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FOREWORD

The Washington Center for Strategic and International Studies (CSIS) and the German *Politisch-Militärische Gesellschaft e.V.* (pmg) organize regular gatherings of experts to address questions of transatlantic security relations. Initiated in 1999 in Washington, we can now look back with satisfaction at a series of successful meetings in Washington and Berlin that have inspired transatlantic discussions and policy.

Our latest conference took place in Berlin on 21 and 22 November 2005. PMG members were particularly pleased that Dr. Robin Niblett, CSIS´s Executive Vice President and Chief Operating Officer, as well as Director of the Europe Program, was able to come to Berlin and bring with him a highly-qualified group of colleagues.

In addressing the topic "**Energy and Security**", participants from the two organizations recognized that the Middle East would be the focus of transatlantic security policy for years, if not decades, to come. This issue will very much affect the content and tone of German-American relations. Relations between Washington and Berlin may have improved recently—even if reality is more differentiated and complex than headlines might suggest. Nevertheless, Germans and Americans maintain a strong interest in accomplishing much together.

The November conference provided an opportunity to address the German-American relationship openly and comprehensively. Top-rate panelists and participants engaged in substantive dialogue regarding Atlantic engagement in the Middle East and the transformations this will require. Discussion focused on four main themes:

- Iran, Iraq and the Security Challenges of the Greater Middle East
- China and Russia: The Rise and Decline of Great Powers?
- Transforming the Security Sector
- The State of EU-NATO Cooperation

As in previous years, the conference was kindly supported by the Transatlantic Program of the Federal Republic of Germany with funds of the European Recovery Program of the Federal Ministry of Economics and Technology, as well as from the Springer publishing house, via the newspaper "Welt am Sonntag" and the Daimler Chrysler AG. These supporters deserve thanks for enabling high-quality discussion replete with important insights regarding the future of the transatlantic relationship.

The main conclusions have been summarized in the following conference report. We thank all the participants in our conference for their substantial contributions. We are particular grateful to David Scruggs, Julianne Smith, Derek Mix, and Dr. Robin Niblett; Dr. Heiko Borchert, Dr. Andrew Denison, Dr. Heinrich Kreft, Dr. Frank Umbach, LTC (GS) Peter Härle and Nikolaus Supersberger, MSc for providing their valuable papers that inspired our discussions. Please find them attached to this report.

Ralph Thiele
Chairman, pmg

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Energy and Security in Transatlantic Relations

Andrew B. Denison

Coming together in Berlin in November, 2005, participants in the **pmg-CSIS Annual Conference** drew one main conclusion: *Germany and America must rebuild the basis for their cooperation, and this on a broadening range of global issues.* More generally, participants agreed on the need to revitalize transatlantic cooperation, also by bringing a more holistic approach to common challenges. The globalizing geostrategic relationship between security and energy was a central point of discussion. Presentations and conversation revolved around the need to orient the transatlantic relationship toward a global policy for managing future challenges. These would include the complexities of a rising India and China and their accompanying thirst for oil, of OPEC and Russia as the main global suppliers of energy, and of the world's major energy reserves lying across a swath of territory, from the Middle East to Central Asia, that is simultaneously challenged by bad government and radical Islamist violence.

Germany and America must rebuild the basis for their cooperation, and this on a broadening range of global issues.

Seven papers, now revised, are included in this conference compendium. This introductory chapter will summarize the conference discussion and draw attention to the various chapters' main points.

Maps and Mindsets

Throughout the conference, many in the group pointed to the interdependence of globalization's opportunities and threats, calling for a more "holistic" approach to common challenges. More than information sharing, the participants wanted a "common assessment" of the world in which we live. Such an assessment would seek to involve all the actors of a broadly defined "security sector." Comprehensive, combined and joint—such an appraisal would lay out a map of the world that America and Europe will need to navigate. The global potential for spreading security and liberty and prosperity would be the central focus.

One might call such a common assessment an Atlantic Road Map—though where the Atlantic ends and the world starts is hardly clear. Such a map would begin with the "European Neighborhood," the crucial and expanding periphery of the Euro-Atlantic world—but it would not end there. The Atlantic Community needs a global framework. It must be one that captures the reality of a world where some 430 million North Americans and 450 million Europeans are increasingly dependent on the fate of the planet's other, rather less prosperous, billions. Chinese, Indians, Africans, Latin Americans—opportunities and dangers abound. To anticipate and address these is the common challenge.

I. Iran, Iraq and the Security Challenges of the Greater Middle East

Stability and Change

Turning first to the Middle East, participants noted the dilemma between stability and change. Discussion indicated a growing consensus around the need for dramatic change, as a tactic, if not a strategy. Riding the whirlwind, managing that change, seemed to be the order of the day. The question of stick and carrot focused quickly on Iran and the Bomb. Violation of human rights, support for terrorism, and rejection of the Israeli-Palestinian peace process, if not the existence of Israel, being, for the moment, counts two, three and four of the indictment against Khameni and Ahmadinijad. The absence of transparent, democratic decision-making "process" in Tehran as well as in Arabic countries on the other side of the Persian Gulf and beyond seemed to lie at the source of these crimes. Participants agreed that keeping the US and the EU on a complementary and

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effective track in regard to the challenge of Iran's mullahs (and Iran's 68 million citizens) will only become more important.

Democracy Dilemmas

The Dilemmas of Democracy found an airing, those double-standards involved when Democracies team up with non-Democracies. A policy of differentiation, with one approach for Musharref and another for Ahmadinejad, found common support. That a Democracy might do itself in, voting away the power to vote (like once upon a time in Berlin) would be the one prohibition. Elections as the minimal check on the excesses of government power would become increasingly mandatory, so the tenor of discussion. Call it the Brezhnev Doctrine Backwards, or maybe, the Berlin Doctrine. In the conference's logic, we can live with Hamas if they can live with recurring elections (and foreswear violence in international relations).

The Atlantic Community needs a global framework. It must be one that captures the reality of a world where some 430 million North Americans and 450 million Europeans are increasingly dependent on the fate of the planet's other, rather less prosperous, billions.

Getting to elections was another matter. Here, there arose the question of whether Civil Society, that de Tocquevilleian agent of change and resilience, would provide an entirely peaceful solvent. Participants spoke of entrenched elites and vested interests who would not give up without a fight. Whether revolution from below could come to Tehran without blood being spilled seemed at least as attractive a thought as boycotting Iranian oil or bombing Iranian nuclear facilities. The March of the Colored Revolutions—from Prague Velvet to Kiev Orange to Tbilisi Rose to Beirut Cedar to Minsk Purple…

Germany, Europe, Energy Security and the Middle East

In his chapter, Heinrich Kreft, Senior Strategic Analyst in the Policy Planning Staff of the German Foreign Ministry, argues that the Broader or Greater Middle East will largely determine relations between Europe and America in the years and decades to come. Kreft also reminds us: "Even though Europe invests heavily in gas and renewable energy for energy-security and environmental reasons, Europe's dependency on Middle East oil will grow." Kreft sees German interests in the Middle East revolving around four objectives: Security and economic interests; a special concern with the Arab-Israeli conflict; EU structures and priorities; and the willingness to partner with the United States. Looking to the future, Kreft underlines the need for a stable Iraq, claiming, "The European Union is united with the United States and other members of the international community in its determination to help Iraq establish democracy and the rule of law." If this can hold, Atlantic relations have indeed improved. Kreft also underlines the role of rising Asian demand for Middle East oil in his analysis of European and German interests.

II. China, Russia and Energy: The Rise and Decline of Great Powers?

The United States and the European Union may see both Russia and China as common challenges, but the respective approaches vary. By the same token, while Russia and China are fundamentally different, the questions they pose are clearly intertwined. In this context, both the EU and NATO will need to take a more global approach that focuses more centrally on how the rapidly growing Asian demand for energy will shape the world system—this was a clear conclusion of conference participants. All recognized the EU's growing dependence on imported in energy. Participants heard how past EU faith in market mechanisms to secure access and prevent crisis would be sorely tested in the future.

In the same way that many participants felt both NATO and EU should be more involved in the Broader Middle East and North Africa, they argued that a common policy aimed at making China a stakeholder in global peace and prosperity would mean being more engaged with China. It would also mean involving China more actively in the affairs of the Middle East. China's cooperation on health and the environment will also be a vital interest for the US and the EU.

China and Russia in Transatlantic Relations

Robin Niblett takes up of the global equation of US-EU relations in the context of Russia and China. In his chapter, Niblett, Director of the Europe Program at CSIS, shows: „How the United States and the member states of the European Union are coping with the tests posed to them, individually and collectively, by the actions and policies of two of the world's most challenging great powers – Russia and China“ Niblett's chapter provides an incisive look at the cross-currents of political attention and influence in the EU and the United States when it comes to Russia and China. Common policies on Russia must seek, "…careful calibration between criticism of the government for its heavy-handed tactics in reasserting domestic control, on the one hand, and a form of constructive engagement that will encourage Russia to serve as an effective partner in the face of the big challenges." Common policies on China must seek to answer the question: "How should they manage the fact that China remains (and appears determined to remain) a one party, "communist" state, and, as such challenges the values of representative government and personal freedom that both the United States and Europe seek to promote across the world?" Niblett clearly shows the distinctive nature of the EU and US policies, but he also shows why it is important that different approaches not get in the way of common cause.

Global Energy Security

The discussion saw participants emphatically underlining the importance of energy to the security and prosperity of Europe and America and the world beyond. Political fires in Middle East oilfields remain a taxing problem, even as the war in Iraq no longer dominates the German-American agenda—much to the satisfaction of the conference attendees. New energy challenges compound the old ones. Russia and Central Asia combine vast energy reserves with strong-armed centralized planning—and a resulting lack of investment. India and China, with their voracious appetite for energy, including Middle East oil and gas, add one more complicating dimension to the Middle East chessboard—each Asian nation a giant with over a billion consumers anxious to shop and drive and live the good life. The conference heard how fragmented, how national, and how dysfunctional, European energy markets and policies were—in a way not unlike the arms markets, the security sectors of Europe. That the security sector and the energy sector were becoming increasingly intertwined in a vulnerable and interdependent world was clear to conference participants.

China and Russia and Transatlantic Relations

Frank Umbach, energy security expert at the German Council on Foreign Relations, predicts in his chapter: "The world's energy security question—which connects disparate issues such as economics, national security, and environmental policies, will likely become one of the major global challenges of this century." He sees Europe's politico-economic stability at stake as the global market for energy tightens. Umbach writes that the EU fails to think about energy in geopolitical terms. "Over the past decade or two, the energy policies of the EU and its member states have been increasingly determined by market forces and a separation of energy questions from political factors and strategic developments." On the other hand, Umbach sees both China and Russia putting energy policy in a very geostrategic context, with China forging relations with the likes of Iran and Sudan, while Russia does not hide its intention to use energy as a source of political leverage. Umbach's conclusion: "The EU needs to introduce a real global strategy of security of energy supply that is based on a new balance between market and strategic approaches—thereby giving more weight to highly important geopolitical risks."

The Need for Transformation

Nikolaus Supersberger, a researcher at the Wuppertal Institute for Climate, Environment and Energy, posits that current energy systems are inherently vulnerable and in need of fundamental transformation. Vulnerabilities include the rapidly growing demand fossil fuels, centralized structures throughout the supply chains, and dependence on reliable 24/7 supply. Supersberger calls for transformation along the following lines: "Reduce import dependence to an "accept-

able" level through development of domestic energy sources, so as to regain control over national energy supply and to minimize susceptibility to political pressure from supplier countries; decentralize the energy system, especially the generation of electricity; reduce absolute energy demand through strong energy efficiency measures; and develop a new understanding of international cooperation in the field of energy supply."

III. Interest and Appreciation in German-American Relations

German interests in the lands across the Mediterranean found a listing, if not a prioritization. In Heinrich Kreft's rendering, Berlin's interests would be: energy access; security in the face of terrorism and WMD; Israeli-Palestinian peace; population movements; and the geopolitical unity of the European Union. The EU's Barcelona project, participants agreed, was in need of a big rethink—and resync with the other engaged international institutions—all of which seem to be getting more involved in Middle East democracy-building, if not terrorist-hunting.

The vexing nature of German-American relations came up repeatedly, whether in the *Axel Springer Haus* or over dinner at the *Hessian Representation* in Berlin. All agreed: Bush has not made it easy for America's friends in Germany. Some would add: Schröder did not make it easy for Germany's friends in America. Glasses raised, the toast of the evening: *Viel Glück, Angie!*

An appreciation for how much each can help the other, not only today, but tomorrow, in facing up to the challenges of globalizing prosperity, of a rising Asia, and of the world's profound vulnerability in age of rapid technological innovation—such an appreciation should again become part of the German-American discourse.

Regarding Germany and America: A little more common appreciation might be in order. Relations can not be based on gratitude or sentimentality alone, one often hears. All the same, appreciation for what has been achieved since the end of the Cold War, if not since 1945, might help put some of the current quibbles in a more humble and historical perspective. Appreciation for what is being achieved today—in building a Europe whole and free and prosperous and safe—is often wanting, so one participant. At a minimum, such acknowledgement of common success would add a little lubrication to the many frictions that arise across the dense web of interaction that is 21st Century German-American relations. An appreciation for how much each can help the other, not only today, but tomorrow, in facing up to the challenges of globalizing prosperity, of a rising Asia, and of the world's profound vulnerability in age of rapid technological innovation—such an appreciation should again become part of the German-American discourse.

Derek Mix, from CSIS, has written of "Impressions from Berlin" and the mix of change and continuity in German-American relations. We read of an "increasingly palpable sense that Germany and the United States are diverging in their global priorities, and that our perceptions of one another bear a diminishing resemblance to how we think of ourselves." At the same time, Mix stands optimistic that, "The bedrock of the relationship remains solid and deep, anchored in our economic interdependence and overwhelmingly shared cultural values." As such, he recommends, "taking the time and interest to peel beneath the surface," concluding, "We may be pleasantly reminded of what we have to offer one another."

IV. Transforming the Security Sector

Transformation and Grand Strategy

What was once a revolution in military affairs is now Transformation—a new coin for the realm. The only constant: Transformation's transformation. Nothing endures but change—Heraclites might have said. Disruptive technology generating obsolescence—paradigm-shifting revolutions—with the ideas go the resources—money follows mind—from sorties per target to targets per sortie—not just of degree but of kind—do you buy aircraft carriers or nano-gnats? And after all that: Seeing all does not mean knowing all. We may find the enemy. Knowing why he will

do what he does is another matter. Cultural sensitivity, mindset, intellectual interoperability—these count. Is this the Transformation of combat—or the return of Grand Strategy?

The Nature of Transformation in the United States

David Scruggs takes up the nature and hype of transformation in his chapter on the bewildering world of defense planning and crystal-ball gazing. Scruggs recognizes the hype, but convincingly argues that some things are truly revolutionary or transformational—that we live in a truly transformational time. A qualitative change that shifts the context of everything else would be transformational. Transformation, importantly, is not just technology, but also organizational and doctrinal. It takes place in a framework that goes far beyond war fighting. Synchronization of diffuse elements has increased dramatically. Scruggs argues that there is "a much higher degree of synchronization of forces and supporting activities than ever previously envisioned; strategic thinkers conclude that organizational and process changes were necessary beyond advancing pure war fighting capabilities." In line with transformationalist schools of thought, the U.S. military is moving, „away from a reliance on massed forces to using coordinated speed, agility and precision firepower to achieve its objectives." Scruggs identifies three areas that are seeing truly transformational change: technical infrastructure; service organizational alignment; and procurement sourcing practices. Not only the "pull" of technology, but the "push" of concurrent demands drives transformation. Scruggs points to: rising infrastructure costs; tighter defense budgets; operations in Iraq and Afghanistan; and the Global War on Terror.

The world's defense industry is fragmented, national, provincial and lacking the economies of a globalized supply chain, conference participants heard.

Realigning National Security Architecture

Heiko Borchert, an independent defense analyst based in Luzern, addresses the need to extend the lessons and models of transformation beyond the military to include the entire "security sector." The number and scope of security actors—public and private, profit and non-profit—has multiplied. The challenge lies in increased coordination amongst the multitude of actors in what has become a globalized security sector. In other words, "the application of military, diplomatic, and economic power needs to be integrated in comprehensive concepts in order to win the peace." Borchert advocates a comprehensive approach rooted in the idea of Effects-Based Approach to Operations (EBAO), an idea "that envisages close civil-military interaction to achieve the desired outcome." Borchert believes that restructuring national security architecture and enhancing security management must take place in a transatlantic context. This should also take advantage of a growing trend toward network-based organizations in the public and private sectors. Borchert also looks at how this transformation will also require "the defense industry to come up with new business models. Yesterday's focus on platforms and large volumes needs to be replaced by capability-based system-of-systems approaches."

Globalized Defense Industry

The globalized defense industry is a maker and taker of Transformation (and Grand Strategy); the sector's primes and subprimes, national and global, are set to move in new directions. The world's defense industry is fragmented, national, provincial and lacking the economies of a globalized supply chain, conference participants heard. If Transformation is the coin of the realm, national sovereignty is the tight-fisted bank. States covet their sovereignty over the defense industry. Still, money speaks. Pressure on governments for international cooperation goes up as defense spending goes down. When deep efficiencies can be found, as with EADS, added value can trump unimpinged sovereignty. At any rate, the US industry will again be looking for added marginal value in Europe. Hardware, platforms, systems, solutions, networks, public, private, war and beyond war, fifty thousand contractors in Iraq—system integration is now a multi-dimensional chess game. Black boxes compete with open architecture. It is about man and machine and mindset. Ultimately, it is about the will to common cause.

V. The State of EU-NATO Cooperation

Institutions and Opportunities

Institutions can channel political will; they cannot be its source. Institutions are important, complex and controversial. They always show room for improvement; they will never be perfect. No nation will wield all the influence it would seek; no nation will be sufficiently "multilateral" for another. Intelligence sharing, information sharing, assessment sharing, mitigation sharing, cost sharing—institutions are about sharing both burden and influence. Burden borne and influence enjoyed—two not entirely unrelated notions, also in the relationship between the EU, NATO and their respective members. Consensus building is hard work, it is urgent work, particularly between Germany and America. Differences abound. So do connections and common interests. Conference participants agreed: The evolving cooperation between NATO and the EU should be welcomed, but much more needs to be shouldered. Participants called for a renewed vision of a renewed relationship across the Atlantic, where the willingness to appreciate and compromise is commensurate with the enormity of the opportunity and challenge.

Partners or Rivals? The EU-NATO Relationship

In her chapter, Julianne Smith sees progress and problems in the ever-closer coordination between the EU and NATO. Ms. Smith, a scholar at the Center for Security and International Studies (CSIS), begins her chapter by positing that the EU-NATO liaison entered a new phase in 2003. This came with the establishment of the EU-NATO Capability Group and the signing of a long-negotiated Berlin-Plus agreement on March 17, 2003, (three days before George W. Bush launched Iraq Freedom). Smith sees these agreements as having, "catapulted the EU and NATO into a previously unreachable level of dialogue and exchange." At the same time, she argues that the greater proximity has also focused greater attention on the remaining differences. Finding solutions to these differences is the focus of Smith's analysis. The main problem, she argues, is the intelligence-sharing issue involving Turkey, Cyprus and Malta—a vexing issue very much tied up with Turkey's uncertain place between the EU and NATO.

Smith puts forward a number of recommendations for better NATO-EU cooperation, based on a larger study she conducted with her colleagues at CSIS. In the context of the conference's overall *themes*, these proposals are as follows: Deepen strategic dialogue—*work on a common assessment*; improve intelligence sharing—*solve the Turkey-Cyprus impasse*; establish links between the European Defense Agency and NATO's Allied Command Transformation—*network the networks;* deconflict force commitments to the EU Battlegroups and the NATO Response Force—*don't cook the books;* strengthen links between Prague Capabilities Committee and the European Capability Action Plan—*seek complementarity, not competition;* harmonize NATO-EU standards and metrics for force planning—*find the unity in all that diversity;* seek a Berlin-Plus in reverse—*pursue business-at-the-edge by providing NATO access to EU civilian and constabulary capabilities*; support the EU-US relationship—*provide further impetus to EU-NATO cooperation*. In sum, coordination finds universal approval—who coordinates whom remains the contentious issue.

Unified Political Will? The State of EU-NATO Cooperation

Peter Härle picks up the question of unified political will as the key to bringing NATO and EU members to more consensus. "Insofar as a political will exists, progress will be achieved—conversely, without the required political will, EU-NATO relations will be further deadlocked." In failing to see the strategic nature of the partnership, many underestimate the importance of an EU-NATO tandem. According to Härle's analysis, it has the potential to be mutually enabling. For Härle, the "Single Set of Forces" concept is an encouraging example. All rhetoric of *autonomy* and *primacy* aside, the EU and NATO are able to jointly say that they have a "Single Set of Forces" around which they must both plan. A pragmatic first step, and thus "already a catalyst for both organizations' force and armaments planning." Härle also praises the pragmatic work of the EU-NATO Capability Group. At same time, Härle reminds us that cooperation is not helped if one overlooks the different natures of the EU and NATO ("Apples and oranges"). EU Summits involve a very different

kind of cross-issue, horse-trading. Unified political will has a very different basis. Härle emphasizes the importance of getting NATO and the EU to work jointly to, "defuse long-standing tensions between Turkey and Greece;" and finally, this "Alliance must tackle the issue of fully integrating France."

Germany, Europe and Energy Security in the Middle East

Heinrich Kreft

The Broader or Greater Middle East has become the focus of international geopolitics. The area will largely determine relations between Europe and America in the years and decades to come. The attacks of 9/11, with the terrorists mainly coming from Saudi Arabia and Yemen, their training grounds in Afghanistan run by Al Qaeda, as well as the subsequent wars in Afghanistan and Iraq, have shifted international attention onto this region. Rising energy prices and the question of energy security have also turned attention to the Broader Middle East. In discussing Germany's and Europe's Middle East and energy policies, I will begin with German Energy Policy, and then turn to the Middle East.

Germany, Europe and World Oil Markets

Germany's and Europe's dependency on energy imports is growing because of declining European oil and gas production. Europe's dependency on energy imports, at 50 percent today, will grow to 80 percent by 2030. Today most of the oil imports come from Russia, with the Middle East a close second. But dependency on Middle Eastern oil, which now is at 31 percent, will grow to more than 50 percent by 2030.

Table 1: Growing Dependency on Oil Imports in OECD Europe

Oil	2000	2030	2000	2030
	mb/d	mb/d	% consumption	% consumption
Production	6,7	2,5	48 %	15 %
Consumption	14,1	16,4	100 %	100 %
Net Imports	7,4	13,9	52 %	85 %

Source: International Energy Agency, cited in Friedemann Müller, Klimapolitik und Versorgungssicherheit, SWP April 2004.

Table 2: Growing Dependency on Gas Imports in OECD Europe

Gas	2000	2030	2000	2030
	bcm/y	bcm/y	% consumption	% consumption
Production	296	276	61 %	31 %
Consumption	482	901	100 %	100 %
Net Imports	186	625	39 %	69 %

Source: International Energy Agency, cited in Friedemann Müller, Klimapolitik und Versorgungssicherheit, SWP April 2004.

It is not just European dependency on Middle Eastern Oil that is growing. The Middle East has by far the largest oil reserves and has produced much less in relation to these reserves than other regions, like the United States or Europe. Sixty-two percent of the world's oil reserves are located in the Middle East, with Saudi Arabia and Iran together controlling one-third. In the OECD countries, which absorb 92 percent of the inter-regionally traded oil, local production (which stood at 21 million barrel per day in 2002) is expected to go down to around 13 million barrel per day by 2030. In Europe, only Norway (with a production of 3 million barrel per day) and the United Kingdom (with

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2.1 million barrel per day) are significant producers of crude oil in Europe. For the United Kingdom, oil production in the North Sea peaked in the 1990´s and is rapidly declining, which will make the country a net importer of oil by around 2010. Consequently, only Norway will remain a significant European source of oil in the foreseeable future. Norway today is the third biggest exporter of oil in the world after Saudi Arabia and Russia. It exports 75-80 percent of its crude oil to other European countries and the rest mainly to the United States.

Even though Europe invests heavily in gas and renewable energy for energy-security and environmental reasons, Europe's dependency on Middle East oil will grow.

In regard to non-European sources, imports from Russia are the biggest individual source, representing some 30 percent. The same proportions hold true for Germany, Russia leading the imports with a 40 percent share, followed by Norway with 21 percent. As for natural gas imports into Germany and Europe, a similar picture emerges: Russia and Norway rank first and second as import sources. For Germany, Russia represents 40 percent and Norway some 30 percent of natural gas imports.

Production of crude oil in the North Sea is likely to have had its peak somewhere in the late 1990s. After a period of plateau production, European oil production as a whole will then start a gradual decline through 2030. With consumption estimated to remain relatively stable, net imports of oil into Europe will increase significantly, projected to almost double until 2030. Russia is expected to increase its exports to Europe at a fairly small rate, keeping its share in total imports a little less than one third and relatively constant until 2020[1]. Consequently, increasing quantities of imports have to be covered from other import sources. Due to the increasing concentration of remaining oil reserves in the Middle East (where two thirds of today's proven reserves are located), much of the supplemental European oil import will likely come from this region.

A newcomer among the world's energy importers is China, which is now the world's second biggest consumer and third largest importer of oil[2] (China was an oil exporter until 1994). India is also becoming an important oil importer. Today China and India together with South East Asia still import less oil than the United States. Within a decade, however, Asia will become the biggest oil importing region. Already in 2004, Asia received 44 percent (together with Japan 65 percent) of their oil imports from the Middle East.

As a consequence, the concentration of world oil production in the Middle East will continue to grow; so will the economic and political power of the Organization of Petroleum Exporting Countries (OPEC). The world economy will become even more dependent on this politically volatile region. Even though Europe invests heavily in gas and renewable energy for energy-security and environmental reasons, Europe's dependency on Middle East oil will grow.

Germany, Europe and the Middle East

Let me now turn to German and European policy vis-à-vis the Middle East.

German interests with regard to the Middle East can be divided into three dimensions, according to Volker Perthes, Germany's leading Middle East expert, who recently became Director of *Stiftung Wissenschaft und Politik*, Germany's most important think tank.[3]

The first dimension is economic interests, particularly the access to safe energy supplies. Here it is important to distinguish between the control of oil supplies and safe access to them: German interests are only concerned with guaranteeing access to oil, not with controlling oil supplies. The second dimension is security interests, which from a Berlin perspective basically means avoiding risks, as the region is marked by regional conflicts and problems such as terrorism and the proliferation of

[1] Some market analysts predict that Russia's oil production may peak soon, especially with the steep increase seen over the last years.

