

Military Reform: Practice and Lessons

Report from ISDP-AMS
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Xianghe, P.R.China

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Conference Report

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I. Introducing the Topic of Military Reform*

The conference on Military Reform: Practice and Lessons was held in Xianghe, Hebei Province, People's Republic of China, on September 19-21, 2008. The conference was arranged jointly by the Chinese Association of Military Science (AMS) and the Institute for Security and Development Policy (ISDP) based in Stockholm, Sweden. The speakers represented a broad range of countries, including China, Germany, Japan, Korea, Russia, Sweden and the US, thereby creating an opportunity to discuss military reform from a number of different angles. The main purpose of the conference was, as the title suggests, the sharing of experiences concerning reforms and the transformation of the military in different countries. The importance of military officers, policymakers and theorists from different countries convening to address issues of mutual interest cannot be overestimated. Since nothing can develop in a vacuum, information sharing and interaction are of importance to all parties. Moreover, information sharing and openness between countries reduces the risk of mistrust and misunderstandings in times of rapid change. Information sharing is, therefore, a basic tool for confidence building. This makes even more sense when considering the challenges the military faces, especially given the fact that it must increasingly consider non-traditional issues in addition to managing classic warfare. When handling these diversified tasks, international exchange is a key factor. This is further emphasized in light of the fact that military reform has become a permanent phenomenon in the post-Cold War period. A main driving factor behind military reform, apart from technological developments, is the necessity of military organizations to be able to act in an internationalized environment. In this respect, the

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transformation and reform of the military could be perceived as resulting from a world that is gradually becoming more multi-polar.

To understand the concept of transformation is of great significance, as the changing the ways in which war is waged might create opportunities for cooperation as well as cause confrontation. Indeed, military reform raises, again, the pertinent question: could the development of new weapons be a cause of conflicts and entail the use of those weapons?

It should be noted that the contents of this conference report are primarily based on the discussions that took place during the conference. Given the nature of discussions, which were wide-ranging with discussants examining many different aspects of a particular problem or issue, the aim of this report is not to provide an exhaustive overview, but rather to highlight the main points of discussion and comments that the presentations provoked among the conference participants. In addition to providing a more thematic summary of military reform, the report also presents the country and regional-based topics of discussion. A more comprehensive edited volume of papers from the conference will be published by ISDP in spring 2009.

Important Features in Military Reform

The discussion on military reforms can be divided into a number of different areas and sub-areas. The main two areas influencing reform are: technological driven changes and politically driven changes. The technological driven are mostly associated with the development of new weapons, information handling and strategies. An important aspect here is the discussion concerning top-down or bottom-up introduction of reforms and how to implement and integrate new technologies and procedures with already existing systems. Politically driven military reforms could be caused by both domestic policy, and even more so, by the changing conditions on a regional and international level. The end of the Cold War is an obvious, and major, international event that came to influence the development of the military in many parts of the world, foremost in Europe, the US and Russia.

Politically driven reforms have mostly been based on the view that the end of the Cold War, and the ongoing process of economic globalization, has had a deep and profound impact on the concept of security and on military affairs. New definitions of security threats, including aspects such as food and

energy security, along with social and economic factors have broadened the security paradigm. One effect has been an alteration in the view of the role of both state and geo-politics in security issues. A common stand-point of several of the conference participants was that they saw *both* an enlarged and a diminishing role of the military. The number of domestic contingencies where the military could have a role to play was seen to be increasing, at the same time as the probability of state on state conflicts was seen to be decreasing. In addition, the peace keeping or peace enforcement capability of the armed forces was of particular interest and had played a vital part in the reform processes of many of the countries represented by the participants at the conference.

A substantial part of the discussion during the conference centred on the topic of reforming command structures and military organizations' ability to perform joint operations. The transformation of command systems was discussed in the light of net-centric warfare.¹ Concerns were raised regarding information overload and the ability to filter and analyze information obtained. The informationization² of war demands not only the gathering and sharing of information, but also the ability to digest the information, provide the necessary analysis and, based on this, take appropriate action.

Further, the subject matter of increased interaction in a net-centric system and the necessity of increased jointness was also addressed. Accordingly, it was discussed how to create functional and independent joint command structures, not tied to any specific branch or service. While views on how to

¹ Net-centric warfare, otherwise known as network-centric operations, refers to converting an information advantage – through the use of information technology – into competitive war-fighting advantage by means of dictating the pace of engagement. This entails the use of a wide range of technologies for rapidly gathering, processing and distributing information. Concerns have been raised; however, over encryption issues, the overreliance on technical solutions, and the potential for misinterpreting information, as well as the difficult physical environments in which such systems need to operate.

