

Armed Forces for 2020 and beyond

Roles | Tasks | Expectations

Walter Feichtinger and Benedikt Hensellek (Eds.)

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Foreword

In 2014 the Austrian National Defence had the honour to host the Annual Conference of the International Society of Military Sciences (ISMS) in Vienna. The general theme of the conference was “Armed Forces for 2020 and beyond. Roles | Tasks | Expectations”. More than 120 participants with scientific and/or military background from over 20 countries participated in this outstanding event in order to tackle the topic from different views, standpoints and academic disciplines. Top level representatives from the EU, the Austrian Ministry of Defence and Sports and the international academic community provided inspiring input to the conference fuelling the discussions.

This volume contains papers that were presented and discussed during the conference. The articles were also reviewed by the chair persons of the different working groups. A single glance at the titles of the articles offers great insight on the wide variety of topics and approaches to the general theme. You can find considerations on the *Militarization of Border Control*, experiences about the *Hardness of integrating UAVs* in selected countries, the presentation of *A Meta Risk Model for Supporting Interactive Decision Making in Situation Awareness Centers*, as well as *Pedagogical Challenges and Benefits* by using *Laptops in Social Science Lectures*.

On the one hand, the broad span of issues indicates how manifold security related topics nowadays are. On the other hand, it depicts the multifaceted expectations towards armed forces in the foreseeable future and what they should be prepared for. In this regard the publication also underpins the unique selling proposition of ISMS by providing a platform for academic professionals from the security and military field. All annual conferences open the door to serious intellectual discourse and exchange, while simultaneously providing a platform to build individual networks.

At the beginning of 2015 the Austrian National Defence Academy and ISMS already published a collection of all abstracts that were submitted and presented during the conference. In addition, all contacts related to the presenters were offered. This volume is a selection of full papers and to a certain extent it also concludes the Austrian presidency of ISMS in 2014.

Allow me to use this opportunity to wish ISMS and all its representatives and contributors all the best for the future – for the benefit of military science and all related aspects.

Dr. Walter Feichtinger, BG
ISMS Council
Austrian National Defence Academy

Abstract

The title of the International Society of Military Sciences' (ISMS) Annual Conference 2014, "Armed Forces for 2020 and beyond – Roles | Tasks | Expectations", opened the door for a broad thematic approach. By raising the question of future requirements and the possible role of armed forces, it tried to identify the security policy environment for future operations and missions. Cooperation on a multinational level between nations as well as international organisations is a precondition and a challenge for successful engagements in future missions.

This volume is the compilation of the broad range of papers presented during this conference in Vienna. Selected papers offer specialized views on the overall topic, mirroring the nine ISMS working groups. Scholars, professors and researchers from various backgrounds and areas of expertise present their research results on actual subtopics. Observations on future forces in Europe as well as an outlook on EU's tools and areas of improvement in the Common Security and Defence Policy give the thematic frame to this volume.

Post-Neutral States and the European Future Force

Julian Lindley-French

There is a big question that hangs around European military headquarters these days like Banquo's Ghost in Shakespeare's *Macbeth*; just what is 'big' and what is 'small'? Set against the enormous and rapid shifts in the global military balance of power all Europe's armed forces look ever smaller, even those of the British and French. It is an imbalance of power made daily worse by the deep cuts to European armed forces that have been going on for a decade and which in spite of the political rhetoric to the contrary seem to be accelerating. What is the choice Europe's really small military powers face and has neutrality a place?

The smaller Europeans face a very profound dilemma; how to organise enough military means collectively to credibly pursue the immense strategic and political ends the twenty-first century will thrust upon them and their bigger allies. This dilemma will affect not only the aligned states but also European states that cling on to some vestige of neutrality. Indeed, 'neutrality' for states such as Austria, Finland, Ireland or Sweden is a form of strategic post-alignment in which the only choice remaining is which operation to support. Actual non-aligned neutrality simply no longer exists particularly so if a state is a member of the EU.

Against that strategic backdrop the defence choices faced by such states over the next decade will be very profound indeed. Indeed, they must choose which type of force to procure and at what level of effect – high, medium or low end of the conflict spectrum. Take Sweden as an example. The recent October hunt for a 'red' submarine demonstrates that in spite of Stockholm's armed neutrality Sweden's small but relatively high-end armed forces are established towards the higher end of the conflict spectrum. Clearly, Sweden assumes that its armed forces will in future operate with the more advanced militaries of the US, UK and France. Austria on the other hand is far closer to the emerging German strategic tradition of peacekeeping. Thus the centre of gravity of the Austrian armed forces is expertise at the medium to lower end of the conflict spectrum.

However, all European forces must overcome Europe's other dilemma; how to put forces with a little bit of everything but not much of anything together in a way that credibly covers the three main missions of defence, crisis management and peace and security support. All three of which suggest a significant degree of advanced expeditionary capability and sustainable and sustaining capacity in the twenty-first century security environment.

Indeed, 2014 has demonstrated the three main mission-types with which Europe's Future Force will need to contend. Russia's use of strategic ambiguous warfare in Ukraine reinforces the need for a twenty-first century concept of collective defence/deterrence, strategic reassurance, and a layered defence. Post-neutral states (for that is what they are) such as Finland, Ireland and of course Austria can of course to some extent rely on NATO and their more powerful neighbours to undertake this mission.

However, given that trade-off the post-neutral states will be expected to contribute to crisis management and peace and security support all of which are becoming more taxing by the very nature of globalisation. The super insurgency in the Middle East is a case in point: The campaign against Islamic State suggests that in the emerging spaces between the great power blocs states are failing and that such failure involves a systemic struggle with profound implications for all European societies including the post-neutrals. There can be no neutrality in such a struggle.

Furthermore, Europeans today share a complex mix of values and interests including the post-neutrals. Indeed, the value-interest is the very ethos of the EU's Common Foreign and Security Policy and Common Security and Defence Policy. The Ebola crisis in West Africa has led to significant calls on European military power. Indeed, the ability to plan, ship and provide security and logistics is a vital component in the 'war' against Ebola. Again there can be no neutrality in such a struggle and the challenge posed by peace and security support is well beyond any one European state, even the strongest.

Therefore, the European Future Force will need to reflect differing political traditions and sensibilities and yet be capable and able to rise collectively to the many shared challenges that are undoubtedly ahead. That challenge

suggests in turn forces that are modular, organised around hubs and spokes with the smaller states acting as capability and capacity spokes even if that in turn entails a significant loss of national and defence sovereignty.

Given that context the European Future Force will also need to be mobile, with reach, sustainable and agile, capable with, capacity, lethal & knowledgeable. The Force will also need to operate to effect throughout the conflict spectrum and across six the domains of contemporary and future conflict; air, sea, land, cyber, space and knowledge.

Therefore, the Future European Force must sit at a nexus between conflict and war, allies and partners, civil and military, technology and doctrine, knowledge and effect, capability and capacity. The Future European Force will also need to be sufficiently able and capable to generate and command complex coalitions, forces and resources to achieve complex political outcomes via military means.

Critically, such a force will need to be comparative advantage-driven to overcome the price that modularity will inevitably impose on unity of effort and purpose. To that end the focus of the force will be firepower and brain-power with shared concept development & experimentation (CD&E) vital. Systematic development, exercising, training and enhanced education will also be needed to overcome the divisive consequences of a modular force that deploys in different formats and groupings.

Finally, the European Future Force will need four main elements. The Hub Force will be strong enough to influence alliances and partnerships, agile and expandable over time and built around command assets. The Core Force will be civilian-friendly, agile enough to work closely across governments and with other departments and EU civilian agencies. The Integrated Force will drive modularity by promoting a shared planning and promote ownership of planning across the force base for complex contingencies and ethos and culture and critical to consequence management. Finally, there will be an Effect Force focused on the more powerful European states, able and geared to take on robust forced entry missions as and when required either in lead or as part of coalitions, institutions and or partnerships.

The post-neutrals will need to decide where and how their forces fit into such a concept because by its very nature the European Future Force will reflect the politics of contemporary Europe. Indeed, in a world in which even the biggest Europeans are small there is no longer a place for ‘neutrals’.

Professor Dr Julian Lindley-French is Senior Fellow, Institute of Statecraft in London, Distinguished Visiting Research Fellow at the National Defense University in Washington DC and a Member of the Strategic Advisory Panel of the UK Chief of Defence Staff.

Part 1

War Studies

The Phenomenon of the Frozen Conflict over Transnistria and its Impact on the Security of Central-Eastern Europe

Kamila Węderska

Summary

The general objective of the project, that the author is planning to undertake, is the identification of the phenomenon of the frozen conflict over Transnistria, and to demonstrate its impact on the security of Central-Eastern Europe. The expected result will be achieved through the main research problem: What is the phenomenon of the frozen conflict in Transnistria, and what is the significance and impact of the conflict on the security of Central-Eastern Europe? Upon completion of this research project, greater knowledge and insights should be achieved with regard to the phenomenon of frozen conflicts along with the development of a model depicting the process of the respective freezing and thawing of this kind of conflict¹. Research results will enable better recognition of the challenges to the security and international relations of Central-Eastern Europe. This article is just a introduction to the scientific problem being investigated by the author, and seeks to describe the planned research. A subsequent article will present the results of these scientific studies.

Keywords: Russian Federation, Transnistria, Central-Eastern Europe, security, frozen conflict.

Introduction

The belief that the frozen Transnistrian conflict is important for the Central-Eastern Europe security is a starting point for scientific inquiry. For practitioners of international relations, the so-called quasi-state, as a result of the freezing of the conflict, took on significant geopolitical importance².

¹ More: Cordell K., Wolf S., *Special Status: Can the Moldovan- Transnistrian Conundrum be Resolved by Consociational Democracy?*, Uppsala, 2013.

² More: Kaldor M., *New and old wars : organized violence in a global era*, 2nd ed. Polity, Cambridge. 2006; Kaldor M., Vejdova I., eds, *Democratization in Central and Eastern*

With seemingly dormant conflicts such as those created after the breakup of the Soviet Union, quasi-states became salient elements of major-power politics. This is the case when talking about a small quasi-state situated on the left bank of the Dniester River, considered by the world as part of Moldova. This “country”, for many reasons, is of interest to the Russian Federation. However, it is also within the interests of the European Union. The Transnistrian Moldavian Republic was established as a result of artificial divisions after the collapse of the USSR, just as other countries such as Georgia, Armenia, and Azerbaijan. The interests of Russia in this region are motivated by a number of different reasons: political – the real power in Transnistria being exercised directly or indirectly by representatives of the Kremlin; social – according to statistics from 2010, nearly one third of the population are Russians in Transnistria; economic – Russia successfully manipulates the Transnistrian “country” economically, and provides preferential financial terms for gas flowing from Russia, and, gives good facilitates for passports and employment for the population of Transnistria; and, militarily – to this day, like from another era, as a result of the frozen conflict, Russian troops are stationed in the Transnistria, together with outdated equipment and military ammunition, and unclear as to their ultimate objectives are in effect cooling the possible intentions of Moldova relating to the integration of Transnistria³. The influence of Russia on this region is a challenge for European security, which especially became apparent during the crisis in Ukraine beginning in 2014. The Transnistrian conflict can be thawed when Russia decides to use it in the policy towards the region of Central-Eastern Europe⁴.

How to investigate and elaborate the Transnistrian phenomenon of frozen conflict?

The general objective of the current research project is the identification of the phenomenon of the frozen conflict over Transnistria, and to demon-

Europe Continuum, London, UK, 2002.

³ More: Bryc A. red., Legucka A. red., Włodkowska-Bagan A. red., *Bezpieczeństwo obszaru poradzieckiego: księga poświęcona pamięci profesora Kazimierza Malaka*, Difin, Warszawa, cop. 2011; Bryc A., *Cele polityki zagranicznej Federacji Rosyjskiej*, Wydawnictwo Adam Marszałek, Toruń 2004.

⁴ More: Baluk W. red., *Polityka bezpieczeństwa narodowego państw obszaru WNP*, Wyd. Adam Marszałek, Toruń 2009.

strate its impact on the security of Central-Eastern Europe. The expected result will be achieved through the main research problem: What is the phenomenon of the frozen conflict in Transnistria, and what is the significance and impact of the conflict on the security of Central-Eastern Europe?

Explanation of the theoretical aspects of frozen conflicts, and in this context, a case study of the frozen conflict in Transnistria will be an important contribution to the development of the science of security studies. Based on previous and preliminary research, the principal research hypothesis will be submitted to verification, namely that the Transnistrian conflict is a part of the phenomenon of “frozen” conflicts and at the same time is a basis for creating a model of “freezing and thawing” of the conflict. In this context, the possibility arises of forecast scenarios shaping the security environment in the region and the consequences of the phenomenon of “thaw” for the security of Central-Eastern Europe. It will be possible subsequently to test and verify the following propositions:

1. the viability of the theory of frozen conflicts, their essence, the conditions of their creation and the subsequent patterns of their development; this in turn will enrich our knowledge of security issues, especially our knowledge about the new type of armed conflict on the example of the Transnistrian case. At the same time it will be possible to apply this model in analyzing other destabilizing situations;
2. the Transnistrian conflict fits into the theory of frozen conflicts, especially in the post-Soviet area;
3. the evaluation and evolution of a model of frozen conflicts will provide the possibility of creating a model of the thawing of this conflict;
4. the functioning of frozen-conflict dynamics on Transnistria have negative impacts on the security of Central-Eastern Europe.

These propositions and their analysis, will provide the answer to the general problem enunciated here, and thus achieve the objectives of the research project.

The subject of research will be the frozen Transnistrian conflict and its impact on the security of Central-Eastern Europe, whose definition is given by J. Solak (Poland, National Defence University):

frozen conflicts are motivated by preservation of the identity (distinctiveness of ethnic and/or religious) civil war, turned against the separatist aspirations of inspirational external forces (third countries and other non-state actors) in the interior of the country (and therefore protected by the principle of the sovereignty of states), which, after the military phase of the lack of a peaceful settlement led to a quasi-states with their own camera power, the legal system and public safety (security) institutions, are not recognized by other entities international law and only by each other⁵.

The Transnistrian conflict is between Moldova, Russia, and the Transnistrian region and it is characterized by the attributes included in the definition of J. Solak. As a result, the theoretical study the author proposes is a model thawing of armed conflict based on the example of the Transnistrian conflict⁶.

As a result of the implementation of the stated research objective, knowledge of the described phenomenon should be developed along with the proposed model of freezing and thawing of this kind of conflict. Research results will allow a clearer recognition of the challenge to the security and international relations of Central-Eastern Europe.

Work plan of the project

Identification of the frozen conflict of Transnistria, the possibilities and the process of its thawing, and the associated consequences, risks, and threats for the security of Central-Eastern Europe will be explained through the prism of the adopted theoretical model of frozen conflicts and the newly created model of thawing conflicts.

The author proposes to assess the research phenomenon of the frozen conflict over Transnistria and its impact on the security of Central-Eastern Europe through recourse to four research tasks.

⁵ Solak J., *Konsekwencje zamrożonego konfliktu o Naddniestrze dla bezpieczeństwa europejskiego*, Akademia Obrony Narodowej, Warszawa, 2010; Solak J., *Moldawia – republika na trzy pęknięcia. Historyczno-społeczny, militarny i geopolityczny wymiar „zamrożonego” konfliktu o Naddniestrze*, Europejskie Centrum Edukacyjne, Toruń 2009.

⁶ More: Celewicz M. red., Kłoczkowski J. red., Pietraś M. red., *Konflikt niskiej intensywności w Naddniestrzu*, Instytut Europy Środkowo – Wschodniej, Lublin 2006.

The first task of the research will be connected with the first chapter of the project: Theory of frozen conflicts. Research Task No. 1 will be realized after the solution of the specific research problems:

- a) How should the theories of frozen conflicts in the science of security be sorted out?
- b) What are the conditions for the formation and course of frozen conflicts?

In order to solve the above problems detailed diagnostic analysis of domestic and foreign literature describing the theory of frozen conflicts will be used. Detailed analysis will be carried out, and as the result, a theory of frozen conflicts will be developed, along with a summary of their nature, their conditions of formation and their development and dynamics. This will be shown to be, necessary for the implementation of the next research tasks.

The second research task will be connected with the second chapter of the project: the Transnistrian conflict as an example of frozen conflicts – a case study. Research Task No. 2 will be realized after the solution of the specific research problems:

- a) How did the Transnistrian conflict occur?
- b) How did the theory of frozen conflicts take into account the characteristics and regularity of the Transnistrian conflict from the perspective of internal factors affecting the continuity of its freezing?
- c) How did the theory of frozen conflicts take into account the characteristics and regularity of the Transnistrian conflict from the perspective of external factors affecting the continuity of its freezing, and what are the interests of the international actors involved, as well as the peaceful attempts to resolve the conflict?

This will entail an evaluation of the causes and course of the Transnistrian conflict and the involvement of different international actors, analysis of peacekeeping documents, peace agreements and peacekeeping operations in the Transnistrian Moldavian Republic.

In the third task of the research, connected with the third chapter of the project, we will find information about the evolution model of frozen conflicts evolution model based on the example of conflict in Transnistria. Research Task No. 3 will be realized after the solution of the following specific research problems:

- a) How does the evolution model of the conflict based on the example of the frozen conflict in Transnistria explain this kind of conflict?
- b) How does the model of the process of freezing and thawing of armed conflicts provide knowledge and understanding of the causes, course and consequences of such conflicts?

Detailed analysis will be carried out after analyzing the model of the formation of the frozen conflict by J. Solak, who has developed the original model of the freezing and thawing of the conflict.

The final stage of the research will be in the form of the following title: Consequences of the functioning of the frozen Transnistria conflict for the security of Central-Eastern Europe. Research Task No. 4 will be carried out after the solution of the following specific research problems:

- a) What are the consequences of the functioning of the frozen Transnistria conflict for the security of Central-Eastern Europe?
- b) What are the possible scenarios in relation to the frozen conflict in Transnistria?

This information will be subject to the diagnosis of the security situation in Central-Eastern Europe and will indicate the risks associated with the thawing of the conflict. In addition, possible scenarios for the shaping of the security environment in Central-Eastern Europe in the context of the Transnistrian conflict will be forecast.

Methodology

Successfully achieving the research project's objectives and proposed courses of actions will require the application of theoretical and empirical research methods, selected in function of the nature of the subject. Theoretical methods, using appropriate tools and techniques will be used in the evaluation of the scientific materials. As well, methods of empirical research in collecting documentation, including surveys (expected to be purposeful selection study groups of about 30 people), will be employed.

To solve the problems of research methods, diagnostic terrain research, analytical and synthetic reasoning, abstracting, modeling, inference, and inductive and deductive reasoning will be applied. Where necessary, additional methods, tools, and techniques will be employed. In addition, the

research based on both Polish and foreign-language sources will be integrated, along with study visits and conferences.

Application of the above methods will develop and organize knowledge with regard to the Transnistrian conflict's impact on security in Central-Eastern Europe and to elaborate lessons learned and provide forecasting, with regard to the questions raised and the scientific problems highlighted.

Summation

To investigate the phenomenon of the existence of the Transnistrian conflict, the continuity of its freeze for over 20 years and create a model of freezing and thawing will give a better prediction of the consequences, scenarios, forecasts and risks associated with the possibility of thawing conflicts and the impact of this situation on the security of Central-Eastern Europe, the European Union, as well as neighboring countries.

Preliminary research by the author, including co-operation with the Polish Embassy In Chisinau during an internship in 2011, and collected literature make it possible to conclude that there is a scientific necessity to collect, deepen and expand scientific knowledge about the theory of frozen conflicts, which is an important element of the development of the science of security. There is a scientific need to explore the frozen conflict in Transnistria, ascertain the risks associated with the possibility of thawing, and demonstrate the impact of this on the security of Central-Eastern Europe. A composite model of thawing conflict is not yet established in any of the research centers in the world.

The project is characterized by its pioneering nature, that is, to create a model of freezing and thawing of the conflict and to demonstrate its impact on the security of the region, which is an innovative research endeavor. The literature does not include research designs of this nature employing interdisciplinary bases for theory development. The proposed project will therefore be the basis for developing a theory of frozen conflicts, including the detailed process of freezing and thawing and the associated consequences. It should make a significant contribution to basic research, and promote the development of scientific publications and teaching in this field. The project will affect the development of the science of security,

expanding knowledge on the evolution of armed conflict. The proposed research will also utilitarian contribute to the development of generalized knowledge, facilitating greater public understanding and awareness of these issues.

A preliminary survey of the literature and source materials made it possible to note that very few Polish and foreign publications only partially explain the phenomenon of the Transnistrian conflict. Examples in the English and Polish languages are the following books and articles: M. Kaldor, *New and Old Wars: organized violence in a global era*, M. Kaldor, I. Vejvoda, *Democratization in Central and Eastern Europe Continuum*, I. Rangelov, M. Kaldor, *Persistent conflict*, S. Wolff, K. Cordell, *Special Status: Can the Moldovan – Transnistrian Conundrum be Resolved by Consociational Democracy?*, S. Wolff, *A resolvable frozen conflict? The domestic and international politics of self - determination in Moldova and Transnistria*, S. Wolff, *Is there a Federal Solution for the Transnistria Conflict*, S. Wolff, *Ethno - Territorial Cross - Border Conflict in Western Europe*, S. Wolff, *Building Democratic States after conflict*, J. Solak, *Consequences of the frozen conflict of Transnistria for European security*, J. Solak, *Moldova - republic on three cracked: historical- social, military and geopolitical dimension of the “frozen” conflicts of Transnistria*, M. Kosienkowski, *Russian Federation to the Transnistrian*, M. Kosienkowski, *Dniestr Moldovan Republic: determinants of survival*, A. Gil, *Dniestr Moldovan Republic as part of the political space in Central and Eastern Europe*. These books and articles relate to the Transnistrian Moldovan Republic, to Europe and the Russian Federation. However, they do not constitute studies that exhaustively describe the phenomenon of the frozen conflict with Transnistria and its impact on the security of Central-Eastern Europe.