[2] Heinrich Kreft, Neomerkantilistische Energie-Diplomatie. China auf der Suche nach neuen Energiequellen, in: Internationale Politik, Berlin, 2/2006.

[3] for a good and concise analysis of Germany's Middle East Policy see: Volker Perthes, Germany and the Middle East, SWP Working Paper FG6 2005/2.

weapons of mass destruction (WMD). This does not imply that Germany fears an armed conflict with any of the Middle Eastern states. Rather, Germany is concerned that existing conflicts within the region could have an impact on European security—something that has happened before. The third dimension is purely political and mainly related to the peace process between the Palestinians, the Arab States and Israel.

German interests in the Middle East deserve a closer look. Contrary to the common wisdom, the economy or the economic dimension of German national interests is not the driving force behind German Middle Eastern policies. While Germany is very much an exporting economy, German trade with Middle Eastern countries accounts for less than three percent of overall German trade, though it is important for some industries, e.g., the car industry. During the past few years, business has seemed to follow politics rather than the other way round.

Security fears, mainly with regard to terrorism, have generated public interest in the Middle East. German citizens have been victims of terrorism in Djerba, Tunisia and there is widespread (though not openly expressed) fear of militant Islam. Another structural dimension leading to increased German interest in the region is European integration and, related to it, the changing geopolitics of Europe. This changing geopolitics is probably best characterized by the so-called Schengen Agreement, which abolished border controls between those countries that are party. Germany has thus moved much closer to the Mediterranean and Middle East. Germany has a strong interest in strengthening the European Union's foreign policy, creating a Common Foreign and Security Policy (CFSP) that deserves its name.

Four dimensions shape German relations with the Middle East: Security and economic interests; a special concern with the Arab-Israeli conflict; EU structures and priorities; and the willingness to partner with the United States.

Finally German policy toward the Middle East is a function of the willingness of the German public and elite to cooperate with the United States.

We thus have four main dimensions shaping Germany's relations with the Middle East:

- Security and economic interests;
- A special concern with the Arab-Israeli conflict and its peaceful resolution within a multilateral framework;
- EU structures and priorities;
- A willingness to partner with the United States.

Against this background, let me discuss briefly three key issues of German foreign policy vis-à-vis the Broader Middle East.

The first key issue for German foreign policy in the region is the Israeli-Arab conflict, particularly the relationship between Israelis and Palestinians. For Germans, solving this conflict peacefully necessitates strong and ongoing support for Palestinian state building. Since the establishment of the Palestinian Authority, Germany has been its main aid donor, but this support has never been unconditional. The goal was and is to build a democratic state that respects human rights and cooperates peacefully with its neighbors. Israel's right to exist—including the right of its citizens to live free from fear of terror and violence—is of central importance to Germans. We consider this right to be inalienable and non-negotiable. This has been one of the fundamental principles of our foreign policy since the days of Konrad Adenauer, regardless of the composition of the Federal Government.

After the Israeli withdrawal from Gaza, there is some reason for prudent optimism regarding the peace process, but only if there is continuing strong support by the Quartet: the European Union, the United States, the United Nations and Russia.

The second issue is Iran, particularly the current conflict about Iran's nuclear program. Iran has been a focal point of German foreign policy for a long time. It was and is Germany's as well as Europe's position that Iran is too important to be left alone. The European Union shares the United States and UN concern that Iran must not develop a nuclear capability.

Europeans have also made clear that they recognize Iran's legitimate national interests such as

- Economic and technological progress;
- Political acceptance as a major player in the region;
- Security, by which Iran understands both national security and regime security.

Germans do not see the current Iranian nuclear program as a legitimate interest. It is a major cause of concern. Iran´s past violations of international obligations, a lack of transparency and insufficient cooperation with the subsequent investigations have shattered any German confidence that the program is for exclusively peaceful purposes. Germany, France and the United Kingdom, with the support of the EU High Representative, have worked with Iran on finding a way to restore confidence. These efforts have received broad support from the international community. Tehran's continued disregard of International Atomic Energy Agency decisions does not help restore confidence. On the contrary, the gains made to date are being put at risk for no good reason. Our concerns do not relate to Iran's right to use nuclear energy for peaceful purposes. This has never been and will not be put in question.

The European Union is united with the United States and other members of the international community in its determination to help Iraq establish democracy and the rule of law.

Our readiness to work on solutions which include objective guarantees that the Iranian nuclear program can only serve peaceful ends remains unaltered. But there should be no doubt that a nuclear Iran would dramatically change the security environment in the whole Broader Middle East.

The Middle East also needs a stable and prosperous Iraq. The European Union is united with the United States and other members of the international community in its determination to help Iraq establish democracy and the rule of law. We want all Iraqis to be able to live without fear and material hardship. The forces of terror and violence must not and shall not be permitted to win the upper hand. Germany and the European Union have provided and will continue to provide considerable support to achieve this goal.

- Advising Iraqi decision-makers in the constitutional process;
- Training members of the security forces;
- Launching far-reaching debt relief for Iraq;
- Supporting the political, economic and cultural reconstruction efforts with wide-ranging aid;
- Fully supporting the role of the United Nations.

Iraq's neighboring countries also play a central role in this process. Together with the Iraqis, they have to shape a shared and peaceful future for the region. This cannot happen without mutual respect, the commitment to non-interference and further confidence-building measures. The agreements on improved border and security cooperation have to be implemented. A comprehensive solution for Iraqi debt has to be reached. Concrete regional cooperation builds trust and is the best guarantee for peace. We are ready to share the European experience in this matter. With this intention, the policy planning staff of the German Foreign Ministry together with the Bertelsmann foundation have hosted a conference on security in the gulf region with participants from Iran, Iraq, Saudi Arabia, the small gulf states and Yemen.

The Broader Middle East and North Africa Initiative and the Barcelona Process

The so-called Broader Middle East and North Africa (BMENA) Initiative launched by the G-8 at the June 2004 summit in the United States, and in this context, the European Union's policy vis-à-vis the region, demonstrate strengthened multilateral efforts in the Middle East.

The BMENA-Initiative followed the Greater Middle East Initiative, inaugurated by President Bush in November 2003 and calling for sweeping reform and substantial changes in the Middle East. The need for modernization and change in the Middle East had long been recognized and addressed in

the European Union's Barcelona Process, the EU's framework for relations with the Middle Eastern and Northern African countries. After some reflections, Europeans welcomed President Bush's initiative. They saw it as United States willingness to deal with structural issues such as education, institution building and the development of the rule of law. Europe has long seen these aspects to be crucial.

Nevertheless, the BMENA-Initiative and, more importantly, the Iraq War served as wake-up-call for Europe, causing Europe to re-examine its own Middle East politics. The Iraq war once again dramatically showed the necessity of developing a common European approach—if Europe wants to be taken seriously on the international political stage.

Positive results came from out of this wake-up-call.

- The development of a European Security Strategy,
- The EU-3 Initiative to deal with the Iranian nuclear crisis.
- A new interest in revitalizing the EU's policy vis-à-vis the Middle East, particularly the Barcelona Process.

The European Security Strategy (ESS) sets the stage for discussing Europe's policy on the Middle East. The document focuses on three strategic objectives, all intended to provide security for EU citizens and promote stability beyond EU borders.

1. Given the nature of the new threats, the EU must engage early on and with the full spectrum of its instruments. The first line of defense will often be abroad, whenever possible, before a crisis occurs.
2. The ESS puts particular emphasis on creating peace and stability in the EU's immediate neighborhood. It refers to the longstanding EU-experience in stabilization processes in the European vicinity. Promoting an arc of well-governed countries from our Eastern neighborhood to the Mediterranean is the aim.
3. The Strategy emphasizes the importance of international law and the role of the United Nations, using the term "effective multilateralism".

Has Europe been too focused on building a zone of stability in the Euro-Mediterranean Region? Did Europe not realize that a zone of stability might just as well be a zone of stagnation?

The Security Strategy goes on to spell out the consequences for the practice of EU policy. It calls for a more active foreign policy that uses the full spectrum of diplomatic, trade and development instruments as well as civil and military crisis management. It rightly underlines the importance of cooperation with strategic partners and mentions the United States, Russia, Japan, China, Canada and India in this context. With the ESS, the EU established an overall framework for its security policy—for the first time in its history. In itself, the ESS has already made a significant contribution to the cohesion of CSFP.

Strategic dialogue between both sides of the Atlantic is crucial. This is what was sorely missing after 9/11 and before the Iraq war. This dialogue must be comprehensive and it must not shy away from controversial topics. Europe and America must work towards a common understanding on proliferation, terrorism, threat analysis—but also on the principles of applying military force.

The “wake-up call” has generated pressure to revisit European Union policy vis-à-vis the Middle East, namely the Barcelona Process. Has Europe been too focused on building a zone of **stability** in the Euro-Mediterranean Region? Did Europe not realize that a zone of stability might just as well be a zone of stagnation? The dramatic changes since 9/11 have moved Europe to revisit its approach to the Broader Middle East and Northern African region.

The EU's commitment to the region is based on a series of overarching objectives and principles, largely along the line of the European Security Strategy. Concerns for the security of the region and for that of the Union provide the overarching focus. On 26 March 2003, the Brussels European Council approved the "EU Strategic Partnership with the Mediterranean and the Middle East". The

aim of the initiative is cooperation in a spirit of partnership that promotes peace, prosperity and progress in the region and builds on tested instruments such as the Barcelona process. Consultations with the countries of the region revealed a number of shared perspectives. The Council identified eleven key objectives and principles regarding strategy:

1. The primary objective is to promote the development of a common zone of peace, prosperity and progress. The goal is to enjoy close and cooperative relations, responding as far as possible to demands from within the region.
2. The partnership strategy will include, primarily, relations between the EU and the countries of North Africa and the Middle East.
3. Resolution of the Arab-Israeli conflict will be a strategic priority. Neither progress on the Middle East peace process nor reform in the region should be a precondition for the other. Both are desirable in their own right and should be pursued in partnership with equal determination.
4. Partnership will provide the basis for long term and sustained engagement.
5. Partnership requires a strengthening of the Union's political dialogue with the region.
6. The EU will avail itself of opportunities provided through the dialogue in partnership to promote its concerns regarding respect for human rights and the rule of law.
7. The EU will avail itself of opportunities provided through partnership with the countries of the region to promote action and cooperation on terrorism, weapons of mass destruction and non-proliferation.
8. The EU will work with the partners in the region to support their reforms in the economic, political and social spheres through engagement with state and civil actors bearing in mind the framework of the relevant UNDP Human Development reports in terms of advancing knowledge (education), freedom (governance) and women's empowerment.
9. The EU will promote enhanced security dialogue with the region including through its own initiatives aimed at Mediterranean partners within the framework of the ESDP on the one hand, and through exchanges of views within the fora linking NATO and the European Union on the other.
10. The modernization of the regulatory environment and liberalization of import and export trade will make it easier for the EU to promote WTO membership for countries in the region; this will also facilitate improvement in the business environment.
11. The EU also will work closely with the United States, the UN and other external actors in pursuit of these goals.

While different Middle Eastern and Mediterranean countries face different challenges, there are some challenges that are common to the majority of them. These are well known, and have been set out in detail elsewhere, e.g. in the relevant UNDP Human Development Reports. Political, economic and social reform is required to master these challenges. Such reform cannot be imposed from outside, but must come from within. The key motivating force is the high expectations of a predominantly young population—more than half the people in the region are under eighteen. They need education and jobs. Political stability can only be achieved if these young people find their place in society. Achieving this goal is the greatest challenge facing the governments of the region. More and more Arab states realize that they need to be prepared for gradual political change if they seek strong and institutionalized political cooperation with Europe. The same goes for cooperation with the United States and other like-minded countries.

China and Russia: Dealing with the Rise and Decline of Great Powers

Robin Niblett

Introduction

As much as commentators and academics in the late twentieth and early twenty-first centuries have heralded the decline of the power of the state relative to multilateral institutions and other international actors, it appears that the concept retains today much of its resilience, especially in the context of the world's existing and emerging great powers. The United States and Russia, the two competing poles and anchors of the post-World War II world order, remain central players in their regions and on the world stage. But it is the rise of China and India as global economic powers and dominant regional security powers that has reminded the world of the continuing importance of major states in international relations and that has resurrected talk of the emergence of a new global multi-polar world order or balance of power.

This paper has as its principal focus an examination of how the United States and the member states of the European Union (EU) are coping with the tests posed to them, individually and collectively, by the actions and policies of two of the world's most challenging great powers – Russia and China. The fact is that the United States and the EU approach these two major powers from very different perspectives, influenced as they are not only by geography and their historical and economic ties, but also by their own respective positions on the spectrum of state power.

The rise of China and India as global economic powers and dominant regional security powers has reminded the world of the continuing importance of major states in international relations and that has resurrected talk of the emergence of a new global multi-polar world order or balance of power.

For the United States, Russia and China pose traditional challenges of diplomacy and statecraft. How can U.S. policies influence the choices of these countries in favor of their own, and the world's, stability and prosperity? For the EU and its member states, the broad goals might be the same, but the approach is more generally one of building institutional frameworks into which they hope to draw Russia and China so that these countries start to acquire outlooks and forms of behavior similar to their European interlocutors. The underlying question behind this paper, therefore, is to consider how difficult will it be to develop complementary, if not coordinated, transatlantic approaches to Russia and China, given that each side approaches these two countries from quite different perspectives.

Russia – Declining and Rising

On the one hand, Russia demonstrates many attributes of a declining power. At the start of the twenty first century, it stands alone as the core of a now vanished empire, having lost indirect control over its previous sphere of influence in central and eastern Europe and direct control over the nations that had constituted the Soviet Union for much of the twentieth century, including Latvia, Lithuania, Estonia, Ukraine, Moldova, Georgia, Azerbaijan, Armenia, and all of the "stan" states of Central Asia. Boiled down to its core, the GDP of Russia has declined relative to the rise of other major powers such as the United States, China, and India over the last decade. It has suffered from huge capital outflows, even as these other countries have recorded their highest ever levels of investment inflows. This lack of investment has left much of Russia with an unmodernized economic infrastructure that holds back its future potential. It has also severely undermined the capabilities of its armed forces, parts of which remain mired in the Chechnya struggle. On another note, Russia's population continues its dramatic decline – currently estimated to be run-

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ning at over 1,500 people per day – as a result of falling fertility, the rise of chronic diseases, and under-investment in basic healthcare.

On the other hand, despite this catalogue of setbacks, Russian state power is experiencing a renaissance, both domestically and on the world stage. To start with, over the last three years, President Putin and his administration have re-asserted Moscow's central power over the national economy, the Parliament, the media, and over separatist regions. The latest target of the government has been domestic and foreign non-governmental organizations which have provided alternative avenues for political opposition and criticism. This centralization of state power has coincided with a dramatic rise in the price of oil and gas, Russia's principal export, providing a financial windfall to the government and giving new impetus to the government's leverage in its foreign policy especially vis-à-vis its closest neighbors.

Even during the worst years of its decline, Russia remained a key player in international relations by dint of its position as one of five permanent members of the UN Security Council and one of the world's two leading nuclear powers. In the last couple of years, however, its influence has increased markedly due to a number of factors. First among these was the fall-out from the 9/11 terrorist attacks in the United States. The attacks shifted Russia from being an object of suspicion and confrontation for many members of the Bush administration and brought it into the camp of potential allies in the war against terrorism. This was especially the case in Afghanistan, where Russia helped rather than obstructed U.S. retaliatory military action in 2001 and where Russian support remains an important factor for the stability of Afghanistan's northern regions.

The US and the EU must seek careful calibration between criticism of the Russian government for its heavy-handed tactics in reasserting domestic control, on the one hand, and a form of constructive engagement that will encourage Russia to serve as an effective partner in the face of the big challenges.

Russia remains also one of the most important actors in the field of proliferation of weapons of mass destruction (WMD). On one level, Russia is itself a central focus of the global efforts to reduce the stocks of surplus chemical, biological, and nuclear weapons. Russia alone possesses stocks of around 8,400 operational nuclear warheads and a declared stockpile of almost 40,000 metric tons of chemical weapons. With terrorist organizations openly touting the need to bring maximum destructive power against their enemies, cooperating with Russia in dismantling its stocks is a key priority for the United States and EU alike.

On another level, as a leading exporter of nuclear power technology and plant construction, Russia is also a leading player in managing the nuclear aspirations of other states. One of its most important relationships in this capacity today concerns Iran. Russia's contract with Iran to build its Bushehr nuclear power facility has opened the slim chance that it could offer Iran an escape route from the latter's determination to develop its own domestic capacity to produce highly enriched uranium. Whether this diplomatic (and commercial) gambit is successful or not, it serves as a reminder of Russia's pivotal role in this area.

Third, Russia's position as the world's leading holder of reserves of natural gas (with proven reserves of 1,680 trillion cubic feet) and one of its leading suppliers of oil has given it new global prominence in a world that currently prices oil at $60 per barrel. Here, Russia's geographic position at the heart of the Eurasian continent gives it enormous leverage in its relations with its neighbors in Europe, Central Asia, and East Asia, not just by virtue of ensuring a steady stream of supply, but also by the decisions that its takes over investment in future pipeline routes – the battle between China and Japan in 2005 over the route of the $11 billion Pacific Pipeline expected to carry 1.5 million barrels of oil per day is especially illustrative here.

A manifestation of the Russian government's new-found international clout is its leadership in the creation of the Shanghai Cooperation Organization, comprising Russia, China, Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan. While the creation of the organization appeared to emanate from a defensive instinct to counter America's growing presence in Central Asia following the invasions of Afghanistan and Iraq, it is taking on a more proactive stance to maintain regional security

and stability as well as to promote cooperation in developing regional ties in trade, science and technology, education, energy and environmental protection.

U.S. and EU approaches to Russia

All of the above make Russia an important focus of both U.S. and EU foreign policy. At a strategic level, this policy requires careful calibration between criticism of the government for its heavy-handed tactics in reasserting domestic control, on the one hand, and a form of constructive engagement that will encourage Russia to serve as an effective partner in the face of the big challenges that it faces in common with both the United States and the EU, such as the spread of terrorism and WMD, on the other. A loss of Russian government coherence would not only make these objectives harder to pursue collaboratively, but might also increase the risk that Russia itself could become an exporter of these two scourges of the modern world.

Even as the United States and EU share this broad concern in their relations with Russia, the immediate priorities reveal some important differences. With its physical distance from Russia (setting the Alaska connection aside) and its focus on specific foreign policy challenges (such as stabilization of Iraq and Afghanistan, trying to manage Iran's nuclear ambitions or sharing information on transnational terrorist networks), the U.S. administration appears to be taking a pragmatic approach to its relations with Russia and the Putin government. President Bush's comment in October 2005 that he recognized that "Russian democracy will be very different from the U.S." reflects this more accommodating stance. Whether in the think tank community in Washington or in hearings up on Capitol Hill, Russia is rarely the focus of attention at this time. Setting aside Iraq and Afghanistan, all external political energy appears to be targeted toward the challenges posed by the rise of China and, increasingly, by how to build closer bridges with India.

Rather than see these relations with Russia as a matter of tackling shared external concerns, the new focus brought by the EU's eastern enlargement is almost entirely on how Russian actions might have negative repercussions for the EU and for European stability in the long-term.

Russia poses a very different sort of challenge to the EU and its member states. Unlike the United States, the EU's relationship with Russia is defined by their proximity to one another. This proximity as well as Europe's innate lack of energy resources has led to EU member states importing over 40 per cent of their oil and gas from Russia in 2004, creating a significant mutual dependency, which was exposed publicly this winter during Russia's dispute with Ukraine over the price it would pay for its future gas imports and Russia's temporary attempt to cut those supplies to Ukraine. Although EU-Russia trade more than doubled (from €38 billion to €85 billion) between 1995 and 2003, Russia and the EU have yet to develop a broader economic relationship within which this energy relationship might sit: Russia accounts for less than 2 percent of the EU's overall trade in services and European Foreign Direct Investment (FDI) in Russia remains well below potential, at around €2.2 billion according to the most recent figures.

This proximity also carries significant historical baggage. The entry into the EU in May 2004 of the central and east European countries that had formerly been part of the Soviet Union's sphere of influence has raised EU relations with Russia to the top of the EU's foreign policy agenda. But rather than see these relations with Russia as a matter of tackling shared external concerns, the new focus brought by the EU's eastern enlargement focuses almost entirely on how Russian actions might have negative repercussions for the EU and for European stability in the long-term. Ukraine and Belarus have become the focus of this struggle, with each side seeing them as vital potential buffers against the encroachment of the other side's political and economic system into their own territory. Russia fears that the spirit of the "orange revolution" might spread eastward and embolden reformist forces in Russia and in others of its neighboring countries. The EU's central European members fear that a Ukraine that falls back under Russian political and economic influence will spread its tentacles into their own countries.

While this concern had initially been limited primarily to the EU's central European members, Russia's growing energy power, its increasingly autocratic government, and the funds that it can access

are causing concern across the EU – concern that Russia might end up exporting criminality and political corruption into the EU more broadly, along with its energy supplies. The Russian government, for its part, following the events in Ukraine in 2004, is starting to see the EU, rather than NATO or the United States, as the institution that perhaps represents the greatest risk to Russia's return to domestic stability and international influence.

Coordinating U.S. and EU approaches toward Russia in this environment will not be easy.

A Rising China

In many ways, China presents important contrasts to Russia, not only in terms of its own development, but also in terms of how the United States and EU are dealing with this major power. That China is rising where Russia has been declining is hard to refute. This is especially clear in the economic area – as evidenced by China's blistering rate of GDP growth (continuing to grow at some 8% - 9% per year); its ability to attract foreign direct investment (some $60 billion per year in 2004 and 2005); or the size of its foreign exchange reserves (growing from $650 billion in 2004 to $819 billion in 2005 and projected to top $1 trillion in 2006). It is also rising in its military capacity, undertaking a serious modernization effort, not only through military imports, but also through its own technical advances. Politically, the Chinese Communist Party has proved to be remarkably adaptive and resilient so far, avoiding the fate of its Soviet predecessor. Its regional political influence is growing, thanks not only to its role as the engine of economic growth in East Asia over the past few years (in 2004, it became both Japan's and South Korea's largest trading partner), but also thanks to determined diplomacy, with the Chinese leadership investing considerable time to cultivating personal relationships with the leadership of its regional neighbors (Japan being a notable exception). China's global influence has also started to be felt in recent years as a result of its growing trading and investment relationships with countries as far a field as Latin America and sub-Saharan Africa.

How should the US and the EU manage the fact that China remains (and appears determined to remain) a one party, "communist" state, and, as such challenges the values of representative government and personal freedom that both the United States and Europe seek to promote across the world?

At the same time, China's rise as a regional and world power poses its own set of challenges for the United States and Europe. How should they manage the fact that China remains (and appears determined to remain) a one party, "communist" state, and, as such challenges the values of representative government and personal freedom that both the United States and Europe seek to promote across the world? Second, as focused as China may be on its domestic economic agenda, it has the potential to be a force for insecurity in East Asia, first, because of the question over the future of Taiwan and, second, because of its tense and unresolved relationship with Japan. Third, China's insatiable appetite for the energy and raw materials to feed its economic expansion is having structural effects on global energy and other commodity markets.[1] China's desire to acquire direct control over the sources of these imports through its own foreign direct investments is challenging the rules and norms under which U.S. and European companies pursue their investments in developing countries.

Finally, despite its growing global influence and its inclusion as one of the permanent members of the UN Security Council, the Chinese government continues to resist being drawn into the position of acting as an overt "stakeholder" along with other major powers in the stability of the international system ("stakeholder" being the word that Deputy Secretary Robert Zoellick suggested best described the role China should aspire toward in this context).

[1] China has accounted for 40% of global growth in oil demand since 2000.

U.S. and European Approaches to China

There is an underlying difference between the ways that the United States and the EU are responding to the rise of China. The rise of China appears to be a far more emotive issue in the United States than it is in Europe. Significantly, China attracts the suspicion of both the left and right of American politics. On the left, China represents the negative side of economic globalization, undercutting U.S. products in the domestic market with its undervalued currency and drawing blue collar and, increasingly, high tech jobs away from the United States as U.S. companies outsource production and value-added research jobs to this cheap, but well-educated country. For the right, China's communist government is automatically a source of suspicion, and its military build-up requires the same uncompromising opposition that the United States applied toward the Soviet Union. The desire to protect democratic Taiwan from communist Chinese threats gives an added edge to the right's opposition to China. These concerns about China are not driven solely by political representatives. As was reflected in the most recent U.S. Quadrennial Defense Review, among the U.S. political-military community there is widespread concern that China is one of the few countries against which U.S. forces might need to go to war in the future, primarily because of the unpredictability of the Taiwan situation. More generally, U.S. alliance commitments and troop deployments in East Asia heighten the salience of military concerns when thinking about China.

It is all the more remarkable, given both the emotions and the security concerns about China, that U.S. relations with China under the Bush administration are going through one of their most positive periods (considering China's constructive role in the six-party talks with North Korea and its recent agreement to report Iran to the UN Security Council over its nuclear program). To a certain extent, this reflects the fact that the administration has other more pressing issues on its agenda in the Middle East. It also appears to reflect a measured sense that China is focused on its internal development and is not in an expansionary mode. This being said, the administration has taken two strategically significant steps to hedge against the risk that China might become an adversary to U.S. interests in the Asia / Pacific region. It has started to build a strong bilateral relationship with India, symbolized most recently by the U.S. decision to share technology under the "U.S.-India Civil Nuclear Cooperation Initiative." And it is actively encouraging the Japanese government to take more responsibility for its own and the region's security. These steps could heighten Chinese concerns about being encircled by a United States that is increasingly activist in its desire and in its willingness to use all resources at its disposal to promote its democracy agenda across the world.

For its part, the European Union's relationship with China has evolved with increasing intensity since the first EU-China summit in April 1998. A leading component of this relationship has been the growing levels of bilateral trade – China became the EU's second largest trading partner after the United States in 2005, and the EU is now China's leading trading partner. A second component of what the EU calls its "strategic partnership" with China is the sense of EU officials and governments that China will have a growing and direct impact on each of the key challenges facing the EU and the world in the coming years, from the proliferation of WMD to the spread of global health epidemics, managing world energy supplies, controlling environmental degradation, and driving world economic growth.

This has led to the institution of a plethora of regular EU-China ministerial meetings, working groups, and educational and scientific exchanges, all overseen by the regular, annual EU-China summits that together are giving some shape to the "strategic" aspect of their relationship. These meetings cover issues as diverse as space cooperation (China is a major investor in the EU's Galileo global positioning satellite system), migration, arms proliferation, forestry management, WTO compliance, energy efficiency, media reform, judicial training, and human rights. They reflect an approach that seeks to draw China into the world order and to make it a global "stakeholder" by building up its internal capacities for effective economic and political governance. To a large extent, the EU's style of incremental negotiation on these issues, rather than confrontation, appears to suit China's cautious approach to making internal change.