² Informationization or informationalization, has a more general meaning of the impact of information technology on societies and economies. In a military sense, it refers also to the computerization of military affairs. This pertains to the use of computer technology by the military to gather and process information and may even be used to conduct cyber-warfare against enemies. The two terms are used interchangeably throughout the report.

create these structures were divided, most participants, though, were very clear on the point that personnel serving in joint staffs should possess a “joint mindset”, with an ability to disregard earlier branch or service loyalties.

Different views on how to achieve an independent “joint officer” were presented, among which officer training came into focus. On this there was a great variety of opinions. Some argued that the making of an efficient “joint officer” needed the creation of a specialized officers corps that was not tied to any branch or service of the military. Others claimed that one should keep the identity of the branches and the officers intact, that it is both a question of pride and expertise as well as a psychological impossibility to alter that. In other words, if you have started your career in the Navy you will probably always regard yourself as a Navy officer.

Transforming the Strategic Orientation

The change from a threat-oriented to a capability-oriented organization was another question that was regarded to be closely connected with military transformation. Most countries have had to deal with the question of which orientating mechanism – threat or capability – to adopt in reforming their armed forces. In a capacity-oriented strategy the focus should no longer be on a specific threat and strategy for addressing a certain scenario. Instead efforts should be concentrated on building a set of capacities to deal with a variety of situations. This change should be seen both in a technological and in a political perspective. With the dismantlement of the bipolar Cold War structure, the level of uncertainty regarding threats has risen. Technologically, it is a matter of constantly up-grading in order to avoid a capability gap towards a yet unidentified threat.

Countries with diminishing territorial threats and/or with a powerful military capacity seem to be eager to adopt the capability-oriented strategy. Countries such as Sweden and Germany for example, which in their military reforms have decreased the importance of national defense in favor of an international Peace Support Operations capacity, display a shift towards a capability-oriented strategy. Hence, the switch from a territorial defense capacity is that of towards a capability of conducting operations on the global arena, which increases the range and uncertainty of operational conditions encountered. The US has long since developed a capability-oriented strategy,

due to its international engagements and position as the world's leading military power. For countries such as China, while it is highly interested in developing its military in the direction of a capability-oriented strategy in the future, it also still has to take into account a number of potential conflicts in its "near abroad". A dilemma for China has been to maintain a capacity for dealing with current threats, and at the same time, developing a capacity to respond to future and unidentified threats. For China, the solution to the challenge of current threats and future capability is a concept of a "threat plus capability" orientating strategy. Possible internal problems and identified external threats require a strategy of instant response. Then again, the necessity of long term planning to develop an informationalized military and a strategy for handling future security threats speaks for capability orientation. In the discussion concerning this issue, the question of how to create a framework for a capacity-oriented strategy, if one abandons the focus on threats, was addressed.

Accordingly, if the capability-oriented strategy towards military superiority is limited by technological or other causes, the threat-oriented capability should continue to be an important part of the strategy guidelines. However, the potential capability of unidentified threats should be focal point for the development process of strategic orientation.

II. Military Reform – a Global Survey

Northeast Asia

Japan

The issue of how the missile defense system of Japan is coherent with that of Japanese defense policy was raised.³ It was promulgated that the missile defense system's rationale was to deter present and future powers with an offensive capacity. It was stressed that Japan was not attempting to become a nuclear power, although Japan has the missile capability and civil nuclear technology. The country's history as well as the aim of avoiding proliferation of military nuclear capacity were said to be the main reasons for Japan's reluctance towards nuclear weapons development.

Japanese military reform has dealt with three main areas:

- Increased civil control of military affairs including civil engagement in management and the creation of a common civil and military structure especially regarding policy making.
- Increasing co-operation between the branches of the military.
- Improving the coherency of the defense budget and military strategy based on objectives and operations.

Japan has made radical policy changes after the Cold War, including participation in peace keeping operations as well as anti-terrorism and reconstruction operations. Furthermore, the policy of Japan has turned

³ Article 9 of the 1947 Japanese constitution states that: "Aspiring sincerely to an international peace based on justice and order, the Japanese people forever renounce war as a sovereign right of the nation and the threat or use of force as means of settling international disputes." Japan is permitted to organize Self-Defense Forces; however, the country is prohibited to deploy nuclear weapons or other offensive weapons. Furthermore, or deployment of troops (with exception of Peacekeeping missions under UN mandate or disaster relief) outside of Japan is also not permitted.

towards non-traditional and security cooperation with other countries (neighbours) to improve the security situation.

To deal with direct threats against Japan, a Central Readiness Force has been created, including units from different branches and special operation forces. The reform has focused on the readiness force and technological improvements of the defense system at all levels. Japan-US co-operation has also developed with the aim of increasing regional and global security. Japan has enhanced the capacity of the Japanese Self-defense Forces (JSDF) to conduct joint operations with the US – early warning and anti-missile defense being two areas where co-operation is especially close.