The proposed results of research will be an integral part of the preparation by the author's doctoral dissertation titled: *Transnistrian conflict in the policy and strategy of the Russian Federation*. In addition, the finalized course of study by the author – national security, scientific publications in the field of frozen conflicts, security of Soviet area countries, including Moldova and Ukraine, and practical experience in conducting field research gained during an internship at the Polish Embassy in Chisinau – should be conducive to the successful implementation of the research tasks outlined here.

A proposed solution to the problem and the creation of a model of freezing and thawing of the conflict will bring an original contribution to the

achievements of science of security in Poland and more generally. Creating a model of freezing and thawing of the conflict will review the current state of knowledge about the problem of Transnistria, will look at it from a new point of view and identify the challenges and threats to international security with an expected thawed conflict and indicate the possibility of counteracting its effects.

The results of the planned research work undertaken within the framework of scientific research, will be universal theoretical application, enriching the existing theories in the social sciences and security science. The resulting model proposed in the project will serve as a basis for further research, enabling the development of ways to prevent the risks of frozen conflicts as they thaw, regardless of internal or external factors.

Research carried out in the framework of the proposed research project is also an integral part of the doctoral thesis prepared by the author and plays a significant role in the implementation of further research tasks. The project results will be used in the preparation of scientific publications and national and international conference presentations regarding the phenomenon of frozen conflicts, including Transnistria and their impact on security in the region.

In further perspective, the project will be the basis of further work for academic societies, universities dealing with issues of security and international relations, military education centers, think tanks, Ministry of Foreign Affairs, National Security Bureau, Ministry of Defense, Polish Institute of International Affairs, Centre for Eastern Studies (Poland).

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Ambush in Now Zad: A Snapshot of Fighting the Taliban in Afghanistan

Shaun Allan and Neil Busby

This article details a real ambush and counter-ambush undertaken by the Royal Marines and their commando engineer support during Operation Herrick 5 (2006-7). The article details how a potentially catastrophic ambush by superior Taliban forces was turned around when the commandos switched to Plan 'B' displaying great flexibility and resourcefulness. The fighting was not unique during the British Forces time in Helmand Province, but provides a snapshot of the vicious fighting undertaken during thirteen years of insurgency.



Figure 1. Combat Engineer Commandos, Now Zad, Op. Herrick 5. Neil Busby second left and Shaun Allan third left (middle)

The details of the ambush have been put together principally by the author (ex-Royal Marine Commando and Combat Engineer 131 Commando RE (TA)) and Sergeant Neil Busby (then a Corporal in 131 Commando Royal Engineers – Territorial Army (TA)), and other eyewitness sources who wish to remain anonymous. The purpose of the article is firstly to spotlight one kinetic operation participated in by British Forces during their thirteen years in Helmand Province out of many thousands of similar operations in this vicious insurgency. Secondly, this article is also written as a tribute to the British fighting soldier, those injured and those who paid the ultimate price in helping the Afghani government in their fight against Islamic extremism and for a better Afghanistan.

The Combatants

The protagonists involved in Now Zad during Operation Herrick 5 were elements Lima Company (L Coy), 42 Commando, Royal Marines, roughly around 80 commandos split into two locations. The riflemen of L Coy were based in Now Zad District Compound (DC), an old Afghan National Police (ANP) compound. The company's support troops – mortars and machine gun (MG – General Purpose Machine Gun and Browning .50 Calibres) sustained fire support gun groups were situated on ANP Hill about 500m south-west of the DC. The Royal Marines were supported by two sections of Royal Engineer Combat Engineers, one section from 131 Commando Royal Engineers TA and the other section from 59 Commando Royal Engineers (eight men each with a Staff Sergeant in command of the whole detachment). The engineer detachment was used in Now Zad for water supply, explosive support and as extra riflemen on patrols.



Figure 2. View from ANP Hill over Now Zad

The Taliban forces in and around Now Zad consisted of many foreign fighters and Afghans. However, precise numbers were not known. Nevertheless, all through the winter of 2006-7 they had been gathering their forces for the new Spring-Summer campaign upon the British-held DCs of Sangin, Kajaki, Garmiser and Now Zad and were said to number around 5,000 fighters. There were very heavy concentrations of fighters around Now Zad and an unofficial front line existed along a large wadi which dissected the centre of the town, which the British did not patrol east of. This was due to the 3rd Battalion the Parachute Regiment being ambushed heavily on the previous tour (Op Herrick 4), and the British forces very low numbers.¹

The Plan

The ambush in Now Zad detailed within this article took place in early March 2007. The action centred in, and about, a typical Helmand Province thick mud built empty compound with two strong locked metal doors which overlooked a large dry wadi then used by the Taliban, and their affiliates, to move men and equipment under cover. On the particular day of the OP/ambush, to be put in by the commando force, an indeterminable group of Taliban fighters would be making their way into Now Zad. This information was intercepted by ICOM-chatter, electronic surveillance of the Taliban's VHF hand-held radios. The plan was to prepare an Observation Post (OP) in a compound overlooking the wadi which afforded sufficient cover, and be prepared to ambush the enemy should a suitable target present itself. The operation was to last 24 hours before a withdrawal of the OP/ambush party.

Numbers and composition of the OP/ambush party

The force sent out to execute the OP/ambush consisted of two groups. Group one the OP/ambush party consisted of one section of Royal Marines (8 men with a Corporal as section commander), plus two Combat Engineers (131 Commando RE) providing explosive methods (L9 Anti-

¹ Patrick Bishop, *3 Para: Afghanistan, Summer 2006* (London: HarperPress, 2007), pp. 71-83.

tank barmine) of entry or exit if required.² The OP/ambush party was under the command of a Royal Marines Lieutenant. The second group was the Final Rendezvous (FRV) group, commanded by a Royal Marines Sergeant, eight Royal Marines and two Combat Engineers, who stationed themselves directly behind the OP/ambush site two compounds back (around 30 metres away) with a road separating an empty compound to the rear of the OP/ambush site and the FRV. The FRV group also contained a Mortar Fire Control (MFC) Sergeant to call down supporting fire if the two parties needed to withdraw under heavy contact.



Figure 3. Author (Shaun Allan) prepares barmines as mousehole charges (OP Herrick 5 - 2006-07)

The OP/ambush and FRV set-up

The two parties set out before first light at around 2.00 am after an afternoon and evening of battle preparation. The commandos patrolled into the FRV without incident set up the position with sentries posted. A half bar-

² Orders regarding the use of barmines for extraction from a compound were not to rush through the explosively created mousehole, but to let the dust settle and await orders.

mine was propped-up on an arched gateway at the end of a narrow alley which faced the position of the OP/ambush compound. This was in order to deny or slow down any pursuing enemy should the commandos wish to 'bug out' quickly. The OP/ambush party moved through the FRV to the compound, which was chosen after reconnaissance a couple of days earlier, and climbed over the compound wall at the rear of the building (furthest away from the wadi) using a single section of demolition ladders.³ The OP/ambush compound overlooked the wadi to be used by the Taliban.

The OP was set up on top of the house inside the compound which ran down one side of the compound wall. The metal doors were facing the wadi. The compound roof had a low wall running around it which afforded cover for those manning the OP. The OP ran with two marines manning it at a time, whilst the rest of the party rested in the compound below. A Claymore was also positioned facing the metal doors on to the street. At first light the Royal Marines Troop commander (Royal Marines call the Troop Commander Boss) took his two Combat Engineers over to the far compound wall and discussed whether a small opening, covered over with a metal sheet, in the wall could be made bigger to create an escape route from the compound. It was decided that to do this would create unnecessary noise. Therefore, the Boss ordered the Combat Engineers to prop-up their half bar-mine next to the metal plate (without the detonator attached).⁴

Contact – Phase 1.

As with most OPs and ambushes there was a lot of waiting. However, unlike in Britain where OPs and ambushes, during training and exercises, tend to be a battle against hyperthermia and staying alert, the Helmand brand of OP/ambush, whilst it was quiet, was quite pleasant as sun shone its warm rays on resting bodies. This however, was not to last. The two parties in the OP/ambush and FRV locations had been in position for around 14 hours.

³ Demolition ladders (Dems ladders) are aluminium and come in 5 foot interconnecting sections to make a twenty foot ladder. Official British Armed Forces nomenclature is A5 Ladder Straight.

⁴ The L9 Anti-Tank Bar-mine in Afghanistan was used to mousehole through the thick mud walled compounds of Helmand Province often under time pressure and often under fire.

It was around this time that a marine turned to me, looked at his watch and said 'It's five o'clock – they [the Taliban] should be attacking soon.' The Taliban in and around Now Zad usually had set times for their attacks, and 5 o'clock in the afternoon was one of their favoured times.

Literally minutes later the two marines on the OP were contacted by MG fire. The two OP marines returned fire. However, as they did, Taliban fighters, who had filed up the wadi under the cover of MG fire, started to kick the metal doors and fire through them in an attempt to break in. The OP marines, faced with two targets simultaneously, threw grenades down at the Taliban attacking party and set off their Claymore. Nevertheless, the Taliban fighters still came up the wadi and then tried to batter down the compound's door. Inside the ambushed compound marines and engineers alike fired at the metal doors trying to drive the attackers back.

Meanwhile, the FRV party ran about securing webbing and preparing themselves for the arrival, or the rescuing, of the OP/ambush party now battling the Taliban around thirty metres to their front. Whilst the marines organised themselves the MFC started to warn off the mortars and the MG group on ANP Hill to stand by to give supporting fire. Moreover, the two attached Combat Engineers started to prepare their half bar-mine to take down the arched gateway (for denial purposes) once the OP/ambush party had moved through the FRV.

The Taliban fighters still battered at the metal gates, shouting 'Allah Akbar' and firing through the gates holding them at bay the marines and engineers within the compound still fired at the doors, which must have inflicted considerable damage to the attacking force. Smoke, dust and the noise of bullets whining past ears filled the compound as a controlled chaos took hold of the men fighting for control of the compound. Fortunately for the commandos in the compound there were no casualties as the ambush began its second phase.

Contact Phase 2.

As the two protagonists fired at each other through the doors to the compound the Royal Marines troop officer realised very quickly that the only way out of this ambush was to blow the mousehole at the rear of the com-

pound and from there make it to the FRV. With bullets whizzing around the interior of the compound the two Combat Engineers ran to the propped-up barmine, next to the metal plate on the back wall. Whilst one engineer calmly taped the detonator to the detonation cord the second engineer of the pair covered his comrade by firing at the metal doors. The safety fuze was cut to about 10-15 seconds and was lit.⁵ If the barmine was not prepared properly and did not ‘go-off’ the OP party would be trapped in the compound.

Running back to the dwelling in the compound the engineers shouted ‘Take cover, barmine firing now’. When all friendly forces within the compound were out of line of sight, and under cover the barmine exploded. Within the confines of the compound the barmine released a massive explosion. Instantly all firing ceased from both sides, and everyone gathered their wits for what was to come. After around thirty seconds, after the dust had settled, the two Combat Engineers set out to inspect the mousehole to check whether a kitted-up commando could get through. As the Combat Engineers checked the breach, the firing through, and kicking of the metal doors commenced again from the Taliban outside. The commandos quickly returned fire and kept firing even as they lined-up against the back wall ready to extract.

On the word ‘Go’ the commandos quickly and closely together exited the compound through the breach and ran towards the FRV. On rounding the corner of the street where the FRV was situated the commandos were waved in by the two Combat Engineers getting ready to prepare their barmine for blowing the arch. As the OP party filed down the narrow corridor into the FRV compound the Royal Marines MFC started to call down mortar and MG on the ambush compound. The noise was terrific and added to the frenetic chaotic atmosphere of the operation thus far.

The commandos who had just reached the FRV lined up with the FRV party inside the compound to await the arch barmine’s explosion before withdrawing. However, in the noise, dust and confusion most of the Royal Marines in the FRV huddled up against the wall attached to the archway

⁵ Our preference as Combat Engineers in Afghanistan on Op Herrick 5 was to light the safety fuze with match fuzees which proved more reliable than lighters.

that was to be blown. As the two Combat Engineers lit the fuze they ran into the compound, dragging the MFC with them, and saw the marines lined up against the wrong wall. Mortars and MG fire was still raining down upon the ambush compound producing a terrific noise and shock-waves adding to confusion. Shouting at the marines to move away from the wall had no effect and they stayed where they were. A few seconds later the blast went off, a massive dust cloud appeared and most of the marines were on the floor. While the two engineers were shouting at the marines to move the troop sergeant could not resist looking around the corner, down the barmine alley, to see what was taking the explosion so long (the safety fuze was set for 12 seconds). Luckily he pulled his head back just in time, but not quite quick enough and took a bit of the blast which knocked him down and left him with very loud ringing ears. All of this happened in seconds.

As the marines next to the wall went down in the blast wave the terrible thought of having killed most of the marines went through the Combat Engineers' minds. However, thankfully the Afghans in Helmand Province build very strong supporting walls, and the marines who had been knocked over by the blast wave of the barmine that had blown a couple of feet away from them all got up and started laughing having clearly enjoyed the experience. Once everyone in the FRV had sorted themselves out it was time to bug out back to Now Zad DC as the mortars and MG fire still rained down upon the unfortunate compound, and any Taliban still in the area.

Phase 3. The Withdrawal and Follow-up

The withdrawal back to the DC went without incident. There were no Taliban fighters following and the Quick Reaction Force (QRF) came out to cover the OP/FRV parties' withdrawal back into the DC. Once back in the DC the marines went back out, in sections, immediately to the site of the ambush to follow up. The Combat Engineers plus two marines formed a QRF waiting outside the Operations Room in case of need. The follow up party arrived back at the DC some time later confirming no more enemy fighters in the area, and an unconfirmed number of bodies lying outside the ambush compound. It was later confirmed that many of the Taliban fighters were in fact foreign fighters from Chechnya who had travelled to Afghanistan to carry out *Jihad*.

Qualities of the British Fighting Soldier

This snapshot of fighting in Helmand Province provides a perfect example of the British fighting soldier and the qualities it takes to fight and win against the odds. When working together as 3 Commando Brigade the Royal Marines Commandos and the Army Commandos make a formidable force. It is the rigorous training and professional dedication of these soldiers that made Operation Herrick 5 such a successful tour. Despite being heavily outnumbered in most of the combat fought on this tour 3 Commando Brigade stopped the Taliban's Spring and Summer Campaign dead providing a momentum for the next British Brigade's tour and the highly successful Operation Panther's Claw. As stated at the beginning of this article the British fighting units in Helmand during their thirteen year stay experienced the same type of intense combat as the commandos in Now Zad on thousands of occasions. This is a tribute to those who fought, were injured and died during their time in Afghanistan trying to help the Afghan people.



Figure 4. Commandos from 131 RE take a break from compound clearing in Helmand. Note the thick mud walls typical of the province. The two authors sit to the rear of the picture.

Militarization of Border Control – Why Not?

Markus Heiskanen

Abstract

Borders have experienced countless changes during the last decades. Borders have been securitized, borderized (twofold securitization; Golunov 2013) and militarized. But what is militarization? In the research literature it has numerous meanings depending on the focus of research and chosen discipline. In addition, it has been largely criticized. It has been claimed that the militarization of law enforcement causes secrecy, lack of accountability, lack of transparency, and hardening of policing, and thus the wrecking of our western democracies and values by ‘militarizing the societal’ unavoidably. But this is not necessarily the case as this study from Finland will prove. In order to make sound claims for and against militarization one has to examine the pragmatic and real consequences of it, instead of indulging in common theorization.

1. Introduction

Militarization of borders began at the end of the Cold War. This trend strengthened after 9/11, when borders became highly securitized (Lutterbeck 2005). In the academic literature militarization of borders has been widely seen as one of the dark sides of globalization, and the securitization of borders. The use of military forces for internal security missions is commonly considered as a typical feature of repressive or authoritarian regimes (Lutterbeck 2005, 245). It has been argued that militarization leads to, for example, unjustified harshness of border control policies and practices, secrecy of law enforcement, neglect of good governance and transparency of administration, and loss of rights regarding privacy. In the worst case militarization can cause severe consequences like casualties, as has been observed especially in the Southern European maritime borders.¹

¹ About the critique against the militarization of borders and border control see e.g. Lutterbeck 2005; Carpenter 2006; Carrington 2006; Green 2006. According to ICMPD (International Centre for Migration Policy Development) over the last decade, a total

As the short introduction above demonstrates, the militarization of borders has been used in several meanings. Usually it refers to the use of military organization and/or technology for controlling state borders. Fortification of borders by walls, fences and trenches are typical expressions of this tendency. It might also refer to more stringent policies, legislation, and law enforcement practices against immigration. I will review the concept of militarization later in section 2.

Border control is basically a law enforcement function to be performed by police (Hobbing 2005). This basis has been highlighted in the EU-Schengen Catalogue (2002) “External borders control, removal and readmission: recommendations and best practices”. Many new EU member states have renewed their border services and organized them according to civil (police) administration. This kind of reform has been made in Germany, Austria, and Estonia. The Finnish Border Guard is militarily organized and subjected to the Ministry of the Interior. In Finland there are no plans to reorganize the Finnish Border Guard according to the common EU recommendations. Thus, this article provides an interesting view about what it means to have a military organization at the external border of the European Union.

In this paper I will study and compare the Finnish Border Guard and the Police² as law enforcement authorities. Both organizations will be reviewed through good governance and administrative accountability. These common principles of legality are reviewed by studying the complaints against police officers and border guards that are made by citizens. In addition, the alleged criminality of both law enforcement authorities will be studied to form an opinion of common blamelessness of security authorities.

of at least 10,000 persons have died trying to cross the Mediterranean Sea and reach Europe’s southern shores (Lutterbeck 2005, 245).

² Unlike the Finnish Border Guard that is a special organization for border control, there is not a uniform police organization called “The Police” in Finland. Finnish Police consists of numerous police departments and special branches like the National Bureau of Investigation (NBI), and the Finnish Security Intelligence Service (Supo). For the sake of simplicity, the various Finnish police organizations are discussed here as the (Finnish) Police.

Contrary to common expectations and academic writings on the militarization of law enforcement, the Finnish Border Guard proved to be more impeccable compared to the Finnish Police. There are very few complaints and appeals made against the Finnish Border Guard compared to the Finnish Police. The same can be said about alleged illegality. The explanation for this surprising result may be found in history, and from the basic features of a military organization. Respect for the rule of law principle, due to the Roman-German legal tradition, has become deeply rooted in the Finnish administration. Military leadership and culture seem to have an effect on how, in case of a malfunction, a new administrative practice can directly be established for the new praxis of the border guard. This cannot be said with regard to the Finnish Police, where the same ‘mistakes’ recurred year after the year in spite of strong guidance from the police management, and the Bureau of Ombudsman.

I have divided my topic into three sections. In the next section I will analyse the concept of militarization. In section 3, I will make a short introduction setting out how to analyse border control. This section will include a description of the criteria to be followed in section 4 where the Finnish Border Guard and the Police will be compared as law enforcement agencies. This article will conclude with a provoking statement, according to which militarization of border control does not mean straightforwardly the encroachment of constitutional rights, or the weakening of accountability of law enforcement. On the contrary, militarily organized border control in Finland has, in fact, ensured that the substantive and procedural rights of people have been realized in more qualified manner compared to a situation where border control would have been the responsibility of the Finnish Police. In conclusions I will propose some needs for further research to study the militarization of borders in the broader societal context.

2. Militarization

Militarization is a vague concept having different meanings based on the context used in a study. Conceptual confusion is evidenced in the research literature by using concepts such as police militarization, paramilitary policing, paramilitary police, military-like policing, and so forth (see for example Parenti 1999; Kraska 2007; Shane 2010; Rantatalo 2012). According to

some researchers this tendency has not concerned only the police and policing. On the contrary, militarization has been linked to the post-modern form of governance, “militarization of societal”, to quote Didier Bigo. Thus, militarization can be observed, besides the police work, in various fields of policy making (security, visa, asylum, etc.), jurisdiction (criminal law), law enforcement (border control, immigration), and even in language. To sum up with the academic literature on militarization, at least the following characteristics can be identified as expressions of militarization, when linking it to the discussion on borders:

- military organization,
- military equipment,
- military *modus operandi*,
- military culture,
- hardening of policies,
- hardening of law (criminal code),
- hardening of law enforcement practices,
- militaristic language,
- fortification of borders.