From a U.S. perspective, the EU's burgeoning relationship with China complicates U.S. diplomatic room for maneuver. Today, U.S. policymakers must take into account a more triangular context

within which the EU is an increasingly important player at the political and economic levels with China, but without the encumbrances of America's regional security commitments and concerns. These different approaches can lead to serious transatlantic misunderstandings, as happened in late 2004 and early 2005 over the EU's desire to lift the arms embargo that it imposed on China following the Tiananmen Square massacre of 1989.

Conclusion

Russia and China are both great powers. As a great power itself, the United States engages with each of these countries at a strategic level, reflecting immediate as well as long-term dimensions of its national interests. In Russia's case, the U.S. government has more to gain at this time from trying to maintain a constructive relationship with its counterparts in Moscow. As a result, it appears not to be taking Russia to task over its internal political evolution, nor over its increasingly heavy-handed efforts to reassert some of its influence over its "near abroad." In China's case, however, given its lesser role in tackling some of the United States' current principal foreign policy priorities, the U.S. government has more latitude to seek to shape the international context within which a rising China will grow – building up India and Japan as strategic counterweights to China's growing power.

The EU is not a great power – it is a collection of medium powers and smaller developed states. It approaches both Russia and China through the prism of its ability to engage with them in institutional terms rather than as a kindred great power. Currently, the EU lacks the institutional mechanisms to engage effectively with Russia and it fears that Russia may weaken some of the EU's own internal institutional bonds by inserting and asserting its power within the EU's political space. The EU's relations with Russia are traversing a difficult period. In contrast, the EU is building new institutional linkages with China, which appear, superficially at least, to be helping to draw China slowly out of its insular shell and toward a greater acceptance of international norms and rules.

Despite their common interests in promoting international stability and prosperity, and their fundamentally shared values of political freedom and economic openness, the United States and Europe have, in comparison to one another, distinct forms of political organization, disparate capabilities, and different global perspectives based on their particular history and geography. The cases of Russia and China reveal how these differences translate into difficulties in building common transatlantic foreign policies.

China and Russia: Implications for European and Transatlantic Security Cooperation[1]

Frank Umbach

Introduction

The terrorist attacks of September 11, 2001, focused renewed attention on South and Central Asia, the Middle East, and in particular, the Persian Gulf. These regions (also defined as the "*Greater Middle East*" or the „*Strategic Ellipse*") are of strategic importance to the stability of the world energy supply in the 21st Century—and thus for the future of European and transatlantic security cooperation.

The world's energy security question—which connects disparate issues such as economics, national security, and environmental policies, will likely become one of the major global challenges of this century.

The world's energy security question—which connects disparate issues such as economics, national security, and environmental policies (such as the 'Kyoto-Protocol' for the global climate)—will likely become one of the major global challenges of this century. Key global energy developments already confirm these assumptions:

- In 2004, global oil demand grew at the fastest rate in over 25 years.
- The primary world energy demand will increase annually by 1.7 percent from more than 11 to over 15 billion tons of oil equivalent from 2000 to 2030.
- The developing countries' share in world demand will increase from almost 30 percent to more than 40 percent in 2030 because 83 percent of the world's population live in non-industrialized countries that will double their current energy consumption.
- Almost all the increase in energy production will occur in non-OECD countries.
- In 2030, and contrary to the over-optimistic projections of many proponents of renewable energies, fossil fuels will remain the primary sources of energy. They will meet more than 90 percent of the increase in demand until 2030.
- Although natural gas will grow fastest and renewables are becoming more and more important, oil will remain the most significant energy source—projected to increase from 78 mb/d in 2002 to 115-118 mb/d in 2025/2030 (a 50 percent growth). Crude oil - accounting for 37 percent of the world's energy mix - will remain the world's most important global energy source, thanks to the expansion of the transport sector (whose share of total oil consumption will rise from 47 to about 55 percent).
- Since 2000, China alone has accounted for 40 percent of the world's crude oil demand. China has already replaced the United States as the centre of the world's raw material's market and as a price setter for these industrial raw materials. In 2003, China already displaced Japan as the world's second largest energy consumer and oil importer after the United States, and surpassed Tokyo as the third largest exporter (after the U.S. and Germany).

[1] This analysis is based on numerous publications of the author on the EUs, Russian and Chinese/Asian energy security as well as their implications for their foreign and security policies, including F. Umbach, "Globale Energiesicherheit. Strategische Herausforderung für die europäische und deutsche Außenpolitik" (("Global Energy Security: Strategic Challenges for the European and German Foreign and Security Policies"), (Munich: Oldenburg Verlag, 2003), 328 pp. (in German) and idem, „Global Energy Supply und Geopolitical Challenges", in: Francois Godement/Francoise Nicolas/Taizo Yakusiji (Eds.), Asia and Europe—Cooperating for Energy Security, A CAEC Task Force Report, Paris 2004, pp. 137-168 and idem, "Europe's Energy Non-Policy", Transatlantic Internationale Politik 4/2004, pp. 52-60.

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- The economic rise of Asia (above all China and India) has not only created an enormous regional energy demand, it also has raised countless foreign and security policy questions for both regional and global stability.
- With China's growing hunger for energy resources and industrial raw materials has come a much more pro-active foreign and security policy, both regionally and globaly. Beijing's import dependencies (energy and raw materials) have numerous consequences for its foreign, security and defense policies. Present policies show this in regard to Iran's ambivalent nuclear program; China's effort to keep this issue out of the UN Security Council is an example.
- The recent Russian-Ukrainian gas conflict has also put Russia's reputation as a reliable energy supplier and partner for the EU into question. That raises important issues regarding Europe's future energy supply security in general and its energy partnership with Russia in particular.

Deficiencies in global energy systems, failing governments in oil and gas producing countries, indeed, crises of any kind in countries and regions outside of Europe—all these things will increasingly affect Europe's politico-economic stability as the global market for energy tightens.

The following analysis will give an overview of the energy and security challenges related to the role of China and Russia in global energy stability, including the implications of their foreign and security policies for the EU and transatlantic relations. It will begin with an analysis of the EU's growing energy security challenges.

The EU's Energy Security Dilemma

Deficiencies in global energy systems, failing governments in oil and gas producing countries, indeed, crises of any kind in countries and regions outside of Europe—all these things will increasingly affect Europe's politico-economic stability as the global market for energy tightens. Although renewable energies and new technologies (such as the fuel cell) are becoming more important and energy efficiency will be increased, they will be unable to contribute much to the global energy supply until 2025/2030.

The present crisis of rising demand for energy in emerging economies like China and India comes with the doubling of oil prices since 2003—and mounting uncertainties about threats of terrorism, how long oil and gas reserves will last, and what kind of capacity is really going to be available on the global market. In this respect, the present global energy and supply crisis is very different from past ones. Thus far, however, the 25 EU member states have failed to forge a coherent European energy security strategy that envisages a clear response to the growing risks of oil and gas dependency over time.

Table 1: World Primary Energy Demand 1971-2030

	1971	**2003**	**2010**	**2020**	**2030**	**2003-2030***
Coal	1439	2582	2860	3301	3724	1.4 percent
Oil	2446	3785	4431	5036	5546	1.4 percent
Gas	895	2244	2660	3338	3942	2.1 percent
Nuclear	29	687	779	778	767	0.4 percent
Hydro	104	227	278	323	368	1.8 percent
Biomass and waste	683	1143	1273	1454	1653	1.4 percent
Other renewables	4	54	107	172	272	6.2 percent
Total	**5600**	**10723**	**12389**	**14402**	**16271**	**1.6 percent**

*Average annual growth rate.
Source: IEA, 'World Energy Outlook 2005', Paris 2005, here p. 82.

Over the past decade or two, the energy policies of the EU and its member states have been increasingly determined by market forces and a separation of energy questions from political factors and strategic developments. Ultimately, energy policies have been left to the industry. Their business interests, however, are primarily guided by short-term economic benefits in an increasingly competitive environment. At the same time, a mid-and long-term national interest in energy supply security has been neglected by both energy companies and national governments. In addition, the privatization of the gas sector, in which new companies emerge, means there will be no single party that will assume overall responsibility for the security of gas supply. Therefore, the organization of security for oil and gas supplies can no longer be entrusted solely to the industry at a time when other regions and new/old players like China and India are already pursuing aggressive national strategies determined by geopolitical considerations (including Russia and many OPEC countries) rather than relying on the "invisibile hand" of market forces. Whereas this separation of economics from politics has made sense for the internal EU market due to the existing common norms and understandings of the overall importance of market forces, energy policies determined outside of Europe are more than ever defined by those strategic and geopolitical interests of national foreign and security policies (particularly in Russia, China, OPEC-countries, and others).

Over the past decade or two, the energy policies of the EU and its member states have been increasingly determined by market forces and a separation of energy questions from political factors and strategic developments.

In contrast to many EU member states (such as Germany), the *EU-Commissioner for Transport and Energy* and foreign and security experts of the EU have intensified their analysis of the EU's future energy and supply security. "Energy security" finds mention in the EU's first global "*European Security Strategy*"—the most important document of its CFSP. In 2004 the British Foreign and Commonwealth Office published an international "*Energy Strategy*" with a specific foreign policy view, while the foreign ministry of the Netherlands completed a similar internal policy document last summer. These new documents also highlight the differences between the various national energy policies and priorities of the EU member states, which makes any coherent international energy security strategy of the EU difficult to implement until it acquires a supranational authority to do so. Despite a constitutional draft that gave the EU more power and influence in the realm of energy policies, its, this remains a field where member states and the *EU Commission* have to share their competence and authority.

Without an EU constitution in place, the national differences in energy policies and strategies increasingly threaten political cohesion, thereby undermining the EU's evolving CFSP. Although the EU has established its own energy partnership with Russia, for instance, many new EU member states and even France and Great Britain have voiced criticisms or expressed their concerns about the ever-growing energy dependence of Germany on Russia—this may have unwanted implications for their own energy, foreign and security policies. The controversial discussions of a new underwater Baltic gas pipeline (North European Gas Pipeline - NEGP) from Russia to Germany and the insufficient German consultation of Poland and the Baltic states, for instance, during the Schroeder-era have demonstrated again the unilateralist tendencies in European energy policies and the lack of a common and coherent EU energy security strategy. Those policies, however, are extremely shortsighted because they also undermine the EU's CFSP and ignore the lesson that any individual EU member state is too weak to establish itself as a strategic actor in the context of a growing energy resource competition vis-à-vis China, Russia, India, Japan and the OPEC. In this light, the British Prime Minister Tony Blair had already demanded a common EU energy policy in October 2005, arguing in the European Parliament:

> „For far too long we have been in the situation where, in a haphazard and random way energy needs and energy priorities are simply determined in each country according to the needs, but without any sense of the collective power we could have in Europe if we were prepared to pool our energy and our resources."

Although energy questions dominated the negotiations leading up to the treaties of Paris (1951) and Rome (1957), the specific institutional provisions were made just for coal and nuclear industries

(leading to the *EURATOM* treaty in 1957). In regard to oil, gas and renewable energy sources, each EU member is free to determine their own national energy policies.

EU members possess only about 0.6 percent of the world's proven oil reserves, 2.0 percent of the global gas reserves and, at least, 7.3 percent of proven coal reserves. In 2001, the EU produced 4.1 percent of the world's crude oil, 9 percent of global natural gas, and 11 percent of the world's coal. With its eastward extension, the EU was able to increase its coal reserves substantially (by 41 percent), but not its oil and gas reserves. In 2002, the EU accounted for 16 percent of world energy consumption with just 6 percent of the world's population. In 2001, oil was still the dominant fuel for 43 percent of total EU energy consumption, followed by gas at 23 percent. It imported 27.5 percent of its oil demand from Eastern Europe (mainly Russia), 24.6 percent from the Middle East, 20.5 percent from Africa and 19.95 percent from Norway.

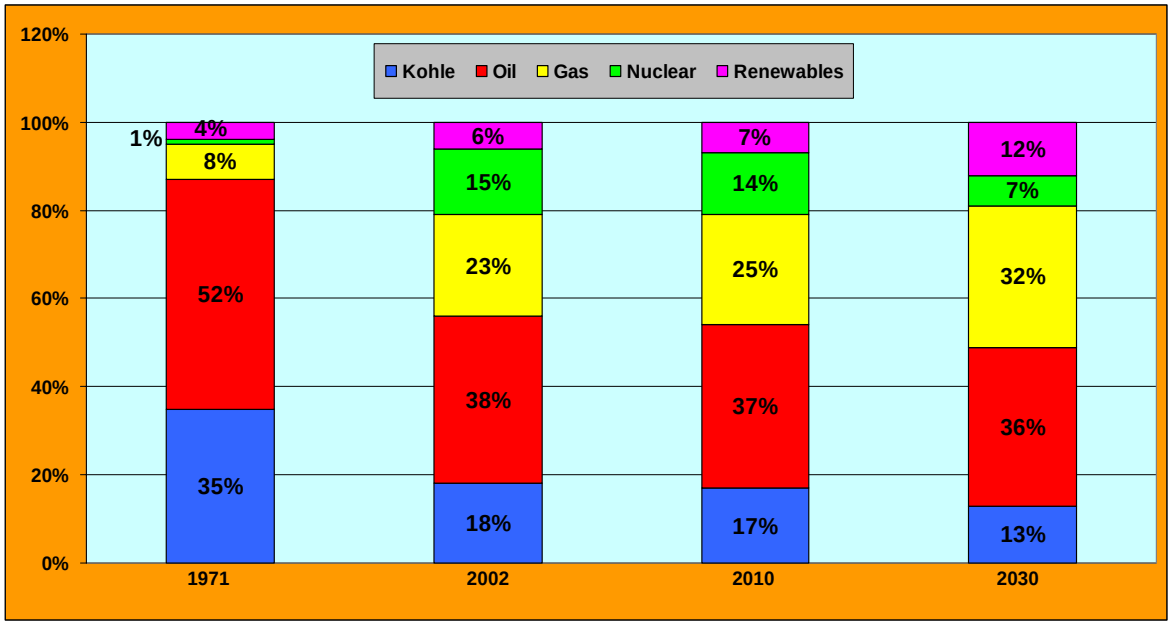
Table 2: EU - Primary Energy Demand 1971-2030 (Mtoe)

	1971	**2002**	**2010**	**2030**	**2003-2030***
Coal	426	303	307	274	-0.4 percent
Oil	633	648	687	743	0.5 percent
Gas	93	389	468	649	1.8 percent
Nuclear	13	251	251	146	-1.9 percent
Hydro	20	26	30	33	0.8 percent
Biomass and waste	25	65	84	147	3.0 percent
Other renewables	2	8	21	57	7.2 percent
Total	**1211**	**1690**	**1848**	**2048**	**0.7 percent**

*Average annual rate of growth.
Source: IEA, 'World Energy Outlook 2004', Paris 2004, Table 8.3, p. 251.

Gas will make up most future new capacity, while the number of oil and solid-fuel power stations will continue to decline. With the EU's enlargement policies bringing in new East European countries, Europe's energy dependence will reach even more worrying proportions. Natural gas imports, for instance, may rise from 60 percent to 90 percent and oil from 90 percent to 94 percent. Thus the EU's long-term strategy for energy supply security has to assure uninterrupted physical availability of energy products on the market, at a price which is affordable for all private and industrial consumers, while at the same time balancing environmental concerns - an even more important objective in the light of the *Kyoto-protocol*.

Table 3: EU - Fuel Shares in Primary Energy Demand 1971-2030



Source: IEA, 'World Energy Outlook 2004', Paris 2004, Figure 8.4, S. 252.

Moreover, the expansion of natural gas as an environmentally clean energy source will also play a very important role in the next two decades for the EU member states. In this regard, the EU and Russia (with its 48 trillion cubic meters of reserves) declared an “energy partnership” in October 2000. EU gas consumption is expected to increase from 370 billion cubic meter (bcm) up to 605-820 bcm. Based on comparable calculations, the *IEA*, for instance, projected a greater increase of the EU's natural gas imports from 49 percent in 2002 to over 81 percent - compared with the *European Commission* (70 percent) - until 2020/2030. The share of gas in total primary demand will rise from 23 percent at present to 32 percent in 2030. In the future, it is expected that a growing share of EU gas imports will be shipped as LNG.

The enlarged European Union borders on the main oil and gas producing areas such as Russia, Caspian Sea and North Africa, and with a decreasing distance also the Middle East and the Persian Gulf. Against this background, the EU has become more pro-active in order to widen and deepen its energy dialogues with neighboring countries and regions. With external dependence on imports forecast to grow steadily, the EU has started to integrate energy aspects into its CFSP and relations with third countries. Despite being a major player on the international energy market, the EU has recognized that it would remain a political dwarf on the global stage if the member states keep the upper hand on energy and foreign policies. Hence the European Commission is seeking to intensify relations with major producer and consumer countries, notably Russia and the countries of the Caspian Basin, the Mediterranean region, Norway, Ukraine and even beyond, in order to diversify the EU's future oil and gas supply networks. It has also expanded its energy discussions with the main consumer countries, such as the U.S.A., China and Japan. However, until the early summer of 2005, the EU lacked an important institutionalized dialogue forum with the OPEC countries and particularly the Persian Gulf States such as Saudi Arabia. But in 2005, the first two meetings took place, and individual bilateral dialogues between the European Commission and the six members of the Golf Cooperation Council have started.

China's Energy Insecurity and the Implications for its Foreign and Security Policies

The energy demand of the People's Republic of China as the world's most populous country will have a long-term influence on regional and global energy supplies as well as manifold effects upon Beijing's foreign and security policy, regional stability in Northeast, South and Central Asia and Beijing's relations with the United States and Europe. With its 1.3 billion inhabitants, China is already the world's second-largest consumer of primary energy (accounting for more than 10 percent of the global primary energy demand), the third-largest energy producer and after the United States, the largest contributor to global carbon dioxide (CO_2) emissions. In 2003, China imported 91 million tons (mt) of crude oil—31 percent more than in 2002. At present, it depends on imports for almost 50 percent of its oil consumption; this may rise to 74 percent by 2030 (according to IEA forecasts).

China is a key player in world energy markets and one of the fastest growing economies in the world,. China's anticipated annual economic growth of around 4.8 percent will drive up China's energy demand, though on a lower scale (around 2.7 percent). China's oil demand will rise by 40 percent until 2030, due to vigorous growth in the transport sector. With a projected 3 percent annual increase in primary oil demand, China's oil consumption of 5 mb/d in 2001 may more than double by 2025 to 12.8 mb/d, with net imports of 9.4 mb/d. According to the *IEA's* projections, net oil imports will rise from 1.7 mb/d in 2001 to 4.2 mb/d in 2010, around 8 mb/d and 10 mb/d in 2030—almost equivalent of those of the United States in 2000, the present total crude oil production of Saudi Arabia as the largest oil producer in the world and more than the projected net imports of Japan, South Korea, Australia and New Zealand combined.

Energy experts are always worried about price increases, whether sudden or steady. At the same time, some forces will work to mitigate the price impact of the massive increase in oil consumption out of China and East Asia: increased global oil production, the increasing market orientation of national energy policy including privatization and deregulation, more efficient package-switched distribution of energy, conservation technologies and policies. Energy security is also dependent on non-market forces. It depends not least of all on the policies of the states concerned and the choice of national strategies for energy security. This is especially true of the Asia-Pacific region, where 60-70 percent of all crude oil imports are still arranged by contracts with state-owned or semi-state controlled international Asian companies. These contracts are determined not only by economic factors, but also by strategic aspects of the foreign and security policy of the individual country. Given the new energy policy dependencies in the early 1990s, Chinese foreign and security policy had to deal with regions and countries that until then had played either no or only a secondary role in its traditional foreign policy. For that reason, the possibility of greater economic and political rivalry, in particular with Japan, India, the United States and, in the medium and long-term, Russia (in Central Asia), for shrinking global oil reserves cannot be excluded.

Since early 1997, China has shown a policy of demonstrative activity in securing of new sources of energy. In 1997 alone, *the Chinese National Petroleum Corporation* (*CNPC*) completed no less than 18 international petroleum and petrochemical projects with a contract value of around USD 750 million. These included the purchase of foreign oil companies (or acquisition of major stakes in the companies), pipeline projects (in Turkmenistan and Thailand) and the construction of refineries and depots abroad. In addition, the PRC is also participating in the development of oil fields in Russia, Pakistan, Kazakhstan, Indonesia, Egypt, Ecuador, Venezuela, Argentina, Iran and Sudan. By October 1997, China had already concluded 126 contracts and agreements with a value of US$5.38 billion, signed with 67 companies from 18 countries. In 2002, China controlled more than 2.72 billion barrels of oil reserves outside its own territory by means of take-overs and international alliances.

Although China's government plans to launch a new round of exploration projects inside China to reduce the country's growing dependence on foreign energy resources, its main focus now is on gaining more overseas drilling rights for Chinese companies. These steps present new risks for China's future oil security. Nonetheless, Chinese companies have stepped up their investment abroad to acquire direct control or partial rights in some of the world's potential oil fields. Beijing has forged closer ties with almost all continents. It has become much more pro-active in Africa (Sudan,

Chad, Angola), the Middle East (Saudi Arabia, Iran, Algeria) and even Latin America (Bolivia, Venezuela, Ecuador, Columbia, Peru and Brazil). Despite the fact that China has recently secured new supplies of oil and gas resources with Australia and Indonesia, the Persian Gulf region has become steadily more important not only for the energy policies of China and the other Asian states, but also for their national foreign and security policies. At present Saudi Arabia accounts for some 16 percent of China's oil imports, while Iran contributes 14-15 percent. In 2004, China signed a preliminary $70 billion contract to buy Iranian oil and natural gas, whereas India at the beginning of 2005 also completed a $40 billion gas deal to import 7.5mt of LNG annually over a 25-year period.

The increasingly global orientation of Chinese foreign and security policy toward the Persian Gulf, Africa and even Latin America Since the mid-1990s stems from China's energy requirements and rapidly increasing imports of oil and gas from countries outside the Asia-Pacific region. All these Chinese diplomatic activities in the energy field have produced an economic-security nexus that is determined by the most fundamental core interest of Beijing's political leadership: economic growth and domestic stability in order to ensure regime survival. However, these unilateral energy-security strategies are undermining multilateral and regional co-operation and may fuel already existing strategic rivalries such as with Japan, India and the United States. Nonetheless, Europe has so far failed to heed and analyse these economic and political interdependencies and their geo-political implications for China's foreign and security policies, although they raise numerous challenges not only for the United States, but also for the European Union.

As Chinese energy and foreign policy experts have admitted, China had always played a rather passive diplomatic role in the Middle East, declaring obvious platitudes about seeking peace and stability, but in reality not really caring too much about regional stability. Now China has a lot at stake and pays much closer attention to the strategic developments in this region. This is all the truer because China's energy policies and "*oil diplomacy*" continue to give bilateral relations clear priority over multi-lateral strategies and solutions designed to safeguard its energy supply. However, at the start of the 21st Century, these are utterly inadequate to deal with the countless challenges that the process of globalization has created for international trade, regional conflict management or international efforts in the field of arms control policy and non-proliferation measures for weapons of mass destruction. Both the Middle East and Central Asia are confronted with countless internal and regional instabilities that could have a strong negative impact on the reliability of regional and global energy supplies. Moreover, China could find itself exposed to growing political pressure from the oil- and gas-exporting states in the Middle East. This political pressure could result in either greater Chinese arms exports, including sensitive dual-use goods and technologies, or to concessions by Beijing on other political issues that run counter to Western and EU policies and long-term strategic interests such as in the case of the Iran. Chinese support for the Russian and French positions on UN sanctions and objections to military action against Iraq, Western policy toward Iran and problematic arms exports to Teheran and other Gulf states (including ballistic missiles) in the 1990s have already demonstrated this problem.

Russia—A Reliable Energy Partner for the EU and the West?

Russia seems to be the logical energy partner for the EU: It enjoys the world's largest natural gas reserves, the second largest coal reserves, the eighth largest oil reserves; it is already the world's largest exporter of natural gas, the second largest oil exporter (only behind Saudi Arabia) and the third largest energy consumer. Given the political instabilities in the Middle East, the natural solution for Germany and the rest of the EU seems to be to expand imports of oil and natural gas from Russia, as expressed in the European-Russian energy partnership proclaimed in 2000. At first glance, there are indeed a number of reasons (not least the argument of improved political stability) for a drastic escalation of energy imports from Russia, being the EU's fifth largest trading partner (after the United States, Switzerland, China and Japan). In 1999, 45 percent of Russia's total energy exports, 53 percent of its oil exports and 56 percent of its natural gas exports to Europe were delivered to the EU, reflecting mutual economic interdependencies. At present, Gazprom alone supplies 25 percent of the EU's natural gas needs, and the EU buys 85 percent of Russia's oil exports. For modernizing and expanding its energy sector, Russia needs more than $900

billion by the year 2020. In this respect, the EU appears as the perfect modernization partner of Russia. On May 22, 2003 the Russian government released its official '*Energy Strategy to 2003-2020'*, which outlines key objectives, interests and strategies of its energy policies. But it also raises new questions in regard to the future volumes of Russia's oil and gas exports to the EU.

Although Russia has fulfilled its supply obligations under its long-term contracts with the EU since the beginning of the 1980s, Moscow's pipeline plans and policies are not just determined by economic considerations but also by the geopolitical interests of its foreign and security policies. The EU is interested in increasing the future import of Russian oil and gas (rising oil and gas demand until 2020) and thus has often ignored geopolitical dimension of Russia's energy and pipeline policies. Nevertheless, it remains uncertain whether Russia can deliver the needed amounts of oil and gas and whether the EU will not increasingly diversify its oil and gas imports—particularly after the recent Russian-Ukrainian gas conflict and the Yukos-affair. The arrest of *Mikhail Khodorkovsky*, chief executive of the private Russian oil giant *Yukos*, has caused uncertainty regarding the future of reform policies in the Russian energy sector. As the result of the Kremlin's crackdown on Yukos and its policies to increase state control of the energy sector, a sharp decline of Western investment in this sector occurred in 2005. Moreover, the Yukos-case is not unique, but part of an overall re-nationalization concept in Russia's energy industry. However, adding lucrative oil production facilities to Gazprom in an effort to transfer it to one of the world's biggest energy companies, restoring state control (51 percent of the shares of Gazprom), and going to global markets to raise billions in new capital will not likely encourage energy efficiency, combat widespread corruption, promote internal reforms and increase much needed transparency. Consequently, in view of Russia's need for vast direct foreign investment of more than $900 billion, it is highly doubtful whether that country in the next two decades can modernize its own utility industry enough to keep pace with the energy exports that Moscow is planning to make to Europe. Sixty percent of Russia's gas pipelines, for instance, are older than 20 years, which is nearly two-thirds of their projected lifespan. Pipeline capacity is already limited.