Main strategy reforms have been carried out in areas such as: the revision of the US-Japan treaty; possible actions in response to an armed attack on Japan; and cooperation with countries in Japan's neighborhood.

Apart from carrying out reforms aimed at enhancing military capabilities, the need to develop a doctrine, and methods for winning the hearts and minds of the civilian population in an operations area, was highlighted as a crucial element in a new strategy. In terms of intelligence-gathering purposes, furthermore, the importance of having good relations with the local population, for example in Afghanistan, was pointed out.

Japan has gone from a threat-oriented strategy towards a capability-oriented strategy, where information superiority is a central part of the doctrine.

Brought to attention during the conference was the question of Japan's missile defense as well as its strategic importance and its consistency with current Japanese defense policy. According to one participant, an important rationale for Japanese missile defense was the possibility of deterring long distance assault on Japan, particularly from new nuclear powers. Though Japan due to its history has a strong aversion to nuclear weapons and is concerned with their proliferation, there was a discussion on a possible change of Japanese nuclear weapons strategy in regard to its the development of ballistic missile and civil nuclear capacity.

One question raised concerned the principle of using nuclear technology for military applications, in a more general sense, and how this was applicable to nuclear powered vessels such as aircraft carriers. How therefore should US

nuclear powered carriers, based in Japan, be regarded? The response followed the reasoning that Japan and its population, for historical reasons, is strongly opposed to nuclear weapons and it was emphasized that the issue is very sensitive in Japan. However, at the same time, it was also communicated that the nuclear propulsion of carriers etc. does not fall under the principles guiding Japan's policy on nuclear weapons.

South Korea also has concerns regarding the nuclear capacity of Japan. On the one hand, they are not worried about Japan acquiring nuclear weapons given the fact that the US nuclear umbrella reduces the incentives for Japan to develop nuclear weapons. However, the amount of weapons graded plutonium that Japan possesses could be of concern for Japan's neighbors in as much that this constitutes a precondition to manufacturing nuclear weapons.

China

Questions were raised regarding the driving factors behind military reform in China. To what extent were common interests with other countries such as hindering proliferation, counter-terrorism, securing Sea Lanes of Communication, and non-traditional security threats the driving force for the reformation of the Chinese military forces? Responding to this, it was stated that reforms would primarily be threat based. This would encompass internal threats, including separatism and social conflict. Furthermore, non-military crisis management, for example natural disasters and rescue missions, would have a more prominent place. In sum, first and foremost the reform was threat based, both regarding internal and regional security, and also regarding traditional and non-traditional security threats. Having said this, it was also pointed out that China increasingly prioritized international cooperation regarding peace-keeping missions.

The driving mechanism of military reform in China is at the moment threat oriented. The attitude is that a capability-oriented strategy is more suited to more "established" and "developed powers", like the US. However, the future orientation mode of China is discussed in academic circles. The uncertainty of the nature of future threats, related to the notion of military reforms as an ongoing process, points towards an increasing capability orientation in the future. If China should find itself in a position similar to

many others, for example the US, without a clear threat towards its territory or sovereignty, a capability-oriented strategy was to be preferred. But under the current circumstances, the threat oriented strategy was the driving mechanism behind China's military transformation.

Thus, the conclusion of the Chinese standpoints regarding military reform were that short term development would be driven by a threat-oriented strategy, while long-term development would chiefly be driven by a capacity-oriented strategy.

In the case of a capability-oriented strategy, the limitations of such a strategy were discussed. Since future developments were held to be unpredictable, it was argued that although the future enemy was hard to identify, the level of technology and capacity of possible enemies could be foreseen.

In regard to the question of how to prioritize units and branches in the process of modernization and transformation of the armed forces, the idea of parallel development was raised. However, the focus seemed to be on area command and military structure issues. Furthermore, since full mechanization of the Chinese military has not yet been reached, it was argued that modernization towards informationalization of the military forces is expected to be a long-drawn out process.

In the discussion on the future development of the Chinese military, the possibility of the navy and the air force having priority over the army was brought up. Such a priority would be – according to one participant – due to two reasons: one being that the priority placed on the army in the past has inhibited development of the other service branches; second, China's ever increasing dependence on the outside world would make it desirable for the PLA to be able to respond to more diversified threat scenarios, which include maritime threats.

It was also argued that although China in the past has given priority to conventional striking power, current efforts are concentrated on the development of informationalization, top-down rapid command, as well as efficient information sharing. China is following a larger global trend of informationalization when it comes to the transformation of its military. Also, there is an attempt to leap-frog from an incomplete mechanized stage

to informationalized warfare capability, thereby shortening the distance, or rather time, between technological levels.