A discourse on militarization can be seen in part as a new arrangement of security apparatus that some researchers have described as a state of ‘security androgyny’ (Easton *et al.* 2010). The boundaries between different agencies in the security domain are becoming increasingly indistinct and blurred (Bayley & Shearing 2001; Loader 2002). In conclusion, according to Završnik (2013, 186) the following changing roles between security actors can be identified: 1) a constabularization or policisation of the military, 2) a militarization of policing, 3) an increasing role played by the intermediary actors filling the ‘security gap’ between military and police, such as gendarmerie forces,³ 4) an increasing role taken on by private security companies in peacekeeping operations and increasingly in domestic settings, 5) a policisation of foreign intelligence work, and 6) an ‘intelligence’-isation of policing.

³ Lutterbeck (2005, 246-247) has argued how, since the beginning of the 1990s, the gendarmerie-type agencies have generally been the fastest expanding security forces in Western European countries. This has happened especially with border control, counter-terrorism and peace support operations.

It is noteworthy that many organizations working as law enforcement in the field of security have their origins in the military. Lorinskas and Kulis (1986) have noted how police organizations are routinely described as military, paramilitary, semi-military, quasi-military, crypto-military, pseudo-military, pyramidal military, military-like, and so on. According to many researchers traditional western policing models in large are based on military philosophy and authoritative structures, and/or they incorporate paramilitary sub-organizations for policing purposes (Lutterbeck 2004, 2005; Zimmermann 2005; Greener-Barchman 2007; Kraska 2007; Silvia 2008; Rantatalo 2012; Phillips 2014). Respectively some research (Cowper 2000) has stressed the similarities of police and military instead of their differences. Even though we can observe that militarization of police and policing has occurred, it is not just a one-sided state of affairs. Like Kraska (2007) has highlighted, militarization varies widely. Kraska has divided militarization in four dimensions reviewing material, cultural (language, values), organizational and operational aspects of militarization in his analyses.

Some researchers regard 'paramilitary' as a separate field from police and military (see Scobell & Hammit 1999; Lutterbeck 2004, 2005). In Europe, paramilitary organizations are often called gendarmeries. Gendarmeries are characterized by a militaristic style, culture, and organization, by the use of militaristic strategies and methodologies, by a hierarchical atmosphere, and by a position between internal and external security responsibilities (Rantatalo 2012).⁴ Paramilitary forces seem to fit into the post-Cold War situation especially well. They combine the advantages of both types of security forces – like the military, they are readily deployable and well equipped, and like the police, trained to work within the society and on internal security tasks (Weiss 2011; Lutterbeck 2005).

As stated above, militarization can be seen as a process of militarization of the societal. One part of this process has been transforming 'the military' to the post-Cold War environment where enemies in the traditional sense have lost their significance, and military is looking for new tasks in the new situation to secure their continued existence (Klerks 1993; Lutterbeck 2005). In parallel to the militarization of police and policing, the domestication of soldiering has occurred (Andreas & Price 2001; Lutterbeck 2005),

⁴ Finnish Border Guard can be regarded as a paramilitary organization.

or the constabularization of the military (Zimmermann 2005; Easton & Moelker 2010; Završnik 2013), where military personnel are looking for new missions, not only in the field of external security but inside their own countries within internal or homeland security (den Boer *et al.* 2010). Today armed-forces personnel participate in the work developed in and for peacetime situations, such as civil crisis management, humanitarian intervention, assistance in catastrophic situations, overseas transportation, supporting elections, environmental protection, assistance of other law enforcement, and so forth.

Militarization is thus a multi-dimensional issue and has to be interlinked with a process of domestication of the military. In the research literature, militarization is regarded as a dark side of the societal. What are the main arguments as to why the military aspects of modern society have been considered as negative? At first, due to the essential features of military culture and organization (regimentation), militarization is claimed to result into a mechanical course of action and biased attitude emphasizing efficiency and the use of force in solving problems. According to Kraska and Cubellis (1997) this leads to “the end justifies the means” mentality in operation. Secondly, according to the critics, militarization tends to highlight secrecy in the course of action inducing the lack of accountability and transparency in law enforcement. Thirdly, function-creep of militarization of the societal has irreversible consequences causing severe side-effects, like the crumbling of liberal values, the hardening of politics and law, and undue human suffering, even casualties.⁵

In this section I have reviewed different aspects and meanings of militarization. In the next section I will review the discussion regarding the criteria concerning how to evaluate border control taking into consideration the existing critique on the militarization of borders. I will conclude section 3 by defining the criteria that will be used when comparing the Finnish Border Guard and the Finnish Police as law enforcement agencies.

⁵ About the critique against militarization of police and policing see e.g. Kraska & Cubellis 1997; Nunn 2003; Birzer & Paul 2008; Hill & Beger 2009; Shane 2010; Jefferis 2012; Završnik 2013.

3. How to evaluate border control?

Border control is basically a law enforcement function. This basis has been rooted in western societies and can be found in law and administration where border control is usually designated to authorities working under the Ministry of Interior or Ministry of Justice (instead of Ministry of Defence or Ministry/ies that are responsible for Military Affairs). This administrative (juridical) basis rests on the separation of powers relating to internal and external security (Lutterbeck 2005, 241). The legal basis of law enforcement will be used as a solid starting point to judge what literature will be considered as valid when developing the criteria for the evaluation of border control. Besides judicial origins of law enforcement, a good-governance approach will be used to construct an analytical tool for evaluation. Finally, taking into account the principle of effectiveness in administration and especially in the military, it will be used as a guide to define appropriate criteria for evaluating border control. In the context of jurisdiction and implementation of law, the imperative of effectiveness has a special meaning as will be demonstrated.

Many researchers (e.g. Lodge 2006; Carrera 2007; Jorry 2007; Pollak & Slominski 2009) have asserted that there is more transparency and accountability in law enforcement, especially in the current post-modern environment where borders have been securitized and law enforcement has attained more power to intervene with the constitutional rights of persons of law. Traditionally, accountability is based on the principal-agent model (Strøm *et al.* 2003). Following Bovens (2007, 450) we define accountability as a relationship between an actor and a forum, in which the actor has an obligation to explain and to justify his or her conduct (decision), and may face consequences for his or her actions. Various types of accountability can be differentiated: political, legal, administrative, professional, and social (accountability). These dimensions will be kept in mind when developing the criteria for the evaluation of border control.

Berry Tholen (2010) has analysed in his article the developments and risks in modern border control. To assess the aims and values in border control he has proposed to use an analysis where both positive and negative outcomes should be observed. At first, one has to evaluate the effective realization of the policies' aims. Secondly, undesirable side effects must be

taken into account to duly value the effectiveness of different policies. Effective realization of border control means both inclusion and exclusion. Border control must guarantee access (inclusion) to those eligible according to law (travellers, asylum seekers) at the very same time when providing exclusion of threats to public order and security. As regards negative outcomes, border control must avoid harmful consequences. Tholen has divided consequences into three categories: 1) avoiding brutal and discriminating treatment, 2) avoiding high costs for potential immigrants, and 3) avoiding death and injury. The criteria proposed by Tholen emphasizes the legal and administrative dimensions of border control as well as practical consequences (including negative side effects) that must be reasonable (principle of proportionality) and well-justified, when assessed against pursued policy goals.

Based on critiques against militarization and the theoretical orientation of my article I have defined three criteria for the evaluation of border control. These criteria are – *effectiveness*, *transparency* and *accountability*. Effectiveness in border control is usually viewed as the detection of illegal activities, such as detection of forged documents, detection of misuse of visa, residence or work permits, overstays, detection of contraband, etc. In jurisdiction and administration, effectiveness can also be defined as the effectiveness of the legal system. Law (enforcement) can be regarded as ‘effective’ when authorities act according to law and principles of good governance. That is, the substantial and procedural norms are followed in law enforcement and rights stipulated by law are realized in practises followed by the police and the border guard. The effectiveness of law occurs in situations when authorities inform people on their procedural rights (e.g. authorities responsible for preliminary investigation inform suspects on their right to use a witness during interrogation) and follow procedural deadlines in order to people will not lose any of their rights (e.g. right to institute criminal proceeding will not expire).

Lack of transparency of law enforcement, especially in the field of security administration, has been a special concern of the social advocates. This critique, usually presented in academic literature, is well-justified on the one hand. On the other hand, this critique cannot be fully avoided due to the special nature of (state) security. Excessive openness of police work (practices, *modus operandi*, etc.) will hamper the prevention of crime jeopardizing

public order and safety. Thus, transparency in this article has been defined as an administrative quality. It can be observed in situations like availability of official documents, information and organization of processing of complaints made by citizens, and organization of internal control within an authority. Due to the limited space available, transparency will not be discussed further in this article.

As stated above, accountability is used as one criterion to evaluate modern border control. I will review accountability based on: 1) public trust regarding law enforcement, 2) complaints made against police officers and border guards, and 3) alleged crimes made by police and border guards. These criteria are quite similar to those proposed by Bovens (2007) above. In one sense the aforementioned criteria examine accountability from the opposite side of the administrative ideal of the 'effectiveness of law'. In cases where the border guards and police officers have committed a crime, or are under suspicion of having committed a crime, one can claim that confidence towards law enforcement has been endangered. Thus, common obedience to the law of security authorities, or alleged delinquency of police and border guards, can be used to measure public trust in security administration.

4. Comparison of the Finnish law enforcement

In this section I will compare the Finnish Border Guard (FBG) and the Police as law enforcement agencies. Both are law enforcement agencies subjected to the Ministry of Interior. Both the police and the FBG are responsible for many duties belonging to internal security. The Police is responsible for maintaining public order and safety. The Finnish Border Guard is responsible for the maintaining border security and sea and rescue (SAR) service. The Police have been organized as any other civil organization according to civil administration. The Finnish Border Guard is militarily organized due to historical reasons. According to the Finnish law, both authorities – the FBG and the Police – are border checks authorities. The FBG is responsible for border control carrying out border checks at land (road, railroad) and sea borders and in the major international airports. The Police perform border checks only in some mainland airports located far from the borders.

It is evident that the main functions of the Finnish Police and the FBG are different even though there are many similarities (e.g. both are authorities responsible for preliminary investigation and border checks, both authorities can provide executive assistance to each other and even perform duties belonging to one another, both organizations follow the same *modus operandi* and tactics in special operations, both authorities use the same equipment (weapons, radios, helicopters, etc.). This is why the FBG and the Police can be compared as law enforcement agencies in a general level. One additional reason for the chosen approach is because there is not enough data available to compare them in fully similar functions. In addition, one has to keep in mind the disparity in personnel in the Police and the FBG; whilst there are about 7700 police officers there are only 2500 border guards in Finland.

As described above, complaints made against border guards and police officers will be used as evidence of mistrust or failure of service from the citizen's point of view. In most cases complaints and alleged crimes could not be proved and have been annulled or discovered as groundless. This is because in most cases there is one person's word (citizen) against another person's word (officer), and without clear evidence (witness, concession, etc.) people under suspicion will be protected based on the western legal principle on presumption of one's innocence if not proved otherwise. However, it can be argued that in a case where people experience behaviour, or a decision, made by an officer so unjust or arrogant that they make a complaint or proceed with a criminal charge against a police officer or a border guard, it can be regarded as a failure to manage the 'customer' of law enforcement according to good governance principles and practises.

The rule of law principle is rooted deeply in the Finnish administration. This is due to the Roman-German legal tradition where principle of legality is one of the corner stones of the Finnish legal system. This may explain in part why militarily organized Finnish Border Guard can act successfully as a law enforcement agency compared to a given civil authority. Respect of the rule of law principle in administration is evidenced by international surveys, too. In many years Finland has been the least corrupt country in the world. Corruption is not a problem with the Finnish law enforcement. In practice, cases arise very seldom where people try to pay off state officials.

Table 1 below describes the figures of complaints and alleged crimes of the Finnish Border Guard and the Police in year 2010.⁶ The survey of the figures indicates that there are much more complaints and mistrust towards the Police in relation to alleged criminal activities compared to the Finnish Border Guard. It is probable that to some extent this is caused by the different nature of the daily work between the police and the border guard. Police officers meet boisterous customers (drunken people) on a daily basis while maintaining public order and safety, and are sometimes forced to use tough measures. Encounters with the police often happen unexpectedly causing stress and nervousness *in situ* while people are always prepared for the border control. But these features may account only for some parts of the huge discrepancy of figures presented in table 1.

	Police	Finnish Border Guard
Complaint	962	2
Complaint/officer	1 : 8	1 : 1250
Crime (alleged)	708	23
Crime/officer	1 : 11	1: 109
Complaints + crimes	1660	25
”Blamelessness coefficient”	1 : 5 (0.2)	1 : 100 (0.01)

Table 1: Complaints and alleged crimes made by the Finnish Border Guard and the Police in 2010 (Heiskanen 2013)

Based on my research (Heiskanen 2013) I found three main reasons to explain the discrepancy between the Police and the Finnish Border Guard. At first, and I think that this is the most important factor, the main reason to explain the huge difference between the Police and the FBG originates from the organizational culture. Military organization is inclined to a precise and conscientious performance of duties. Meticulous compliance of orders is in the heart of regimentation. Even though the Police show a high professionalism in duty, precision is not as deeply rooted in the police culture as it is in the military (Cowper 2000, 242). The organizational cultural discrepancy was evidenced by numerous studies and official reports where

⁶ This information is based on an analysis I did for my doctoral thesis *Rajakeisarin uudet (v)aatteet. Käsiteanalyysi rajaturvallisuudesta* (“Border Emperor’s new ideas. Concept Analysis on Border Security”; available only in Finnish).

the police were criticized for not following legal and administrative norms in duty.⁷

Secondly, the principle of effectiveness may explain why the implementation of legal norms in the Finnish Border Guard is so highly valued. The principle of effectiveness is one of the main characteristics of Weberian bureaucracy as well as a military maxim. To strive in effectiveness in the performance of duties has also been regulated in the Police Law (2008) and the Border Guard Act (2005). According to the common principle of effectiveness, tasks have to be performed in an efficient and appropriate manner without delay. As discussed earlier, compliance of orders, rules, and regulation, partly due to the regimentation, is respected in a military organization to a much greater extent than in a police (civil) organization.

Thirdly, discrepancy may be caused in part due to the different legal status of a border guard and a police officer. Basically, soldiers are not allowed to question the authorization of the order. Only in cases where the order is evidently against the law, a soldier (border guard) must deny to obey it. Again, a police officer must always make sure that the orders given to them are lawful. A police officer is responsible if s/he complies with a possibly dubious order. In this sense the police culture can be regarded as individualistic opposed to military conformity. Thus, the different status of a police officer and a border guard relating to the public law may induce a wide range of variation in their performance of duties empowered by law.

5. Conclusions

By the late 1990s, borders had been securitized. This tendency has intensified since 9/11. According to academic research parallel to securitization of borders there has been militarization of policing. Militarization is used in several meanings based on the focus of a study and the theoretical approach adopted. In general, militarization is seen as a dark side of 'post-modern' causing mainly malign effects such as secrecy, lack of accountabil-

⁷ E.g. Bureau of Ombudsman has insisted the Police Department of the Ministry of Interior to pay attention and revise many procedural aberrations that repeated itself one year after another. I wonder what measures the Police Department has taken – if any – due to the same word-for-word translation recurring in four consecutive years.

ity, lack of transparency, harsh policies and practices, and adverse side effects as human suffering and even death, a few to name. It is almost 'a mission impossible' to find any research where militarization has been seen to contribute to any positive results for security and/or society.

In this sense the study made as a part of my doctoral thesis is very important in providing some counter-evidence to the current discussion. As reported in this article, militarization of law enforcement does not *necessarily* lead to undemocratic practices. Based on research literature, official reports, and a case study done in Finland analysing the Finnish Border Guard and the Police, it can be argued that the outcome of militarization depends more on the national and historical context than a military organization as such. In other words, this means that the results of studies dealing with militarization of policing and/or border control cannot be generalized applying to all and other cases under the same heading.

Based on the Finnish case study, both organizations – the Police and the Finnish Border Guard – perform their tasks in an efficient way. The compliance with norms in the FBG is at a much higher level than in the Police. The border guards perpetrate less often to alleged criminality compared to the police. What is noteworthy is that the discrepancy between the Police and the FBG as regards compliance with norms and alleged criminality increased one year after another. While the complaints and alleged crimes decreased by 75% with the Finnish Border Guard between 2006 and 2010, the figures increased year after year with the Police. Fairly, one can argue that border control as a law enforcement function done by the militarily organized Finnish Border Guard does not cause any encroachment of constitutional rights. On the contrary, people received their substantive and procedural rights in a more qualified manner.

In general, the militarization of the societal cannot be regarded as a desirable development. The termination of the Cold War led to expediting the domestication of soldiering due to losing an enemy. According to critics, the shift in military affairs has brought the battlefield to the 'home space', inside the country. This shift may have catastrophic consequences to the democratic values as illustrated in the research literature. Unfortunately research studying the effects of militarization, not only at a theoretical but also at a practical level, is very scarce. To fairly assess the real (not only

potential) consequences of militarization of policing and domestication of soldiering, more pragmatic and empirical research is required. Otherwise we may take a biased attitude being guilty of a too one-sided study or a theoretical approach instead of examining real consequences evidenced by practice.

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Part 2

Military Technology

The military potential of unmanned cargo aircraft

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Abstract

Unmanned cargo aircraft (UCA), which we may see being developed in the coming years, have characteristics that make them suitable for a variety of military operations. The absence of flightcrew and the resulting freedom to use novel configurations reduce costs. The decoupling of aircraft and crew whereby the controller operates from a fixed site regardless of the UCA's location facilitates planning and basing and increases utilization, and hence productivity. UCA are expected to be able to move relatively small cargo loads efficiently, thereby increasing flexibility of resupply. The application of dual-use technology may spread development cost over a relatively large production run and facilitate the use of support infrastructure during out-of-area operations. There are limitations too, mostly related to the fact that UCA have yet to be introduced into service. In this article we investigate the potential and limitations of UCA and offer a development agenda.

1: Introduction

Unmanned Aerial Vehicles (UAVs) have been used by armed forces worldwide for decades for reconnaissance, communications relay, surveillance, weapons delivery and other tasks. In this article, we explore a relatively new role of UAVs: cargo transport. Although at present only one Unmanned Cargo Aircraft (UCA) is in operational use; the K-Max helicopter of the U.S. Marines, several advantages of UCA promise considerable benefits. UCA can complement or replace surface transport and tactical and strategic airlift in traditional roles, but also make new types of operations possible, like various forms of sustained operations deep within enemy territory. In this contribution, we first describe the concept of Unmanned Cargo Aircraft. Then we explore the various characteristics of UCA that define their suitability for military operations. We also address limitations and challenges. Finally, we present a general roadmap for the development of UCA.

Because of the research method used (see below), this paper cannot offer a definitive assessment of the usefulness of UCA for military operations. It is aimed at identifying the main factors that determine the potential benefits of UCA and giving a broad qualitative assessment of these factors. Only by setting requirements for specific types of operations and then quantitatively assessing the extent to which various UCA configurations would satisfy these requirements, can an accurate judgment of the potential of this new class of aircraft be given.

2: Method

This article is not primarily the result of research. It is the result of several years of developing ideas on unmanned cargo aircraft in the Platform Unmanned Cargo Aircraft (PUCA); a group of researchers, designers and consultants from both Europe and the U.S., with a wide range of expertise in aerospace, military operations and business (for more information, see www.platformuca.org). As far as the gathering of empirical data is concerned, the primary research method was literature study. Also, we initiated several Bachelor's and Master's projects on various aspects of UCA at the Universities of Delft and Twente in the Netherlands and South Wales in the UK.

3: Unmanned Cargo Aircraft

Although there is a number of publications dedicated to UCA, a clear definition is lacking. There are many types of UCA in development: short-range package delivery systems with a payload of mere kilograms, like the Amazon UCA¹, helicopters, quadcopters or tailsitters², intercontinental range vehicles (Hoeben, 2014), heavy-lift aircraft³, airships⁴ and amphibious aircraft⁵. It is possible to convert manned aircraft like the Lockheed C-130 Hercules into UCA. In this article, for the sake of clarity, we confine ourselves to UCA that:

¹ <http://www.amazon.com/b?node=8037720011>, accessed 11-19-2014.

² <http://www.theatlantic.com/technology/archive/2014/08/inside-googles-secret-drone-delivery-program/379306>, accessed 11-19-2014.

³ <http://www.biosphereaerospace.com/overview.htm>, accessed 11-19-2014.

⁴ <http://www.tp-aerospace.com/#!cargo/c20r9>, accessed 11-19-2014.

⁵ <http://singularaircraft.com/>, accessed 11-19-2014.

- Are designed from the ground up as UCA (so, no conversions from manned aircraft or existing UAV's).
- Have a range of at least several hundred miles and a payload of at least a few hundred pounds. So, we exclude so-called urban delivery systems like the one suggested by Amazon. These vehicles may have their value for military operations, but their operating environment (operating either under line-of-sight control or outside controlled airspace) is too different from larger, longer-range UCA to be covered in this article.

Figures 1 and 2 depict some concepts of what UCA as discussed in this article could look like.