Moreover, from the outset of Putin's presidency, international experts have observed a "*creeping re-nationalization*" of Russia's energy policy, albeit Putin has pragmatically welcomed an increase in the financial involvement of Western companies, especially German ones. The controversial decision by Germany's former Chancellor Gerhard Schroeder to accept an appointment with the *North European Gas Pipeline Company (NEGPC)*, a project controlled by *Gazprom* and, therewith, the Kremlin, has highlighted the often naïve views in German political and economic circles on Russia's energy and pipeline policies.

In 1997, before *Putin* was appointed Prime Minister and then elected President, he defended a Candidate of Sciences dissertation ("Mining Raw Materials in the Strategy for Development of the Russian Economy") at the *St. Petersburg Mining Institute*, in which he outlined his views on natural resource policy for Russia. His thesis and his article of 1999 in the institute's journal summarizing his dissertation thesis are fully consistent with his re-nationalization policies of Russia's natural resources sector during the last years. Putin—who sees the demise of the Soviet Union as "the greatest catastrophe of the 20th Century"—views Russia's resource sector and particularly its energy industry as a strong supporter of a "managed democracy" from above. It is to serve not only as key to the nation's economic development, but also Russia's geo-political revival as a new economic-political (energy) superpower—at a time when 66 percent of Russians regret the collapse of the USSR. In his ambitions to use Russia's oil, gas and pipeline industry as the most important instrument of Russian foreign and security policy, the Russian state must exert strategic control over the energy sector; it cannot be left entirely to market forces and strategies. Hence, Putin allowed not only the dismantling of Yukos through a series of legally dubious machinations, he increased the government stake in Gazprom from 38 to 51 percent. He also allowed it to buy Sibneft as Russia's fifth-largest oil company. By having majority control of Gazprom, the state directly controls now 30 percent of Russian oil output. The new "Kreml Inc.", a circle of few confidants of Putin, already controls nine big combines and, therewith, not less than 40 percent of the Russian GDP at the end of 2004. In Putin's view - supported by many "silowiki" in the Kremlin, ministries and the parliament - the EU's increasing dependence on Russia's gas imports and pipelines and European oil and gas sectors owned by Rus-

sian companies may lead to a policy of “silence for gas.” This would be an “oil and gas-fueled Finlandization of Europe.” According to Russian analysts, the wide acquisition of Gazprom stock by the Moscow elite during the last years means that many of the same people who are designing Russia's foreign policy are also the large Gazprom stockholders.

In August 2005, Russia's Foreign Minister Sergej Lavrov, stated that Russia was planning a radical change in its policy vis-à-vis other former Soviet republics and even influential powers such as the United States and the EU. Moscow would no longer tolerate any agreements in which it did not receive economic or political benefits for its oil and gas exports. This demonstrated a new political willingness by the Kremlin to reward the politically loyal (like Belarus or Armenia) by allowing them to enjoy huge subsidies valued in the billions of dollar a year, and to pressure and intimidate the intransigent countries of the former Soviet Union (such as Ukraine, Georgia, Moldova and others), that is, those turning away from Moscow on key foreign policy issues.

The recent energy conflict between Moscow and Kiev (Ukraine imports a third of its energy from Russia) has shown that the Russian government and President Vladimir Putin are prepared not only to use Russian energy to force customers to pay much higher prices almost over night, but also to use it as a foreign policy tool to pressure customers to concede to Moscow's geopolitical ambitions. Shortly before the outbreak of the conflict, Gazprom—controlling 16 percent of the world's known natural gas reserves and carrying 25 percent of the EU's gas supplies as well as 80 percent of Russia's gas exports, transported via pipelines over the Ukrainian territory - took steps in order to ensure its leverage by blocking all other regional producers from providing Ukraine with alternative sources by buying up all of their production itself, such as those of Turkmenistan. The intended gas conflict was also a new attempt by Putin to influence the forthcoming parliamentary elections in Ukraine next March.

Moscow was not so much interested in world market prices, but rather to acquire the Ukrainian pipeline system—especially after Moscow took over the ownership of the Yamal-gas pipeline on the territory of Belarus in December 2005. Gazprom has already tried to buy into the gas-distribution networks in Hungary and Poland to regenerate itself as a great power in Europe and beyond. It has also put immense pressure on the Georgian government to cede control over the gas pipelines that ship gas from Russia to Georgia and beyond to Armenia. Thus both Georgia and Ukraine have opposed any Russian ambitions to take over their pipeline system, which would have consequences for their pro-Western foreign and security policies.

With the Kremlin plan to create a Gas-OPEC from Europe to Asia and the conclusion of different bilateral and individual deals with European companies rather than partnerships, Moscow has also encouraged fierce competition among European companies and states for access to Russian energy assets. For years, Russia has locked European gas companies into long-term contracts, making them critically dependent on Gazprom for many years. This is part of an overall energy and foreign policy doctrine to increase Gazprom's market share in Western Europe (with the focus on Germany) from 26 to 38 percent by 2020. The long-term contracts go far beyond just gas deliveries. By using its monopoly status and political power to dictate the prices, often regardless of previously agreed contracts, Gazprom efforts are directed at controlling the exploration, delivery and sale of gas to many countries in order to lock up these markets, such that these countries cannot turn elsewhere for their energy.

Under these circumstances, it is not surprising that progress on the mutual energy dialogue has been hampered by the two parties´ divergent interpretations of its meaning. While Russia wants EU support to modernize its energy sector and protect its strategic and geopolitical position in Europe through the European Union, the EU has sought the reform and opening of the Russian energy market through market mechanisms and the creation of a positive business climate.

Given their own experiences as weak states vis-à-vis the “big brother,” it is hardly surprising that Poland and the Baltic states have heavily criticized the new German-Russian agreement to build a 1,200 km gas pipeline directly linking them under the Baltic Sea by 2010. Indeed, the German government of Chancellor Gerhard Schroeder did not consult its new EU neighbor states nor did it review and take into account the underlying geopolitical motivations of the Kremlin or the energy,

ecological and security interests of these new EU members. Given the re-nationalization trends in the so-called “strategic sectors” of the Russian economy and particularly in its energy industry, there is no guarantee that Western and even German companies will not find themselves in an analogous position to Yukos. Furthermore, the economic rational behind the project is very questionable, because the costs of this underwater pipeline are 2 to 3 times that of a comparable land pipeline - even if one includes higher transit costs through several countries. Furthermore, there are more economically attractive pipeline options from Central Asia, which would offer a real diversification of pipelines and supply sources and routes, and thus enhance the EU's future energy security.

Conclusions and Perspectives

The EU faces new energy challenges in the coming decades for which it must have an appropriate energy security strategy. Due to the environmental obligations of the *Kyoto-Protocol*, phasing-out nuclear energy programs in important EU member states, and increasing depletion of oil and gas fields in the Northern Sea until 2020, the EU will become much more dependent on oil and gas imports from outside Europe. In addition to Russia, this includes unstable countries and regions in the Middle East, Central Asia and Africa. Despite new energy-saving measures and the promotion of renewable energy sources, oil and gas will remain the primary energy sources through 2025. Therefore, and given the completion of the internal market, the EU and its member states need to take a global view in an age of globalization and growing interdependencies between domestic, external and economic security on one hand, and local, regional and global political as well as socio-economic stability on the other hand. Accordingly, the EU needs to introduce a real global strategy of security of energy supply that is based on a new balance between market and strategic approaches—thereby giving more weight to highly important geopolitical risks, both in a *Common European Energy Policy* (*CEEP*) as well as in the *CFSP*. The EU needs new policy instruments for a *CEEP* and its *CFSP* to assure the global security of energy supplies.

The Western aim of encouraging China's integration into the international global cooperation structures, while insisting, in return, that Beijing abide the same rules as everyone else, will remain the major strategic goal and challenge for the years to come. China's energy policies and the implications for its foreign and security policies will create a particular challenge for transatlantic security cooperation. On the EU side, a more critical discussion of the global efforts of de-nuclearizing Iran in the framework of China's energy and resource diplomacy, for instance, is overdue. Another example is China's and India's attempts to engage “states of concern” (such as Myanmar, Sudan, and Zimbabwe) in order to access their energy resources. Chinese and Indian policies are undermining attempts by the United States and the European Union to isolate these regimes economically and politically. This highlights one of the major challenges and dilemmas of the EU's policies vis-à-vis China in the next decade: To protect long-term EU and Western security interests without driving China into political linkages with pariah states.

The EU needs to introduce a real global strategy of security of energy supply that is based on a new balance between market and strategic approaches—thereby giving more weight to highly important geopolitical risks.

Regardless of the volume of the future Russian energy imports (which also needs to be discussed), the EU-25 will need to diversify its rising oil and gas imports by also looking to other potential energy producers—even those which are seen as politically more unstable. Given their close proximity to an expanded EU-30, rising oil and gas energy imports, the global fight against international terrorism, and proliferation of weapons of mass destruction, the EU is forced to deepen and expand its relations to Central Asian states and countries in the Middle East by pursuing “*strategic partnerships*” and “*strategic dialogues.*” Russia and the Caspian Sea states have the potential to break into some markets in Europe, the United States and Asia, but they cannot replace the Middle East as the world's primary supplier of oil.

In regard to Germany's and the EU's energy partnership with Russia, a more objective, realistic, comprehensive and analytical view of Russia's energy policies is urgently needed - the Merkel coalition government has begun to move in this direction. The EU can no longer overlook Russian use energy resources and pipeline monopolies in the 1990s as a foreign policy instrument towards its

neighbors on the territory of the former USSR and particularly Ukraine. Ukraine is the target of Russia's ambitions to become a new great power based on its energy resources and attendant political influence on the regional and global level. In Putin's view, Russia's energy sector becomes the new Russian source of international power and prestige and part of the global balance of forces. Energy has replaced Russia's once great military power, which is only a shadow of its former myth. Hence the Russian state must play the dominant role in its strategic industries, particularly in its oil and gas sectors. In this context, Gazprom has become the national energy champion and the most important foreign policy instrument. Putin's new energy security doctrine is not only an energy challenge, but also a foreign policy challenge, for transatlantic relations and the EU in particular.

The Russian-Ukrainian gas conflict has called Moscow's reputation into question as a reliable energy partner of Germany and the EU. It was also a clear breach of the spirit if not the letter of the World Trade Organization, which Russia is likely to join in coming months. If Russia follows the present path, it will be part of the problem of global energy insecurity, not part of the solution.

As Russia is hosting the 2006 G-8 Summit, where it wants to discuss Russia's increasing role in global energy security, Moscow faces clear constraints. Russia can not argue persuasively that it wants to play such a role and at the same time to use energy supplies as a foreign policy instrument to pressure Ukraine (meanwhile also Moldova and Bulgaria). Russia can not demonstrate its political desire to have the capacity to inflict real economic pain and political pressure, even towards the EU and the West.

Therefore, the EU needs a constructive discussion about the extent to which it should become dependent on just one energy producer —in the case of Russia, a producer that is not a democracy (though it is more stable than many countries in the Middle East or Central Asia) and is still leveraging energy access, particularly pipeline plans, for its foreign and security policies. These often run contrary to those of its neighbors as well as of many long-term strategic interests of the EU. The renationalization trends are an important prerequisite for Putin's increasingly assertive foreign policies, using its energy policies, exports and pipeline plans as an instrument of political pressure and blackmail in Eurasia.

Therefore, the EU needs to minimize dependency on just one single energy producer, even if a certain energy dependence on Russia is unavoidable. There is really no alternative to an EU-Russia energy partnership. It must also manage its policy better by taking into account the interests not just of its new members (such as Poland) but also of those left outside (i.e., Ukraine and Central Asian states) in order to develop lasting regional stability. The recent Russian-Ukrainian gas conflict has underlined these basic principles: First, importance of a collective EU energy security policy vis-à-vis Russia that moves away from coercion on individual countries to real collaboration and cooperation on an equal status between a politically united EU and a more pragmatic, democratic and market-oriented Russia. Second, the obvious though difficult need to diversify energy supply sources and energy transportation routes.

Vulnerability of Energy Systems and Resulting Need for Transformation

Nikolaus Supersberger

In recent years, questions regarding energy supply have risen on the public agenda, driven by events like Katrina and the resulting shortfalls in fossil fuel production and refining. These questions have also grown in importance because of a sharp increase in energy demand from countries like China, India, but also rapidly growing industrialized countries like the USA. Natural disasters and serious electricity blackouts in a number of countries show how dependent our societies—in industrialized as well as developing countries—are on the constant supply of energy. Ongoing terrorist attacks on facilities of the fossil fuel industry—pipelines, production sites, etc.—also show how fragile our energy infrastructures are, on all levels, from the global to the local.

Characteristics of Modern Energy Systems

The vulnerability of modern energy systems is a function of their complex characteristics. First, heavy use of carbon-rich fossil fuels is one defining feature of today's global energy complex. Oil, coal and natural gas dominate. Low-carbon nuclear fuels and renewable energies play a secondary role. Different energy carriers have different specific infrastructural requirements and implications on system vulnerability. In some cases, supply is secure, in some cases not. In some cases, substitutes are readily available, in others not. The primary energy carrier coal is mainly converted to the secondary energy carriers electricity and heat. The same holds true to a lesser degree for natural gas converted to electricity and heat. Oil is king in the transportation sector; in heating it is also important, whereas in electricity it is not. Renewable energy sources are used for electricity, transportation and heating.

Second, for decades, the energy industry, especially in electricity generation, has used economies of scale, building infrastructures comprised of large generation units and large-scale transmission lines and distribution networks. This is true for the „production“ or “extraction” side of energy. Centralization was the result.

Third, modern energy systems and modern economies need a constant energy supply—no interruptions, 24/7—hence the need for constant *security* of supply. There is nothing more “dangerous” to modern economies than experiencing an unforeseen disruption. Unlike oil, which can easily be stored in tanks, storing electricity is extremely difficult. Technologies for efficient large-scale storage are not on the markets.

Fourth, world energy demand will continue to grow; at least that is the extrapolation of current trends. This is a basic characteristic of the global energy system. (Not that increasing energy consumption is an iron law of development. Energy efficiency, at any rate, grows with development.) In sum, today's global energy system shows strong dependence on:

- Fossil fuels;
- Centralized and large scale structures throughout the supply chains;
- Reliable 24/7 supply;
- Rapidly growing demand.

Fossil energy also shows a number of specific characteristics. The number of relevant oil and gas suppliers is going down, whereas the number of relevant consumers—mostly from the large group of developing countries—is going up. The remaining suppliers are growing more dominant, gaining more market power and more political power. Import dependence is growing, and will grow much

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more in coming decades. Remaining reserves are more expensive to extract. Finally, supply lines cover ever greater distances.

Disruption of Supply and Causes of Vulnerability

The requirement of *constant* supply is *the* major cause of vulnerability. In other words, disruption of supply is the major threat to fossil-fuel-dependent economies. It is the "background noise" that sets the context. Here, there is a difference between disruption of supply (notably terrorism, strikes and political risks) and other causes of vulnerability (import dependence, rapidly rising demand and centralization). The former involve direct interventions in the functioning of the energy systems, the latter the overall structural conditions of these systems.

Terrorism is at the top of list when it comes to disruption of global supply. Iraq shows that infrastructures of oil and gas production make easy targets for terrorist attack. Since the end of the Baathist regime in Baghdad, more than 200 attacks on oil production sites, on pipelines, on hubs, and on port facilities have occurred. This has lead to a significant reduction of oil exports, resulting in an estimated financial loss of about $11 billion for Iraq between June 2003 and May 2005. At times, the export of oil came to a complete stop. Environmental damage due to oil spills alongside pipelines also has costly consequences. Saudi-Arabia spends $1.2—1.5 billion annually for security measures for oil and gas production, transportation and refining facilities.

It seems only a question of time before a major attack on a supertanker succeeds. In October, 2002, terrorists targeted a French tanker off the coast of Yemen. Imagine the catastrophe of a large oil spill. Further imagine an attack not in the open ocean, but at a strategically relevant choke point of tanker transport like the Strait of Hormuz, the Suez Canal or any number of terminals. Sinking a tanker would create a major disruption. This is an extreme scenario, but not an unthinkable one. The number of tanker transports is large (and growing) and security measures have logistical limits. Thousands of oil and gas production wells are decentralized, but the logistics of oil and gas depends on a few central "hubs". These are loading ports, highly frequented shipping routes, refineries, pipelines with capacities of a million barrels per day or more (in the case of natural gas, billions of cubic meters capacity per year) and hubs with storage tanks in areas of high consumption.

The problem of centralized structures is even more apparent in electricity generation: large generation units and transmission lines (high-voltage grid) dominate, offering easy targets for terrorist attacks. That there have not been many such incidents is probably due to the limited effect: modern electricity grids allow failures and malfunctions of power plants to be compensated for by other plants. With nuclear power plants, the issue is not the disruption of electricity supply but the damage caused by radiation.

The widespread blackouts in the USA, Italy, France and other countries in the years 2001 to 2004 revealed another type of vulnerability. In partially liberalized markets, structures with a large degree of centralization are by no means failsafe. Indeed, resilience decreases under these conditions. Large-scaled centralization meant that blackouts were also large-scale. Labor unrest is another cause of disruption to fossil energy supply, giving evidence of how dependent oil supply and oil prices are to small scale disruptions. In 2004 and 2005, strikes in Norway, Nigeria and Venezuela led to price jumps on the global market, although production losses were negligible. The reasons: nervousness among the market players and general insecurity ("what would happen if more strikes reduced global supply?").

The general pattern among terrorist attacks and strikes is that disruptions are often small or negligible on a global scale (with certain exceptions), that they are not centrally coordinated by an organizational body, and that they don't follow an international strategy.

Political Risk: Arising from Unexpected Sources?

The opposite is the case with political risks. The term is often applied to describe the situation in the Middle East. The region is usually seen as politically unstable, constantly threatened by subversion and religious fundamentalism. Some experts do, however, disagree, believing that

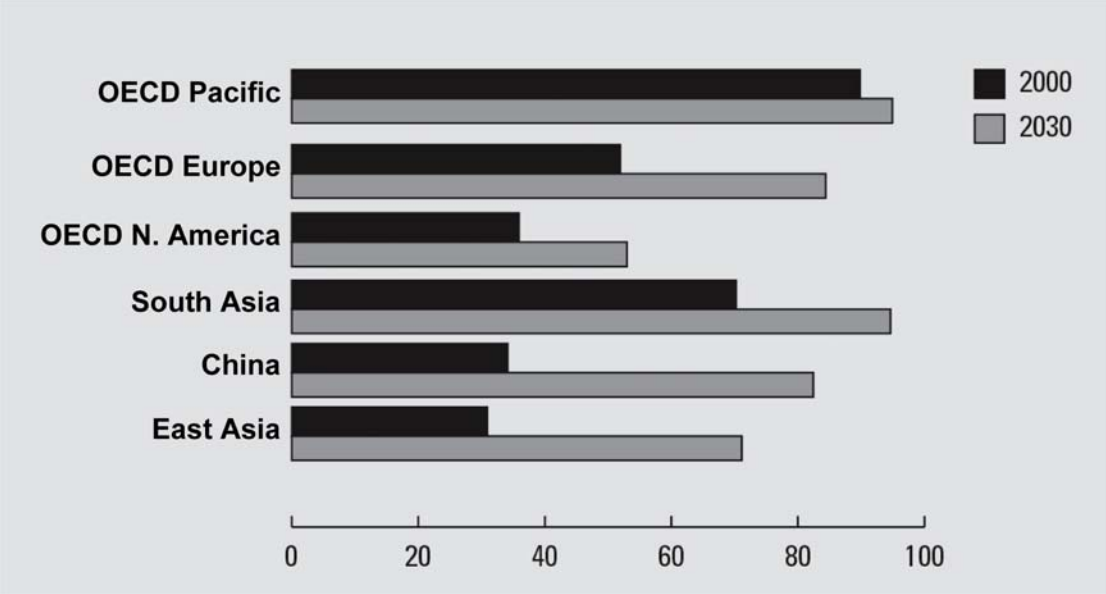
countries in the Middle East are more or less politically stable: they may not be democratically legitimized, but the ruling elites would not be directly threatened by upheaval and revolution. The power of OPEC should not be overestimated. Yes, the world is becoming more dependent on OPEC oil (and gas), and its political power will therefore increase. Yes, huge additional capital flows into OPEC countries occurred in 2004 and 2005. Yes, OPEC countries generally seek to maximize profits—which is a common principle of capitalism. But OPEC is an aggregate of quite different developing countries, each dealing with special challenges like environmental stress and accompanied health risks for their populations, poverty, unemployment, and more. Like the consuming countries depending on oil supply, OPEC countries depend on revenues from oil exports. Extremely high oil prices bear major risks for OPEC countries themselves, among these are promotion of alternatives to fossil fuels and reducing dependence on OPEC. These alternatives have the potential to reduce OPEC power. OPEC´s oil price corridor (keeping prices between US$ 22—28) was an instrument to maintain profit maximization and market share without creating the impression that the eleven countries would blackmail the world with the oil weapon. This instrument will probably not be used by OPEC anymore.

Another setting is a scenario of political overthrow, comparable to the Taliban regime in Afghanistan. What if such a regime came into power in Saudi Arabia, which provides about 15 percent of global oil? In this case the oil weapon could of course be used, and it would probably be in the logic of Islamic fundamentalism to use it, just to harm the economies of "pagans" i.e., the Western societies. However, this is speculation, and more realistic situations are at hand.

The Ukraine gas conflict shows another facet of political risk, and here it becomes obvious that political risk is the link between the disruption of supply and causes of vulnerability. This conflict was symptomatic—a clear example of the kind of challenges the future will bring.

The conflict developed as follows. All eastern European countries are somewhat dependent on Russian natural gas. The same holds true for Western Europe. Russia wanted Ukraine to pay a "world market rate" for Russian natural gas. This position is reasonable, as Ukraine received gas from Russia at a "friendship rate" in the past. Other countries like Belarus still get gas with these conditions. So why does Ukraine now have to pay twice as much than before? Is the answer its pro-Western attitude? This again is speculation. But the point is: can oil and gas be used to put pressure on countries to make them behave in a certain way? Can oil and gas or most notably deprivation of oil and gas, be used to "punish" other countries? These questions sound pretty unscientific to be asked by a scientist. However, one answer is: Yes, oil and gas *can* be used in this way. Import dependence bears—apart from forgone domestic value creation—the risk that independence of decision making on international level is reduced. Import dependence, as a challenge for national energy systems and cause of vulnerability, is a growing global problem. The consumers on the one side increase in number (as developing countries enter the global market and compete for oil and gas) and the consumers increase absolute demand. On the other side production capacities continue to decrease in the major consumer regions; the remaining producers thereby increase their power. Growing demand for oil and shrinking domestic capabilities to meet that demand leads to enhanced international competition for the remaining oil reserves.

Increasing prices have dominated the global energy markets, partly due to short-term supply shortages, partly due to strong growth of demand, partly due to tight production characteristics.



Source: Oil import demand of different world regions in percent of total oil demand. (IEA 2002)

The global natural gas system shows a similar pattern of dependence. New players like China will shape the global gas market. China might import 30 percent of its gas in 2030—up from zero percent in 2000.

Adding Peak Considerations and Substitution of Energy Sources

Increasing prices have dominated the global energy markets, partly due to short-term supply shortages, partly due to strong growth of demand, partly due to tight production characteristics (little spare capacity for oil production). Statements that prices will soon come down are fewer. Most of the relevant non-OPEC oil producers reached production maximum and have entered the stage of production decline, while the competition for remaining reserves gets more aggressive. The hopes are on OPEC to match increasing demand by increasing production. Yet the cartel finds itself in a dilemma: it is expected to increase production, hence market share, but increasing market share is judged by many non-OPEC countries as a threat to global economy, putting the fate of global economy into the hands of such a few countries.

Fossil fuels are finite, non-renewable resources. The statement that oil will last for "another 40 years" at current consumption rate is misleading. Consumption is increasing (so that current consumption as reference is worthless) and, more importantly, it is impossible to produce from an oil field at constant rate until the last recoverable drop is pumped out of the ground. A realistic production profile generally follows a bell shaped curve with a production maximum when about fifty percent of the recoverable oil is produced (the so called depletion mid point), possibly followed by a short plateau. After this *peak production rate*, productivity decreases; the field is then "in decline." This is valid for single oil fields as well as their cumulated number on global scale. The discussion focusing on a static range of fossil fuels is distracting attention from the basic problem: the world will experience supply restrictions long before the world "runs out of oil". In fact, we will never run out of oil—we will simply stop producing oil before we reach this end point because it will not be economic anymore. In the future we will stop production voluntarily, because alternatives will be fully introduced. The crucial point is when demand further increases but supply can not follow. The resulting gap will bestow us soaring, probably exploding oil prices.

We will never run out of oil—we will simply stop producing oil before we reach this end point because it will not be economic anymore.

Searching for substitutes to conventional oil offers numerous opportunities. Not surprisingly it is the traditional energy players—oil and gas producing companies and countries, power industries, various governmental and non-governmental players—that favor substitutes utilizing other sources of

fossil fuels, such as tar sands, heavy and extra heavy oil production, and synthetic fuels from coal and natural gas. The other "branch" of options is comprised of the renewable energy sources like wind, solar energy, biomass, hydrodynamic energy (waves, tides, rivers and storage lakes) and geothermal energy; and last but not least, enhanced energy efficiency and energy saving.

Substitution of fossil fuels by other fossil fuels brings numerous disadvantages: the production processes of all the substitutes need more energy and usually consume more materials, e.g., water, and emit more greenhouse gases. One of the unsolved problems of using tar sands is their severe environmental impact on two sides: local damages due to open-pit mining and significant energy demand for processing and upgrading to synthetic oil, hence increased greenhouse gas emissions (plus emissions of other pollutants). At present, Canadian discussion revolves around whether to use gas to fuel tar sands production (as hitherto) or to sell gas to the United States directly. Substitution of conventional oil by natural gas through gas-to-liquid processes (GTL) is an energy-consuming process with currently low efficiency. The long-term strategic issue of GTL technologies will be that demand for natural gas would increase even faster than it already does, and structural supply restrictions of gas would occur sooner than currently expected. The only way out of this dilemma would be tapping remote gas resources that can not be used for anything else. For coal-to-liquid (CTL), the situation is different: In addition to the energy intensity of the process chain and subsequent increased carbon dioxide emissions (if carbon dioxide capture and storage proves impracticable), the challenge would be to find a socially acceptable way of increasing coal production. In China, which will soon build a large-scale CTL-plant, more than 5000 persons die in coal mines per year.