In the discussion regarding the difference between informationalized warfare and information warfare it was suggested that informationalized war concerns the structure of the military apparatus, its method, focal points and grand strategy as well as transport and communication, information gathering, processing and dissemination. Information war is the warfare of cyberspace with cyber attacks on the digitalized system of the enemy, i.e. a hacker-war. In a comment to the subject of discussion it was argued that informationalized warfare should be decentralized in order to be efficient. Accordingly, the purchase of technologies and armaments should also be taken in to account so as to avoid bottle-necks which could delay the necessary technological up-grading of military resources.

Regarding the economic and political developments in Chinese society over the last few decades, it was discussed whether the development of society and the modernization of the military should be viewed as a combined development. It was contended that the transformation and reform process in the Chinese military is, indeed, connected to a larger process of modernization and development in China. One participant argued that one could perceive the military as a hub for the process of combined development. In addition to the discussion of the development of society and the military, another participant highlighted the importance of how the development of the military was approached. Should the development of modern means to observe the battlefield come first, and thereafter the structure for processing the information (in a broad sense), or should it be the other way around?

The necessity of recruiting competent personnel was also subject to discussion. There is a potential dichotomy between the needs of the military and that of a modern, rapidly growing economy. It was said that recruiting processes have been changed, with the military having opened up more for cooperation with civil entities and contractors. Students have also been recruited: the military pays their education in return for their serving in the armed forces.

South Korea

The South Korean perspectives on military reforms differ due to the perceptions of the threat from North Korea. The conflict with its northern neighbor has constituted the most influential component for the South Korean threat image since the division of the Korean peninsula. Also, the relation to both China and Japan has played an important role in the creation of the South Korean threat orientation. The South Korean perspective of the threat emanating from North Korea is based on its history, doubt in the stability of the North Korean political system and also the North's acquisition of nuclear weapons.

An important factor in the development of the South Korea military posture has been the presence of the US military on the Korean peninsula. The downsizing of the US presence on the Korean Peninsula, a high level of economic development and an increased sensitivity concerning foreign forces on Korean soil has led to a policy of increased self-reliance, both when it comes to capabilities as well as the development of weapons and other equipment. In the 1980s and 1990s reforms of the command structure were initiated. However, due to political reasons the effects of the reform were limited. After the Gulf War the concept of RMA⁴ was recognized and South Korea followed the US style of reforms. In the 2000s further strengthening of the military capacity was perceived as necessary because of the US military cut down in South Korea due to the conflict in Iraq. The North Korean nuclear situation further contributed to military developments in South Korea. The next step, in South Korean military reforms, is the 2020 Defense Reform, focusing on enhancing self-reliance in defense matters. Further motives for the Defense Reform 2020 have been a changing security environment including such aspects as the global war against terrorism, nuclear crisis on the Korean peninsula and lessons of military transformation from the US and France.

⁴ RMA – Revolution in Military Affairs – refers to a theory about the future conduct of warfare. While it is linked to technological and organizational considerations, there is some ambiguity over whether it refers to the use of revolutionary technology in itself or to adaptations of a military organization to cope with changes in technology. Furthermore, if taking a technology-centric perspective, there is the issue of foes adopting asymmetric warfare to counter technological superiority.

The aim of military reforms in South Korea is streamlining and up-grading the technological level as well as reducing the number of troops. It is inspired by the development in the US, where a move towards a more capability-oriented organization can be discerned. Moreover, in comparison to earlier military reforms in South Korea, current transformation increasingly takes non-military aspects into account. The aim in South Korea is not only to streamline the military structure of command and control in order to make the central command more efficient, but also to reduce political micromanagement in professional military matters. Budget issues are of critical importance since the Defense Reform 2020 still could fail due to too rosy expectations of economic growth, and also changed priorities for future state budgets. Here, the will to prioritize the welfare system over military investments was mentioned as one example. Moreover, the reconstructing of the armed forces could furthermore be delayed as a result of resistance to downsizing in the absence of *détente* on the Korean peninsula.

An important experience from earlier military reforms in South Korea demonstrates the need for presidential and political support where the core issue concerns the budget. In this concern it was suggested that closely connected to accommodating the emergence of an appropriate budget, based on planning and acquisition, is the need to minimize self-interest in the military.

During the conference, the South Korean relationship with the US as well as the benefits of South Korea sending troops to Afghanistan and Iraq was discussed. One opinion on the issue was that South Korea is more or less obliged to support the US, it also being a crucial partner when it comes to handling North Korea.

The connection between the Defense Reform 2020 to the planning for eventual reunification with North Korea was also discussed. It was said that the reform of military forces and reunification are issues falling under the purview of the president and even if there is a will to reunite the country, it would not happen quickly – rather the opposite – among other things due to the financial burden reunification would impose.