Figure 1: Source: NLR

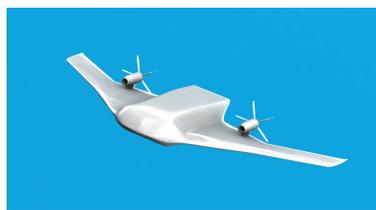


Figure 2: Source: van der Aa, Euving, Kinderman, de Leede, and Lerink (students University of Twente)

Now that the concept of UCA has been described, we turn to the features that make them suitable for military operations and that in some cases give them advantages over other types of transport.

4: Potentially advantageous characteristics of UCA

The characteristics that warrant considering the use of UCA for military tasks are low cost, high productivity, the potential for the utilization of dual-use technology and the potential for developing versions for other roles than transport, like airborne warning and control systems. We will address each of these features⁶.

⁶ For assessing aircraft design properties, we refer to Anderson, J.D. (1999). Aircraft performance and design. Boston etc., McGraw-Hill.

4.1: Low cost

4.1.1: Little or no aircrew cost

The most salient cost advantage of UCA over most other types of air transport is their lack of aircrew. If one considers that civilian airlines sometimes need twelve crews to make optimal use of long-distance passenger aircraft, one can imagine that aircrew cost can be considerable. For civil transport aircraft, pilot costs are on average 12% of overall airplane costs (Swan and Adler, 2006). UCA also enable savings to be made in 'away from home' pay, traveling and accommodation cost and the like. For military transport aircraft, costs vary strongly with use (number of flight hours) but the figure of 12% for pilot costs for civil aircraft shows that substantial savings should be possible. Military aircraft sometimes fly in a hazardous environment, where loss of crews is a realistic possibility. Although the financial costs are difficult to assess, savings may be made concerning training of replacement crews. Of course, human cost is an entirely different but also important matter.

Of course, UCA need to be controlled, but one controller on the ground should be able to control multiple UCA 'en route' (Cummings et al., 2007). For take-off, landing and taxiing, one controller per UCA may be needed, but these phases constitute only a small percentage of a flight. The effects on personnel needs for parking, loading and unloading etc. is not yet clear. Depending on the type of cargo, a loadmaster may be needed.

4.1.2: Low fuel and maintenance cost

Unlike manned aircraft, UCA that are used purely for cargo and not passenger transport (more on this limitation in Section 5.1) need not have pressurized cabins. For cargo that needs to be conditioned, dedicated containers can be built. In discussions with various experts, opinions on the weight advantages of deletion of a pressurized cabin vary from marginal to 20% of the aircraft's empty weight. Less weight means less lift required, and hence lower fuel consumption. It also means less complexity, and thus lower maintenance cost.

Fuel consumption can be further reduced by an aerodynamically efficient airframe. The so-called Blended Wing Body (BWB, see Figure 3) almost

entirely does away with a heavy and drag-inducing fuselage and holds the promise of a fuel burn reduction of up to 27% (Liebeck, 2004). For manned aircraft, minimum cabin dimensions make a BWB only attractive for large aircraft, but the smallest standard LD2 cargo container measures a mere 156x153x163 cm, whereas the ubiquitous LD3 container measures 201x153x153 cm. A BWB that has no pressurized cabin has the extra advantage that the cargo hold need not be cylindrical, so it can be shaped to accommodate square containers with a minimum of unused space.

Another way to reduce fuel consumption is to fly relatively slow, i.e. with a speed of 250-300 kts. This is at present only done by medium-range manned aircraft, but with UCA this is also feasible over long ranges since crew fatigue is not an issue. The optimum speed depends on several factors, like airframe and engine characteristics, operational needs and the acceptable susceptibility to variance in flight times due to wind conditions. Keeping cruise speeds in the 250-300 kts range makes fuel-efficient turbo-prop engines a logical choice. It is not yet clear, however, how much fuel can actually be saved by flying relatively slow.

Low costs, however important, are but one side of the cost-benefit coin. The other side is high productivity, which we address in the next section.

4.2: High productivity

4.2.1: The Hertz business model

When you rent a car with the Hertz company, you don't have to return it to the location where you picked it up; you can leave it at any Hertz sales point you want. UCA can be operated in the same way because the aircraft and its crew can be 'decoupled'; they need not be in the same geographical location. If a UCA is scheduled to fly cargo from, say, Ramstein to Lossiemouth, and on arrival there turns out to be cargo that needs to be transported to Kevlavik, the extra flight can be made without taking air-crew scheduling into account. Of course, one or more controllers need to be available, but this will seldom be a problem because controllers are not coupled to one specific aircraft and can handle several UCA nearly simultaneously. Controllers can be located at convenient places all over the world, and their work schedules can be optimized. They should need to work only

during the daytime, largely eliminating relatively expensive and hazardous night shifts.

The uncoupling of vehicles and crews offers training, basing and scheduling flexibility. In today's fiscal environment, where the pilot-aircraft ratio may be driven more by budget constraints than by operational needs, this is a major issue. Even during the Korean and Vietnam wars – major but still merely regional conflicts – the U.S. Air Force had to hurriedly retrain staff and other pilots to fill the cockpits of its Sabre and Phantom fighters (Werrell, 2005; Davies, 2008). A pilot shortage can occur suddenly, unexpectedly and, according to Murphy's Law, at the worst possible moment.

4.2.2: Short turnaround times

The absence of a flight deck means that even small UCA can have a cargo door in the nose, making loading and unloading easier than with a side door. Manned aircraft often compensate the lack of a nose door with a rear ramp that can also be used for airdrops. A UCA can have a rear ramp, perhaps in combination with a nose door for rapid combined loading and unloading. It must be said that, to our knowledge, it has not been researched whether a rear ramp is feasible and practical for a BWB configuration.

4.2.3: Flexibility in landing locations

If a UCA has a turboprop configuration with the associated straight (unswept) wing optimized for relatively low cruising and landing speeds, it has the ability to operate from short runways. UCA are in this respect similar to manned turboprop aircraft. The propellers provide excellent acceleration at low speeds, braking power during steep descents, and high-energy airflow over high-lift devices (flaps). But unmanned aircraft have two further advantages. First, ride quality and pleasant flight characteristics are not important, so the UCA can be designed for steep approaches and unflared landings. Second, touchdown scatter can be minimal; the plane touches down on almost exactly the same spot every time. The U.S. Navy has successfully landed the Northrop Grumman X-47B unmanned aircraft on an aircraft carrier and plans to develop an unmanned combat aircraft for use aboard carriers. The touchdown zone on an aircraft carrier is a mere 30 meters long. To achieve this touchdown scatter with manned aircraft requires in-

tensive training that is seldom worth the cost. It is not difficult to envision UCA operating from stretches of roads. This would require special guidance equipment like differential GPS (DGPS) that is also required for unmanned aircraft already in use.

The combination of low operating cost, the absence of crew fatigue problems and the ability to land on primitive runways may make it possible to use UCA for strategic transport of cargo loads that are too small to be transported efficiently by present-day transport aircraft. Ideally, cargo can be transported directly from depots in Europe or the U.S. to frontline locations, without the need to redistribute cargo at local hubs. Resupply of Forward Operating Bases (FOBS) may be a suitable role for UCA (Van de Ven, 2014). Even with the relatively low cruising speed that we envision for UCA, the total transport time of cargo may be shortened and, perhaps more importantly, delivery times may be more predictable.

In conclusion, UCA have the potential to deliver high productivity through high utilization, short turnaround times and flexibility. However, these benefits need to be proven in practice, which will not happen until UCA are developed and deployed. The chances of developing a military UCA may increase if synergies can be had by utilizing dual-use technologies; the subject of the next section.

4.3: The utilization of dual-use technologies

Since there are no UCA in use as yet, designers of such aircraft can literally start with a clean sheet of paper. This could be a good opportunity to develop certain technologies for both military and civil UCA. Examples are configurations like the BWB discussed in Section 4.1.2, UCA control centers, landing aids, loading equipment, and software for allocation of cargo to UCA, making full use of the flexibility of such aircraft. It is even possible that survivability features that may be adaptable for UCA enable designers to eliminate the built-in ballistic tolerance that render many military transport aircraft too heavy and complicated for the civil market. One could think of the stealth that a BWB configuration could bring, and of the possibility to fill every void of a UCA, including the cargo hold, with onboard-generated inert gas (i.e. nitrogen) for fire prevention. The lack of a pressurized cabin eliminates the danger of explosive decompression in case of

damage, and the lack of windows potentially increases the structural integrity of the airframe.

Making military and civil UCA look alike as much as possible also has operational advantages. Logistic and support infrastructure may be shared, which is especially useful for out-of-area operations. In times of emergency, it becomes easier for the military to charter civil UCA if military and civil UCA are similar as far as loading equipment, maintenance requirements etc. are concerned.

4.4: Development of UCA for other roles

Like manned transport aircraft, UCA can be developed to take on new roles, like maritime patrol and airborne early warning. This is not in itself an advantage of UCA, but if a new platform for one of these roles has to be chosen, UCA provide an extra option. Such an option may be more cost-effective than derivatives of manned aircraft, given some of the advantages of UCA described above. Relatively long endurance may also be an advantage for some roles.

With this, we conclude the description of the potential advantages of UCA. But apart from the fact that these advantages have yet to be proven, UCA have several limitations and development challenges. These will now be addressed: vehicle limitations, safety, certification, public acceptance, and development dilemmas.

5: Potential drawbacks of UCA

5.1: Vehicle limitations

The UCA discussed in this article have no provisions whatsoever for either crew or passengers. This limits their flexibility, for many cargo flights are used to transport personnel as well. The necessity to have aircraft that can transport personnel in addition to dedicated UCA creates logistical complexity that one would rather avoid. Further research is needed to assess whether the extra logistical complexity outweighs the advantages of UCA. But the problem may be less than appears at first sight, because of the following reasons:

1. Major logistical operations require a variety of assets anyway. Many armed forces have various types of transport aircraft in use, make use of civil contractors, and use sealift and road transport as well. If viable roles for UCA are identified, it may be possible to reshuffle existing transport assets so as to use each of them in the roles for which they are best suited. For example; when a force has to be built up in an area far away from existing bases, sealift and heavy transport aircraft may be used for moving large numbers of troops, armor and other heavy equipment, and initial stockpiles of munitions. When the new base is established, frequent resupply flights can be organized using UCA, while occasional transfer of personnel can be accomplished by helicopters or light transport aircraft like the C-27J. Whether this is practical or not will need to be established. At present, personnel is often transferred using flights for which cargo is the main priority, simply because these flights are available. This need not be the most effective or efficient way to move personnel around.
2. UCA can be developed for specific tasks, like resupply of forces deep in enemy territory. In fact, that is one of the roles of the Unmanned K-Max helicopter that is being operationally tested by the U.S. Marines⁷.
3. It is possible to design UCA so that passenger accommodation is possible. Cabin dimensions should be large enough, there should be heating, toilets etc. available. If flights take place below 8,000 feet, no pressurized cabin is required (although discomfort can result), as can be deduced from Muhm (2007). For long distances, this altitude restriction may not always be practical, but it is entirely possible. Should a UCA with full passenger accommodation, including a pressurized cabin, be developed, some of the advantages over manned aircraft disappear, but others remain, like the flexibility that the decoupling of vehicle and crew gives. It remains to be seen whether people are willing to entrust their lives to an aircraft with no pilot. In the longer term this problem may disappear as people

⁷ <http://www.kaman.com/aerospace/aerosystems/air-vehicles-mro/products-services/unmanned-aerial-systems/>, accessed on 11-20-2014.

get more and more used to autonomous vehicles, like cars (think of the Google driverless car⁸), and people movers. The Israeli company Urban Aeronautics is working on an unmanned cargo and casualty evacuation aircraft⁹. Anyway, the time that UCA make manned transport aircraft superfluous is still far off.

5.2: Safety and certification

There is a wide range of opinions on the safety of unmanned aircraft. The consensus seems to be that present-generation unmanned aircraft (UAVs) are not as safe as their manned cousins, but this does not say much since many unmanned air vehicles do not have the redundancy and safety features that are the norm for manned aircraft. It is unlikely that safety standards for unmanned aircraft will, as a rule, be less strict than those for manned aircraft, especially when they concern the safety of people on the ground. There need, of course, be no crew safety features. We will not enter the discussion about what is needed to make unmanned aircraft as safe as manned aircraft, because this issue does not pertain to UCA in particular, but to unmanned aircraft in general. We do want to draw attention to a problem that has been identified for some time: in order to assess whether unmanned aircraft meet safety requirements they need the opportunity to build up a track record, which can only be done with large-scale use. Manned aviation took a century to build its present safety level and the track record to prove it. A possible solution is to operate UCA over areas where the danger of casualties on the ground in case of accidents is low, and build a track record before operations in more challenging environments are started.

An associated problem is certification, also an issue for unmanned aircraft in general. Since there is at present only limited experience with unmanned aircraft operations, it is difficult to establish certification standards. We will not address this issue any further, but it is clear that here lies a major challenge.

⁸ http://en.wikipedia.org/wiki/Google_driverless_car, accessed on 11-20-2014.

⁹ <http://www.airforce-technology.com/projects/airmule-uav/>, accessed on 11-20-2014.

5.3: Public acceptance

Like with every major innovation, the introduction of unmanned aircraft generates controversy. ‘Drones’ are associated with assassination operations in Afghanistan, with violations of privacy (being photographed and monitored without one’s consent or even knowledge), with terrorists taking over control and crashing unmanned aircraft into nuclear plants, and with UAVs simply crashing by accident in somebody’s back garden. These reservations, justified or not, are not specific for UCA. But especially civil UCA do have characteristics that make them susceptible to public controversy. They are likely to be larger and heavier than many existing surveillance UAVs, making the consequences of accidents potentially more severe. It is to be expected that many different types of actors will operate UCA. While manned transport aircraft are operated by a limited number of airlines and armed forces, any company that operates lorries now may in the future want to operate UCA. To certify and monitor all these actors and to handle the incidents and accidents that will inevitably occur could become a major challenge. Furthermore, many large UAVs operate from remote bases and can often be kept away from populated areas. But UCA will haul and deliver their cargo in populated areas; that is where the economic activity takes place that generates the need for cargo transport. Military UCA may not share all of these characteristics, but opposition to civil UCA is likely to backfire on their military cousins.

It is no use to deny the potential hazards of UCA. Accidents will happen, few or many, simply because accidents can happen. Military and civil users should work together on proactively devising a strategy to enhance acceptance of UCA. MacSween-George (2003) found 52% acceptance of unmanned cargo transport in her sample, and concludes that ‘the public can be persuaded to accept unmanned aircraft technology advances when provided logical and emotional appeals’. She claims that unmanned cargo transport (and other uses such as firefighting) ‘can be mediums to get people accustomed to the idea that unmanned aircraft is (sic) now and in the future, a certain reality’.

5.4: Development dilemmas

The biggest development dilemmas that we identified in our work with the Platform Unmanned Cargo Aircraft (PUCA, mentioned in the Methodol-

ogy section) are: the chicken-or-egg problem and the lack of consensus about the specifications of to-be-developed UCA.

The chicken-or-egg dilemma is, in a nutshell: potential users of UCA (the military, shippers, forwarders, airlines) are unlikely to be interested in an aircraft that does not yet exist, and that may not be introduced for a decade or more. Especially potential civil operators have a limited time horizon. One PUCA member representing a shipper told us: ‘Other shippers have a short-term view; they only look at the next three months. We are an exception with our long-term orientation; we look at the next six months at least’. He obviously was mocking us, but the message is clear. Potential suppliers of UCA, on the other hand, are wary of investing in a product for which the market demand, certification requirements and regulations for use are unclear. Some aerospace primes that we discussed the idea of (particularly military) UCA with, were concerned that UCA would compete with some of their transport vehicles available at present. A representative of SESAR (the European Single Sky ATC reform project) told us that he saw UCA as potentially the most significant civil unmanned aircraft application (so, excluding government use of UAV’s for surveillance and the like), but so far SESAR seems to adopt a ‘wait and see’ attitude. No group of actors (potential users, aerospace manufacturers), seems to be willing to take the first step, apart from the U.S. Marines and small startups like Singular Aircraft.

Given the above, it is not surprising that there is no consensus about the specifications of a UCA. Within PUCA, there have been advocates of converted manned aircraft like the Lockheed C-130 Hercules, amphibious aircraft (flying boats with wheels), airships, very large long-range UCA and package delivery systems. Among PUCA members there also are several schools of thought about the design approach that should be taken, at least for the first few types of UCA to be developed. Should these first UCA be designed with low technical risk as the foremost priority, should low operating cost compared to manned aircraft be pursued, or should the advantages of ‘unmanned’ be maximized, even if that leads to higher acquisition cost or higher technical risk? Which approach would be most convincing to customers, and who are those customers? Hoeben (2014) suggests that smaller-sized long-range UCA are the most competitive compared to manned cargo aircraft on the civil market. But he took a fairly low-tech

UCA as a reference, and his work says nothing about the military market. To complicate matters; the market that may offer the greatest short-term potential may not be the largest market in the long term.

These dilemmas make it clear that more insight is needed into the benefits of UCA for potential users. It is also clear that this insight can only to a limited extent be obtained by research. One cannot research what is not there yet. One can research interests of stakeholders, attributes of design options, historical trends etc. But this can only form a basis for predicting the future of UCA. Constructing a future reality is as much a matter of expert opinion and experience as it is the result of logical deduction of present-day facts and knowledge. Insight does not build planes. Relevant actors need to be motivated to choose to invest in UCA. So how do we proceed? In the next section we suggest the broad outlines of a development agenda for UCA.

6: A development agenda for military UCA

The first question when generating a development agenda is: who will execute it? As far as the civil world goes, shippers are too concerned with the short term, while airlines like KLM (a PUCA member) generally do not see cargo as their priority (their focus is on passengers). Aircraft manufacturers are either too small to take on major projects unsupported or too pre-occupied with their present range of products. So, the drive to invest in UCA should come from potential clients. National armed forces may do their bit (and sometimes they are doing that already), but national projects should be avoided since they tend to lead to duplication and lack of standardization. In the West, the NATO Research and Technology Organization (RTO) and EDA (European Defense Agency) are obvious candidates for sponsoring investments in UCA. National aerospace research agencies and universities are also well suited for the pre-competitive phase of UCA development.

We envision a UCA development agenda in three phases: basic research, setting specifications, and actual development. Only the first phase can at this stage be described in any detail. We take the perspective of NATO.

Phase 1: Basic research

The first step in research about UCA for military use should be, in our view, exploring and quantifying the general benefits and challenges of UCA. When these are clear, relevant actors can hopefully be persuaded to invest in UCA. Therefore the following questions should be answered (broadly, not in detail, for there can be many types of UCA, each with their own capabilities):

1. Which challenges do NATO forces face in the coming 10 to 50 years? This question does not need to be researched; the required knowledge is available, possibly in, for example, the Joint Air Power Competence Center (JAPCC), but we need it for answering the next question.
2. Which logistical/transport needs can be derived from these challenges? This question can be answered by literature study and interviews with experts. Note that needs are identified, not yet prioritized. That will come in question 6. A potential problem here is that interviewees may define need on the bases of means presently available to meet those needs, whereas UCA may yield completely new transport capabilities. So, creative sessions could be organized in which the following issues are addressed:
 - If supplies could be available anywhere in, say, half the time it takes now, what new capabilities would that yield for NATO forces?
 - If the minimal efficient payload of present-day means of transport would be halved, and if crew scheduling would no longer be an issue, how much extra transport capability would this yield (expressed in tons of goods transported, and number of transport requests that can be honoured within a certain time).
 - If risk to crews were no longer an issue (enemy threats, transport of hazardous goods), how much extra transport capability would this yield?
 - If the minimum payload for which direct instead of hub-flights are feasible would be, say, halved, how much extra transport capability would that yield?
3. What can be the technical and operational characteristics of UCA in the coming 20 to 50 years? This should not lead to a detailed tech-

nical description of UCA, but to broad indications of:

- The capabilities that UCA can be expected to have, compared to manned aircraft. For example: short take-off & landing (STOL) capabilities, minimum and maximum efficient payload and range, crew (ground controller) requirements and mission rates.
- The general trade-off between relevant characteristics of UCA. For example; the trade-off between payload and cost per ton-mile.

On the basis of this, two or three generic UCA can be defined that will figure in the subsequent questions below. Question 3 can be answered by running simulations, but a more effective short-term solution may be expert meetings.

4. Which of the needs identified in question 2 can be efficiently and effectively met by the generic UCA as defined on the basis of the answers to question 3? This question can be answered best by expert meetings.
5. What are the general requirements concerning support and infrastructure for the generic UCA when they are used to meet the needs as identified in question 4? This question can be answered by literature study and interviews with experts in air transport and logistics.
6. Which, if any, types of UCA should be developed in the coming 10 to 20 years? This is not so much a question but a set of recommendations based in the answers to questions 4 and 5. Based on these recommendations, a roadmap can be formulated for starting the development of UCA.

Phase 2: Setting of specifications

In this phase, the type or types of UCA to be developed should be specified in terms of user requirements. How this should be done is beyond the scope of this article, but there are many organizations with experience in requirements engineering. This phase can only be further defined when the first phase is well underway. It is vital that not only research organizations like RTO, JAPCC and universities are involved, but also aircraft and support systems manufacturers, certification authorities and, of course, end-users.

Phase 3: Development

In this phase, the first type of UCA is developed. This phase can initially take the form of a technology demonstration. How this phase is shaped goes beyond the perspective of this article.