There is significant debate as to when this production peak for conventional oil, as well as for all hydrocarbons, will occur. Some experts hold the view of an early peak for conventional oil in 2010 or even sooner, other experts speak of a time frame between 2015 and 2020 or later. A minority deny the possibility of a production peak at all. This debate digresses into specific details—and the context gets lost. This context is the low flexibility of our energy systems.

Inflexibility is the major weakness of current energy systems. They are too inert to be able to respond to abrupt changes. Adequate reactions on structural supply restrictions take decades. To recall: the transport systems are almost totally dependent on oil products; electricity generation depends increasingly on natural gas (with a major share still from coal); heat production for industry, commercial and residential uses oil and gas. No serious attempts have been made to alter the situation on a structural basis. It is easier to stick with what you have. Inertia derives from different sources, among them consumer behavior, but also powerful lobby groups playing all their cards to prevent system change, because change means a probable loss of power and profit. On the structural side, inertia results from the long life-time of power plants (up to 50 years), pipelines and other infrastructures. Indeed, inertia is used as an argument for keeping current structures.

Finding substitutes for fossil fuels has never been regarded as an inert process. Replacing conventional oil by non-conventional fuels (see above) has always been judged as a smooth process mainly driven by economic factors. The rationale was that rising oil prices would make fossil alternatives, one after the other, economically feasible. After reaching cost effectiveness, they would contribute to the overall energy supply. The error in reasoning is that economical criteria are not the only influencing factors; the described automaticity only works in more or less narrow confines. Leaving factors like social acceptance and environmental sustainability aside, two other essential determinants were ignored: possible long-term contribution on global or at least national scale, and velocity of dissemination of alternatives. Even companies investing in tar sands believe that tar sands products will only play a marginal role for global supply, and this is due to non-economic reasons. The velocity of market introduction of alternatives depends on the time required to build up significant production capacities, on necessary new infrastructures, long planning periods for large scale facilities (e.g. power plants), complex research and development tasks, and restrictions of non-energetic resources essential to certain technologies.

The previous analysis focused on the *vulnerability* of energy systems. In sum:

1) Current energy systems are intrinsically vulnerable. The structure of the systems themselves causes this vulnerability; thus only the alteration of these structures can mitigate the problem.
2) The current systems are dead ends as they are rooted in the depletion of exhaustible resources.
3) Rapidly growing import dependence is part of the problem.
4) The large degree of centralization (e. g., in electricity generation) is another.
5) Global energy demand increases, and new players, especially among the developing countries, start to claim a larger share of the global energy supply.
6) Competition for energy resources might lead to violent conflicts.

Transformation of the Energy System as Prerequisite for Future Risk Minimization

We are living with energy infrastructures in critical condition. Built without considering resource limitations and complex relationships between diverse players, they are now less able to meet the needs of modern societies. For the long-run, security of supply without harming social (!) and environmental contexts can no longer be guaranteed.

There are two pathways to deal with the challenge of rising energy insecurity, increasing vulnerabilities and secondary effects of fossil energy use (climate-change refugees). The first is coping with the effects and choosing ever more drastic measures to keep control. As a last resort, military force would be used, be it for securing supply lines, be it as an instrument of political pressure, or be it for gaining access to fossil fuel by force. The risks will not vanish with military involvement. They can only be reduced to a limited degree. The question arises how fossil-based centralized energy structures can fit into a setting of increasing global security risks.

The second pathway and a possible way out of the dilemma of ever increasing risks is a far-reaching transformation of our supply and demand structures. This should be the major task of the coming decades, aiming for security of energy supply and general energy security. However, depending on the different players and their mindsets, we often get small pieces of a strategy without broader context, with many players driven by all possible motivations but long-sighted security. This is valid for Germany as well as the European Union: Even if there are success stories, a concise and coherent long-term energy strategy is missing. A first framework for such a strategy should include the following elements:

1) Reduction of relative (and absolute) import dependence to an “acceptable” level through development of domestic energy sources. The aim would be to regain control over national energy supply and to minimize susceptibility to political pressure from supplier countries;
2) Decentralization of the energy system, especially the generation of electricity;
3) Reduction of absolute energy demand by introduction of strong energy efficiency measures;
4) Development of a new understanding of international cooperation in the field of energy supply.

Whatever the nature of the specific substitutes, the process of far-reaching transformation will take 20 to 30 years. Imagine a rather early oil production peak, say in 2015; natural gas following about twenty years later. What would happen? This peak with subsequent decline will aggravate the described situation: Competition for cheap oil will give way to competition for oil *at all*. Economies, hence countries, will become much more vulnerable to (political) pressure from producer countries. The desperate need for oil could lead nations to deploy military forces to open access to oil sources. Nations not using such extreme measures will be left empty-handed. Wars for resources have happened (albeit for other reasons than securing supply, e.g., the Biafra-war in the 1960s and in parts the first Gulf War between Iraq and Iran 1980-88), and they could happen again, this time for secur-

ing supply. The inertia of our energy systems excludes quick reactions. Nevertheless, the longer the delay, the worse will be the consequences of this structural production decline.

Options for System Transformation

Decentralization, reduction of vulnerability to external and intrinsic risks, reduction of import dependence and environmental protection are the four sides of the energy tetrahedron.

Germany is a good example of an industrialized country characterized by high energy demand and high energy-import dependence. Reduction of import dependence needs to stress use of domestic energy sources. In Germany, different types of coal and renewable energies can be used, whereas oil and gas are not available in significant amounts. Coal provides about 25 percent of total energy demand, oil products and natural gas, 36 and 22 percent, nuclear and renewable energies, 13 and 4 percent, respectively. More than 90 percent of consumed oil is imported, more than 80 percent of natural gas (mainly from Russia), 100 percent of nuclear fuels. Only hard coal and lignite are produced domestically (but more than half of hard coal demand is provided by imports). Renewable energies are also domestically produced.

Although energy intensity (energy used per unit GDP) in Germany is low compared to world average, many options for further reduction of energy consumption remain: be it in household appliances, insulation of buildings, efficient vehicles; be it in energy saving by changing individual behavior, material efficiency and much more. Therefore energy efficiency can contribute significantly to the reduction of total energy consumption and reduction of absolute import dependence: not using energy means not having to import it. Benefits like domestic value creation and technology development (creation of export markets) are also important. Widely achieved energy efficiency gains will facilitate the transformation of the centralized energy systems to more decentralized ones, because less energy demand will naturally reduce the demand for power generating units, hence making system transformation cheaper than often assumed. But why is decentralization a worthwhile goal? The benefits of small systems are obvious: blackouts will of course still happen, but they will not have severe effects on the economy because they will be limited in dimension. Resilience will increase. A decentralized system will not offer attractive targets for terrorist attacks, like large nuclear power plants do. Small systems are in most cases more efficient (e.g., because no long-distance power lines are necessary). They are cheaper and faster to build. Furthermore, decentralization is a prerequisite for the introduction of renewable energies—and vice versa.

Decentralization, reduction of vulnerability to external and intrinsic risks, reduction of import dependence and environmental protection are the four sides of the energy tetrahedron.

Regrettably, the strategic value of renewable energies has gone largely unnoticed. Three reasons explain this:

1) Their image problem—renewables have long been judged (at least until the mid-1990s) as toys for weird environmentalists;
2) An underestimation of their potential to contribute to national energy supply;
3) The belief that renewable energies are way more expensive than fossil fuels.

Numerous studies, projects, and governmental expert commissions (e.g., the *Enquete Commission on Sustainable Energy Supply*, initiated by the German Parliament in 2000) have presented evidence that the potential for renewable energies in combination with energy efficiency measures in Germany is large enough to reduce carbon dioxide emissions by 80 percent until 2050 (the Kyoto target). In other words, there are credible substitutes for fossil fuel. This could be accomplished at acceptable prices and would even be beneficial for the national economy if external costs were included.

Under the premise of increasing vulnerability, the cost regime of different energy types has to be revised: external costs have to be factored into energy prices. This simply means that costs arising from energy use—which are not part of nominal energy prices—are included in energy cost calculations. External costs arising from energy use include expenses for repairing environmental damages

(local and global), for curing negative health effects, but also for increased security efforts throughout the whole supply chain. Internalizing these costs would lead to a price increase—reflecting "real" energy costs. Under these changing price conditions, the market will need to reexamine the available energy options. It will have to recalculate cost effectiveness.

Factoring in external costs, e. g., for electricity, would shift the cost balance in favor of renewables. High oil and gas prices already have made biomass for heat generation in buildings competitive. Wind power, and especially geothermal energy, is of course still more expensive than electricity produced from coal or natural gas. The limited time span of technology development—compared with fossil (and nuclear)–explains the current high cost. Nevertheless, costs are converging. Learning in the renewable sector and increasing fossil fuel prices are reducing the price span between renewables and non-renewables.

The once valid maxim of reliable and cheap energy supply—focusing on the German (domestic) market and that of the European Union—has to be broadened to cover more non-energy aspects, as outlined above. Consequently, apart from current cost differences amongst energy carriers, the relevant issues are: can we afford to pay less for electricity from fossil sources facing increasing security challenges? Is the additional price we pay for the reduction of import dependence too high when each unit of domestically produced energy strengthens national negotiation leverage in politically difficult times and immunizes against pressure from energy suppliers?

Under the premise of increasing vulnerability, the cost regime of different energy types has to be revised: external costs have to be factored into energy prices.

Our traditional energy systems show structural weaknesses—today more than ever. Muddling through with these systems seems only second best in the light of growing national and international insecurities and vulnerabilities. What is required instead is an energy strategy coordinated among all relevant players leading to courageous decisions and concrete steps enabling the transformation to systems intrinsically less vulnerable.

Change and Continuity: Impressions from Berlin

Derek Mix

As the new German chancellor goes to work, the central questions in her country's relationship with the United States are not about what will or will not change from Schröder to Merkel, but rather how to understand the changing parameters of the past decade and a half. German and U.S. interests, perceptions and priorities have never been identical, but were usually similar enough throughout the Cold War, and into the final term of Helmut Kohl, to impart a sense of comfortable predictability to the bilateral relationship. Now, in the post-9/11 world, there is an increasingly palpable sense that Germany and the United States are diverging in their global priorities, and that our perceptions of one another bear a diminishing resemblance to how we think of ourselves.

Viewed from the United States, German foreign policy is an ever more confusing blend of the old principle-based, NATO- and EU-centric identity with a newly found assertiveness in pursuing national interests. Viewed from Germany, the rationale behind many U.S. policies has become impossible to relate to, as the American people appear to embrace an equally unfathomable brand of evangelicalism and conservative politics in growing numbers.

For all this, the significance of divergence need not be overblown by exaggerated perceptions. The bedrock of the relationship remains solid and deep, anchored in our economic interdependence and overwhelmingly shared cultural values. Although the invasion of Iraq inflamed concerns of growing U.S. unilateralism to come, both states remain committed to NATO as the central pillar around which Euro-Atlantic cooperation on security issues revolves. Germany continues to be a key partner to the United States on the ground in Afghanistan, in the Balkans, and in the wider campaign against terrorism. The German military is in the midst of an intense transformation designed to maintain the relevance of its forces alongside their American counterparts in the 21st century security environment. Where we diverge, it is more often than a not a dispute over means, or even strategy, but not over ultimate goals. This is a strong foundation upon which to stand.

There is an increasingly palpable sense that Germany and the United States are diverging in their global priorities, and that our perceptions of one another bear a diminishing resemblance to how we think of ourselves.

But do we face, nevertheless, creeping estrangement made inevitable by a changing world? As we have seen, questions of how to go from “here” to “there” can be dramatically polarizing, even when we agree on where “there” is. And there remains no shortage of such questions to be addressed urgently, starting with how to deal with Iran's nuclear ambitions, how to balance reform and stability in the Greater Middle East, and how best to counter the threat of Islamist terrorism, to name but a few. The danger is that coordinated transatlantic action on these issues will be mired in irresolvable debates over method, hindering joint pursuit of common interests and thus making success less likely. This makes the challenge one of how to transform such irreconcilable differences from contradictory into complementary approaches.

Those who assumed the election of Angela Merkel would be enough to realign U.S. and German worldviews failed to fully appreciate the degree of structural change that has occurred in the past fifteen years. Individual personalities—Gerhard Schröder or George W. Bush—do not adequately explain why Americans and Germans increasingly view the same subject through a different lens. Certainly, some aspects of this phenomenon—attitudes about the use of force, for example—stem from long before the end of the Cold War. In a world freed from the constraints of rigid bipolarity, these factors suddenly became significant, and therefore more noticeable. We have still not grown wholly accustomed to the notion that we may not be able to convince one other to see things our own way when it really matters.

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But dumbfounded Americans must find perspective on how profoundly Germany's circumstances and identity have been in flux since the fall of the Berlin Wall. At the domestic level, the social and economic consequences of reunification have not nearly run their course, as conditions in many eastern regions continue to lag far behind those in the west. Germany's European context too often receives insufficient attention from U.S observers, not allowing for the magnitude of the Maastricht Treaty, the exchange of the deutsch mark for the euro, or the eastward enlargement of the European Union. Any one of these monumental tectonic shifts on its own necessitates a preoccupying process of redefinition and reexamination that cannot be concluded within a matter of a few years. Taken all together, even spread over the course of a decade, such a barrage of events overtakes the ability, from either side of the Atlantic, to accurately comprehend their full import.

These developments are preoccupying enough, to be sure, but there is much more: Germany and Europe do not exist in a vacuum and cannot look internally to the exclusion of the outside world. The Balkan wars of the 1990s served as a rude introduction to the sometimes chaotic and brutal nature of post-Cold War security conditions. Now, in addition to dealing with problematic states such as Iran and North Korea, the members of the Atlantic Alliance must confront a new breed of amorphous non-state actors that have arisen to threaten the liberal values we commonly cherish. On the other side of the coin, globalization has revolutionized the world economy, presenting new challenges, opportunities and threats to national economies. In between, Germany, Europe, and the United States must engage a rising China and an ambiguous Russia while addressing the proliferation of weapons of mass destruction, the spread of deadly diseases, the state of the world's environment, issues of global underdevelopment, poverty, and debt, and a host of other modern conundrums. In a world this complicated, it should come as no surprise, really, that even the best of friends can have different ideas of how to go about things, based on interests and perceptions that cannot possibly be identical.

How, then, are Americans to understand today's Germany? German policy does remain based on the principles that have served it so well since the end of the Second World War. Germany's outlook has also become colored as much by the lessons learned as a member state in the European Union as by its history in NATO and the experiences of its own national history. Political ideas and purposes still drive foreign policy goals. But in a changing world, Germany has found that its interests are changing too, and so must its role. Pragmatism is on the rise. The national interest is increasingly defined in economic terms, as Germans struggle with a self-image suffering from their country's lackluster economic performance in recent years. Economics propel Germany's outreach to China. Successful enterprises such as Airbus are lionized in the national psyche. Energy is unabashedly a strategic national interest, the basis of relations with Russia and Central Asia. Instability in the Middle East is a concern on political grounds, but also admittedly feared for the migrations it could trigger.

So Germany has become a “normal,” if particularly multi-layered, country. Domestic and European introspections are its key priorities. This means getting the national economy growing, enacting structural reforms, lowering unemployment, and diffusing social tensions. The post-constitutional treaty political crisis of the European Union will require German leadership to get integration back on track. The United States would be well served to take more of an interest in how this crisis plays out. Yet, the demands of introspection must not excuse engagement from those international issues deemed, with justification, most urgent by the United States. Europe may well have a keener sense of its limitations, of the finite nature of its resources, and of to what extent international events and developments can be managed. But it must continue to leverage the substantial weight it has as a counterpart to the United States. We will have our legitimate differences of opinion, perception, and interest, and these will at times be extraordinarily difficult to overcome. These must not obscure belief in partnership; there is nowhere else to turn but to one another.

Taking the time and interest to peel beneath the surface, we may be pleasantly reminded of what we have to offer one another.

By and large, these are problems for governments. Meanwhile, as U.S. force realignment drastically reduces the numbers of American troops based in Germany, a main avenue of U.S.-German cultural exchange shrinks. Other existing routes will need to be expanded, and new ones will need to be

opened. This will require dedication and effort. The number of American scholars of German history, politics and culture, of Americans who speak the German language, of Americans with more than a passing acquaintance with Germany, should not be expected to increase. They will remain a small group proportionally, but must not grow too small. The non-governmental paths of exchange we do have, institutionalized or not, take on added significance to the future of our mutual understanding and cooperation. Germans, too, need more opportunities to remember that there is far more diversity and dynamism—that there is far more to like—among the American people and their culture than has been perceived of late. Taking the time and interest to peel beneath the surface, we may be pleasantly reminded of what we have to offer one another.

Security Sector Transformation in the United States

David R. Scruggs

The current Network Centric Warfare transformation of the U.S. military is both deeper and narrower than is commonly reported. Evidence of leaps in U.S. military operational effectiveness can be seen in U.S. combat performance in Afghanistan and Iraq as well as in military support of relief operations in Indonesia, Pakistan and the U.S. Gulf states. At the heart of Network Centric Warfare are the information processing and communication technologies that have revolutionized commercial business. Leveraging these technologies for defense purposes has enabled, and required, much closer relationships among the military Services, supporting Department of Defense (DoD) institutions and the defense industry than at any time in the past 50 years. This new interdependency is being driven by several underlying factors that have much in common with pressures on European MoDs today. Simultaneously, years of debate and conflicting views about the meaning of defense transformation combined with DoD leadership's aggressive promotion of transformational initiatives gives observers the impression that a much broader segment of the U.S. Defense establishment is experiencing profound change than is really the case.

At the heart of Network Centric Warfare are the information processing and communication technologies that have revolutionized commercial business.

Discussion of transformational changes occurring in the non-U.S. and non-military sectors of the U.S. government including the homeland defense (or civil) security sectors has been left aside for the purposes of this paper. The three areas touched on here are the nature of transformation, the underlying factors driving transformation today, and how DoD is transforming itself.

The Nature of Transformation

Military theoreticians and defense practitioners agree that transformation is about changing the status quo. That's about where the agreement ends. Though Secretary of Defense Donald Rumsfeld has made transformation an imperative since he took office in 2001, neither the scope nor depth of change needed to qualify as transformation has been definitively settled. Proponents disagree on the role technology plays in transformation and to what extent changes in supporting and business processes are considered elements of transformation. Opponents of the concept co-opt the term transformation and apply it to programs and processes that produce non-transformational results. Others who may feel threatened by change simply bog down the process in DoD's two million person bureaucracy. What the vast majority of practitioners inside and supporting DoD recognize is that the phrase "transformation" has been misused and overused recently to the point where it has begun to lose its meaning. A brief discussion of the nature of transformation is therefore warranted before discussing the status of transformation in the U.S. today.

There are two main schools of thought on what transformation means to the military: those that identify transformation almost exclusively with a Revolution in Military Affairs; and those that see transformation as the process of adapting the Armed Services broadly to the challenges of a post-Cold War world.[1] The first group is closer to the intellectual roots of defense transformation that date back to the Soviet concept of a Revolution in Technology Affairs in the early 1980s. Andrew Marshall, Director of DoD's Office of Net Assessment, picked up this idea in the early 1990's but expanded its meaning and renamed this phenomenon a Revolution in Military Affairs, or RMA. It is Marshall's definition of a Revolution in Military Affairs that we still use: *the introduction not only*

[1] "From Revolution to Transformation", Ian Roxborough, *Joint Forces Quarterly,* Autumn 2002, p. 68.

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of important new military technologies but also of the tactics and concepts of operations that together create "profound" shifts in warfare advantage.[2]

It is important to note, however that this view pertains almost exclusively to warfighting and is focused primarily at the operational level. There remains a group of RMA advocates that believe transformation is about making the current RMA of Network Centric Warfare a reality. Even Andrew Marshall stated as recently as 2003 that his concept of transformation was about changing only a relatively small part of the force but radically to see what new technologies can really do for us.[3]

The second school of transformation thinkers emerged in the late 1990s. A realization that information technologies allowed a much higher degree of synchronization of forces and supporting activities than ever previously envisioned led strategic thinkers to conclude that organizational and process changes were necessary beyond advancing pure warfighting capabilities. Networking sensors, munitions, logistics and command and control systems became the focus of this group of advocates who began using the phrase transformation to connote a wider range of activities than encompassed under the strict RMA definition Marshall and others were using. The focus of transformation starting after the 1997 Quadrennial Defense Review was to transform the U.S. military to promote its asymmetrical advantages to deter or defeat regional or rogue states. Priority issues included development of very high-tech capabilities geared to information superiority, long-range precision strike and space control.[4] The Bush Administration broadened this definition of transformation to include improved jointness, more expeditionary capabilities, training, personnel, logistics, worldwide basing, and business.[5] In effect, this was an agenda to reconfigure DoD's entire institutional framework for new warfighting methods based around Network Centric Warfare. The attacks of September 11, 2001 and the Afghanistan and Iraqi operations that followed prompted DoD to add countering non-traditional warfare and weapons of mass destruction (WMD) strategies to its list of transformation objectives.

Dramatically increased synchronization of forces and supporting activities require changes in organization and process that go well beyond advancing pure war-fighting capabilities.

Shifting the U.S. military away from a reliance on massed forces to using coordinated speed, agility and precision firepower to achieve its objectives is a common thread running through both the RMA and broader transformation schools of thought. The main difference is the scope of what is included. The view that transformations include RMA's but encompass broader institutional changes is gradually becoming accepted. That the information processing and communication capabilities imbedded in the Network Centric Warfare RMA underlie DoD's broader transformation agenda corroborates this view.

Most analysts also agree that transformation is not the incremental modernization of existing equipment and capabilities.[6] This is where theorists and practitioners part company. It is a judgment call along a sliding scale as to what is just an improvement to a legacy system and what is a transformational new capability. It is also very expensive to replace a whole class of military assets or platforms when a carefully chosen upgrade combined with a new concept of operations results in a completely new capability. It was 1950's era B-52 bombers equipped with LITENING Targeting Pods coordinating with a handful of Special Forces operators on the ground that allowed the U.S. to collapse the Taliban regime in Afghanistan in 2001 with minimal numbers of U.S. troops in-country. To a significant extent, therefore, transformation remains in the eye of the beholder.

Practitioners have another concern that does not appear in most of the transformation literature and that is the role of industry in transformation. Industry has played important roles in both U.S. and European military transformations throughout most of the 19th and 20th centuries. The integration of

[2] Ibid., p.71
[3] "The Marshall Plan", Douglas McGray, *Wired Magazine*, February 2003, Issue 11.02.
[4] "Transforming The American Military", Andrew Krepinevich, Speech given at George Bush School of Government on Sept 1st 1997.
[5] Defense Transformation: Background and Oversight Issues, Ronald O'Rourke, CRS Report for Congress, April 2005, p.6.
[6] Ibid, p.3.

industry into overall military planning proved crucial in both World Wars[7] and during the Cold War. The ownership and structure of industry have been less important over time than a well-integrated method of signaling to industry what the military's evolving needs are and creating an environment where (sometimes rapidly) changing requirements can be accommodated.

When we look at past transformations we see the influence of RMAs that caused identifiable breaks with what came before. Military innovations are transformational when they make existing modes of warfare *obsolete*. Machine guns made Napoleonic tactics and organizations obsolete. Tanks made trench warfare obsolete. Aircraft, aircraft carriers, jet aviation, the atomic bomb, ICBMs and precision guided munitions have all had similar effects in that they too made preexisting warfighting methods obsolete. In each case coordination with industry was necessary to turn RMA technical breakthroughs into full-fledged capabilities.

Each of these cases followed a more or less similar pattern. A significant technology advance led the change. Development of supporting tactics and doctrine took a period of years to coalesce. Finally, procurement and sustainment methods had to be developed to make these systems decisive. The machine gun was introduced in the American Civil War but it took until World War I before it became a key factor on the battlefield. Scale production of guns, ammo and a logistics system to keep the guns supplied were keys to making machine guns viable. Tanks and aircraft were both introduced in World War I but did not become decisive assets until World War II. Big initial gaps between technology and tactics had to be overcome as well as solving major organizational issues of how to develop, integrate and maintain large amounts of complicated machinery in adverse environments before tanks or aircraft could be deployed in useful numbers. For the first time in Army history, the logistics of fuel became paramount (the Navy had faced the coaling and oiling station problem since the switch from sail to steam).

Shifting the U.S. military away from a reliance on massed forces to using coordinated speed, agility and precision firepower to achieve its objectives is a common thread running through both the RMA and broader transformation schools of thought.

The development of precision-guided munitions (PGMs) is a more recent example of this technology/doctrine/procurement-sustainment pattern with even more far-reaching implications. In Operation Desert Storm in 1991 10% of U.S. air and long-range munitions were PGMs. By Operation Iraqi Freedom in 2003, approximately 68% of U.S. air and long-range munitions were PGMs.[8] A critical factor in converting the U.S. military to PGMs was a production cost revolution based on a commercial contracting arrangement between the Air Force and Boeing, the prime contractor.[9] This involved mating existing bomb and mechanical steering technologies with a relatively inexpensive GPS receiver to yield the Joint Direct Attack Munition (JDAM) that can be dropped from a wide variety of U.S. and allied aircraft. Costs for a JDAM today are roughly 25 times cheaper than the costs for a Tomahawk cruise missile in the mid-1980s with similar accuracy.[10] The implications of vastly increased accuracy at significantly decreased costs are still being felt in force structure and in sustainment terms. As planners get closer to converting the targeting equation from number of sorties per target to number of targets per sortie, there will be an inescapable questioning of how many and what types of fighters, bombers and aircraft carriers does DoD really need to accomplish its missions? Regardless of the answers to these questions, they could not even be posed if the DoD's collaboration with industry had not made this capability possible.

Given the above, the nature of transformation can be summed up as follows: an RMA (a profound technological change plus adequately developed tactics and doctrine to exploit the new technology) *plus* defense organizations reconfigured to provide institutional support for the RMA *plus* a robust process to coordinate military needs and industrial efforts. Transformation follows fairly predictable historical patterns that are the result of the interplay between all three of the elements listed.

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[7] "Military Reengineering Between the World Wars", Brett Steele, RAND Corporation, OSD Report 2005,p. 65.
[8] "Precision, The Next Generation", John Turpack, *Air Force Magazine*, Nov. 2003, Vol. 86.
[9] "Acquisition Reform – Inside the Silver Bullet", Dominique Myers, *Acquisition Review Quarterly*, Fall 2002, p. 315.
[10] Author′s calculations based on unit and cost data from http://www.fas.org/man/dod-101/sys/smart/jdam.htm and http://www.fas.org/man/dod-101/sys/smart/bgm-109.htm.