It was also questioned whether the focus on developing the air force was a sign that South Korea was expecting decreased support from the US in the

future. One conference participant reiterated that the aim of South Korean military reforms is increased self-sufficiency of the armed forces and an upgrading of their capacity. On the topic of South Korea's purchase of the long-distance fighter F15, it was suggested that the purchase was not a response to North Korean aggression as such, but was influenced rather by the relationship with Japan. Moreover, the highlighting of air force development was more related to economic issues than to future US support of South Korea.

Furthermore, from the discussion it was unclear how much industry was capable of influencing military affairs and particularly the Defense Reform 2020. One participant suggested that South Korea should maintain a military-industrial complex focused on maintaining, and developing, certain areas of competence in the defense industry. On the other hand, another participant countered that changes may appear since the Defense Reform 2020 has brought new civilian actors into the security community with no or weak previous connections to the military.

The South Korean fear of a potential escalation of the North Korean conflict was also briefly discussed, and here it was said that South Korea found it objectionable that North Korea had so many forward deployed systems. It was further mentioned that North Korea, on the other hand, fears US aggression from bases in South Korea. It was said that the Cold War is still ongoing because of the situation on the Korean peninsula – including unresolved territorial issues.

Russia and USA

After the end of the Cold War, the armed forces of Russia underwent a massive transformation, which influenced the whole Military Industrial Complex (MIC). The military lost control of the interior forces and MIC is now under civil jurisdiction. Unlike in most other countries, where military reform processes mainly concerned the armed forces, in Russia the entire political system as well as its territory changed in the early 1990s. This led to a need to drastically transform the military to better suit the new political situation, inclusive of the new geographic responsibility and geopolitical status.

Today, issues such as the professionalism of the military, improved social conditions for soldiers, improvements to the command and control system as well as creating an inter-logistic agency and developing a new strategy are all important for the Russian military. Overall motifs for the military transformation in Russia seem to centre on the downsizing of the organization and making it more efficient. Nevertheless, it is not only domestic and economic reasons that influence the transformation; emerging conflicts in the former Soviet Union, non-traditional security threats and a new threat perception have also made major reforms necessary. The trend has been to try to develop a new doctrine for the entire system rather than making small, incremental changes. Accordingly, the new doctrine for the armed forces includes new non-traditional warfare, since it has become increasingly important to efficiently fight local wars and low intensity conflicts. The modernization of the Russian armed forces is driven both by new technology and the need to respond to new threats. This kind of modernization is likely to influence and to some extent alter the entire structure of the armed forces.

The military reforms and transformation in the US have seemingly focused on the incorporation of new technology into the military organization. However, it is much more than just that. The reforms in recent years are a combination of different factors including technology, people and organization. Many of the changes have been caused by the collapse of the USSR and the end of the Cold War, when the US no longer had to prepare for a massive attack by the USSR and military peer competition. But new challenges by new states, and more so from non-state actors, arose, which brought about changes in threat perception. No longer was the defense of territory the only aspect to consider, but infrastructure, energy supplies and communications have also become primary assets to defend. The operations after the Cold War have demonstrated the difficulties in handling these new threats. Adapting to the new world order demands new concepts of military engagement – not only new technology. Capability orientation has replaced a threat-oriented strategy both regarding non-traditional issues as well as traditional ones.

It was pointed out that military reform is a product of historical, social and technological factors. Computers, greatly enhanced precision and improved

mobility have been the latest additions to the revolution in military affairs (RMA). However, it was argued that some inventions and developments are of greater advantage to the new adversaries than to conventional military forces. The free flow of information on the internet was mentioned as an example. Furthermore, the importance of efficiency and economics was pointed out, since reforms were also a way to economize, and therefore not only driven by geo-political ambition and military capacity. In other words, a significant aspiration of reforms was to bring about an output larger than the input.

Despite the absence of large political changes, it has not stopped military transformation from taking place in the US. The ambition of reforms in the organization have, for example, been to reduce inter branch competition and to strengthen central control. The changes have covered the whole field from large, global, command and control systems to small personal gadgets such as night vision goggles. Although the dream of a digital battlefield still lies in the future, information technology has brought it closer.

However, it was argued that many of the reforms were conceptual, for instance the “rediscovery” of counterinsurgency in US strategy or the US navy’s shift towards projecting war overseas instead of primarily securing the oceans.

Combat experience in the period after the Cold War has taught the US the important role of training during transition. This is problematic since military reforms don’t come naturally to defense organizations, which need to be prepared and ready for conflict or hostility at any time. For the military it is often said that it is more important to be prepared for war *today* than to plan for future conflicts. In addition it was argued that transformation is expensive and might not lead to the desired goal. This was exemplified with the claim that “Shock and Awe” is better as a slogan than as a doctrine. On the subject of lessons learnt from mistakes it was said that one of the less successful projects in US reforms has been the development of light mobile ground forces, since they turned out neither to possess sufficient strength against a conventional opponent nor to be efficient against an insurgency.