7: Conclusion

Unmanned Cargo Aircraft can have several advantages over other means of transport: low cost, high productivity, the potential for utilizing dual-use technology, and the potential for development into, for example, airborne warning and control systems. At present, it is not possible to say how great these advantages are. This is perhaps one of the reasons why UCA are not yet in use. But the potential advantages are too great to ignore. A multinational program should be set up to assess and quantify the advantages, and disadvantages, of UCA, to develop doctrines for their use, to write specifications for the various types of UCA that have enough potential to be considered for further development, and, if so desired, to set up an organizational structure for the design and production of UCA.

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Unmanned Aircraft Systems against Air Threats: The Semi-Direct Control System

Frank Tempelman, Hans Heerkens

Abstract

In this paper, we propose a new control system for unmanned combat air vehicles (UCAVs), enabling these to engage in air-to-air combat. UCAVs could be very effective in air-to-air situations, mainly because manoeuvrability and endurance are no longer limited to those of the human body. Our Semi-Direct Control System (SDCS) eliminates a number of problems, preventing UCAVs being used against air threats nowadays, mainly with respect to bandwidth, latency, and situational awareness. In the SDCS, commands are supplied to the UCAV separated by intervals. In between these intervals, the UCAV has to sort things out for itself, but because of the relative shortness of the intervals, the amount of artificial intelligence needed in the UCAV is limited and feasible given today's standards. The SDCS additionally offers new possibilities for the Human-Machine Interface, further increasing operational effectiveness, and, although a number of research questions have yet to be answered, opens up new possibilities for operational use of unmanned aircraft.

1 Introduction

1.1 Background

Due to the introduction of new technologies, the effectiveness of manned fighter aircraft will probably decrease in the next twenty years. The range of air missiles increases, as well as their manoeuvrability: avoiding them may become almost impossible. The added value of stealth technology for manned aircraft will, according to the US Air Force, decrease due to the development of anti-stealth technology. Increasing flight performance of manned aircraft hardly decreases their vulnerability, and reaches its limits, due to physical limitations of the air crew. Laser and energy weapons increase the vulnerability of the human senses. Focus will move to long-

distance or long-duration missions, pushing the limits on human stamina.

The obvious solution is the use of unmanned aircraft. For reconnaissance and the attack of ground targets, their use is fairly common nowadays, and development of unmanned fighter-bomber aircraft is on-going (e.g., the development of the Unmanned Carrier-Launched Surveillance Strike (UCLASS) aircraft by the US Navy (Rosenberg (2013), Majumdar (2013b)). Unmanned aircraft, probably co-operating with manned aircraft, will change warfare in many respects (Work & Brimley (2014)). Aircraft, much like the current ones, but in which the pilot is optional, are in research (Anonymous (2010)). However, attacking air-based targets using unmanned aircraft is, although slowly getting some attention (Robinson (2009)), still considered impracticable for now, because of insufficient situational awareness for the pilot, and limitations in data links. The data link, necessary for a ‘traditional’ human pilot on distance, usually satellite-based, will probably have a delay of tenth of seconds. Such a delay is unacceptable in air-to-air combat, or in avoiding air-to-air missiles or energy weapons. The Semi-Direct Control System (SDCS) proposed here mitigates, and perhaps solves, these problems

1.2 Overview of this paper

In this paper, we will first discuss the advantages of using unmanned combat air vehicles (UCAVs) against air threats, leading to the logical question: why is it not done today? This is because it appears that there are a number of problems to overcome. We will discuss these problems, and propose a solution in the form of the SDCS. Its main principles are discussed and an example is given. An important aspect is the Human-Machine Interface for the SDCS, and we will give some special attention to ideas on that subject. After the conclusions, a number of steps to be taken and questions to be answered to make the SDCS feasible are outlined.

2 UAS against Air Threats

2.1 Advantages

The main advantage of using unmanned instead of manned aircraft in situations against air threats lies in overcoming the limitations of the human

body. Humans can only handle a certain amount of G forces (in the order of 9 to 12G), limiting the manoeuvrability (acceleration and turn rate) of combat aircraft. Unmanned aircraft of course do not have a pilot on board. Hence, manoeuvrability is less limited (handling forces from 20 to 30G should be possible, giving the aircraft a manoeuvrability comparable to that of guided missiles), offering a better possibility to be a more worthy adversary to the increasingly effective enemy air threats. These air threats may even be unmanned themselves, and supplied with self-defence equipment. The development of UCAVs by adversaries, e.g., with a small high-tech sector but extensive resources and depth of defence, offers them the possibility for long-range strike and counter air, keeping war at a distance. There is a real danger expected that against unmanned fighter aircraft, only other unmanned aircraft can stand a reasonable chance of prevailing in an engagement.

Furthermore, both endurance and range of unmanned aircraft are potentially superior to those of manned aircraft, thanks to their lower empty weight and higher fuel fraction, and because of their optimized aerodynamics (no canopy etc.). Again, due to the limitations of the human body, a pilot can only be in an aircraft for a limited amount of time. Removing the pilot will increase the endurance of the aircraft, thus also extending the operational range where the aircraft can be deployed.

Humans are also more vulnerable to emerging types of threats, like the use of laser weapons, or directed energy weapons. Unmanned aircraft are less susceptible to these kinds of threats because of their manoeuvrability, redundant sensors and absence of physical risks for the pilots like blinding. This offers an additional possible increment of operational effectiveness.

Controlling UCAVs impose other physical requirements to the pilot as compared to manned aircraft. Manned aircraft require physical and mental characteristics that are found in only a small proportion of aspiring pilots. It is expected that, certainly in this age of computer technology and gaming, the pool of possibly appropriate UCAV pilots is larger than that of prospective manned aircraft pilots, and their training may be less costly since it can be done largely in simulators.

Finally, the lack of limitations due to the presence of a human on board the aircraft opens up new possibilities, like short or vertical take-off and landing, or operating at great altitudes. Even attacking low-flying satellites may be a possibility for unmanned aircraft.

2.2 Current problems

The foregoing raises the question why is it not done right now. Why are UCAVs not being used in air-to-air missions yet, as it, as we have shown, offers numerous advantages? The reason is that there are several serious problems to overcome when wanting to apply UCAVs in air-to-air combat.

In these types of situations, quick reactions are needed by a human pilot on the ground, based on proper situational awareness (SA). To obtain that SA, lots of sensor data has to be sent to the pilot on the ground. Bandwidth is however limited and data links are vulnerable to jamming or forging.

Furthermore, and maybe even more important: there is always latency in data links. This latency is at the very least in the order of tenths of seconds, which is, in air-to-air combat, far too much.

These problems could be solved in principle by applying totally *autonomous* UCAVs in air-to-air engagements. Latency problems and bandwidth limitations disappear when the UCAV can do most or all of its tasks on its own. However, despite the large amount of research that is done in the area of autonomy and Artificial Intelligence, the progression that is made thanks to this research, and that our optimism in this field of research is shared by others (e.g., Robinson (2009)), it will take decades to be able to send UCAVs on a mission with ‘destroy all enemies you encounter’ given as the only command. There are also ethical issues to consider: who is, or should be made, responsible for the act of a machine? For now, ‘full autonomy’, if existing at all, is not feasible, and an intermediate solution has to be found.

3 The Semi-Direct Control System

3.1 Explanation

The core of SDCS is that an Unmanned Combat Aerial Vehicle (UCAV) is operated by sending control commands in short intervals (varying from

one to a couple of seconds). These commands do not directly steer the UCAV, but supply it with waypoints or commands instead: fly in a certain direction, fly to a certain position, approach a certain target, follow under a certain angle, avoid an air missile using a certain manoeuvre, attack an aircraft and so on. A Combat Manoeuvring Management System (CMMS), supplied with some intelligence and autonomy, calculates the optimal way to get from the current to the designated parameters (position, velocity, weapons and systems configuration). This is done by analysing position and movements of both aircraft and target, prediction of changes by using extrapolation techniques, and using these to calculate and execute the necessary direction changes. Although full autonomy may be a few steps too far for now, methods and techniques to locally detect obstacles and avoid collisions in a limited space, are getting more and more advanced (see e.g., Kelly (2010)) and can be applied to this end. In Figure 1, a stylistic impression is given of the SDCS, showing the commands, separated by intervals, and the manoeuvring in between these commands.

The pilot determines the tactics to be used, and can continuously modify the flight path, weapons deployment etc. based on the opponent's behaviour. The SDCS executes the pilot's commands. Expectations are that the SDCS can react in terms of milliseconds (not taking the delay caused by mechanical rudder movements and the like into account): sufficient for both in air-to-air combat and to avoid imminent threats like missiles.

The SDCS is positioned in-between direct control systems, in which the pilot directly controls the control surfaces and other devices (thrust vectoring) of the aircraft, and interval control, in which the pilot, using intervals varying from minutes to hours, directs the aircraft on a two-dimensional map, without being able to execute combat manoeuvres. SDCS eliminates the drawbacks of both 'classic' systems: there is limited data exchange, the volume of data exchange is small, but despite that combat manoeuvres can be executed. Furthermore, SDCS overcomes the problem of needing too much intelligence in the UAV: because the tasks the UCAV is ordered to do are relatively simple and easy to assess, only a limited amount of intelligence is needed. If some tasks, projected for the SDCS to execute, prove to need too much intelligence, the task can probably be split up into separate, less complex, tasks.

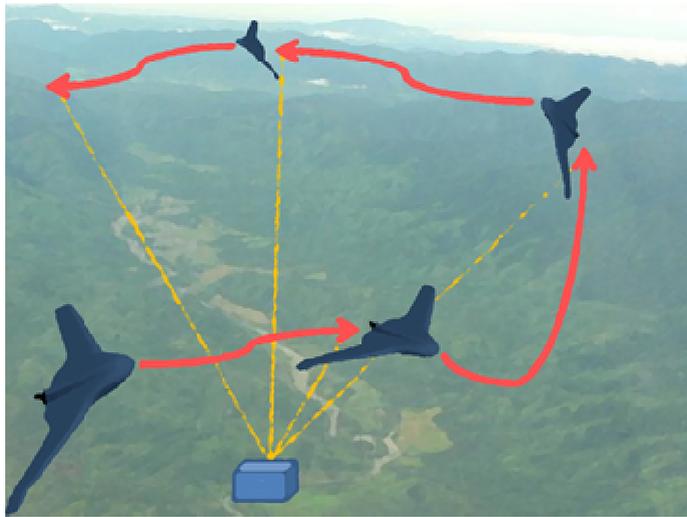


Figure 1 Stylistic impression of the SDCS

In general, one can say that there is a trade-off between the length of the interval and the complexity of the commands on the one hand and the intelligence, needed in the CMMS, on the other hand. One can imagine that over time, when artificial intelligence and autonomy options further improve, the intervals will lengthen and the commands will become more complex, or abstract, an abstract type of command being something like ‘get into good position’, a more concrete command ‘get to that-and-that position’. In the meantime, the SDCS offers, when varying on the interval time, an interesting research vehicle on autonomy and artificial intelligence.

The SDCS is especially suited for situations in which quick reaction is needed because of obstacles or threats, and where direct joystick control is not feasible or precise enough. Furthermore, the predictability of totally autonomous behaviour in for instance dogfights can be avoided. Direct control requires detailed situational awareness, SDCS requires much less.

3.2 The Human-Machine Interface

The SDCS control can take place in a traditional Human-Machine environment. However, we see additional, more advanced, opportunities to increase the effectiveness of the SDCS, by locating the controller in a Virtual Reality (VR) environment.

In this environment, a synthetic picture, based on data, video, audio and other sensory cues from the UCAV and other platforms, and probably with real-time simulation data added, is created. The environment can possibly be presented in a way that the pilot has a virtual view from inside the UCAV. Of course, also data like speed, altitude etc. can be shown. It is possible for the pilot to ‘step out of the cockpit’ and view the airspace with both his/her own vehicle and opponents. Think for instance of a ‘dome’ on the wall in which synthetic representations of goals are shown in more detail than a pilot of a manned aircraft would see, or a Virtual Reality helmet. This results in improved situational awareness as compared to the current indirect control systems, in which the UAV is usually a dot on a two-dimensional map, and may make the UCAV usable in a more high-risk environment than is considered acceptable right now (Majumdar (2013a)).

To create this synthetic environment, fewer sensors are needed than in situations where real imagery is combined into a situational awareness picture. Fewer sensors means a possibly smaller, more agile UCAV, more silent in different senses (less visible for detection systems), and easier to make stealthy. So, even if the stealth advantage is decreasing, its advantages will continue to hold for some time for these kinds of aircraft.

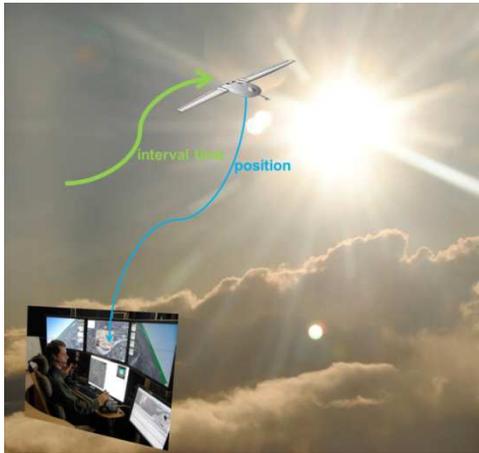
The controller can use pick-and-move techniques to command the UCAV, picking it up with special virtual reality gloves from where it is and moving it to the desired location, which is probably easier, more flexible and faster than more traditional ways of issuing commands.

The synthetic VR environment offers additional possibilities, once again improving operational effectiveness. One can think of the visualisation of the (expected) course of potential targets, or the visualisation of no-escape zones. Tasks can be distributed between two or more controllers, and it is easy to control more than one UCAV by only one operator, avoiding coordination problems. Furthermore, the SDCS allows leaving the aircraft alone for a moment or two.

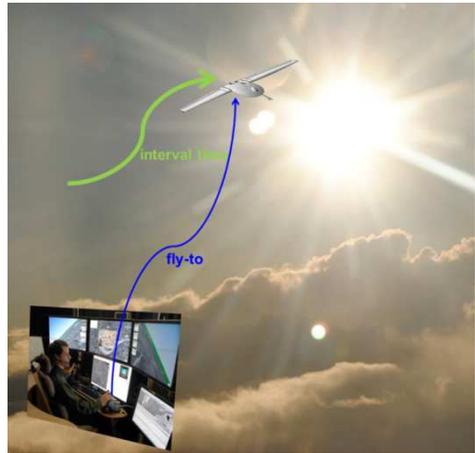
3.3 An example

In Figure 2, a small example is supplied of the SDCS in action. It depicts a situation in which an UCAV, controlled by a pilot on the ground, using a

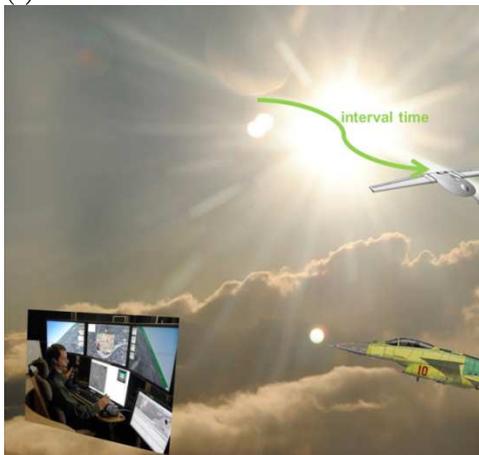
rather classic Human-Machine Interface, engages an enemy aircraft and it is an excerpt of a larger scenario.



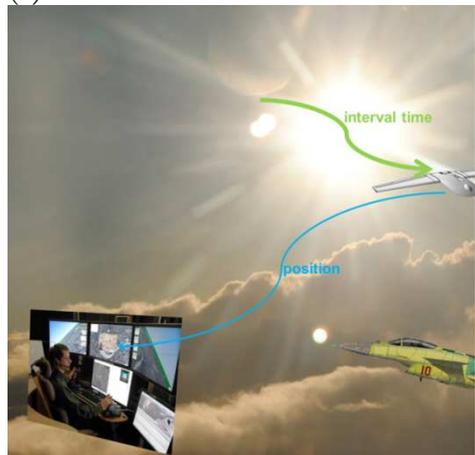
(a)



(b)



(c)



(d)

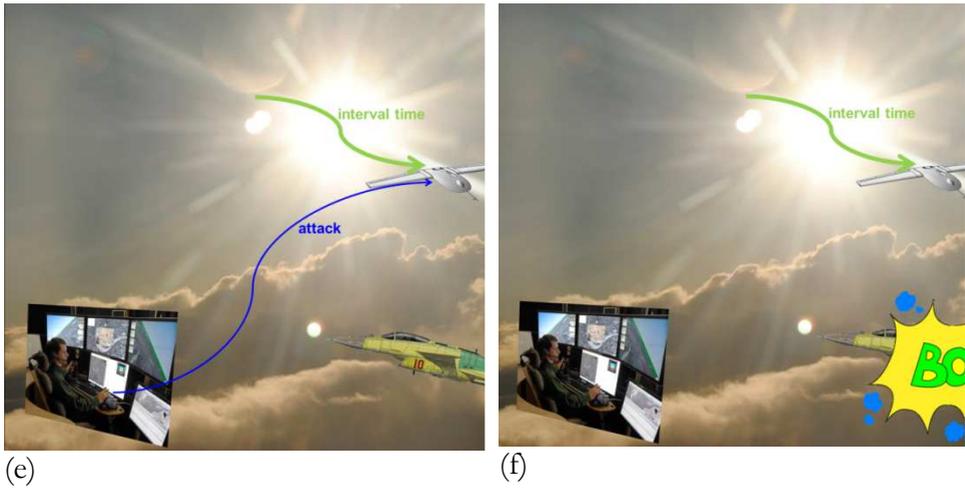


Figure 2 An example

In Figure 2 (a), the UCAV has just finished its commanded manoeuvre, and sends his new position, possibly accompanied by the detected position of the enemy aircraft, to the controller on the ground. In Figure 2 (b), the controller sends a new command to the UCAV, ordering it to fly to a new position in order to get attacking chances against the enemy aircraft. Figure 2 (c) shows the UCAV, flying to its new position. Meanwhile, the enemy aircraft has moved too, of course. In Figure 2 (d), the UCAV sends his new position to the ground, after which in Figure 2 (e), the controller commands the UCAV to attack, which it successfully does in Figure 2 (f).

4. Application areas

In general, the SDCS is especially suited for situations in which quick reaction is needed because of obstacles or threats, and where direct joystick control is not feasible or precise enough. Furthermore, as mentioned, the SDCS opens new possibilities in air-to-air situations. In this section, we will give some examples of possible operational application areas where the SDCS may prove its use.

Air defence

Air defence, defined as ‘all measures designed to nullify or reduce the effectiveness of hostile air action’ (NATO Standardisation Agency (2012)), can

also contain air-to-air components. However, most air forces choose to augment airbase defence with surface-to-air missile systems as they are such valuable targets and subject to attack by enemy aircraft. The use of UASs reduces the disadvantages of using air assets in air defence, with respect to vulnerability of pilots, and costs, and the SDCCS also opens up possibilities to operate in a wide area.

Cruise missile and UAS defence

Possibly the only way to use air assets in the defence against enemy cruise missiles and hostile UCAVs, is the use of UCAVs by own forces. The SDCCS opens up this possibility, and offers, as an additional advantage, the possibility to operate much further away than what is possible now with the currently preferred defence against such threats, being either surface-to-air defence, , or manned aircraft. As compared to the latter, UCAVs of course can be much longer on-station.

Escorting

Using a UAV to protect other air assets during a mission is also possible. One can think of escorting bombers, transport aircraft, tanker aircraft and AWACS. It may even be possible to control the UAV using the SDCCS on-board the aircraft it protects.

Counter-air and interdiction

Air interdiction is the use of aircraft to attack tactical ground targets that are not in close proximity to friendly ground forces. It differs from close air support because it does not directly support ground operations and is not closely coordinated with ground units. Unlike strategic bombing, air interdiction is not meant as an independent air campaign, as its ultimate purpose is to aid ground operations rather than to defeat the enemy by air power alone. The purpose of air interdiction is to delay, disrupt, or destroy enemy forces or supplies *en route* to the battle area before they can engage friendly forces.

Using UCAVs controlled by the SDCCS opens up the possibility for more effective air interdiction, because it can be applied deeper into enemy territory than what is possible now, for a longer consecutive time, as compared to using manned aircraft, and without the risk of losing pilots.

Ship defence

The additional technical possibilities of using UCAVs instead of manned aircraft include technical possibilities, not available for the latter. One can think of Short Take-Off and Landing (STOL), or Vertical Take-Off and Landing (VTOL), without having to take the human on-board into consideration, opening up the possibility to operate from small ships. This for instance enables the defence of groups of small ships, where the SDSC is stationed and controlled on board of one of these ships.

The edge of space

The ability to make use of the extreme manoeuvrability and flight performance may even be relevant if the continuing militarization of space leads one day to air combat at the edge of space.

5. Conclusions

Applying the SDSC to control UCAVs opens up new operational possibilities, mainly because of the lack of the restrictions a pilot on-board implies. Air-to-air operations requiring long endurance, e.g., deep into enemy territory and operations requiring extreme manoeuvring become possible. A number of application areas have been identified for the SDSC.