Underlying Factors Driving Transformation Today

Strategic factors guide transformation efforts at the top DoD policy levels. There are, however, four other factors driving transformation in the U.S. military today that have equal or greater influence on ultimate transformation outcomes. These factors are:

1. Rising infrastructure costs
2. Decreasing access to resources (money)
3. Current operations in Iraq and Afghanistan
4. The War on Terror

The first two factors are shared problems with most countries in Europe. These factors were driving transformation in the U.S. even before the Bush Administration made transformation a top defense priority. The latter two factors are more unique to the U.S. with number three shared by the U.K. and number four shared with many European countries but with significantly less urgency on behalf of their ministries of defense than exists within DoD.

Rising infrastructure costs: Infrastructure encompass the three key areas of personnel, equipment costs and the costs of basing – both domestically and overseas. The Military Personnel account is currently the second largest cost category within the DoD budget at $117 billion or 27% of total expenses and has been growing faster than the overall defense budget for the past five years. There has been a 60% increase in personnel expenses since 2000, which equates to a 12% annual growth rate.[11] Part of this increase is caused by a 30,000 increase in end-strength. An even larger part of this increase is caused by rising medical expenses for active, reserve and retired service members. Another part of this increase has been caused by the need to cover extra combat-pay for large numbers of DoD personnel serving in Iraq, Afghanistan and elsewhere since 2001. Combat pay pressures will decrease as deployment levels in Iraq reduce but end-strength and medical care costs are not likely to let up in the near future. As a result, DoD leaders are deeply involved in a reexamination of how to reengineer existing operations and procedures to be done with substantially fewer people. This has both technology and organizational impacts. This also involves a major rethinking of who DoD wants to recruit for the future, who it needs to keep for the present and which uniformed roles it can civilianize either to government civil servants or to contractors.

It is no secret that DoD equipment costs have risen steadily since the end of the Cold War. Both the costs of developing new systems, particularly weapons, and the costs of maintaining existing systems have contributed to this growth. For new systems, total expenditures on R&D and procurement have increased from $94 billion in 2000 to $146 billion in 2004 or 55%. Meanwhile, outlays for maintaining existing equipment have more than doubled over the pasted five years due primarily to increased wear and tear from operations in Iraq and Afghanistan. DoD's traditional methods of dealing with equipment cost increases have been to stretch-out program schedules, to tighten acquisition rules and to ask for more funding from Congress. We are entering a period where none of these methods will likely yield much relief. It is therefore incumbent upon DoD leadership, Congress and industry to find new and sometimes radical new ways to buy and maintain the equipment DoD needs.

DoD is still working off a Cold War overhang of domestic and international bases. As of November 2004, the U.S. military still operates 572,000 facilities on 3,740 sites world-wide encompassing 30 million acres of land.[12] Three-quarters of these bases are on U.S. territory. Germany has the largest U.S. military presence outside of North America with 302 installations.[13] DoD has reduced its domestic base structure by approximately 20% since 1988 through the Base Realignment And Closure (BRAC) process. DoD is currently beginning its fifth round of BRAC adjustments following earlier rounds in 1988, 1991, 1993 and 1995. The U.S. has realized $29 billion in savings from prior

[11] "National Defense Budget Estimates FY06" (Greenbook), Office of Secretary of Defense (Comptroller) Department of Defense, April 2005.
[12] "Base Structure Report: Fiscal Year 2005 Baseline", OSD Deputy Under Secretary of Defense (Installations and Environment), p. 3.
[13] Ibid.

BRAC's and is estimating that about $7 billion in annual savings can accrue from the current round.[14] The Bush Administration is also attempting to rationalize its overseas base structure and bring up to 70,000 service members and 100,000 dependents back to the continental U.S., which equates to about one-sixth of total DoD forward-presence abroad. These changes may not be transformational but they are necessary to create budgetary savings to relieve pressure on other DoD accounts and for strategic reasons to position forces to where they are likely to be used in the future as opposed to where they are now.

Decreasing Access to Resources: Though U.S. defense budgets have increased over 50% since 2000 levels, much of this increase has gone to pay for personnel and current operations with relatively modest amounts to pay for transformational programs. With recent fiscal developments in the U.S. of unexpected hurricane relief and domestic rebuilding costs on top of war cost supplementals and high budget deficits, all departments of the U.S. government are being directed to cut costs – including Defense. DoD is now facing the dilemma of choosing whether to *reset* the current force (fix the current stuff), to *recapitalize* the force (buy newer versions of the current stuff), or to *transform* (rethink our approach and buy different stuff to be used in non-traditional ways). The reality is that DoD leadership will not have the freedom to chose its preferred option (likely transformation) over the others. Congressional, White House, operational and Service institutional pressures are forcing accommodations that are slowing transformational initiatives primarily through the competition for funding. These pressures are also not likely to subside over the near to mid term.

Current Operations in Iraq and Afghanistan: DoD has employed NCW principles of replacing mass with speed, agility and precision from the beginning of both conflicts. Both conflicts, in turn, have put particular strains on the areas of command & control, surveillance, speed of the acquisition system and in-theater logistics. These strains have forced U.S. forces to develop supporting NCW processes and organizations faster than would have been the case in the absence of "hot" operations. Both operations have also forced the DoD to acknowledge the limits of NCW and military power in situations that are inherently political or cultural.

At least three areas of DoD work do meet the criteria for transformational change: technical infrastructure, service organizational alignment, and procurement sourcing practices.

The War on Terror: Transformational pressures in the Global War on Terror are being felt by DoD mostly in the areas of intelligence, surveillance and special operations. The primary hurtle today is determining how to collect, analyze and disseminate defense intelligence both interdepartmentally within the U.S. government and with allies. This is as much an intelligence community cultural bias against sharing as it is a technical problem.[15] This problem is being solved but at an agonizingly slow pace. Surveillance is also an issue as terrorists don't show up well on satellite, or other remote imagery. In other instances we know where suspected terrorists are but our current sensors cannot tell us their intentions, which are heavily contextual in nature. Special operations forces are being expanded to fill this gap in human intelligence but fielding of new forces of this type takes years given the high degree of training involved and the substantial attrition of senior operators to the private sector.[16]

How DoD is Transforming Today

Separating real defense transformation from simple rhetoric will always be hard. As discussed above, determining the degree of change actually occurring is a matter of judgment – not at the extremes but in the middle choices. The middle ground in this regard comprises the substantial number of military programs and organizations that are beneficial to DoD's long-term missions but may not be transformational in the pure sense of the term. Internal DoD constituents have personal and institutional motivations for identifying and meeting new transformation goals regard-

[14] "Military Base Closures: Observations on Prior and Current BRAC Rounds", U.S. Government Accountability Office Report to Congress, May 3, 2005, GAO-05-614.
[15] "Worldwide Terror War Hindered by Secrecy", Dafna Linzer, *Associated Press*, March 28, 2004.
[16] "Forces Under Stress", Harold Kennedy, *National Defense Magazine*, October 2004.

less of whether or not their activities clear the hurdle of "profound" change. Though this practice of over labeling transformation is understandable, it is extremely unhelpful for serious defense analysts.

The key external actors in this debate, Congress and the defense industry, also have vested interests in what is judged transformational. Their input will always stretch the definition of transformation as that designation under the current administration confers eligibility for preferential treatment or funding. Congress provides funding but with a careful eye toward justifying and maintaining jobs, hence votes in home constituencies. The defense industry provides critical expertise, services and equipment but is itself split on the issue of transformation. Portions of the industry have strong interests in new technologies and focus their influence and investments accordingly. Other portions of the defense industry have decades of investments in so-called legacy systems and are loath to quickly abandon them for both common sense and profitability reasons. Multiple actors therefore have multiple reasons for calling their efforts transformational when in fact only a fraction of these – maybe a quarter to two-fifths – truly qualify for that category.

There are at least three areas in which DoD is making concrete strides toward transforming itself that do meet the criteria for transformational change. These areas are technical infrastructure, Service organizational alignment and procurement sourcing practices. All of these areas have either a direct or indirect reliance on the Network Centric Warfare RMA but involve institutional changes deeper than those for strictly battlefield operations. At least two of these changes (technical infrastructure and procurement sourcing) have benefited from a close, although occasionally contentious, relationship with the defense industry.

The first area of significant change is in technical infrastructure. Command and control, surveillance and systems automation have increased by orders of magnitude in the past decade. Command and control is the nexus of Network Centric Operations and may be one of the few areas where reality is matching or exceeding the press hype on this subject. The much discussed Common Operating Picture is actually occurring to a large degree at the tactical, operational and strategic levels in real time today. Starting with the 1st Calvary in Baghdad in the March 2004 to March 2005 timeframe, the Army has the deployed ability to white-board operational maneuvers among commanders scattered over several miles of terrain (in this case Baghdad), while on a secure net, in real time, while on the move.[17] The sensor data available down to the platoon commander level is now fused to include geospatial information systems (GIS) databases, which allows much richer situational awareness than traditional voice and text communications provided.[18]

This creates several operational advantages. Routine command decisions are getting pushed down the chain-of-command. Command staffs are spending less time gathering information and more time analyzing and acting on commanders' decisions. More knowledge is getting passed horizontally across forces versus traditional up across and then down again patterns. This is particularly useful in counterinsurgency operations where passing information quickly is critical. The Secure Internet Protocol Network (SIPRNET) allows officers and NCO's in Iraq and Afghanistan to transmit detailed observations about insurgent tactics and locations within minutes and hours where this type of information used to take days and weeks to be shared fully.[19] Key constraints for users are turning out to be bandwidth and user interfaces both of which are expanding exponentially but still need operational and theater level management.[20]

Surveillance is another area of substantial improvement. The reality of persistent surveillance, even over limited areas, is new and is changing awareness levels and speed of response. The advent of unmanned aerial vehicles (UAVs) has increase battlefield visibility from the theater level with an

[17] "The 1st Cav in Baghdad: Counterinsurgency EBO in Dense Urban Terrain", Patrecia Slaydon Hollis, *FA Journal*, U.S. Army, Sept-Oct 2005 ed., p.7.

[18] "Network Enabled Operations in OIF: Initial Impressions", Prof. Dennis Murphy, Center for Strategic Leadership, U.S. Army War College, March 2005, Vol. 06-05.

[19] Ibid.

[20] Bandwidth constraints are particularly vexing as DoD has increased satellite communications throughput speeds from 99 Megabits per second (99 million bits per second) available in Desert Storm to 3.2 Gigabits per second (3.2 billion bits per seconds) for Operation Iraqi Freedom with much improved performance but little progress toward satisfying total demand: http://www.globalsecurity.org/space/systems/bandwidth.htm.

Air Force GlobalHawk at 60,000 ft. to the squad level with a 5 lb. Marine Corps Dragon Eye at 300 ft.. Combined with existing government and commercial satellites, manned reconnaissance platforms (e.g. U-2s, AWACS, J-STARS, RivetJoint) and manned and unmanned ground sensors persistent awareness can and does occur. Again the only caveat is that sensors tell us what is happening but not why it is happening. Better human intelligence is the key to solving this problem and is an area where Europe has historically had an advantage over the U.S..

Improved automation is a broad technical category with a multitude of applications. The Navy may be the most advanced U.S. Service in this respect as decreased manning has been one of its stated strategic goals for over the past five years. Examples are most evident in new ship designs. The next generation aircraft carrier CVN-21 will drop the ships company by over one-third from the current NIMITZ-Class carrier compliment of 3,200 sailors to 2,400.[21] The new destroyer DD(X) is being designed to run with a crew of 125 verses 340 for a current DDG-51.[22] The recently launched amphibious assault ship LPD-17 has a ship's company of under 400 and is a 40% larger ship than the older LPD-4 it replaces, which carries a compliment of almost 430.[23] This is a sizable swap of capital for labor using automation widely to make up the manning differences. This development is transformational as it materially decreases the logistics footprint needed to service a much leaner fleet. Savings are also expected to accrue from lower operations and maintenance costs to feed and house smaller crews and from lower personnel costs for current manning and future retirement obligations.

Service organizational alignment is primarily an Army phenomenon at present with some Air Force realignments in the near to mid term. The aim of both Services is to shift from being primarily forward garrisoned forces as they are today to being primarily expeditionary forces projected from a continental U.S. base. The Army is making a major change in the way it approaches future operations by breaking itself down from a structure of 10,000 to 16,000 strength divisions to 1,500 to 3,000 strength brigades. This is the biggest change in Army structure in 50 years and a major concession to the view that there are very few BIG wars on the horizon. This is also a deliberate reorganization of Army forces to take advantage of NCW principals of smaller, lighter, agile forces concentrating firepower when needed and then redeploying quickly to meet new challenges. NCW is cumbersome with larger units so these units are being disaggregated.

U.S. ground forces are also transforming their roles by taking a large step to the right of their current missions. This development is highlighted by the deliberations in the current Quadrennial Defense Review. As Special Operations Command takes on more terrorist-hunting responsibilities in the Global War on Terror, the Marines have taken on more traditional special operations efforts of training local militaries and becoming indoctrinated into local cultures and languages. The Army, meanwhile, is preparing to take on some traditional quick-deployment missions of the Marines with its new smaller, lighter brigade-oriented force.

Finally, DoD is making notable changes in the way it provisions itself. The outsourcing of a major portion of its support functions both in and outside its theaters of operations is a major departure from past practices. The in-theater ratio of contractors to uniformed personnel during Operation Desert Storm in 1991 was 1 per 100. The same ratio for Operation Iraqi Freedom during major combat operations in 2003 was 10 per 100. Today, the ratio of contractors to uniformed personnel in Iraq is 35 per 100.[24] Contractors have always provided support to DoD but not on this scale or scope. In 1995, DoD-wide spending on services of all types was $61 billion. By 2004 this amount had grown to over $107 billion or a 75% increase over ten years.[25] The scope of services has also grown from primarily research, equipment services and facilities management a decade ago to in-

[21] Author's interview with Deputy Program Manager, PEO Carriers, Washington Navy Yard, June 11, 2004.
[22] "The Navy's DD(X) Destroyer Program", J. Michael Gilmore, Congressional Budget Office Report to House Armed Services Committee, July 19, 2005, p. 5.
[23] http://www.fas.org/man/dod-101/sys/ship/lpd-17.htm.
[24] "Contractors Deployed on Military Operations: UK Policy and Doctrine", Matthew Uttley, U.S. Army War College, Sept 2005, p. 1.
[25] "Evolution and Structure of the U.S. Federal Professional Services Industry", Pierre Chao, David Scruggs and Guy Ben-Ari, CSIS Report, January 2006.

clude a much larger proportion of professional administrative and information and communication services by 2004.[26] The implications of this can be seen on the ground in Iraq where there are 50,000 contractors today providing everything from personal security for VIPs to food services to logistics to IT installation and support.

The implications of this development for DoD is that it is becoming leaner in terms of fighting capabilities and for the ability to deploy rapidly for non-combat missions. This comes at the price of much greater dependency on the private sector for sustainment. Neither DoD, Congress nor the defense industry are entirely comfortable with this new arrangement yet. This new set of roles and responsibilities raises important questions for all parties. What is an inherently government function, what are the rights of non-combatants supporting combatants on the battlefield and to what degree does DoD have authority over contracted civilians in wartime environments are but a few of the relevant questions that need to be addressed soon to solidify current practices.

In summary, there are many changes occurring in DoD and in the larger U.S. defense establishment that are legitimately transformational. These make up somewhere under half of the changes that are labeled as transformational, however, and identification of many programs and organizations as transformational remains problematic. The one certainty for the future is that underlying pressures driving transformation will not decrease anytime soon. The key U.S. actors of DoD, Congress and the defense industry are now locked in a tighter relationship than perhaps at anytime in the recent past. These three must therefore find new ways to work together constructively if the benefits of the current wave of transformation are to be fully realized.

[26] Ibid.

Security Sector Transformation: Why and How Our National Security Architecture Should be Realigned

Heiko Borchert

Defense transformation is well underway in most countries of the transatlantic community and beyond. This follows from the recognition that today's security environment demands armed forces that are more deployable, more agile and more adaptable. Armed forces need to cope with dynamic developments in theater and they must be more precise in delivering the desired effects. The military is, however, only one instrument of power. As was underlined by operations in the Balkans, Afghanistan, and Iraq, the application of military, diplomatic, and economic power needs to be integrated in comprehensive concepts in order to win the peace. Therefore defense transformation puts particular emphasis on an Effects-Based Approach to Operations (EBAO) that envisages close civil-military interaction to achieve the desired outcome.

Armed forces have gone a long way toward comprehensively redesigning their concepts, capabilities, processes and structures in order to bring them into line with current security challenges. The next stage in the transformation process must be aimed at transferring transformational core principles from service levels to the interagency and political levels. In order to become more effective, the transformation of our security and armed forces requires a more comprehensive transformation of the security sector. Realigning the security apparatus commensurate with the new challenges is a prerequisite to remaining politically relevant. Without security institutions that are able to set up, implement, assess and further develop security strategies that adequately mirror today's and tomorrow's security risks our ability to tackle these challenges will be seriously hampered. Restructuring our national security architecture and enhancing security management should thus become a key task for the transatlantic community.

The application of military, diplomatic, and economic power needs to be integrated within comprehensive concepts in order to win the peace.

The purpose of this paper is to briefly outline the major drivers for security sector transformation and to describe the basic building blocks of this comprehensive institutional reform agenda. Against the background of an interim assessment of how Germany's national security architecture has been adapted in recent years, the paper will conclude by suggesting how transatlantic cooperation could advance the security sector transformation agenda.

Sources of Change

Today's international security environment deviates fundamentally from the past. The core challenge for our security institutions is that existing divisions of responsibility and labor are no longer adequate to deal with new security challenges. They provide neither the necessary degree of inter- and intra-agency coordination, nor do they provide for smooth cooperation between the public security sector and security-relevant non-state actors.

Five important trends make it necessary to transform today's security sector in order to overcome dysfunctional civil-military dichotomies:

- Many of today's risks, such as terrorism and organized crime, are transnational and originate from problems within rather than between states. The rise of non-state actors ready to use force and the failure of state structures in various regions of the globe coincides with the proliferation of weapons of mass destruction and ongoing regional conflicts. Due to the power of globalization and

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modern interdependencies, the consequences of these conflicts can no longer be confined to zones of crisis in distant lands. These conditions blur the distinctions between key concepts of traditional security policy—"domestic" and "foreign", "war" and "peace" as well as "combatants" and "non-combatants" –thus rendering them potentially dysfunctional. As a consequence, existing security institutions and the state's instruments of power need to be transformed to reflect these changes.

Restructuring our national security architecture and enhancing security management should thus become a key task for the transatlantic community.

- Addressing the root causes and the consequences of these new conflicts demands new types of operations. In recent times, stabilization operations have witnessed a shift from combat tasks to policing tasks. While military forces are perfectly suited to accomplish the former, they are less well trained to provide the latter. Police forces could deal with the latter but they are hardly available, being in short supply in most nations that might be ready to contribute. There is thus a need for new operational concepts that help blend civil and military capabilities on the one hand and the integration of non-state actors on the other.

- In the Euro-Atlantic area, the enlarging and the deepening of the European Union brings the need to increase coherence between different policy areas in general and the respective instruments in particular. As the European Security Strategy points out, "none of the new threats is purely military; nor can any be tackled by purely military means. Each requires a mixture of instruments."[1] From an organizational point of view, improved coherence requires processes, structures and instruments that cut across existing institutional boundaries.

- Significant technological progress makes it possible to physically link various security institutions and security forces. Among other things, networking the relevant actors improves joint situational awareness and understanding; it promises to increase transparency; it helps shorten decision-making cycles; it improves the ability to conduct operations rapidly. Nevertheless, the potential for realizing the promise of technology is limited by today's institutional setting.

- Finally, there is a growing trend toward network-based organizations in the public and private sectors. Anne-Marie Slaughter has argued that a new governance model is needed that "assumes disaggregated states in which national government officials interact intensively with one another and adopt codes of best practices and agree on coordinated solutions to common problems."[2] Governments are thus no longer the sole drivers of political processes. Rather they need to interact with a diverse group of stakeholders. This requires the public sector to open its working procedures for third parties to properly integrate them into its own processes. "Governing by network" is the outcome.[3] The same holds true for the corporate sector. The key concept of process and business reengineering as well as the emphasis on cost cutting and just-in-time production have led to a fundamental redesign of most companies. This has integrated suppliers, distributors, clients and even competitors into corporate value chains. As a consequence, the extended enterprise has become more fluid and flexible, but also more dependent and thus more risk-prone. Therefore governments and companies must adopt more holistic "system of systems" approaches to realign their goals with dynamic changes in the relevant environment, the demands of different stakeholders and the organizational architecture required to accomplish their key missions.

Building Blocks

Given the prevalence of a comprehensive understanding of security, the security sector also requires a broader definition. For the purpose of this paper, the national security sector shall encompass the security forces (e.g., armed forces, paramilitary forces, border guards, emergency responders such as police, fire fighters, and emergency medical services) and intelligence services, the respective departments overseeing them, interagency committees and structures (e.g.,

[1] Council of the European Union, European Security Strategy, 15895/03, Brussels, 8 December 2003, p. 9.
[2] Anne-Marie Slaughter, *A New World Order* (Princeton, Oxford: Princeton University Press, 2004), p. 263.
[3] Stephen Goldsmith and William D. Eggers, *Governing by Network. The New Shape of the Public Sector* (Washington, D.C: Brookings Institution Press, 2004.

national security councils), and parliamentary oversight bodies. Although they do not fall under the direct authority of governments, non-state actors play an increasingly important security role and should thus be interpreted as security-relevant third parties with whom governmental security actors need to forge close bonds. Given this broad web of relevant stakeholders, security sector transformation aims at pushing interagency interaction to new levels. This requires a linked-up all-government philosophy to strengthen interagency leadership and new approaches to design security-relevant processes and structures. In sum, security sector transformation builds on the notion of network-centric, effects-based, and capability-driven security governance:

- Network-centric security governance is the conceptual response to the nature of new security risks. This idea builds on the comprehensive understanding of security aimed at preventing crises, combating them once they have escalated, mitigating their impacts, and providing stabilization in their aftermath. To this purpose, network-centric security governance builds on the systematic interlocking of all relevant security sector actors, levels of decision-making and implementation (from the international level within NATO, the EU, and the United Nations to local levels of interaction), security instruments (diplomacy, information, military, law enforcement, economy or DIMLE), and tasks to be accomplished (conflict prevention, crisis management, post-conflict stabilization).
- Given the multi-faceted character of current security challenges, an effects-based approach to operations (EBAO) has become the key philosophy. Effects can be defined as outcomes resulting from the deliberate use of a coordinated set of actions involving all relevant state and non-state capabilities across the DIMLE spectrum. The aim is to shape the behavior of actors and to influence conditions consistent with an overall goal (end-state). In order to create deliberate effects, a systems approach is necessary. Therefore the target to be influenced will be analyzed from various perspectives, thereby paying particular attention to political, military, economic, social, information, and infrastructure aspects (PMESII).
- While network-centric and EBAO define the new philosophy for security governance, capabilities are the means to achieve it. Capabilities can be understood as those competencies that are needed to achieve a defined mission. Rather than simply focusing on the provision of single platforms, today's capabilities-based thinking takes into account the complex mix of doctrine, organization, training, leadership, material, personnel, and infrastructure needed to achieve successful mission outcome. Although capabilities have become the standard currency of armed forces, capabilities-based thinking has hardly made its way beyond defense. This is a problem because the lack of a "common language" for civil and military planners to communicate with each other seriously hinders the implementation of effects-based operations.

Against this background it becomes obvious that the security sector in most countries of the transatlantic community and beyond is in need of serious overhaul. Five aspects can be singled out as most important: Cross-agency management systems, integrated strategies and planning, new organization, joint performance assessment, and cultural change.[4]

Cross-Agency Management Systems

One of the main characteristics of today's challenges is that they ignore existing institutional responsibilities. In some cases, organizational responsibility for the new tasks has yet to be defined, thus rendering these tasks "institutionally homeless."[5] An effects-based approach to security governance requires an all-government enterprise architecture that effectively bridges current organizational stovepipes.[6] Management systems provide for the systematic harmonization of processes, structures

[4] For a similar line of reasoning, see: Martin J. Gorman and Alexander Krongard, "Institutionalizing the Interagency Process. A Goldwater-Nichols Act for the U.S. Government," *Joint Forces Quarterly* 39 (Winter 2005), pp. 51-58.

[5] Ashton B. Carter, "Keeping the Edge. Managing Defense for the Future," in Ashton B. Carter and John P. White (eds.), *Keeping the Edge. Managing Defense for the Future* (Cambridge, London: The MIT Press, 2001), p. 2.

[6] The General Accountability Office, for instance, has clearly underlined the need for cross-agency enterprise architecture in dealing with homeland security. See: *Homeland Security: Agency Plans, Implementation, and Challenges Regarding the National Strategy for Homeland Security,* GAO-05-33 (Washington, D.C.: United States General Accountability Office, 2005).

and instruments. They should be realigned or set up anew thereby encompassing the whole security sector. Most importantly, cross-agency management systems have to foresee the integration of third-party processes or process elements. This is key, for instance, in providing smooth cooperation with defense contractors in order to enable fast integration of new technologies into the armed forces or to provide critical infrastructure protection in tandem with the corporate sector that owns and runs key infrastructure.

Integrated Strategies and Planning

Effects-based thinking is about increasing coherency by integrating the various instruments of state power and non-governmental capabilities. This cannot be done without integrated strategies. Coming up with strategies that are seriously joint and combined, however, is easier said than done.[7] It requires a common understanding of and agreement on the risks and challenges to be met, the tasks to be accomplished and the contributions to be delivered together and by each individual department and service. The definition of integrated security strategies can be eased by cross-agency management systems and by new instruments for early detection, monitoring and management of risks and opportunities. Most importantly, integrated strategies require integrated planning processes and cycles. In practice this means that planning tasks and duties will have to be reallocated. Because of the nature of the security risks, it seems feasible to strengthen long-term planning at the interagency level. This will help forge a common assessment of the challenges and thus facilitate the delineation of specific tasks. Integrated planning is also necessary for integrated security budgeting.