It was pointed out that it will take 5-10 years to create a new system from concept to implementation. Transformation is an ongoing process and the goal should be the development of institutional flexibility, thereby making it easier to continuously adapt to new scenarios. Also, one should not plan for fixed scenarios, but instead concentrate on the capabilities of the armed forces. This kind of thinking has its limits though, especially regarding material planning, since one can't plan in a vacuum. Possible enemies have to be taken into account, thereby introducing an unavoidable element of threat-based planning. On the other hand, regarding the management of human resources in the organization, the capability concept could be more useful since people by nature learn to adapt to new situations. The aim is to have a built-in capacity in the organization to adapt and change. One crucial factor is to create a culture where senior officers see it as natural to listen to younger officers and other experts, and also are prepared to delegate authority – to create an innovation-friendly environment.

It was understood that successful reforms needed participation from both uniformed military and civilians outside the organization. Successful military reforms are possible if the organization is part of the change and not just the target of an outside campaign. However, it needs creative, intelligent and brave personnel to invoke these changes. It was also argued that it was crucial that “outside” and “inside” persons work together to make the changes, for example an outside contractor and an inside officer. In this regard it was further noticed that it was important for the military to encourage this kind of behavior by promoting officers that were willing to accept new ideas and implement changes.

The perhaps most important lesson from US transformation has been the importance of listening to criticism, learned from failures, and being able to correct the mistakes. Although the US administration and its military have made mistakes, there has been a constructive willingness to listen to opinions and address errors. It would be false to believe that reforms can be made without making mistakes in the process.

Europe

Germany is approaching its military reform through step-by-step changes. The transformation is based on an evaluation of societal expectations and

global developments. The development of net-centric thinking focuses on increasing the integration between the different branches of the armed forces. A crucial factor is the training and development of higher officers, which is done jointly and through forums for discussing problems. Furthermore, it was also stressed that it was not only a matter of military training but also of raising political understanding in order to increase chances for successful crisis management. Important to German military reform are changes in the international arena where the Bundeswehr has approached the challenges according to its tradition of high specialization and at the same time adapting its training to changes and development, both political and technological.

The transformation of the German armed forces is not propelled by a state-on-state conflict scenario or advancements in technology. Instead it has focused on improving its capacity in dealing with non-traditional conflicts. This comes out of a change in focus, from territorial defense to international PSO, and also from the conclusion that non-traditional capacity often differs from the needs for state-on-state warfare. This is reflected in the restructuring of some of the German forces to deal with rapid response tasks and stabilization tasks. Since they are not intended for classic warfare, the units with stabilization purposes are equipped differently from others, and are optimized for conflict management and peace support operations. Although the structure is basically the same – as for the rest of the Bundeswehr – for conflict management and stabilization units, the operational requirements are met by a greater proportion of reconnaissance, logistics and engineering personnel. Significant also is the increased focus on the mobility of light forces and a corresponding decrease in reliance on heavy mechanized units and artillery. The air force and navy are heading in the same direction as the army in this respect; however, developments in the army have gone further due to the specific platforms of the different branches.

Regarding information and knowledge based warfare such as the informationization of the military and its impact on C4I and R⁵, it was

⁵ C4ISR is an acronym used by the U.S. military and stands for command, control, communications, computers, intelligence, surveillance, reconnaissance. (It should be noted, however, that there exist a plethora of similar acronyms but with different

stressed that information and knowledge are not the same. While information is only information, knowledge is a deeper understanding and entails an ability to analyze the problem at hand. While information-based warfare is mainly based on classical warfare and suited for battlefield thinking, knowledge-based warfare also uses a system understanding, which includes culture, economy, religion and social aspects to estimate how the actors will act. Moreover, while implementing the system knowledge in strategic and tactic analyses one must consider the implications and effects one's actions have on the system. Regarding the network or net-centric approach in the case of conflict management, it has to be broad and cross departmental to produce a comprehensive understanding of the situation.

The transformation of the military to deal with a changing world could itself interfere in or influence political developments and create a spiral feedback-effect. As in the case of Sweden, it was said that the drastic downsizing of the armed forces and reevaluation of priorities could create a power vacuum in Northern Europe, thus creating regional instability with ramifications for Swedish security policy. A reinvestigation of the threat perception was suggested as a first measure to counter such a development.