Using the SDSC removes the need for full autonomy, removes the need for large bandwidths, and overcomes the latency problem, present when steering a UAV directly. The envisioned synthetic Human-Machine Interface offers new possibilities in controlling, possibly multiple, UCAVs, in a Virtual Reality environment. The trade-off between interval length and artificial intelligence needed offers the possibility to gradually make the vehicle more autonomous, when AI research advances, and also offers a research vehicle to AI and autonomy.

With the West having the ultimate manned fighter, the Lockheed Martin F-22A, available at present, the time is right to start development of air-to-air UCAVs. The security risk if development problems are encountered is manageable with the F-22A at hand, and maturation of UCAVs will likely take so long that, if they are to be the eventual successors of the F-22A, development should start in the next ten to fifteen years. This means that

the basic technologies need to be developed sooner. In the meantime, UFAVs can be a useful addition to the somewhat limited air-to-air capabilities of the F-35 Joint Strike Fighter (JSF). Since there are less than 300 F-22A's available at present and there will likely be thousands of JSFs, additional air-to-air capabilities may be welcome, especially in the later years of the operational life of the F-35.

6. The way ahead

Technical challenges for the SDCS are, next to the development of the 'intelligent' CMMS, the realization of an effective Human-Machine interface, probably in a VR environment. To determine the feasibility of SDCS, at least the following questions have to be answered:

What information does the pilot need to effectively give input to the CMMS?

What SA is necessary for the pilot? How does it depend on the operation? Does it depend on the phase in the operation? Does it depend on the length of the intervals between commands?

How can this information be generated?

How do we obtain that SA? How much does it depend on sensors in the UCAV? Does this actually solve the bandwidth problems? Are additional sensors necessary? Is the use of real-time simulation an option?

What is the effectiveness of various ways to present the information to the pilot?

What possibilities are there, and in what timeframe? Does a VR environment improve mission effectiveness? Is a 'classic' HMI adequate for testing the SDCS concept?

What information should be given in the control commands?

What types of commands are possible? How does the length of the interval determine the complexity of a task? How does the information, available in the control room, determine the possible types of commands that can be given? What is, given these various possibilities, the level of intelligence/autonomy needed in the intervals between the control commands? Is this level of autonomy feasible?

Are the demands, imposed on the pilot using SDCS, feasible?

What abilities does a controller have to have, to control a UCAV? How does this depend on the HMI? How does it compare to the abilities of pilots of manned aircraft? Is it expected that there are sufficient controllers available? Is specialization (e.g., in mission phase) an option?

It is expected that most of these questions can, in essence, be answered using simulations. The results will show whether or not the SDCS is a solution to overcome the previously mentioned drawbacks of UCAV in use presently, and if it offers the possibility to use UCAVs in air-to-air situations, without unrealistically high data link or autonomy requirements..

The acquired knowledge can also be of value in the development of other types of unmanned aircraft, especially because considering the shift from more and more tasks from manned to unmanned aircraft. Examples are rescue UAV's that can, for example, evacuate people from ships in distress. SDCS par excellence expands the possibilities for UAV use.

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Part 3

Leadership, Command and Control and Basic Competences

Situational Awareness and its Impact on Crisis-Induced Action: the Norwegian 22/7 Case

Dan Hansén, Martin Holmberg & Christian Uhr**

Abstract

The purpose of this paper is to show how models from the scientific studies of Command & Control (C2) can help enriching the description and understanding of C2 in scenes from empirical studies of crisis and conflicts. As a specific case, the concept of Situational Awareness¹ is applied to the events in and outside Oslo on the 22nd of July 2011 (Terror bombing in Oslo and Massacre at Utøya). The documents used for the case study are from the official Norwegian examinations of the event^{2 3 4 5}. The main conclusion in this paper is that the operational level requires attention regarding how to obtain a relevant situational picture, and consequently also a situational awareness at a high enough level.

Introduction

To learn from societal crises is a common mantra, and also a great challenge. Recent events like the pandemic, tsunami, wildfires or terrorist attacks normally justify a series of investigations, research initiatives and development projects that keep practitioners, academics and politicians busy until the next agenda-setting crisis occurs. Such initiatives are normally rationalised by the aim of continuously developing the society's capacity to deal with all kinds of perturbations. However, several obstacles challenge the process of continuous progress. One of those has to do with retrospectively comprehending what has happened during a response process, i.e.

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¹ Endsley, M.R. Toward a theory of situation awareness in dynamic systems. *Human Factors* 37(1), 32-64, 1995.

² Norwegian Government (2012) NOU 2012:14 Rapport fra 22.juli-kommisjonen.

³ Nordre Buskerud Police (2011) Evaluering 22/7 2011: Nordre Buskerud politidistrikts politioperasjon fredag 22. juli til mandag 15. august 2011.

⁴ Oslo police (2011) Oslo politidistrikt: Evaluering 22/7 2011, Oslo: Oslo Politidistrikt.

⁵ POD (2011) 22. Juli 2011: Evaluering av politiets innsats, Oslo: Politidirektoratet.

how to make relevant analytical choices and how to understand causation in a complex context. Without relevant understanding, the conditions for relevant development are poor. Also, since each crisis is unique it is difficult to know what lessons learnt that will be relevant in future events. We therefore propose to use terms from C2 theory to describe shortcomings in functional coordination and direction at a higher abstraction level and thus possibly making lessons learnt more generalizable.

In this paper we put the magnifying glass on the challenge of analysing the basis for managerial initiatives during the acute phase of a crisis. More precisely, we are interested in how a situation is understood on various organizational levels. We argue that such understandings are logical prerequisites for achieving functional direction and coordination among societal resources engaged in a response to a crisis. Our contribution should be seen as a piece of a larger analytical framework promoting an understanding of a key challenge associated with response operations. We believe that the analytical approach presented here can lead to new insights valuable for those interested in both academic progress and practical improvements.

The aim of this paper is to examine and demonstrate how the concept of Situational awareness (SA) can be used to enrich the description and understanding of Command & Control during responses to crises. Our approach is tested by an analysis of the response to a terrorist attack in Norway 2011. Thus, this paper also comprises tentative results from this empirical study.

First, we present the Dynamic DOODA and Situational Awareness as bases for our analytical framework. This is followed by a description of various scenes taking place during the response to the terror attack in Norway. Each scene comprises a short analysis based on the framework presented initially. Finally, the analytical approach and the tentative results are discussed and conclusions presented.

Situational Awareness at Different Organizational Levels

In this paper, our view of Command & Control is based on the cybernetic DOODA model⁶. However, we only focus on the Orientation part of the

⁶ Brehmer, B. The dynamic OODA loop: Amalgamating Boyd's OODA loop and cy-

command process, which is concerned with finding out what needs to be done in order to resolve the crisis. In order to do this, one has e.g. to have a good understanding of the Operational Picture, and it is this part of Orientation in the C2 process that we will concentrate on in this paper. Obviously, in order to fully analyse the C2 in a crisis, one has to analyse all parts of the C2 process, i.e. the whole DOODA loop, but that is beyond the scope of this paper. Before the analysis, we briefly present the DOODA loop and the Situational awareness model used in this paper.

The DOODA model describes a general command process, and consists of a feed-forward and a feed-back phase, giving a loop that is repeated throughout a mission. The feed-back phase is required since the environment changes all the time, and also because more information can be obtained. The feed-forward phase is required in order to be able to adapt the use of own resources. At a high level of abstraction, four functions of command are necessary: Data Collection, Orientation, Planning, and Influence.

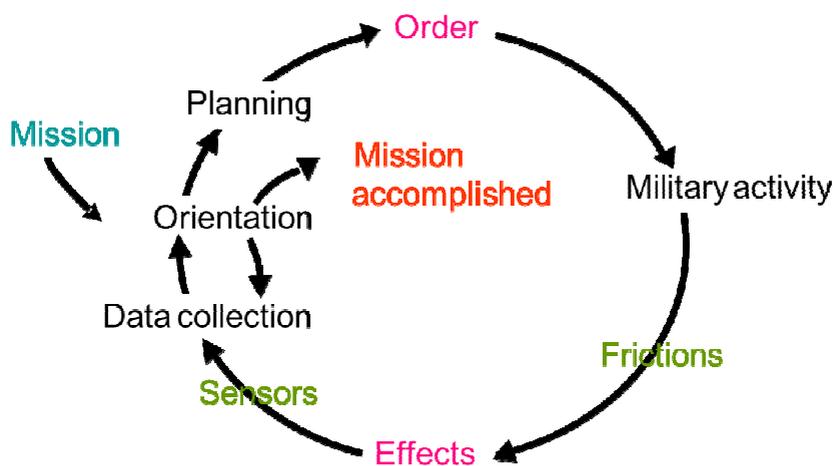


Figure 1: The DOODA loop as presented by Brehmer.

bernetic approaches to command and control. Paper presented at the 10th International Command and Control Research and Technology Symposium, McLean, VA, June 17-21, 2005.

The term Situational Awareness (SA) has been used for a long time, but with different meaning in different contexts. Mica Endsley has made an often-used description of SA, which will be used in this paper. Endsley suggests a model with three steps in forming an SA, Perception, Comprehension, and Projection.⁷

Perception (Level 1 SA): In the first step, the status and dynamics of relevant elements in the environment must be perceived. The elements may be e.g. objects, people, or events, and their status include e.g. their position, speed, and size.

Comprehension (Level 2 SA): In order to reach the second level of SA, the processes of pattern recognition, interpretation, and evaluation are used to comprehend how the elements in the environment influence the individual's goals.

Projection (Level 3 SA): The highest level of SA means includes the capability to make forecasts to possible future situations that may arise from the current situation, and how this development affects the individual's goals.

However, since the original framework was conceived for describing how individuals comprehend an event, it is not directly suitable for our purposes in this paper. Instead, we have chosen to use the terms from Endsley's paper, but only as a description of the level of understanding that we judge has been achieved by an organisation as a whole.

This study has been made on Tactical, Operational, and Strategic levels, where Endsley's levels of Situational Awareness in this paper have been operationalised as follows:

⁷ Endsley (1995).

	Level 1 SA	Level 2 SA	Level 3 SA
Tactical Level	Knowledge of position and state of individual objects and people on the site of one of the events	Understanding of relations between objects, people, and resources on the site of one of the events	Capability to forecast the nearest future on the site of one of the events
Operational Level	Knowledge of the position and character of the events that have occurred that affect the operation as a whole	Understanding of the relation between the events and between the events and the available resources	Capability to forecast possible events in the near future
Strategic level	Knowledge of the character of the event for the nation as a whole (accident, terror attack, etc)	Understanding of the effect the event has on the society as a whole	Capability to forecast what part of society that will be affected on a longer time scale

The Norwegian 22/7 Case

The terrorist crimes committed by Anders Breivik in Oslo and at Utøya on 22 July 2011 were completely unimaginable in the Norwegian and wider Scandinavian context. At least from hindsight, the case stands out as exceptional and perhaps incomparable. But here we make a point of describing the events as they unfolded on what appeared to be a perfectly normal Friday afternoon in a slumbering summer holidays' mood (and there are plenty of those). We do not claim to be exhaustive here since the purpose of the paper is merely to show the concept, not to make a complete analysis of the whole event. Rather, we have carefully selected five scenes that represent the three levels of the command structure (tactical, operational, and strategic). The five scenes are further chosen to include both the Oslo and Utøya sites. If the bombing in Oslo came as a bolt from the blue, the Utøya massacre took place under the very dark clouds of the demolished

government buildings, which arguably means that the situational awareness looked different at an initial stage when dealing with the second attack, compared to the first. We are interested in the workings and effects of situational awareness at distinct levels, for which reason the scenes exclusively deal with law and order (policing) issues, since the police is typically organised in such a fashion. Each scene is by way of descriptive analysis characterised as SA 1, 2, or 3. We have chosen to study the official documents from the different police districts and “22. Juli-kommisjonen” report from “Noregs offentlege utgreiingar”, the governmental investigation of the event. In order to make a complete study of the event as such, the original data (interviews, documents, etc) should have been used, but since the purpose of this paper is to demonstrate a concept rather than to make a comprehensive analysis of this particular event, the choice of documents should suffice.

Prelude

The first signal about the Oslo explosion was received at the Oslo police’s Operations Centre at 3: 25 p.m. Friday, 22 July 2011. It was a telephone call from Oslo city centre police station, which stated that an explosion had taken place at the government building. The signal was reinforced two minutes later, when security personnel at the government building called and confirmed that there had been an explosion, that there was much smoke around, and that there “had been a terrorist”.⁸⁹ From this moment, Norwegian authorities gradually became aware of a frightening reality.

Scene 1. Oslo Police Tactical Level: Initial Stage

The initial response was in keeping with instructions. Two police units were sent to the scene and a task leader was alerted and he arrived at the scene at 3:33 p.m.; four minutes after the first patrol had arrived. They reported to the Operations Centre that a large area needed to be roped-off, that all available police officers be sent to the scene, and that fire and rescue services be alarmed. The task leader further urged early on that the Operations Centre warn the members of the Cabinet and make sure their

⁸ Norwegian Government 2012: 85.

⁹ Oslo police 2011: 45.

houses were evacuated. He also instructed the Operations Centre to alert the anti-terrorism unit and to call in the staff organisation. He further said that there were many dead and wounded people around. Based on experiences from abroad, he raised the awareness that secondary attacks should be planned for. He explicitly told the Operations Centre to “press the largest button.”¹⁰

The situational awareness level clearly reached SA3 on the tactical level in this scene. The relevant objects were seen, and appropriate actions to deal with wounded people and damaged buildings were taken. Furthermore, the conclusion that this was a terrorist attack and thus required special attention due to the risk of a secondary attack shows that the task leader was also capable to make the forecast that members of the cabinet were threatened. Since the conclusions were drawn from previous events and not from a detailed analysis of this particular event, the forecast turned out to be wrong – there was no secondary attack on the cabinet. Since forecasts are always difficult to make, we do not make a comparison between the forecast and the true outcome to determine the SA level. Instead, we choose to assign the SA level 3 based on the fact that there was a serious attempt to make a forecast based on a combination of facts from the event and facts from other sources. However, since there was no time to make a proper analysis, this was the best possible way to get started with the rescue work at the site of the bombing, and start preparing for a possible second attack. Actually, the conclusions drawn are even close to SA3 on an operational level.

Scene 2. Oslo Police Operational Level: Initial Stage

The Operations Centre responded to the information given from the explosion scene by sending out a message that all available police patrols made it to the government building, including the anti-terrorist unit. A great many activities were undertaken by the Operations Centre, but the 22 July Commission contends that they “did not press the largest button”¹¹. The Commission points at the following deviations from what could have been expected¹²:

¹⁰ Norwegian Government 2012: 85-88.

¹¹ Ibid. 90.

¹² Ibid. 90-1.

- No helicopter resources were mobilised.
- Neighbouring police districts were not made use of.
- Roadblocks or observation posts were not established.
- No nation-wide alert was immediately sent out.
- The terrorism plan was not activated.

Taken together, the observation from the Operations Centre when concrete situation reports were transmitted is that those signals were dampened. The whole situation was managed in a contained manner. Based on how the Operations Centre acted, it is obvious that they were aware that a serious event had occurred, but since they did not press the largest button and mobilise all available resources in the region, it does not seem like they had a good understanding of the consequences of this event. This is also indicative of not quite reaching SA2 on operational level; the estimation here is that SA level 1 on operational level was established.

Scene 3. Nordre Buskerud Operational Level: Post Oslo Bombing Stage

Only two minutes before the first telephone call from Utøya to the operations centre at Nordre Buskerud Police District, the head of operations (operasjonsleder) spoke in the phone with the emergency ward at Ringerike Hospital. They discussed the Oslo bombing and the fact that they had not yet been alerted or asked to raise their readiness. The emergency ward informed the head of operations at NBPD that between 500-700 youths were in a camp at Utøya, and that several of them probably had relatives affected by the Oslo bombings, and therefore in potential need for psychological care¹³. Shortly after then, from 5.24 p.m. and onwards, telephone calls came from individuals at Utøya and from AMK (Akuttmedisinsk Kommunikasjonssentral) about shootings and shot people. AMK informed that a man in a police uniform used an automatic weapon¹⁴.

The operations centre at NBPD quickly got bogged down by telephone calls. At a smaller police district, like NBPD, the distance between operative and tactical functions are closer; the borders are indistinct. The head of

¹³ Nordre Buskerud Police 2011: 35.

¹⁴ Ibid.: 36.

operations was stuck trying to answer all incoming calls, when the rest of the police 1) called in the emergency unit and 2) formed into patrols that got ready to a) observe at the landing stage and b) prepare the boat for going over to Utøya¹⁵.

The head of the police station (stasjonssjefen) was called in by the police at 5:28 p.m. and arrived at the station 12 minutes later. When he understood that the situation was much more severe than he had expected, he also realised that they would need much more than the emergency units, and went to his office and started to call in more police, both investigative units and operative. He also made sure the telephone switchboard was manned; even though there were few people they could forward calls to, they were instructed to tell people calling from Utøya to take protection.¹⁶

At the same time as the head of the police station entered (5:40 p.m.), the head of operations called his equivalent at Oslo PD to inform about the situation, but also to request the anti-terrorism police to come. The head of operations in Oslo replied that they were aware of the shootings and that they currently were trying to get helicopters for the anti-terrorist police.¹⁷

The police commissioner (politimester) at NBPD interrupted her vacations at 5:42 p.m. when the head of operations in Oslo called her and informed her about what was happening, and that the anti-terrorism police were on their way by car. Furthermore the head of operations in Oslo urged the NBPD police commissioner to make sure they formed a staff organisation. She called the head of the police station to inform about what she just learned, and that she was on her way to the station. The head of station did not inform the head of operations that the anti-terrorism police were going there by car.¹⁸

At 5:59 p.m. the culprit called the emergency number and was directed to the chief of staff, which by then had formed. The culprit said he wanted to hand himself over to the police, but shortly after the call was discontinued

¹⁵ Ibid.:36-7.

¹⁶ Ibid.: 38.

¹⁷ Ibid.

¹⁸ Ibid.

by the culprit. The chief of staff sent this information as an alert to all police at 6:01 p.m. but due to poor connectivity, not many took part of it.¹⁹ Just over half an hour later, the culprit was arrested.

At the initial stage of the Utøya shootings, the operational level at NBPD was fragmented and suffered from a severe information overload. This was also due to the fact that they also had to deal with a lot of information related to the tactical level. The situational awareness was by contrast quickly assembled and the connection to the Oslo events was made early. When commanders were called in, they first imagined a “normal” shooting, implying maximum three people²⁰. But this assumption was instantly abandoned on their way or at latest when reaching the police station. The picture the operative level gained turned out to be quite accurate: There was one man dressed in a police uniform, shooting at the youngsters at Utøya with an automatic weapon, and it could potentially be related to the Oslo bombing. There is no record of attempts to start preparing for possible future events. The conclusion is therefore that the SA reached level 2 on operational level.

Scene 4. Security Services Strategic Level: Afternoon

The on-duty head of the Security Services was in accordance with regulations the acting head of the organisation. As the acting head heard the explosion, he immediately called in the leadership of the services. But there was no systematic alert to the staff, in case more personnel would be needed, nor any alert to the services’ local branches. The alarming function is one of the security services’ most central tasks in case of crisis. They hold lists of military and civil organisations and people to alert so that they can take action based on the intelligence the services provide. On 22 July, the staff there took for granted that other police districts, the military and the Government Offices already knew about the explosion. Since the Security Services did not know more about it than what they could follow via online media, they did not either find it pertinent to alert these organisations. It took until 5 p.m., when the head of the security services came into office, before they formed into a staff organisation. But they were uncertain about

¹⁹ Ibid.: 44.

²⁰ Ibid.: 37-40.

their role. At 7 p.m., the Attorney General decided to appoint the Oslo police district to lead the investigation. The security services therefore saw their role as supporting the OPD.²¹ When the culprit had been arrested at Utøya the PST rapidly toned down the threat picture vis-à-vis public figures, symbols and other objects worthy of protection, which the Commission found questionable²² provided that it was not yet known if Breivik was alone or if there was a risk for follow-up attacks.

The situational awareness level at this strategic level reaches 1, but at the tactical level. This can be seen by the fact that they never assumed their strategic role. No information about the situation seems to have come out from the Security Services, indicating that they had not finished any analysis of the situation on the strategic level.

Scene 5. National Police Directorate Strategic Level: Afternoon

The POD was somewhat unstructured during the afternoon of 22 July. The police director was new at the post and had only served for a few weeks before he left on vacation, during which his predecessor – who had only served for a few months as an intermittent solution – substituted him. But the new director interrupted his vacation and came into office when he heard about the explosion. As he entered, the substitute headed for the Government Offices, where he provided police expertise and acted as a form of liaison. But people at the Government Offices thought he was the acting police director. At the POD, a staff organisation gradually took shape, but it is not clear exactly when it was constituted; probably between 5:30 and 5:55 p.m. However, due to summer holidays, less than half of the staff had any experience in or training for that type of work.²³

The POD is co-located with the Oslo city centre police and the building is close to the government quarters, for which reason the staff immediately knew about the bombing (3:25 p.m.). The national police director decided, together with the chief of staff, not to intervene at an operational level, but instead appointed the Oslo police commissioner to lead and coordinate

²¹ Norwegian Government 2012: 219.