New Organization

Redesigning processes will lead to new organizational structures. Delivering desired effects across various agencies is only possible if traditional hierarchies do not undermine new interagency processes and bodies. Key processes—such as the definition of security sector goals and the allocation of resources (finance, human resources, technology, information and knowledge, and others)—must follow a functional rather than an organizational approach. Changes in financing processes are particularly needed. Integrated security budgets are better than today's compartmentalized agency-specific budgets; they can help rebalance different military and non-military budget categories and thus contribute to smarter security spending.[8] The United Kingdom offers a good example with its Global Conflict Prevention Pool, where the departments of defense, foreign affairs and development assistance all pool parts of their resources and agree on joint strategies. It shows how integrated approaches can work.[9]

Joint Performance Assessment

Value-for-money demands the continuous assessment of any bureaucracy's performance. An integrated approach to security sector governance, however, will require new performance assessment instruments. Every tool that can help increase cost transparency will be of great help, because the preparedness of each department to contribute funds to joint pools will depend on the ability to demonstrate that this approach yields more added value than current instruments. In addition, it is quite obvious that security forces that provide support to other departments, for instance the use of armed forces in disaster relief and consequence management, expect to be reimbursed. This in turn depends on the application of adequate cost accounting tools. Furthermore cost accounting is the key to determining the life-cycle costs of new equipment. Agency-specific information requirements for performance measurement will have to be complemented by new approaches to assess the performance of the whole security sector. In this regard, something like Security Sector Audits could be useful; these would help assess the performance of each department and service, while analyzing the degree

[7] For a very illustrative analysis of the relevant problems, see: Donald Drechsler, "Reconstructing the Interagency Process after Iraq," *The Journal of Strategic Studies* 28:1 (February 2005), pp. 3-30.

[8] *Report of the Task Force on a Unified Security Budget for the United States, 2006* (New York and Washington, D.C.: Institute for Foreign Policy and Center for Defense Information, 2005).

[9] *The Global Conflict Prevention Pool. A joint UK Government approach to reducing conflict* (London: Foreign & Commonwealth Office, 2003).

of cooperation between them. In doing so, modeling and simulation can help identify strengths and weaknesses in interagency interaction.

Cultural Change

Transformation is all about change—from the change in mind-sets to new capabilities, concepts, processes, structures, and instruments. In a truly transformational security sector, the leadership must press for cultural change toward trust, delegation, empowerment, initiative, independence, self-synchronization, and responsibility. Without these changes, effective knowledge management, a key prerequisite of effects-based operations and of greater intelligence effectiveness, will not happen. Cultural change requires strong leadership to overcome resistance and to drive through needed reforms. The key asset to achieve change, however, is the people working in the security sector. As the U.S. General Accountability Office has correctly pointed out in a report on 21st century management challenges for the federal government: "Even though people are critical to any agency's successful transformation, define its culture, develop its knowledge, and are its most important asset, a number of agencies still try to manage this asset with a 'one-size-fits-all' approach."[10] A transformed security sector will require joint and combined training and education, job rotation among the various departments and security-relevant third parties such as NGOs and the corporate sector, interagency career plans and management development as well as promotion and remuneration schemes based on the values outlined above.

Where Do We Stand?

Progress in transforming the security sectors of the transatlantic allies varies from country to country. Whether and to what extent governments embark on the challenging agenda outlined above depends on the readiness of political decision-makers to change existing processes and structures in light of the new challenges. This readiness, in turn, is strongly influenced by national risk assessments, the international level of ambition assumed by national governments and the occurrence of security incidents such as the terrorist attacks in the United States, the United Kingdom and Spain, which might serve as triggers for reform.

An in-depth analysis of what has been done to adapt security sectors in the transatlantic area to cope with new demands is beyond the scope of this paper. However, many countries lack transformation agendas that would mirror the comprehensiveness of defense transformation and that would be necessary to transform the security sector in general and the civilian security sector actors in particular. This is a serious shortfall, which could lead to a vicious dual asymmetry: civilian security instruments and ministries lagging behind the most recent military reform initiatives to improve the effectiveness, deployability, and flexibility of the armed forces. By the same token, diverging views about the possible homeland security role of armed forces could harm transatlantic interoperability and cooperation.

In Germany, three strands of change in foreign and security policy stand out:

- First, transformation of the German *Bundeswehr* is well on track. The 2003 Defense Policy Guidelines and the 2004 Conception of the *Bundeswehr* set out the political foundation for German defense transformation. These documents emphasize the growing international role of Germany's armed forces and the need to provide adequate capabilities. Therefore the new capability profile of the *Bundeswehr* puts a prime focus on command and control, intelligence collection and reconnaissance, mobility, effective engagement, support and sustainability, and survivability and protection. In addition, Germany's armed forces are in the process of being restructured in order to underline the new importance of international contributions. Intervention forces (35,000 personnel) are designed for high intensity multinational operations. Stabilization forces (70,000) cover peace support operations in up to five simultaneous missions in different theatres. Finally, support forces (135,000 personnel) provide assistance to intervention and stabilization forces and

[10] *21st Century Challenges. Reexamining the Base of the Federal Government*, GAO-05-325P (Washington, D.C.: United States General Accountability Office, 2005), p. 69.

maintain the military homebase. In parallel, Germany has assumed leading roles in key transformation areas such as concept development and experimentation and in international operations.

- Second, domestic security has seen a number of changes. New laws and modifications of existing ones have provided a solid basis to fight terrorism. The government approved a new strategy for civil protection. Much more than in the past, the strategy foresees an integrated approach in which federal and state (*Länder*) capabilities and capacities are brought together in a comprehensive way. The traditional dichotomy between the two levels of the German federal state has become less of a barrier to counter-terrorist cooperation. Among the many different organizational changes, the creation of the Common Counterterrorism Center stands out as most important. Without encroaching upon the independence of each institution, the Center brings together analysts from the Federal Intelligence Service (BND), the Federal Criminal Police Office (*Bundeskriminalamt*), the Federal Office for the Protection of the Constitution (*Bundesamt für Verfassungsschutz*) as well as the respective organizations from the *Länder*. In addition, new command and control centers that allow for the joint management of federal and state assets (*Gemeinsames Melde- und Lagezentrum*) as well as military and civilian assets to improve air security (*Nationales Lage- und Führungszentrum Sicherheit im Luftraum*) and maritime security (*Maritimes Sicherheitszentrum*) were established. Finally, a new series of training exercises (Lükex) are testing cooperation among government agencies at federal and state levels and between government and corporate sectors.
- Third, the German government has adopted an Action Plan for Civil Crisis Prevention (*Aktionsplan Zivile Krisenprävention*) that advocates close civil-military interaction across the whole spectrum of crisis prevention, crisis management and post-conflict stabilization. The Action Plan foresees the establishment of a new interagency body to bring together various governmental and non-governmental stakeholders. In addition, civil and military leaders jointly run Germany's Provincial Reconstruction Teams in Afghanistan. The military commander is part of NATO's chain of command, while the civil head reports directly to the Ministry of Foreign Affairs.

A new stage in ongoing transformation activities is needed, one that transfers the conceptual building blocks of defense transformation to the security sector as a whole.

These changes are to be welcomed as they strengthen Germany's ability to cope with new challenges abroad and on the home front. The problems, however, are two-fold: First, many of these changes are agency-driven and thus (mainly) restricted to particular policy areas. The need for serious interagency interaction goes unrecognized. Second, most reform activities focus on improvements at the level of individual departments or below and tend to neglect the need for significantly greater action at the joint strategic interagency level. Although Germany has a kind of national security council called the *Bundessicherheitsrat*[11], the involved actors do not use this body to the degree necessary for truly integrated security strategies.

Where Do We Go from Here?

Defense transformation as embraced by NATO allies demands further changes to German national security architecture if the concept of an Effects-Based Approach to Operations is to be implemented. Defense transformation, although far from being accomplished, has reached a kind of "glass ceiling," defined by military power as only one among many different instruments of power and by the way the authority of most defense ministries is limited to the military instruments. A new stage in ongoing transformation activities is needed, one that transfers the conceptual building blocks of defense transformation to the security sector as a whole. In the EBAO context, the Alliance is attempting to support its members in achieving this outcome. Therefore it would make sense to advance the security sector transformation outlined in this paper as vigorously

[11] Under the leadership of the chancellor, the committee comprises the head of the federal chancellery and the heads of the departments of foreign affairs, defense, finance, the interior, justice, economics and technology and economic cooperation and development.

as defense transformation, because this is the only way to fully unleash to potential of defense transformation.

The NATO community and individual nations should—together with the European Union and other international organizations and non-governmental actors—enter into a serious debate about the impact of transformation on national security decision-making, interagency interaction, and political leadership, intelligence, training and education, and the role of the security and defense industry.

Security Decision-Making, Interagency Interaction, and Political Leadership

The national security apparatus is a product of the national political system. In many cases, national security institutions do not work in a way that best serves the national interest.[12] Caution is thus needed when advocating recommendations for security decision-making reform based on the experience of different countries as the specific cultural environment plays a key role. Nevertheless, those countries involved in the Multinational Experimentation (MNE) series were right to embark on the discussion about national and multinational interagency groups that help implement the EBAO philosophy. In order to provide maximum benefit for security sector transformation, it is important to link the results of these experiments with ongoing discussions about how to adapt national security architectures. The transatlantic community and non-NATO EU members form an important group of states that is diverse enough to provide insights into different security decision-making approaches. A comprehensive dialogue aimed at identifying best practice and collecting lessons learned should look at the following issues:[13]

- Role and composition of national security bodies (advisory vs. executive);
- Processes, structures, methods, and instruments of interagency coordination;
- Pros and cons of integrated vs. centralized national security decision-making;
- Role of individual actors such as national security advisors;
- Integration of intelligence services into the development of national security strategies;
- Role of open source intelligence in meeting national security information requirements;
- Processes, structures, and tools used to involve stakeholders in common relevant operational pictures at all levels of the national security decision-making echelon;
- Role and composition of long-term planning units (such as forecasting or trend-monitoring units) and their involvement in national security strategy-making.

Dealing with these issues ultimately requires answers about how transformation impacts on political leadership. This is a tricky issue as it touches upon the division of power between the executive and legislative branches of government. A 2004 report by the CSIS and the Business Executives for National Security stated that "all 100 senators and no fewer than 412 out of 435 House members" had some degree of oversight over the Department of Homeland Security. Homeland-security issues were being dealt with in 79 committees and subcommittees.[14] The message that comes along with these figures is obvious: The integration of civil and military capabilities in favor of more integrated security strategies in the administrative branch of the government will trigger serious need for reform of parliamentary oversight bodies. While it remains to be seen what institutional solution would best suit national requirements, there can be no doubt that responsibility, which is currently dispersed among various committees, needs to be consolidated and integrated. In a recent speech, German Federal President Horst Köhler suggested the creation of a comprehensive, interagency security committee of the German Bundestag.[15]

[12] Amy Zegart, *Flawed by Design. The Evolution of the CIA, JCS, and NSC* (Stanford: Stanford University Press, 1999):
[13] See also: Susanna Bearne et. al., *National Security Decision-Making and Security Sector Reform* (Cambridge: RAND Europe, 2005).
[14] Untangling the Web: Congressional Oversight and the Department of Homeland Security (Washington, D.C.: Center for Strategic and International Studies and Business Executives for National Security, 2004), p. 2.
[15] See: "Einsatz für Freiheit und Sicherehit," Rede von Bundespräsident Horst Köhler bei der Kommandeurtagung der Bundeswehr, Bonn, 10 October 2005, p. 9.

Most importantly, parliaments should address how to increase budgetary flexibility to provide more financial leeway for transformation. One idea could be capability-based budgeting. In this case, money would be earmarked for capabilities rather than individual platform-based programs. If programs within capability categories need to be changed money remains available and could be shifted to finance other projects. This provides more planning-certainty for commanders and for the industry. At the same time, industry will also need to become more flexible in meeting defense and security capability needs. A recent assessment report of the U.S. defense acquisition system proposed the creation of "acquisition stabilization accounts." These accounts could "mitigate the tendency to stretch programs due to shortfalls in the Department of Defense non-acquisition accounts that ultimately increases the total cost of programs. This will substantially reduce the incidence of 'breaking' programs to solve budget year shortfalls and significantly enhance program funding stability."[16]

The role of parliament is an important issue in situations where the executive seeks to enhance its influence by defining the common relevant operational picture (CROP). Should parliamentarians have access to the CROP? How will they react if they do not get access? Defense transformation builds on modeling and simulation in order to identify the best strategic options before implementing them. Is there a need for modeling and simulation (M&S) to support parliamentary decision-making as well? Beyond advancing the needs of the modeling and simulation industry, could an M&S caucus[17] assist parliamentarians in making smarter investments by using operations research for security and defense budgeting? Today's operations take place in a multinational environment, with national defense and security forces being tightly woven into a net of bi- und multinational partnerships. Against this background, what is the future role of national decision-making with regard to deployments abroad? Is there still a need for national decision-making on every aspect of an international mission or is it possible to replace national decisions, for instance, by a vote of the European Parliament or the NATO Parliamentary Assembly? All these are serious questions that remain unanswered. Raising them in this context might be a first step towards an intensified discussion about political leadership in the era of transformation.

Intelligence Transformation

Since the end of the Cold War, intelligence policy has been in a state of constant change. This is no surprise. The end of traditional inter-state rivalries and the advent of new violent non-state actors have changed the "intelligence business model." Transformation complements ongoing reforms with distinct additional challenges:[18]

- The focus on interagency interaction means that the intelligence community has to serve a series of new clients, most importantly in the field of homeland security. Some of them are not experienced intelligence users. This means that their requirements need to be identified first in order to adapt intelligence products and services accordingly.
- Transformation puts a premium on accelerating decision-making at every level of the command echelon. This not only requires the smooth integration of intelligence services into strategic, tactical, and operational decision-making, but also the removal of barriers to interoperability between intelligence providers and consumers. Issues include systems architecture, technology integration, and tricky legal questions: most countries make a very strict distinction between intelligence and law enforcement. Setting up common databases for both users can thus be hampered.[19]

[16] *Defense Acquisition Performance Assessment. Executive Summary* (Washington, D.C.: Assessment Panel of the Defense Acquisition Performance Assessment Project, 2005), p. 14.

[17] The U.S. House Armed Services Committee has established and M&S caucus. See: <http://www.house.gov/forbes/mascaucus.htm > (access: 3 January 2006).

[18] For more on this, see: Heiko Borchert (ed.), *Verstehen, dass die Welt sich verändert hat. Neue Risiken, neue Anforderungen und die Transformation der Nachrichtendienste* (Baden-Baden: Nomos, 2005).

[19] However, U.S. armed forces operating in Iraq can access the FBI fingerprint database in order to check out whether detainees have a criminal history in the United States. See: <http://www.fbi.gov/page2/june05/iafis062705.htm> (accessed: 7 January 2006).

- Effects-based operations require new knowledge built on a holistic analysis of the target to be addressed. Providing relevant insights requires intensified cooperation with academic disciplines such as social, cultural, and regional studies that are not part of the normal intelligence repertoire. In addition, there is a serious need to manage open sources more professionally, thereby taking into account the knowledge requirements of all stakeholders in the DIMLE spectrum. Advancing the use of open source intelligence will require changes in the way material is classified. A report by the Markle Foundation was right to advocate that distributable products should be created containing as much open information as possible for as many users as would need it, while adding sensitive information targeted to specific users only.[20] In addition, intelligence services will have to cooperate with new stakeholders in order to gain access to untapped sources of information. And finally, concept development and experimentation tools such as modeling and simulation could be used to generate new insights and to verify existing assumptions of the intelligence community.[21]
- By advocating a "system of systems" approach, transformation brings to the fore the importance of a comprehensive business architecture for all stakeholders involved in network-enabled operations. This holds true for the intelligence community as well, because "activities and programs that are conducted by independent actors under varying degrees of secrecy are in constant danger of creating unwanted redundancies, coming into operational conflict or, worse, working at cross-purposes."[22] As was advocated above, this requires a new approach to intelligence community management by strengthening joint management and leadership, the common definition of intelligence requirements in a cross-agency process, the joint assessment of effects-based operations and the joint management of personnel and finances in order to provide for swift changes if needed.

Intelligence cooperation has been a stepchild of NATO for many years, and the record in the European Union is hardly better. However, as the intelligence community continues to play a key role in any nation's security architecture, the above aspects should be discussed thoroughly among intelligence experts and in cooperation with outsiders from the research community and the corporate sector. In doing so, it might be useful to create a Center of Intelligence Transformation within NATO's transformation command, sponsored by NATO countries with the participation of EU institutions (such as the Situation Center in the Council secretariat), industry and academia. As a kind of "intelligence test-bed", the center would aim at coming up with technology- and non-technology-based solutions to the above challenges. This center could provide a vibrant hub for unconventional ideas about intelligence, which might eventually attract investors that could help spin-off successful ideas into sustainable enterprises.

Transforming Training and Education

"Power to the edge"[23] means devolution of powers, competence, and responsibility; it means access to all instruments of power by those actors that need it most to achieve the desired effects. Transformation thus greatly strengthens the role of individual actors. This in turn demands changes in current training and education curricula and methods in order to prepare all relevant actors to meet this challenge—from decision makers at the top level of the echelon to the single infantry man in the theater. Transformational training and education entails the provision of knowledge to:

- Use new methods such as modeling and simulation and effects-based planning;
- Manage and support sophisticated databases needed, inter alia, to provide common knowledge bases for EBAO and CROP;
- Deal with and select from a massive amount of raw information;

[20] Zoe Bird and James Brakesdale, *Creating a Trusted Network for Homeland Security. Second Report of the Markle Foundation Task Force* (New York: Markle Foundation, 2003), pp. 22-24.
[21] For more on alternative analysis, see: Warren Fishbein and Gregory Treverton, Rethinking "Alternative Analysis" to Address Transnational Threats, *Sherman Kent School Occasional Papers* 3:2 (October 2004).
[22] Deborah G. Barger, *Towards a Revolution in Intelligence Affairs* (Santa Monica: RAND, 2005), p. 43.
[23] David S. Alberts and Richard E. Hayes, *Power to the Edge. Command and Control in the Information Age* (Washington, D.C: CCRP, 2003).

- Engage in sound decision-making under heavy time constraints due to compressed decision cycles;
- Initiate and manage change in an environment that is in constant "flux";
- Think and act in terms of capabilities- and effects-based operations, meaning across existing organizational stovepipes;
- Lead and manage subordinates in an organizational context that defies traditional principles of socialization by hierarchy;
- Negotiate successfully and deal with non-governmental actors with diverse cultural backgrounds.

Transatlantic partners should aim at providing tangible results by transforming training and education in order to narrow the distance between traditional training and education sessions and operations. In this regard new technologies in the fields of distance learning and modeling and simulation are of great use. However, existing products need to be adapted. Transformation demands new solutions that help bridge the gaps between analytical work, preparation of planning, decision-making and execution on the one hand and exercises, training and education on the other. Real transformational success will come if real-time information can be fused with planning assumptions and both can be live-tested in exercises. Tomorrow's operations will be interagency operations. Therefore special attention should be devoted to providing a training and exercising environment that links the respective national institutions at all levels[24] with their counterparts in other nations and at the international level, such as NATO's Joint Warfighting College, the Joint Analysis and Lessons Learned Center and the new European defense academy to be established within the framework of Europe's Security and Defense Policy.

Transformation requires the defense industry to come up with new business models. Yesterday's focus on platforms and large volumes needs to be replaced by capability-based system-of-systems approaches.

The Role of the Security and Defense Industry

Transformation requires the defense industry to come up with new business models. Yesterday's focus on platforms and large volumes needs to be replaced by capability-based system of systems approaches. These must allow for the swift integration of technology into armed and security forces, which requires a serious concept development and experimentation phase prior to being fielded. Legacy systems still need support, but the new defense environment will benefit from entrepreneurial flexibility, self-financed risk-taking and the provision of integrated services, rather than single products.

The business setting for the defense industry on both sides of the Atlantic could not diverge more: In the United States, the Department of Defense has aggressively pushed the defense sector down the transformation road and it provides substantial financial support for industry transformation. In Europe, by contrast, defense supply and demand sides continue to be heterogeneous despite recent consolidation in certain industry sectors. Inefficient ways of spending scarce defense monies further complicate the situation. Nevertheless, individual European defense industry players are competing successfully against their U.S. rivals, which is a sign of hope. The European Defense Agency could play an important role in enhancing Europe's Defense Industrial and Technology Base by harmonizing defense requirements and supporting long overdue consolidation of the industry.

The transformation challenges for the defense industry are manifold: First, there is the need to come up with radically shortened and accelerated procurement processes and procedures. Although every nation has a distinct legal setting in which public procurement must be managed, general exchanges on lessons learned from adopting procurement legislation could prove valuable. A particular prob-

[24] In Germany, for instance, this could include a training and education network consisting of the Federal College of Security Policy (*Bundesakademie für Sicherheitspolitik*), the German Armed Command and Staff College (Führungsakademie der Bundeswehr), different training center of the services, the Federal Office for Crisis Management, Emergency Planning and Civil Protection (*Akademie für Krisenmanagement, Notfallplanung und Zivilschutz*) and the Center for International Peace Operations (*Zentrum für Internationale Friedenseinsätze*) as well as research institutes at universities and the industry

lem stems from early involvement in concept development and experimentation where there is a danger of disadvantages in later stages of down-selecting the different competitors. Second, the United Kingdom has recently published its Defense Industrial Strategy, which clearly outlines what industry capabilities are required to support defense transformation and what capabilities should remain national.[25] France and Germany are reported to be undertaking similar activities. It will be necessary to create transparency with regard to the final results of these studies and to exchange thoughts on how capacities in areas that are not deemed of "national importance" can be consolidated. Third, the provision of defense services demands new financing mechanisms. The United Kingdom in particular has pioneered public finance initiatives that help to raise money from private markets to invest in defense services. Other countries stand to gain a lot from this model, and it would thus be useful to seriously address the conditions that need to be met in order to use PFI with success. Finally, the lead systems or lead capability integrator approach comes with serious consequences for small- and medium-sized companies. It tends to favor companies with well established client-provider relations and enough money to supply much needed upfront investments in new technologies and demonstrators. The big companies can carry additional risks stemming from the integration of various suppliers into common architecture. Because of this, the recent U.S. Defense Acquisition Performance Assessment has argued that, "how Lead Systems Integrator, prime contractors or original equipment manufacturers select or compete the selections of subcontractors should be a critical element of the source selection competition."[26] As U.S. and European readiness to embrace the LSI model seem to diverge, learning from each other could be useful to analyze the strengths and weaknesses of this model.

Beyond the defense business, a new security business is in the making, mainly driven by specific homeland-security requirements.[27] Like in the defense field, science and technology (S&T) will not be able to solve every homeland-security problem, but the lack of adequate S&T solutions would be a serious deficit hampering the provision of security. However, current homeland-security markets can have deterring effects. These markets are highly fragmented, and cumbersome bureaucratic processes and bidding requirements tend to favor companies with established contacts, sustained sales power and abundant financial resources. Unlike the defense sector, where there is—more or less—only one key client, the new homeland-security market requires companies to act at different federal and sub-national levels and to understand the requirements of different clients, such as police and law enforcement, fire fighters, emergency medical services and others. In addition, key corporate benchmarks (like growth perspectives and profit expectations) diverge. In 2001/02, for example, profit before tax of successful biomedical products in the U.S. was well above 25 %, while traditional defense companies yielded operating margins of 7-14 %.[28]

U.S. and European policies towards these problems also diverge. Among other things, the U.S. government has adopted new legislation like the Homeland Security Act and the Biological, Chemical and Radiological Weapons Countermeasures Research Act in order to provide economic incentives for companies to invest in homeland security products, especially in the field of bioterrorism. In addition, Project BioShield creates a new market for biomedical countermeasures worth $5.6 billion over ten years. European countries, by contrast, could not agree on a joint stockpile of vaccinations and opted for individual solutions instead.[29] Another aspect where European approaches diverge is the willingness to apply military technology (and solutions) to homeland security. The new European Security Research agenda emphasizes the dual-use nature of modern technology, such that it can serve both military defense and homeland security. U.S. experts, by contrast, seem to make a

[25] *Defense Industrial Strategy. Defense White Paper* (London: Ministry of Defense, 2005).
[26] *Defense Acquisition Performance Assessment. Executive Summary* p. 11.
[27] For a general overview, see: *The Security Economy* (Paris: OECD, 2004).
[28] Bradley T. Smith, Thomas V. Inglesby, and Tara O'Toole, "Biodefense R&D: Anticipating Future Threats, Establishing a Strategic Environment," *Biosecurity and Bioterrorism* 1:3 (September 2003), pp. 193-202, here p. 197.
[29] Commission of the European Communities, Cooperation in the European Union on Preparedness and Response to Biological and Chemical Agent Attacks (Health Security), COM(2003) 320 final, Brussels, 2 June 2003, p. 15.

strong point that homeland-security requirements differ from military requirements and thus demand distinct solutions.[30]

More policy dialogue is clearly needed. This should not be confined to NATO members, but should also include non-NATO EU members as well as the European Commission, which is about to play a key role in advancing European security research. Issues would include the definition of standards for homeland-security applications as well as common ways to advance solutions in such diverse areas as data mining and data fusion, CBRNE detection, biometrics, the use of radio frequency identification, improvement of personal protective equipment for first responders, and modeling and simulation.

[30] See for instance: Holly A. Dockery and Penrose C. Albright, "Creating a Paradigm for Effective International Cooperation in Homeland Security Technology Development," Paper prepared for NATO Advanced Research Workshop "Science and Technology Policies for the Anti-Terrorism Era," PREST, University of Manchester, 12-14 September 2004.

Partners or Rivals? The EU-NATO Relationship

Julianne Smith

Once described by a U.S. ambassador as "divided by a common city," NATO and the EU have significantly improved their working relationship since 2000. While the importance of strengthening the EU-NATO relationship has been stressed by U.S., Canadian and European policymakers for over a decade, the first major milestone came in August of 2001 when NATO and the EU jointly brokered a peace deal in Macedonia between the Slavs and the Albanians. This cooperative effort, where the EU and NATO each brought their respective strengths to bear – for the EU, promises of future negotiations on membership and economic assistance and for NATO, military capabilities – demonstrated how powerful the two organizations could be when they joined forces to tackle common security challenges.

A little more than a year later, in December 2002, NATO and the EU signed a common declaration, describing a future relationship based on "effective mutual consultation, dialogue, cooperation and transparency" while stressing "equality and due regard for the decisionmaking autonomy and interests of the European Union and NATO." [1] The declaration also encouraged the two organizations to pursue mutually reinforcing military capabilities, which led to regular bilateral meetings between the Prague Capabilities Commitment (PCC) and the European Capability Action Plan (ECAP) groups.

Those bilateral meetings, in tandem with the creation of the EU-NATO Capability Group on March 8, 2003, catapulted the EU and NATO into a previously unreachable level of dialogue and exchange. But they also magnified the long list of political, cultural and financial obstacles to ensuring coherent and mutually reinforcing development of the capabilities needed by both organizations. The same questions about enforcement, coordination, and resources that had plagued both the PCC and ECAP individually surfaced almost immediately in their joint meetings. It soon became obvious that increased dialogue alone would not necessarily produce results.