Further, in the case of the Sweden, one participant raised the question whether the Swedish military-industrial complex was rational or not, since the military was bound to purchase the products. It was agreed that the Swedish military was dependent on manufacturers, but on the other hand, it was argued that this situation was not necessarily negative. The defense industry, unions and local politicians have all been strong advocates of the Swedish military. It was further argued that without it the Swedish armed forces would probably not have today's high material standards. It was also said that the small number of actors and persons in the security establishment facilitates a good atmosphere, open dialogue and that this close partnership could be one reason for the efficiency regarding equipment purchases.

subsets of elements). Command and control refer to the military commanders' ability to direct forces while computers and intelligence refer to what is required to enable coordination. The last three components – intelligence, surveillance, reconnaissance – are to do with methods of monitoring an opponent/enemy and the area of operations. In sum, the term implies a maximising of the operational effectiveness of people, processes, and technologies.

Peace Support Operations (PSO) is an umbrella term for different peace keeping missions linked to the UN and is based on the consent of all involved parties. When it comes to peace enforcement, on the other hand, there is no need for the consent of combatants – for obvious reasons. Further discussion on the topic of peace keeping brought up questions addressing the differences between a peace keeping force and a relatively light conventional force in a low intense conflict (LIC). This was related to the broader question of the difference of participating in and planning for a peace keeping operation with that of a LIC. In the case of Sweden one participant said that a significant lesson being learned from PSO is that every mission is unique and that only a few general rules can be applied. One participant in the conference highlighted the need of being prepared to engage in combat duties on peace keeping missions. This is important since the situation can change and evolve in an unforeseen a direction. It was also stressed that, in order to succeed, all short term actions need to have a long term perspective. The tendency to plan for a quick fix has proven not to be a good idea. It was further discussed how the participation in PSO was perceived by the international community and if some forms were more acceptable than others. Furthermore, the pre-settings for PSO as well as conduct and engagement were brought up. One conference participant argued that even though interventions without a mandate are never popular, a conflict, if left unchecked due to insufficient international consent, can have such disastrous consequences that there are situations when great powers, or coalitions, might have to act on their own without a mandate. Although situations vary from case to case, it was pointed out that, in PSO, it was important to, as far as possible, to seek broad international support.

Regarding the differences between developed and undeveloped countries participating in PSO, it was said that the main differences concerned the budget. The result being that poorer countries contributed mainly with people, while developed countries were keener to contribute with more sophisticated assets. This “imbalance”, unfortunate as it is, is probably here to stay for the foreseeable future. There was a consensus on that the need for “boots” on the ground” had been given a far too low priority during the last

decade, perhaps due to the exaggerated expectations of what modern technology could offer.

III. Key Challenges of Reform

Technology vs. Human

Is there a tendency to go from quantity to quality, perhaps, brought on by technological developments, budgetary issues and industry as well as resentment over military spending? Is this tendency influencing military strategy to decrease infantry in favor of other more “technologically heavy” units, notwithstanding that recent conflicts seem to show the necessity of having presence on the ground?

For some, the decreasing interest in conventional infantry is both connected to quality but also to the changed priorities in the tasks of the army. The question of “boots on the ground” is a concern for all parties involved in military reform.

One view put forward was that ongoing reforms may have lost their aim and that this perhaps would lead the pendulum to swing back in favour of the military focusing on its core activities. It would thus follow that infantry would perhaps then once again become the primary asset.

One conference participant argued that the reformation of the armed forces in some countries (US and Russia) has been “lost” due to overconfidence in technology and the need for costs savings. This line of thinking reflects the opinion that the obsession with firepower and information technology has relegated the importance of traditional branches and that of infantry in favour of the artillery, air force and other systems that are able to deliver massive fire power.

On the issue of the future of the infantry, one participant observed that supporters of far reaching reforms in the US believed infantry to be obsolete. But, it was argued, in any conflict there is no substitute to troops on the ground. Framing the question in terms of whether we need infantry or not is wrong: instead it would be more correct to ask about how best to put ground forces and infantry to use. It is not longer a realistic option to use it to “grind

down” the enemy, a Verdunian *modus operandi*, a scenario for ground-fighting which has haunted the US, UK and Germany since World War One. It is unquestionable that ground forces are a necessity for a successful campaign. Hence, it is important to address *how* to improve the ability and protection for units involved in ground combat.

A further point of view was that there is a distinction between historical and modern infantry. Against an enemy with efficient fire-power the infantry needs to operate differently compared with a situation where the fire-power of the enemy is weak. In the US, light or elite infantry have been developed, which are not cheap to train. As they lack long-range heavy weaponry, the cornerstones for developing these types of units are training, mobility communication and situational awareness. The light/elite infantry soldier requires twice as much training as soldiers in mechanized infantry units, that is, if s/he also is to be given the ability to operate in non-traditional conflict situations, such as anti-insurgency/guerilla, counterterrorist and peace keeping operations.

One point of view represented was that the infantry needed to focus on smaller unit actions. The level of technology should be high on all levels, including the individual soldier where modern communications is of crucial importance.