²² Ibid. p. 258.

²³ POD 2011: 107-9; Norwegian Government 2012: 156-7.

activities.²⁴ Since POD works with strategic issues, this seems to be a reasonable thing to do. Due to the unstructured situation, very few notes were taken and the logbook was used only fragmentary. It is therefore difficult to get a picture of what kept them busy during this day. Among reported achievements²⁵ are seven coordination meetings with representatives from some ten organisations, such as the military, different police units including the security services, the justice ministry and the Health Care Directorate. The signals that came in can then supposedly have been different proceedings of these agencies, their needs and the actual situation, first in Oslo and later at Utøya.

In terms of strategic actions, the POD undoubtedly dampened the seriousness of the situation. They never considered setting the terrorism plan in motion, a plan that the POD had developed and revised only half a year earlier. The objective of the plan was to make sure that alarming procedures worked adequately to reduce response time, that resources were mobilised to hinder terrorists from moving around, that borders were controlled, and that certain people and buildings were protected etc. The substitute police director said he did not at first see the explosion as an act of terror, and he later disappeared to the Government Offices. The one who interrupted his vacations claimed he was so new at the post that he did not know about the terrorism plan. Apparently none of his colleagues informed him or took any initiative to enact the plan. The police's preparedness level was never raised, even though the POD was aware that the Armed Forces had raised their level of preparedness at 5.30 p.m., which is before their knowledge of the attack at Utøya.²⁶

The situational awareness level on a strategic level is difficult to assess due to the short time span of the operation, there was not enough time to see analysis and decisions on the strategic level except for pre-planned actions and initial meetings with other agencies. It is however likely that a SA level higher than 1 would have manifested in a more forceful and plain line of action.

²⁴ Ibid: 109.

²⁵ Ibid.

²⁶ Norwegian Government 2012: 154-6.

Results

The obtained SA levels in the different scenes are shown in the table below.

Descriptive patterns of interest

	Scene 1 Tactical level	Scene 2 Operational level	Scene 3 Operational level	Scene 4 Strategic level	Scene 5 Strategic level
SA1		Operational		Tactical	Strategic (?)
SA2			Operational		
SA3	Tactical/ Operational (*)				

* These levels were obtained only from coupling of the event to previous acts of terrorism, not from analysis of this event in particular.

Discussion

This analysis shows that it is possible to grasp some of the key challenges associated with understanding a crisis from a tactical, operational and strategic level by using the concept of situational awareness. Of course, one could argue that secondary data is not sufficient for drawing the conclusions we have made, but our aim was not primarily to come up with unarguable conclusions about a particular response operation, rather to probe the approach and see if it enriches the understanding. A further analysis, once involved parties have shared their view of the obtained SA level, can focus on understanding why/why not a certain level of SA was obtained, rather than focusing on detailed events. It is our view that this would help the post-event analysis to identify critical flaws in the C2 system (e.g. training, manning, equipment, ...) on a general level, rather than focusing on event-specific flaws.

In everyday command and control activities, the tactical, operational, and strategic levels fulfil distinct roles, even when the going gets tough, or per-

haps in particular then. Using Endsley's approach to situational awareness, and ascribing distinct attributes to each of the three levels, yields some remarkable insights into the actual C2 in this particular case. The attributes migrate between levels of command in two of the five scenes. The tactical level reaches the highest operative SA level in scene 1, and the strategic level reaches the lowest tactical SA level in scene 4. This is theoretically disturbing. But rather than shaking the tenets of the theoretical model, it calls for reflection about the nature of the case. It can hardly be categorised as ordinary, not even in crisis terms. Bafflement about what to do is to be expected. The case nevertheless witnesses of a pressure from the tactical level towards the operational and from the strategic level towards the tactical. It is as if the strategic levels have severe difficulties orientating and assuming strategic responsibility in the crisis, and instead play down the severity and potential ramifications of the attacks. Also at the operational level these tendencies are discernible. The operational level in Oslo scores a low SA 1, but its counterpart in Nordre Buskerud reaches SA 2, which may suggest that the knowledge of the first attack in Oslo had an alarming effect on the awareness. The theoretical approach renders these observations possible, and opens up a few avenues for future research. Are these patterns observable in other crises of comparable magnitude, or perhaps also in other types of crises? In this case, the tactical level assumed operational responsibility. It raises questions about interactive effects in this case and others. Do strategic and operative levels tone down their role and the outlook of events *because* the tactical level pushes the boundaries?

Large scale crises and big failures are typically bemoaned with cries for more out-of-the-box thinking. If commanders at various levels could only be better at thinking and acting different from every day practices when very extraordinary events occur, then the thinking and acting would better match the events, the arguments go. By all means, a certain room for flexibility and allowance for improvisation won't hurt. In the Norwegian 22/7 case, there is not much out-of-the-box thinking, but since some command levels do not achieve the SA level expected for their command level one could argue that the inside-the-box thinking is difficult in extraordinary events.

The analysis made during this work has brought us to identify opportunities for development of the results in this paper. One of those is to develop

the matrix presented under the theoretical framework, e.g. search for more generic expressions when presenting what is needed in order to reach the various levels of Situational awareness. Another important issue to address in the future is to further explain the causation between high level of Situational awareness and desirable effects in the societal context. We also see a potential for an analysis of Situational awareness as a concept in itself, including discussions on the existing criticism towards it.

Part 4

Law and Ethics

The Commander-in-Chief in legal system of the Republic of Poland

Malwina Ewa Kołodziejczak

Abstract

The Commander-in-Chief of the Armed Forces in the Republic of Poland shall be appointed in certain situations – for the duration of war¹ and (sometimes) during the martial law². This paper will describe these situations and analyze the provisions of this forming, especially in the case of the martial law. The author tries to answer the question: when should the Commander-in-Chief be appointed? Does the imposition of martial law always necessitate the appointment of the Commander-in-Chief?

In the Polish legal acts there are some shortcomings in the rules. The law can be unclear on this matter, creating a problem particularly with regards to interpretation. Therefore, the author will mention some legal definitions. In the Polish legal acts, the concept of “war” creates the biggest problem, which must be distinguished from the “state of war” or “time of war” and, above all, the “martial law”. These definitions and their proper interpretation are of special importance when determining the cases in which we should or just can nominate a Commander-in-Chief.

¹ *The Constitution of the Republic of Poland of 2nd April, 1997* (Journal of Law from 1997, No. 78, item 483), art. 134 „[...] 4. The President of the Republic of Poland, for a period of war, shall appoint the Commander-in-Chief of the Armed Forces on request of the Prime Minister. He may dismiss the Commander-in-Chief of the Armed Forces in accordance with the same procedure. The authority of the Commander-in-Chief of the Armed Forces, as well as the principle of his subordination to the constitutional organs of the Republic of Poland, shall be specified by statute [...]”.

² *The Act of 29 August 2002 - Martial law and the competence of the Commander-in-Chief and his subordination to the constitutional authorities of the Polish Republic* (Journal of Law from 2002, No. 156, item 1301), art. 10 “1. If at the time of martial law, there is the need to defend states, Polish President directs the defense in cooperation with the Council of Ministers; 2. President during martial law, in particular: (...) 4) may appoint, at the request of the Prime Minister, Commander-in-Chief of the Armed Forces [...]”.

The article describes the hierarchy of legal acts which leads to a discussion about the possibility of the appointment of the Commander-in-Chief in certain situations. Then, both optional nominations are analyzed: during war and during martial law, and the possibility of calling in other situations.

Key words: Commander-in-Chief, President of the Republic of Poland, war, martial law.

1. Introduction

Recent international events and internal reforms (reforming the leadership of the Armed Forces), has allowed issues related to the topic of the Commander-in-Chief of the Polish Armed Forces to gain in importance. However, there are still difficulties when specifying his role and his place in the Polish legal system. Firstly, it is difficult to clearly state when and in what situation can the Commander-in-Chief be appointed. The Commander-in-Chief is a constitutional body, and at the time of appointment by the President, acquires a number of prerogatives. It is difficult to say the time and circumstances in which a President may appoint the Commander-in-Chief. The *Constitution* explicitly indicates the “time of war” as a necessary condition to justify the appointment. On the other hand, the *Act of 29 August 2002 on martial law and the competence of the Commander-in-Chief of the Armed Forces and its subordination to the constitutional authorities of the Republic of Poland*, added that even during martial law, when it is necessary to defend the state, the Commander-in-Chief may be appointed. It is necessary to analyze and interpret the different situations, since the rules in this area have shortcomings and loopholes and the many definitions can trigger different legal impacts. Hence, it is therefore necessary to try to interpret situations in which the appointment of the Commander-in-Chief may be inaccurate.

2. Methodology (the main research problem, aim and hypothesis)

The short problematic situation presented above allows us to distinguish the main research problem, aim and hypothesis. The aim of this paper is to interpret regulations and to analyze selected situations in which the President appoints the Commander-in-Chief. Therefore, the main problem is contained in the question: *in which situations according to Polish law is there a possibility for the appointment of the Commander-in-Chief?* This

article attempts to resolve the following problems:

1. When should the Commander-in-Chief be appointed (before the war or during the war)?
2. Does the Commander-in-Chief have to be appointed every time under martial law?
3. Can the Commander-in-Chief be appointed during a normal functioning state, in case of war without external threat?

The hypothesis assumes that, in accordance with Polish legal acts there is only one mandatory situation in which the President can appoint the Commander-in-Chief, and few non-obligatory situations under martial law. It seems to be necessary to the order of some definitions. The working hypotheses which can help to solve these problems specifically focus on a few assumptions:

1. It can be expected that the Commander-in-Chief should be appointed only at a time and in a situation when war has started. Therefore, it can be problematic to interpret some phrases such as “a period of war” (“time of war”), “war”, “state of war”. In certain situations, a state of war can continue without military action. Why then appoint the Commander-in-Chief?
2. According to the *Polish Act of Martial Law*, the Commander-in-Chief can be appointed when there is the need to defend state. But even in this situation, the President can just do it. The appointment of the Commander is not obligatory for him. What if the President has received a request from the Prime Minister, but he didn't choose/want to appoint the Commander-in-Chief?
3. I suppose that the Commander-in-Chief can only be appointed during war or under martial law. It means that before war or in the case of war, the President can't appoint him. Perhaps society should know who will probably be Commander-in-Chief during war. Perhaps the amendment of the *the Act of 21 November 1967* –

*Universal duty to defend the Republic of Poland*³, according to which the President may, in time of peace, appoint a person referred to embrace this function is right. However, the person who is scheduled for this position can not function and perform the tasks entrusted to the Commander-in-Chief in peacetime. The Commander-in-Chief as a constitutional body has the opportunity to act within specific examples only during war or under martial war.

3. Legal basis

Currently, in accordance with the highest legal act in force in Poland, the *Constitution of the Republic of Poland* hierarchy acts is strictly defined.

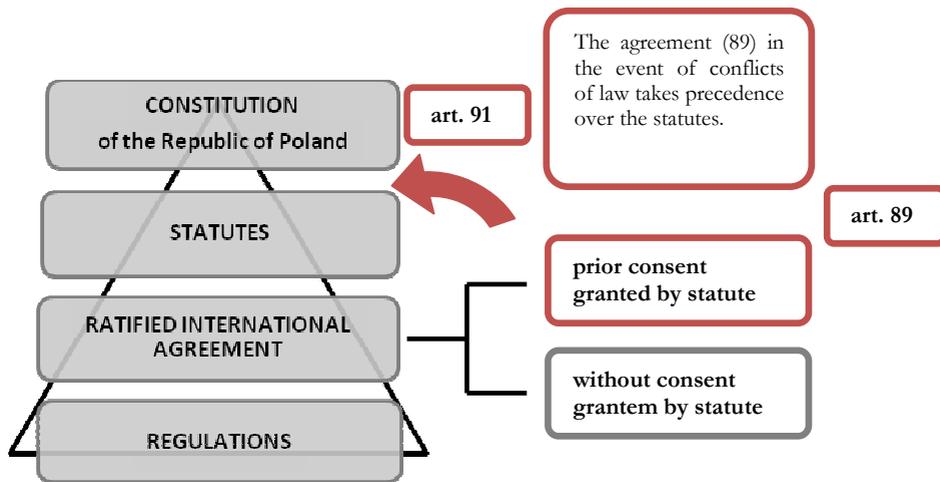


Fig. 1. Hierarchy of Polish legal acts. Source: Own work.

As shown above, the *Constitution* takes precedence and all other acts must

³ *The Act of 21 November 1967 – Universal duty to defend the Republic of Poland*, Journal of Law from 2015, item.144, art. 5a par.1. Current rules, after amendment, introduced big changes. The most important, concerns the possibility to indicate a “candidate” before the time of war, during the normal functioning of the state. The indication of such a person, is aimed to better prepare the candidate to fulfill the tasks as Commander-in-Chief during the war. Interestingly, the designated person is preparing for the role of Commander-in-Chief, but by the time of the effective appointment of the Commander-in-Chief or designation by the President, *another person* may be provided for the appointment to this position

be consistent with it and its subordinate. In accordance with art. 87 next are statutes, then ratified international agreements and regulations. It should be noted, that in the case of ratified international agreements, the way of ratification is considered very important. If the ratified international agreements require prior consent to be granted by statute through the Sejm and the Senate (Parliament), they have the force of law at the same level as Polish status. Because of this, international agreements become part of national law. Then, in the case when there is a conflict of laws between these international agreements and statutes, primacy is granted to the rules of ratified international agreements.

It should be added that in Poland, as in most European Union countries, there are two parallel independent legal orders: EU (different from the international) and Polish. This situation partly interacts with the aforementioned art. 9, 87 and 90 of the Constitution.

EU law is divided into primary law: the founding treaties, the protocol annexed, accession treaties, as well as general principles of EU law⁴ and the secondary law: regulations, directives, decisions (legally binding) as well as opinions and recommendations (non-binding).

The status of primary law indicates that no rules of national law can have precedence before it, so as not to deprive it of its character of EU law and to not undermine the legal basis of the EU itself. However, after Polish accession to the EU, the Polish Constitutional Court dealt with the principle of priority. The Court confirmed that Poland is bound by an order respecting the adopted norms of international law, but that the Constitution takes precedence validity and application in the Republic of Poland, being the highest legal force⁵.

⁴ One of the most important principles is the principle of primacy, which is the foundation of a unified and proper functioning of Community law in all Member States, at the same time expresses postulate, however, it contains an order, ensure the effectiveness of Community law in national legal systems, and thus its effective implementation. J. Galster, *Podstawy prawa Unii Europejskiej z uwzględnieniem Traktatu z Lizbony*, TONiK, Toruń 2010, p. 218, vide: B. Serwin, *Zmiany w katalogu źródeł prawa po akcesji Polski do Unii Europejskiej*, „Zeszyt Administracja. Teoria – dydaktyka – praktyka”, (28) 3/2012, p. 119.

⁵ Constitutional Court's judgment of 11 May 2005., Ref. No. K 18/04, vide: B. Serwin, op. cit., p. 133.

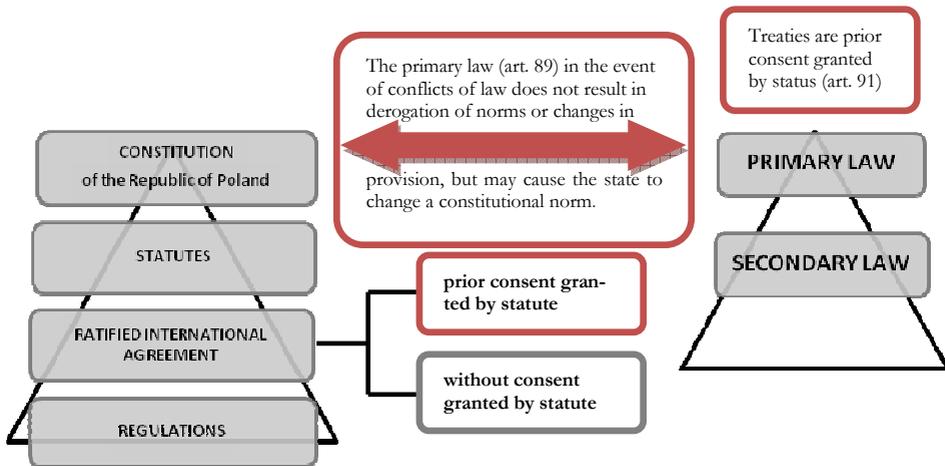


Fig. 2. Hierarchy of legal acts in force in Poland. Source: *Own work*.

Thus, the consequence of Polish accession to the European Union is the validity of two parallel legal systems – Polish and EU. However, as stated by B. Serwin, their mutual autonomy does not mean lack of interaction. It also eliminates the occurrence of a collision between both legal systems. A collision cannot be resolved by recognizing the primacy of EU law norms in relation to the constitutional norm. In the case of a collision, constitutional norms do not lose their binding force or do not change.

In consequence, what is important and what must be accepted is that art. 87 of the Constitution appears to be out of date, incomplete and insufficient, and perhaps it should be supplemented by a marked outright law acts of the European Union⁶.

However, the EU *has no influence* on issues related to the appointment and functioning of the Polish Commander-in-Chief. Even with the functioning of SACEUR, NATO *has no effect* on this issue. Some connections would only occur in a time of conflict on Polish territory with the simultaneous functioning of SACEUR, but it is rather related to cooperation, as there is

⁶ B. Serwin, *op. cit.*, p. 133.

no provision to the rules of subordination in this case. European Union legislation refer instead to the defense policy already in the Treaty of Lisbon⁷, but there are no guidelines on the system of command and control of the armed forces.

Accordingly, the art. 134 of the *Constitution* expressly indicates a situation in which the President of the Republic of Poland appoints the Commander-in-Chief. For the duration of the war at the request of the Prime Minister, the President appoints the Commander-in-Chief. There is no doubt that in this case the President has no choice and that the appointment is *mandatory*. On the other hand, in the art. 10 of Act of 29 August 2002 – *Martial law and the competence of the Commander-in-Chief and his subordination to the constitutional authorities of the Republic of Poland* added that the President *can* appoint the Commander-in-Chief during martial law, when it is necessary to defend the state.

It is necessary to analyze the situations and to subject them to interpretation, since the rules in this area are unclear, there are some shortcomings and loopholes, and the many definitions are rather difficult and could cause different effects. Hence, it is necessary to attempt to interpret the situations in which the appointment of the Commander-in-Chief in specific moments is considered inaccurate.

Martial law is one of the states of emergency, which can be introduced by the President of the Republic of Poland at the request of the Council of Ministers “in the case of external threats to the State, an armed attack on the territory of the Republic of Poland or when an international obligation for the common defense”⁸.

⁷ *Treaty of Lisbon Amending the Treaty on European Union and the Treaty Establishing the European Community* (Official Journal of the European Union C 306/1/2007), art. 28a, 7, ‘If a Member State is the victim of armed aggression on its territory, the other Member States shall have towards it an obligation of aid and assistance by all the means in their power, in accordance with Article 51 of the United Nations Charter. This shall not prejudice the specific character of the security and defence policy of certain Member States.’

Commitments and cooperation in this area shall be consistent with commitments under the North Atlantic Treaty Organisation, which, for those States which are members of it, remains the foundation of their collective defence and the forum for its implementation’, source: <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:C2007/306/01&from=PL> (28.06.2015).

⁸ *Polish Constitution*, art. 229.

Currently, the definition has been expanded: martial law can be imposed in the event of an external threat also due to terrorist attacks and activities in cyberspace, but only when such activities are performed by external *entities*. However, such an extension to the definition with a focus on specific situations, paradoxically, causes a narrowing of the definition. On the other hand, art. 2 paragraph 1a legislature decided to define what external threats to the state encompasses, understood as actions that threaten the independence and the integrity of the territory or important economic interests. They may also seek to prevent or disturb the normal functioning of the state by *external entities*. But, according to this definition, we should remember what external entity is.

Article 2. paragraph 2 discussed the act, highlighting that the Council of Ministers should determine the cause and area, in accordance to the threat and to the degree of the limitation of rights and freedoms of man and citizen, in the application of martial law.

On the one hand, to precisely define the external threats it is intended to identify specific situations in which it is acceptable to introduce martial law. On the other hand, the article is given well-defined activities, which in an ever changing world involving the possible emergence of new threats, will repetitively require the revision of recently revised laws.

In addition to these considerations, it is important to note that after the introduction of martial law, changes occur that may have an impact on the functioning of public authority or legal persons, as well as on organizational entities without legal personality and above all on regular people's lives. One should always consider whether the imposition of martial law is necessary because it should be the last resort.

4. Problems of interpretation of the legal definitions

It is necessary to analyze some important definitions which have a large influence on the science and theory of security and the topic of the Commander-in-Chief. Appropriate use of definitions, and their proper interpretation is essential to achieve certain goals. Otherwise, one may receive alternative legal consequences than expected.

Thus, the situation appears problematic due to the difficulties associated with

interpreting the circumstances and the specific moment in which the Commander-in-Chief may or should be appointed, and the difficulties associated with the definition of terms (war, state of war, a time of war, martial law).