While underlying problems must be redressed for mutually reinforcing military capabilities to be achieved, the EU and NATO have continued their work together on the ground in the Balkans, undertaken their first joint conflict management exercise in November 2003 and watched their memberships converge, with 19 of the 25 EU states now also part of NATO.[2] In addition, the EU has been open to learning from NATO experience in certain areas, such as multinational command and control capabilities, which features prominently on the agenda of the European Defense Agency's capabilities directorate and on the EU Military Staff's "Headline Goal 2010 Requirements Catalogue." In this field, both the EDA and the EUMS are collaborating with the NATO Command, Control and Consultation Agency (NC3A) to better understand the existing challenges and potential solutions for achieving interoperability.

Generally speaking, "Berlin Plus" has received high marks due to a number of innovative structural changes within NATO and the EU.

Berlin Plus

Most notably, though, after seven years of tense negotiations, the EU and NATO signed the "Berlin Plus" arrangement, which allows EU military missions to use NATO assets and capabilities. This arrangement, signed March 17, 2003, was used by the EU in Macedonia in 2003 and in Bosnia during the handover from NATO's SFOR to EUFOR on December 2, 2004.

[1] *"EU NATO Declaration on ESDP"* The European Union and the North Atlantic Treaty Organization, Press Release (2002) 142, December 16, 2002.

[2] This number will rise to 21 of 27 EU Member States when Bulgaria and Romania joint the EU on January 1, 2007.

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Generally speaking, Berlin Plus has received high marks due to a number of innovative structural changes within NATO and the EU. For example, thanks to an EU agreement in December 2003 that proposed that the EU and NATO establish permanent military liaison arrangements in each other's organizations, a provisional EU cell was created inside SHAPE for operation Althea in Bosnia. As a result, the NATO Deputy Supreme Allied Commander, Europe simultaneously serves as the European operations commander for the EUFOR mission in Bosnia.[3]

But Berlin Plus has also had its share of challenges. Because two members of the European Union who are not members of NATO (Cyprus and Malta) lack the necessary security clearances, virtually no intelligence sharing takes place between the two organizations. This issue has not only affected Berlin Plus, it impacts every aspect of the EU-NATO relationship and paralyzes joint initiatives. Until Turkey and other opponents of granting Cyprus and Malta clearances change their position, the current lack of trust between the two institutions will remain the biggest impediment to NATO-EU cooperation on a number of key security challenges.

Debates persist about whether or not the EU should develop a separate planning headquarters – an idea France, Belgium, Germany and Luxembourg proposed at the Brussels "Summit of Four" in April 2003. EU and NATO member states that were not at the Summit voiced fierce opposition to the idea, claiming that an independent headquarters would be dangerous and counterproductive for the EU-NATO relationship and would further tax already scarce resources. What resulted was the establishment of a small civilian/military planning cell inside the EU, which could serve as the core element of a planning/operational center for future EU operations. France and Germany also promised that their own national headquarters could be turned into multinational headquarters on an ad hoc basis if necessary. Questions remain, however, over the viability and cost-effectiveness of this solution in the long term.

Until Turkey and other opponents of granting Cyprus and Malta "security clearances" change their position, the current lack of trust between the two institutions will remain the biggest impediment to NATO-EU cooperation on a number of key security challenges.

In addition, the EU-NATO relationship has been troubled by a number of turbulent strategic debates. The desire of some European countries to build the EU's capacity for relatively autonomous military action raises questions about the ultimate state of the EU-NATO relationship. Will the EU develop a stronger European pillar within NATO or will the EU gradually replace NATO as the main security and defense organization in Europe? At present, there is no answer. The EU remains dependent on NATO for military assets while continuing its efforts to develop its own capabilities and operational structures. Because outlining a specific division of labor between the two organizations would be so politically charged, the two institutions appear content to leave that question off the table for now and accept that a certain level of duplication and friction is unavoidable.

Recommendations

- *The strategic dialogue between the EU and NATO should be expanded and deepened.*

For the past five years, the EU-NATO dialogue has been limited primarily to two core security issues: crisis management in the Balkans and ways to strengthen European military capabilities. While those issues merit continued attention, the changing nature of the global security environment has increased the need for the two institutions to broaden and deepen their dialogue. Opening up the often pre-scripted and stale dialogue between the North Atlantic Council and the EU's Political and Security Committee to include topics such as combating terrorism and the proliferation of weapons of mass destruction, or regions such as Ukraine or Moldova, would enable NATO and the EU to look at future scenarios and examine ways they can work together to prevent and manage international crises. The EU-NATO dialogue over cooperation in Darfur, while tense at times, has been a good first step toward pragmatic complementary action and a more open exchange between the two organizations.

[3] But the reciprocal arrangement to co-locate NATO liaison officers with the European Union Military Staff has yet to be realized.

An informal meeting of NATO Foreign Ministers, which took place on April 20-21, 2005 in Vilnius, served as a first attempt to move NATO's internal political dialogue to a broader strategic level. Ministers from the 26 NATO countries discussed a wide variety of issues, including the situation in the Darfur region and the peace process in the Middle East. They also discussed hosting joint informal meetings between NATO and EU Foreign Ministers. We recommend that a similar meeting of NATO and EU Defense Ministers also be scheduled in the future.

A more important but also more difficult dialogue needs to take place at the strategic level to outline a future vision for the two organizations. Both NATO and the EU have documents that serve as strategic guideposts – NATO's 1999 Strategic Concept and the EU's 2002 Security Strategy – but the NATO-EU relationship continues to be plagued by strategic incoherence. With each document intentionally left vague to skirt politically charged questions about the two organizations' future goals, roles, and missions, each member state is left to its own interpretation. Does NATO's future rest in out of area operations in the Middle East? Africa? The Caucasus? What kind of military forces are required for NATO's role in collective defense and the EU's role in crisis management? Where does enlargement end for these two organizations? If EU enlargement is put on hold in the months or years ahead, will added pressure be placed on NATO to enlarge at a faster pace? Should NATO have the right of first refusal when it comes to the conduct of operations? What type of threats should each organization be prepared to combat? Asking such questions in national capitals across the European continent produces a diverse mix of answers.

To its credit, NATO recently finished drafting its own "comprehensive political guidance," which aims to answer some of the questions above without redrafting NATO's Strategic Concept. We urge the EU to undertake a similar effort by translating its Security Strategy into more specific planning guidance for the organization. At the very minimum, NATO and the EU need to try to come to some agreement on how they plan to use the capabilities they are working so hard to acquire. Such scenario-based planning processes do not necessarily need to be common but they do need to be as transparent and compatible as possible. A dialogue of this kind could be conducted among all members of the EU and NATO or limited at first to a handful of small contact groups, which might be more effective in the long term.[4]

- *Intelligence sharing problems must be solved.*

With little doubt, intelligence sharing is the biggest challenge facing the EU-NATO relationship and the key to solving it rests primarily in the complex relationship between Turkey, Cyprus and the EU. The myriad of stipulations that Turkey and the EU have thrown at each other in recent months, however, leaves many Europeans and Americans skeptical about the likelihood of a breakthrough. Turkey wants the EU to deliver a long-promised aid package to the Turkish side of Cyprus before allowing Cyprus, and Malta to join NATO's Partnership for Peace Program (which would automatically grant the two countries the security clearances they need to join EU-NATO talks). And the EU wants Turkey to recognize the unification of Cyprus, which joined the EU last May. Neither option seems likely in the short term, especially as EU-Turkey relations have soured in recent months over European hesitation about Turkish membership.

A major diplomatic effort to break the current impasse should be launched by both the United States and key stakeholders in Europe with the hope that the carrot of EU membership might trump Turkish objections to EU-NATO intelligence sharing. A failure to hold the talks will severely limit the prospects for a compromise. At that point, EU member states and Turkey will need to ask themselves if halting future negotiations on the subject of intelligence sharing is worth the consequences: increased tension in the EU-NATO relationship; a deterioration in operational success where both institutions are involved (i.e., the Balkans); for the EU, a souring of relations with one of its strongest allies in the Muslim world; and for Turkey, less influence if European countries are forced to conduct EU work on defense independent of NATO.

[4] See Hans Binnendijk, "Talking Security," *International Herald Tribune*, April 20, 2005.

- *The European Defense Agency should establish close links with NATO's Allied Command Transformation.*

Both the EDA and ACT are still in their early stages of development, but as they move forward in their work, there will clearly be natural overlap. As with the ECAP and PCC groups, the two bodies must identify ways to foster transparency and cooperation through regular consultation (something that France has blocked in the EU). In the meantime, the EDA and ACT should develop working-level contacts and collective effort. Given that many working-level staff are already working both EU and NATO processes and some informal interaction already exists, this should be readily achievable.

In the coming years, the two organizations might want to consider putting an ACT cell in the EDA (specifically in the Capabilities Directorate) and vice versa. NATO's experience with transformation and collaborative defense planning and programs could be very helpful and its existing infrastructure and organization could be readily leveraged by the nascent EDA. The EDA and the larger EU-NATO relationship would certainly benefit from drawing on NATO's Defense Requirements Review (DRR) process in developing the EU Comprehensive Capability Development Process.

- *The EU and NATO should de-conflict force commitments to the EU Battlegroups and the NATO Response Force. They should also meet informally to discuss capabilities available for prospective operations.*

While the EU and NATO have repeatedly stressed the importance of de-conflicting member state commitments to the EU Battlegroups and the NATO Response Force, few concrete steps have been taken to avoid a situation where troops are simultaneously committed to both multinational forces. Currently, neither force is fully operational (although the NRF and the Battlegroups have both reached "initial operational capability," with full operational capability expected in 2006 and 2007 respectively). It is therefore important that a coordinating mechanism be developed now to ensure that the two organizations' ability to react to mounting crises will not be inhibited by debates over the dual-hatting of forces. A handful of individual countries (the Netherlands, for example) have developed their own national plans for avoiding a situation where troops are committed to both forces, but no coordinated EU or NATO plan has been developed. Therefore, assuming that the impasse over intelligence sharing can be broken, we recommend that SHAPE hold a force commitment review conference every six months – something it did in the spring of 2005 for the missions in Afghanistan and the Balkans. We also recommend that the DSACEUR take on this particular responsibility given his current role in both institutions.[5] In addition, when new operations arise, representatives from NATO, the EU and member states should meet informally to discuss what assets might be available and relevant.

We recommend that SHAPE hold a force commitment review conference every six months—something it did in the spring of 2005 for the missions in Afghanistan and the Balkans.

- *The PCC/ECAP links must be renewed and strengthened.*

Where there are direct and obvious links, the PCC and ECAP groups have met jointly to share ideas on strengthening specific European military capabilities such as strategic lift and air-to-air refueling. While some progress has been made, many experts agree that both initiatives have stalled in recent months. Most of the exchanges between the two groups tend to be largely informational and unproductive. Actual results in the form of concrete recommendations or decisions have proven elusive. This argues for restructuring the PCC/ECAP relationship based on a clearer sense of which countries have a comparative advantage to lead in what capability areas and which institutional context – NATO, EU, or ad hoc cooperation among member states – makes the most sense in specific areas.[6]

[5] An idea also suggested in Leo Michel, "NATO and the EU: Stop the Minuet; it's Time to Tango!" *Eurofuture* (Winter 2004): 88-91.

[6] See the country cluster methodology presented in chapter 7 of this report.

Consistent with the migration of ECAP to the EDA, future meetings of the two groups should also include representatives of the National Armaments Directors of EU and NATO nations.[7]

- *NATO and the EU should harmonize their standards and metrics for force planning.*

As discussed in earlier chapters, NATO and the EU have both undertaken several initiatives aimed at strengthening their members' military capabilities. NATO has also presented its members with specific deployability and usability targets (40 percent and 8 percent of national forces respectively). A key challenge, however, remains assessing what capabilities already exist and measuring the extent to which forces are both usable and deployable. Currently, member states have the freedom to count, characterize, and catalogue their capabilities as they see fit, using national metrics that may not match those of their neighbors. Understandably, countries want to counter any accusations that they are failing to modernize their forces, sometimes leading them to exaggerate the capabilities they actually have in hand. As a result, neither NATO nor the EU has an accurate reading of existing capabilities at a time when both organizations are striving to identify shortfalls and conduct operations. Therefore, both the EU and NATO should launch a renewed effort to identify an agreed set of standards by which every member of the two organizations can measure and report their current capabilities.

NATO and the EU should consider developing a "Berlin Plus in reverse" arrangement. Such an agreement would provide NATO access to EU civilian and constabulary capabilities for future crisis management operations.

- *The EU and NATO should create a "Berlin Plus in reverse."*

The Berlin Plus arrangement is designed to provide the EU with NATO common assets and capabilities for military operations. Most missions, however, as seen today in Afghanistan and the Balkans, require a combination of military and civilian capabilities, especially during the post-conflict reconstruction phase. Given that the EU has already developed an impressive array of constabulary and civilian instruments and continues to grow in this area and that NATO has no intention of creating civilian capabilities, NATO and the EU should consider developing a "Berlin Plus in reverse" arrangement. Such an agreement would provide NATO access to EU civilian and constabulary capabilities for future crisis management operations.[8]

- *The EU and NATO should consolidate all existing coordination cells and de-conflict any that are established in the future.*

In recent years, a number of coordination cells have been created across Europe: the European Airlift Center in Eindhoven; the Sealift Coordination Cell, which is co-located with the EAC; the Strategic Air Lift Coordination Cell, also co-located with the EAC; and a Greek Sealift Coordination Cell. All these cells have declared their services and assets available to the EU and NATO. To maximize their effectiveness and avoid duplication, NATO and the EU should seek to consolidate these cells into one European Strategic Mobility Center to improve the coordination of all strategic lift assets, mechanisms, and initiatives to be used for future operations.[9]

Conclusion

While the exact direction of the EU-NATO relationship might be hard to predict at times, neither the EU nor NATO has the option of reversing course. The convergence of their memberships, the expanding dialogue between the two organizations, their respective strengths, growing interdependence, and overlapping interests make it impossible for the EU and NATO to limit the relationship indefinitely. That said, tackling the current mistrust, unhealthy com-

[7] Julian Lindley-French, "The Ties that Bind," *NATO Review*, Autumn 2003.

[8] Additional details on this idea can be found in Helga Haftendorn's piece in Internationale Politik titled, "Ein Koloß auf tönernen Füßen," (April 2005).

[9] There have been suggestions that a multinational coordination cell also be developed for land transport but we see less utility in doing so since future NATO and EU missions are likely to take place outside of Europe.

petition, and severe information sharing blockages that are currently plaguing the relationship will be extremely challenging in the coming years and could certainly leave some countries reminiscing about the days when the two organizations had nothing to do with each other.

The good news is that the evolving U.S.-EU relationship, which appears to be gaining momentum after years of stagnation, will likely strengthen the NATO-EU relationship. Skepticism and concern in some U.S. quarters regarding the EU's growing role in the foreign and defense arena has been no secret over the past decade. Likewise, some Europeans have expressed an interest in sidelining NATO to strengthen European influence *vis a vis* the United States. But as the United States and the EU expand their working relationship and foster greater transparency, it will become increasingly difficult to view America's relationship with the EU and NATO as a zero sum game.

The State of EU-NATO Cooperation

Peter Härle

By providing information on the EU, NATO and cooperation between the two organizations, this chapter seeks to promote transatlantic relations. By tracing the development of EU-NATO relations, it aims to shed more light on the essence of their strategic partnership, thus offering a clearer picture of the current political state of affairs. Finally, the chapter makes recommendations for the way ahead.

Basic Comparisons

It is difficult to compare apples with oranges—the EU and NATO are very different organizations, with different histories, organizational structures and objectives.

While NATO is a defense alliance in which sovereign member countries make decisions based on the principle of consensus, the EU is a supranational organization with a broad spectrum of competencies. NATO is a unique success story. It has become synonymous with peace and freedom in Central Europe. Without this unique transatlantic forum, Germany could never have reunified. NATO recently enlarged to include 26 sovereign member countries, and the Alliance is currently undergoing a transformation process to prepare it to meet new challenges and seize new opportunities.

By contrast, the EU is primarily an economic and trade union. Pursuant to the broadened concept of security, the EU Summit in Helsinki in December 1999 decided to establish a European Security and Defense Policy (ESDP) that aims to institutionalize cooperation between Member States in the area of security and defense by coordinating existing military capabilities. A new policy area for the EU, this developed as a result of lessons of the Kosovo war. The EU's aim is neither to create independent European armed forces nor to compete with NATO.

Currently, 19 of the 25 EU, and 26 NATO, member countries are members of both organizations. Nevertheless, realizing the ESDP is often more difficult than the aforementioned pattern of affiliation would suggest. Both organizations' headquarters are in Brussels, but at separate locations. Moreover, most of the 19 countries that are members of both organizations have three permanent representations in Brussels: one at the EU, one at NATO and a bilateral representation, i.e. an embassy. The key to overcoming obstacles to cooperation is the political will of the member states, which, however, is weak in some areas and, at times, even intentionally counterproductive.

Generally speaking, "Berlin Plus" has received high marks due to a number of innovative structural changes within NATO and the EU.

EU-NATO Relations: A Strategic Partnership

In recent years, each organization has shown a willingness to cooperate with the other. The EU, for its part, has proceeded at breathtaking speed, in particular when considering that ESDP was only identified as an EU-relevant policy area in the late 1990s (at St. Malo in 1998, the 1999 Cologne Council Meeting and the 1999 Helsinki Council Meeting). Even before the 2000 Nice Council Meeting officially institutionalized it, the EU Political and Security Committee (PSC) took up its work as an interim body.

Regular meetings of the North Atlantic Council and the PSC since 2001 are a special expression of this new strategic partnership. In 2002, the EU and NATO issued a joint EU-NATO declaration on ESDP, and in 2003, following intense negotiations, the two groupings achieved another break-

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through with the Berlin Plus Agreement, which laid the foundation in operational terms for cooperation between the two organizations.

Already in 2003, the EU-led Operation Concordia replaced the NATO Operation Allied Harmony, and the two organizations conducted their first joint EU-NATO / NATO-EU crisis management exercise. The shared element of this exercise essentially focused on practicing the procedures for supporting the EU with NATO assets and capabilities (Berlin Plus). Due to the enhanced military-operational cooperation, each organization established small liaison elements at its partner's military headquarters, i.e. at SHAPE and the European Union Military Staff. The "Single Set of Forces", as the term is used, is already a catalyst for both organizations' force and armaments planning. The need to harmonize their efforts promotes EU-NATO cooperation in this area. The NATO-EU Capability Group is one result.

The "Single Set of Forces", as the term is used, is already a catalyst for both organizations' force and armaments planning.

Largely because of EU enlargement in the spring of 2004, cooperation between both organizations, which had been quite promising at first, began to stall. Neither Cyprus nor Malta have concluded a bilateral security agreement with NATO, and at the initiative of a NATO/non-EU member country, official dialogue—in particular at the political/strategic level—between the two organizations is almost deadlocked; it is limited to the most urgently needed exchange of information related to the transfer of authority for and the conduct of operations. Nevertheless, informal contacts between the organizations' headquarters and staff remain intact.

Political Realities

Assessing the state of EU-NATO cooperation requires not just wishful thinking, but a pragmatic look at the political facts. The decisions taken at Helsinki in 1999 (European Headline Goal) are of central importance for cooperation: according to these decisions, a de facto US reservation applies, i.e. the EU is only authorized to launch and conduct military operations "where NATO as a whole is not engaged" (1999 Helsinki Council Meeting, Presidency Conclusions, item 27). In the ultimate analysis, the EU consequently is not in a sovereign position to take military action.

At the NATO Prague Summit, one initiative was taken to improve Alliance capabilities (Prague Capabilities Commitment). Ultimately, it formed the foundation for efforts to harmonize both organizations' force and armaments planning.

NATO and the EU operate in rather different ways. While NATO exclusively deals with security policy, the latter represents only one of many EU policy areas.

The joint declaration that both organizations adopted on ESDP in 2002 essentially lays down general principles for cooperation. Along with the Berlin Plus Agreement, it is considered one of the crucial milestones of the two organizations' strategic partnership. To implement ESDP, the EU attempted to copy NATO's basic organizational structure (North Atlantic Council --> Political and Security Committee, Military Committee -->EU Military Committee). Nevertheless, NATO and the EU operate in rather different ways.

While NATO exclusively deals with security policy, the latter represents only one of many EU policy areas. This becomes particularly clear in the context of EU summits at the level of heads of state and government, during the so-called "night of the long knives", when—in order to increase the chances for summit compromise and success—agreements spanning several policy areas are hammered out that do not always make sense to outside observers.

The EU presidency principle is not always conducive to the development of ESDP. Generally, the member state that assumes the presidency presents its own special ESDP project. Frequently, however, despite the best of intentions, these projects simply cannot be realized during the six-month term. One positive aspect is that the ESDP has been developed at incredible speed thanks to the presidency principle. A drawback, on the other hand, is that most ESDP projects are designed to

yield quick results, so that the respective presidency can claim at least a substantial part of this success for itself. This leads to a meandering rather than a consistent development of ESDP.

In the force planning process, France plays a special role, since it is the only NATO member country to not participate in Alliance force planning. Therefore, it is hardly surprising that France tries to realize its own aims independently of NATO within the context of EU force planning. France has a fundamentally different interpretation of the "Single Set of Forces" principle than the other 18 countries that are members of both NATO and the EU. French forces are not subject to NATO force planning arrangements, which are concluded "at 25" (Defense Planning Committee).

As stated earlier, EU enlargement has hindered EU-NATO cooperation, since Cyprus and Malta have not concluded bilateral security agreements with NATO. One can presume that, at least until agreement has been reached with Turkey on the Cyprus question and Turkey's EU accession negotiations have been concluded, there will be no change in the official state of affairs. This means prospects are bleak for any short-term further improvement of EU-NATO cooperation.

NATO is still undisputedly the forum for transatlantic security policy consultation. However, NATO HQ, for one, follows the development of EU-US relations with a keen interest. If NATO sees any rapprochement of the US to the EU or vice versa, it takes close note to determine if NATO appears to be losing any relevance. This concern stems from worries that the EU and NATO may be competitors when it comes to transatlantic dialogue.

Certain EU member states continue to vie for a lead ESDP role. This battle is not yet over, as no major nation wants to be put at a disadvantage. From time to time, EU presidencies of smaller member states are exploited by larger member states to assign their own personnel, and thereby promote their own policies.

Insofar as a political will exists, progress will be achieved—conversely, without the required political will, EU-NATO relations will be further deadlocked.

NATO must also contend with a number of problems. Since the last round of enlargement in 2004, the Alliance has no politically approved Crisis Response System (NCRS). The old dispute between Turkey and Greece over the Lemnos question is at fault here; it was already a major issue during the approval of the NATO Precautionary System (NPS). France never participated in the NPS, nor are the new NATO member countries well-acquainted with it. The Alliance's alert calendar is based on NCRS, which also determines NATO's reaction capability. In the meantime, NCRS is applied as if it were politically approved: all member countries are expected to abide by it to prevent a disaster from occurring in a worst case.

The Way Ahead

Although it may be hard to compare apples with oranges, the foregoing comparison of NATO and the EU warrants the conclusion that a strong Europe is beneficial to transatlantic relations. Therefore, the EU should not be merely a junior partner of NATO.

Even difficult political questions deserve open, detailed discussion. NATO must defuse long-standing tensions between Turkey and Greece, and the Alliance must tackle the issue of fully integrating France. Within the EU, the ESDP lead role must be determined, with one possible outcome being member states' declaring that no single state will assume the lead.

NATO must defuse long-standing tensions between Turkey and Greece, and the Alliance must tackle the issue of fully integrating France.

Finally, a joint effort must be made to resolve the burdensome Cyprus question to the benefit of all parties involved.

Political will is the key to resolving all these questions. Insofar as a political will exists, progress will be achieved—conversely, without the required political will, EU-NATO relations will be further deadlocked.

Politisch Militärische Gesellschaft e.V. (pmg)

Center for Strategic & International Studies

2005 U.S.-GERMAN BILATERAL DIALOGUE

ENERGY & SECURITY

– AGENDA –

Monday, November 21, 2005

13:00 Welcome
Ralph Thiele, *Chairman, Politisch-Militärische Gesellschaft (pmg)*
Robin Niblett, *Executive Vice President and Europe Program Director, CSIS*

13:15–15:15 IRAN, IRAQ AND THE SECURITY CHALLENGES OF THE GREATER MIDDLE EAST

AMERICAN DISCUSSANT: **David Denehy**, *Senior Advisor, Bureau of Near Eastern Affairs, U.S. State Department*
GERMAN DISCUSSANT: **Dr. Heinrich Kreft**, *Senior Strategic Analyst, Policy Planning Staff, Federal Foreign Office*

COFFEE BREAK

15:45–17:45 CHINA AND RUSSIA: THE RISE AND DECLINE OF GREAT POWERS?

AMERICAN DISCUSSANT: **Dr. Robin Niblett**, *Executive Vice President and Europe Program Director, CSIS*
GERMAN DISCUSSANT: **Dr. Frank Umbach**, *Head of the Asia-Pacific Program, Research Institute of the German Council on Foreign Relations (DGAP)*

19:00 *DINNER – **U.S.-GERMAN RELATIONS: CREEPING ESTRANGEMENT?***

Dr. Michael Inacker, *Vice President; External Affairs and Public Policy, Daimler Chrysler AG*
Dr. Ulrich Schlie, *Director for Policy Planning, Federal Ministry of Defense*

Politisch Militärische Gesellschaft e.V. (pmg) **Center for Strategic & International Studies**

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– AGENDA –

Tuesday, November 22, 2005

8:00–09:45 TRANSFORMING THE SECURITY SECTOR

AMERICAN DISCUSSANT: **David Scruggs**, *Fellow, Defense Industrial Initiatives Group, International Security Program, CSIS*

GERMAN DISCUSSANT: **Heinz Schulte**, *Vice-Chairman, Politisch-Militärische Gesellschaft (pmg) and Editor, GRIEPHAN*

COFFEE BREAK

10:15–12:00 THE STATE OF EU-NATO COOPERATION

AMERICAN DISCUSSANT: **Julianne Smith**, *Deputy Director, International Security Program, CSIS*

GERMAN DISCUSSANT: **LTC (GS) Peter Härle**, *Head of Security Policy/Military Strategy Division, Bundeswehr Transformation Center*

12:00-12:30 Concluding Remarks
Robin Niblett, *Executive Vice President and Europe Program Director, CSIS*
Heinz Schulte, *Vice-Chairman, Politisch-Militärische Gesellschaft (pmg) and Editor, GRIEPHAN*

12:30 Lunch/Departure