According to one participant, it was important to discuss the future role of the infantry and its relation to other services. Technological developments will influence infantry like all other branches, for example the increased use of information technology in the ground-forces. But the development will also be formed by political decision-makers and it is important to recognize the knowledge gap between civilian experts and the military concerning the environment in which the infantry has to carry out its tasks.

Perspectives on reforms and military transition differ. In a war, a politician’s primary goal is to win. For the soldiers – while winning is obviously important – survival also assumes a high priority, a difference that could influence the process of reforms.

One perspective was that the question of the future of infantry and the need to have boots on the ground was perhaps too difficult to discuss in such general terms: the variety of conflict scenarios regarding actors and locations

as well as other conditions makes generalizations impossible. Since one could conduct a military campaign and be successful, in the case of Kosovo, without boots on the ground but not in the case of Iraq, the conclusion would be that there is no universal formula for success; instead, threat perception perhaps, again, should be given a more important role when developing one's military.

Joint Command vs. Services

The conflict between a joint structure and the distinctive features of the service branches regarding development stages, aims and purposes was also addressed during the discussion. The difficulty, due to differences between the branches and services of the military, when attempting to create efficient structures for joint operations was a main concern for the conference participants.

It was acknowledged – on issues of joint command – that this could be difficult to achieve due to the problem of creating necessary competence in Joint Staffs, a problem related to the healthy competition between services and branches. This was viewed as a problem of balancing the control over budget and staffs between the commands of the various services and branches and that of the unified command. It was pointed out that the question could be approached in a number of ways. One suggestion was to promote officers faster if they had distinguished themselves in a joint command position, and thereby increase the merit value of serving in the command.

Although the joint and unified command was seen by the participants to be the future of the armed forces, preserving the specific culture of the different branches and services was also held to be important. Second, instead of addressing the organization of the services and branches, in a first attempt to develop joint capability, one should start where the power is, i.e. increase joint development and let the services adapt to a new reality. Third, to further encourage development of unified command structures C4ISR systems should be developed as joint systems.

From a Chinese point of view, the transformation of the armed forces is a path to increase co-operation between the services. This is connected with

other developments in the Chinese military, in which the air force and navy basically developed as “spin offs” from the army. The reformation is one way of reducing the “big brother” thinking of the army towards the other services. Furthermore, the Chinese participants pointed at the effect of “informationalization”, increasing the need for joint capacity. However, while “informationalization” speeds up the development of joint command structures, the different platforms and cultures of the services and branches curbs the development towards a single system culture, where command functions are fully integrated throughout the armed forces.

One problem identified was the challenge to find commanders with a thorough enough knowledge of the entire military apparatus and how different parts of the organization work. One opinion was that it was necessary to train specialists for leading joint operations; that these officers should be trained within the joint command, and not in the different services. This has been partly successful but has far from eliminated the problem of the lack of integration between the services. It was said that theory is one thing and reality is something else – the latter due to the differences in cultures and experiences of the various services and branches. The United States Marine Corps (USMC) distrust of the United States Air Force was cited as an example wherein the former possesses its *own* air support.

Concerning the role and function of a senior officer working in a unified or joint command, it was stressed that there were two ways of acting. One would be as an ambassador of one’s service. The second would be to primarily serve the command; making sure his/her service delivers what the command might need. The second option was the one advocated by the majority of the conference participants. This notwithstanding, it does not dismiss the question of loyalties and differences of opinion on how a problem should be addressed, which depend in large part on the background and training one has.

All participants agreed that transformation was a delicate balancing act between preserving traditions, unit cohesion and existing competences, but at the same time increasing integration and promoting flexibility. There is no panacea when it comes to creating tomorrow’s armed forces.

IV. Conclusions and Key-points from the Discussions

Below are listed some of the main conclusions and findings resulting from the conference discussions.

- The transformation of military structures and introduction of new technologies i.e. informationization have empowered the role of the individual soldier and lowered command levels.
- The aim of reforms is to transform the military, from a mass army to an advanced jointly-led organization, where the respective branches are preserved but which can be combined with one another in a flexible way.
- Military reformation should be guided by long term doctrine and theory building.
- Digitalization of Command and Control facilitating both centralization and decentralization has been a main feature of recent reforms.
- The effect of informationization could cause commanders and their staffs (on all levels) to receive too much information. The implications of this should be taken into account when informationization is applied to tactics, strategy, and politics.
- There is a need for the military to develop capability to handle conflicts that fall outside of the state-on-state conflict concept. Since non-traditional and low intensity conflicts are more frequent than inter-state conflicts, it is important to study their characteristics, challenges, and how to deal with them; this without forgetting that conflicts between states will always pose the greatest demands on military organizations.