There are also doubts when determining the meaning of the term “state of war”. The constitutional reference comes only to indicate in art. 116 paragraph 1, that this Parliament (Sejm only to be precise) has the power to decide on war. In paragraph 2 it is stated that the resolution of a state of war may take in the two situations: because of an *armed attack* on the Polish territory, or when there is need for collective defense, *obligations arising from international agreements*. If the Sejm is unable to collect, the President of the Republic of Poland decides on the state of war. Thus, this is another example for the introduction of concepts without proper explanation. It is assumed, that a state of war is a concept taken from public international law and refers to actions between *states* (as primary entities of public international law). So, it primarily addresses the legal institutions of another country. Therefore, the “state of war” does not apply to and does not indicate what changes occur in the relations between the authorities within the country and it does not give a basis for organizational changes, or the appointment of the Commander-in-Chief. The consequences should be relevant to the situation. The possibility of starting hostilities exist, but it is just (or only) countries, according to international law, that can sever diplomatic relations, introduce embargos, and break economic relations⁹.

It should be taken into notice, that a state of war is not the same as a “time of war”. The time or period of war involves actual hostilities or real warfare, military operation¹⁰.

⁹ M. Kolodziejczak, *Naczelny Dowódca Sił Zbrojnych w polskim systemie prawnym* [in] *Naczelny Dowódca Sił Zbrojnych w systemie obronnym państwa polskiego*, ed. T. Kośmider, AON, Warsaw 2014, p. 135-136.

¹⁰ Until a few months ago, most of the lawyers and experts on the subject believed that the Commander-in-Chief in time of peace is not functioning, because he is appointed during war or under martial law, when **it was** necessary to defend the state. Recently, the problem has been noticed by the legislature and amendments were introduced - currently the president decides, when the “time of war” starts: “if necessary, defend the state [President] decides, at the request of the Prime Minister, on the date and time at which war on Polish territory is considered to have begun. The same procedure shall be used to determine the time and date at which war is considered to have ended, *Act on the universal duty...*, art. 4a introduced by *the Act on amendment of the act on the universal duty...*, art. 1



Fig. 3. Differences in basic definitions. Source: *Own work*.

5. Few assumptions for hypothetical situations¹¹

In the first example (Option 1), martial law is already introduced (in progress), there has been (expected) aggression/armed attack by another state, the President of the Republic of Poland at the request of the Prime Minister appointed the Commander-in-Chief and in the meantime the Parliament has announced a state of war (Fig.4). However, this is the perfect situation, when authorities work together, and all decisions were made on time. So, it is a model scenario, but it is very unlikely that the events would roll in accordance with this scenario. Hence, it is necessary to consider other possibilities or situations where the appointment of the Commander-in-Chief is not so clear and obvious.

¹¹ For the purposes of functioning of Commander-in-Chief were distinguished nine legal and organizational assumptions. In this paper I will present just four.

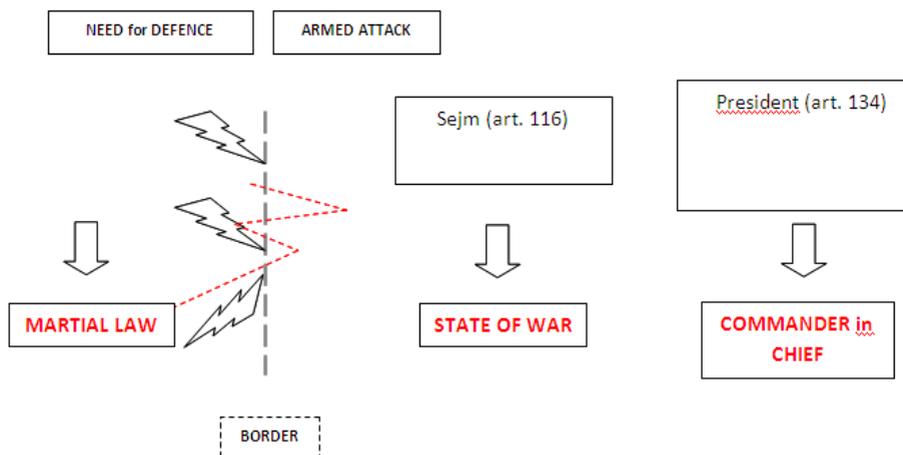


Fig. 4. Model situation of the appointment of the Commander-in-Chief during war, preceded by the decision to introduce martial law and the declaration of a state of war. Source: *Own work*.

In a second variant (Fig. 5) the period of war continues. Armed attack occurred unexpectedly and it was not possible to introduce martial law in advance. Time of war *de facto* exists, therefore, the appointment of the Commander-in-Chief is possible. It is likely that in a similar situation it is necessary to immediately appoint the Commander-in-Chief. However, without the introduction of martial law, the Commander-in-Chief has no legal powers and tasks, because his competence arises from the *Martial Law Act*. In turn, the introduction of martial law, can cause difficulties, for example:

1. The Council of Ministers cannot collect and submit an application for the President of the imposition of martial law.
2. The President refuses to issue the regulation.
3. The President is unable to provide the Sejm regulation, since it cannot be picked up.
4. Regulation cannot be published in the Official Gazette.

Does this mean there will be no formal prerequisites for the imposition of martial law?

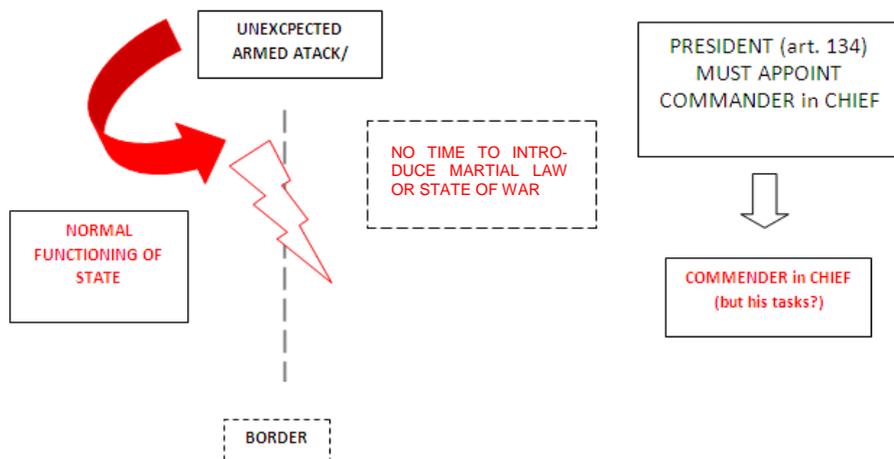


Fig. 5. Diagram of the appointment of the Commander-in-Chief during the war without the imposition of martial law. Source: *Own work*.

Another case (option 3): what happens if during martial law, where the defense of the state is necessary but the President of the Republic of Poland does not decide to appoint a Commander-in-Chief, because it is not obligatory for him?

Another problem (option 4) would arise if Poland, according to international agreements, is required to make a decision about the state of war without an actual warfare on its territory? Should the Commander-in-Chief be appointed?

A few more similar assumptions can be found. One of the most important, applies to a situation similar to that in Ukraine. In this case, the appointment of the Commander-in-Chief would be consistent with the Constitution of the Republic of Poland? In a similar situation the Commander-in-Chief appears to be necessary, however, the lack of regulation is not allowing his appointment.

7. Conclusions

The functioning of the Commander-in-Chief in Poland's command and control system of national security is difficult, because there are many

doubts on the right interpretation. In connection with the afore-mentioned assumptions there are further questions. There are still a lot of doubts, mostly boiling down to questions about: the time of appointment, of the same person for candidate for a future Commander-in-Chief, a situation in which the Prime Minister and the President of the Republic of Poland do not come to a consensus on who should be the Commander-in-Chief, as well as what happens in the case of an application refusal by the President? It is also important to consider a situation in which the appointment of the Commander-in-Chief is scheduled in advance, but then the presidential term of office expires and the new President may prefer the appointment of another person for this position?

In conclusion, we can say that the above-mentioned considerations lead to the following deductions:

1. Current legal acts, on matters relating to the appointment and the functioning of the Commander-in-Chief are not sufficient. The loopholes tend to create difficulties of interpretation. It is therefore necessary to introduce significant changes, providing clear and legible normative solutions that will not raise doubts on the issue.
2. It is difficult to clearly indicate who could be a Commander-in-Chief. Drawing from past experience, there has been an inclination to chose one of the highest-ranking soldiers of the Polish Army. However, according to new legal acts, the Commander-in-Chief could be an Operational Commander, a General Commander or even the Chief of General Staff. Furthermore, other people cannot be excluded, including civilians.
3. The president of the Republic of Poland appoints the Commander-in-Chief for the duration of war, which is expressly stated in art. 134 of the *Constitution*.
4. In other exceptional cases, during martial law – the president of Poland can appoint the Commander-in-Chief, as it is considered necessary for the defense of the country.
5. Problems and difficulties associated with the definition of terms is not only a Polish matter. One cannot find clear definitions in international acts, NATO's documents *etc.* Fundamental definitions should be regulated on an international level.

In the Republic of Poland the legislative acts and the most important

documents in force, have a multitude of formulations, a multiplicity of concepts or an inconsistency in their use. The absence of some definitions will increase the problems associated with their comprehension. The lack of regulation creates a situation in which multiple interpretations are possible. Therefore, it is necessary to introduce significant changes imminently, yielding clear and transparent regulatory solutions that do not raise doubts, while simultaneously providing important legal certainty.

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Part 5

Security and Defence Policy and Strategy

Globalisation's Impact on Navies in the Asia-Pacific: From the Modern to the Postmodern to the "Quantummodern"

Chang Jun Yan¹

Abstract: *Globalisation, with its defining aspect of the global sea-based trading system, has changed navies directly and indirectly. It has directly shifted the focus of navies from their war-fighting role to their constabulary and diplomatic roles, and indirectly widened the requirements of these latter roles. Booth's original equilateral triangle of naval roles based on modernist competition has hence morphed into an isosceles triangle based on postmodern cooperation. However, whilst this is true to a larger extent for European navies, the Asia-Pacific remains mostly a modernist remnant in a postmodern flat world. Therein, although there is an ongoing shift towards postmodern cooperation, the triangle of naval roles still remains more equilateral. Not only is such postmodern cooperation limited within Asia-Pacific navies, they are moreover "quantummodern", existing in a state of superposition of modernist competition and postmodern cooperation concurrently even within the limited cooperation being undertaken; a form of competitive cooperation within "security competition by proxy" endeavours in the guise of cooperation; as a case study of anti-piracy missions in the Gulf of Aden demonstrates.*

Globalisation is so ubiquitous in the world today that the term has become almost a cliché. Thomas Friedman famously declared that *The World is Flat* once again due to globalisation shrinking the world to a size "tiny".² Since the most salient characteristic of globalisation lies within its economic aspect, especially the global sea-based trading system, globalisation has similarly affected the roles of navies – which reflect the states that they defend – to a large extent, both directly and indirectly. This article argues that globalisation has directly shifted the focus of navies from a military or war-fighting role, to one that is premised more upon their constabulary and diplomatic roles; and indirectly widened such constabulary and diplomatic requirements with the rise of non-state actors concomitant with globalisa-

¹ The author wishes to thank Dr Alan Chong, Collin Koh Swee Lean, and the participants of the 2014 International Society of Military Sciences Conference present during his panel for their incisive questions and insightful comments; not to mention the gracious hospitality provided by the Austrian National Defence Academy.

² See Thomas Friedman, *The World is Flat: The Globalized World in the Twenty-First Century*, Expanded and Updated, (London: Penguin Books, 2006).

tion. These changes are based upon postmodern cooperation to defend the global sea-based trading system instead of the modernist conflictual system of gaining a military edge over the competition. However, whilst such changes are truer for the European navies, these changes are more curtailed within the Asia-Pacific wherein modernist conceptions of Westphalian sovereignty and geostrategic concerns still hold tighter sway, with plenty of disputes between the various Asia-Pacific states, territorial and otherwise, in effect threatening global trade. In spite of this, Asia-Pacific navies are not spared from postmodern cooperation as a result of globalisation and they have hence started moving towards such a direction. Nevertheless, elements of competition and conflict can still be identified within the postmodern cooperative efforts of the Asia-Pacific navies. Asia-Pacific navies are hence “quantummodern” – the roles of navies in the Asia-Pacific are in a state of *superposition*, existing in both a postmodern cooperative state as well as a modernist conflicting state *at the same time* within even postmodern cooperation.

In demonstrating the “quantummodern” status of the Asia-Pacific navies, this article is structured into four main sections. The three traditional roles of navies, comprising their military, constabulary and diplomatic roles, are considered in the first part before the second section examines globalisation’s direct and indirect impacts upon these, utilising an investigation of the new European Union Maritime Security Strategy (EUMSS). The third section then explores the modernist state of the Asia-Pacific navies, albeit one that is shifting towards limited postmodern cooperation, through outlining the strategy of the Chinese navy. Last but not least, the fifth section utilises a case study of the naval anti-piracy missions in the Gulf of Aden (GoA) to illustrate the “quantummodern” state of Asia-Pacific navies.

The Sailor Cap: Traditional Naval Roles

States are customarily interested in the use of the sea for three broad purposes, the passage of goods and services, the passage of military forces, and the exploitation of resources in or under the sea; these thereby gave rise to three traditional roles of navies as acknowledged by Ken Booth.³ These three roles are: (1) a military or war-fighting role of defending the state

³ Ken Booth, *Navies and Foreign Policy*, (London: CroomHelm, 1977), pp. 15-16.

against traditional security threats primarily of a military nature, via means of sea control with its twin dimensions of sea assertion for own use or sea denial to prevent hostile usage of the sea; (2) a constabulary or policing role concerning the extension of state sovereignty and the enforcement of national laws at sea; and (3) a diplomatic role involving the use of navies as instruments of the state's foreign policy via generally non-violent means. An example of the first role of navies would be the Battle of Midway in 1942 during the Second World War (WWII); Singapore deploying its patrol vessels to the waters around Horsburgh lighthouse (*Pedra Branca*) for maritime show of naval presence (MSNP) patrols demonstrates the second; and the United States agreeing to allow a New Zealand Navy ship to dock at Pearl Harbour, Hawaii, for the first time since the 1980s – an embargo placed in retaliation against New Zealand's barring of nuclear-armed or nuclear-powered ships in its waters in 1984 – highlights the use of navies as a foreign policy diplomatic tool. From these three naval roles, five traditional modernist naval missions founded upon competition can be identified: (1) the maintenance of nuclear deterrent and ballistic missile defence forces at sea; (2) competitive sea control between navies; (3) the conventional projection of maritime power such as in amphibious operations; (4) maintaining good order at sea focusing on the exclusive defence of the state's national interests; and (5) maintaining traditional bilateral alliances at sea to deter potential enemies.⁴

Underpinning these roles and capabilities are two features of the sea environment which, in turn, contribute to two characteristics of navies. Of these, the distinguishing features of the sea are: the mobility provided by the sea – “it is far easier to move anything by sea than over land”; and the “vastness of the sea”.⁵ Coupled to, and as a consequence of, this sea-based mobility and the sea's sheer size, navies are highly adaptable and flexible. As Colin Gray puts it:

The adaptability characteristic ... helps explain why seapower broadly, and navies

⁴ Geoffrey Till, *Seapower: A Guide for the Twenty-First Century*, Second ed., (Abingdon, Oxon: Routledge, 2009), pp. 14-16; Geoffrey Till, *Asia's Naval Expansion: An Arms Race in the Making?*, (London: Routledge, The International Institute for Strategic Studies, 2012), pp. 119-162.

⁵ Norman Friedman, “Naval Strategy”, in *The Politics of Maritime Power: A Survey*, ed. Andrew T. H. Tan, (London: Routledge, 2007), p. 29.

narrowly, have not been eclipsed in tactical, operational, strategic, or political relevance ... The flexibility of seapower derives from the facts that the world's land area is essentially insular in geostrategic character ... naval power can loiter with variable menace for long periods without intruding into geography owned by friends or potential foes [*i.e.* the vastness of the sea].⁶

The flexibility and adaptability of navies assist in explaining the widening of naval tasks to include the maintenance of nuclear deterrent and ballistic missile defence forces at sea in the age of nuclear weapons for instance. These four qualities emphasised above: sea-based mobility, the immense extent of the sea, the flexibility and adaptability of navies, account for why globalisation has affected the roles and capabilities of navies to a large extent.

Globalising Navies and Transforming Hats: From the Modern to the Postmodern

Although globalisation is so widely spoken of only in this current era, it is not a new phenomenon. For example, the ancient Silk Road linked China, through various regions of the Asian continent, to Europe and Africa. What is new about globalisation now is that it is tightening its thrall upon the world; its contemporary form is *thicker and quicker*: the density of networks of interdependence has increased dramatically and this surge is at an exponential rate.⁷ Globalisation comprises of various aspects, such as political globalisation, economic globalisation, cultural globalisation, and the globalisation of communications. Political globalisation is illustrated by the deepening question over territorial borders and the related issue of political governance, with increases in cross-border, open-border, and trans-border relations.⁸ The EU arguably epitomises these. In terms of cultural globalisation, there has been a proliferation of universal norms and values, such as the human rights embodied in the United Nations' Universal Declaration of Human Rights. On top of that, ideas have also propagated globally as a result of cultural globalisation. Francis Fukuyama famously declared the "end of history" due to the triumph of liberal democracy over communism

⁶ Colin S. Gray, *Modern Strategy*, (Oxford: Oxford University Press, 1999), pp. 219-220.

⁷ Joseph S. Nye Jr. and David A. Welch, *Understanding Global Conflict and Cooperation: An Introduction to Theory and History*, Ninth ed., (New Jersey: Pearson, 2013), p. 258.

⁸ Categorized by Jan Aart Scholte, "Global Capitalism and the State", *International Affairs*, 73:3 (July 1997), pp. 430-431.

at the end of the Cold War and with the rise of *cosmopolitanism*, recognising that “there has emerged in the last few centuries something like a *true global culture*, centering around technologically driven economic growth and the capitalist social relations necessary to produce and sustain it.”⁹ The Arab Spring movement possibly demonstrates the validity of such a claim. The globalisation of communications has made the world a hyperconnected one, with the World Economic Forum (WEF) reporting that “the amount of data transmitted worldwide surpassed one zettabyte [10^{21} bytes] for the first time in 2010”, and that “this digital universe is now expected to double every two years”.¹⁰

More than anything else, the defining aspect of globalisation is economic globalisation as the preceding discussion on political and cultural globalisation insinuated. Cross-border, open-border, and trans-border relations are also exemplified by multinational corporations (MNCs), with the EU itself starting off as an economic union. Cultural cosmopolitanism is facilitated by the dominance of capitalist social relations. Joshua Ho further pointed out that not only is cultural globalisation affected by economic globalisation, the globalisation of communications is also “one of the factors that deepened economic globalisation”.¹¹ Economic globalisation is dependent upon trade, and trade is largely via the global commons of the sea because this is the cheapest and most efficient way of transporting goods. Therefore, since the worldwide network of interdependence is defined economically in large part, globalisation can be seen as a “trading system that produces a tight, mutually dependent, cooperative community of industrial production and consumption”¹² which “depends absolutely on sea-based

⁹ Francis Fukuyama, *The End of History and the Last Man*, (New York: The Free Press, 1992), p. 126 and *passim*, emphasis added; for the Kantian argument of cosmopolitanism, see Immanuel Kant, *Perpetual Peace and Other Essays: On Politics, History, and Morals*, Trans. Ted Humphrey, (Indianapolis: Hackett Publishing Company, 1983).

¹⁰ Soumitra Dutta, Beñat Bilbao-Osorio, and Thierry Geiger, “The Networked Readiness Index 2012: Benchmark for ICT Progress and Impacts for the Next Decade”, in *The Global Information Technology Report 2012: Living in a Hyperconnected World*, ed. Soumitra Dutta and Beñat Bilbao-Osorio, (Geneva: SRO-Kundig; World Economic Forum; INSEAD, 2012), p. 3.

¹¹ Joshua Ho, “Introduction”, in *Globalization and Defence in the Asia-Pacific: Arms Across Asia*, ed. Geoffrey Till, Emrys Chew, and Joshua Ho, (Abingdon, Oxon: Routledge, 2009), p. 3.

¹² Geoffrey Till, “The Development of Modern Maritime Strategy: Its Implications for

trade as expressed by the sea-container.”¹³ As the WEF highlights, world seaborne trade has grown about eighteen times from 0.5 billion metric tons in 1950 to 9 billion metric tons in 2012 whereas world Gross Domestic Product (GDP) has only grown approximately nine-fold within the same time period; in volume terms, seventy-five percent of world trade is by sea.¹⁴

Due to the growing networks of interdependence of globalisation that has connected and flattened the world, in such a postmodern era, the world is a global commons. It is a complex, globalised whole that depends on access to the maritime domain in particular for its security and prosperity. Nevertheless, threats to this system exist. Such threats endanger trade and the conditions for trade and these include: (1) the internal contradictions in the economic system itself, as has been highlighted by countless Marxists and neo-Marxists such as Max Horkheimer; (2) disorder ashore and at sea, especially in areas that produce crucial goods or through which these goods pass, such as any one of the strategic choke points of the Panama Canal, the Suez Canal, the Straits of Gibraltar, the Straits of Hormuz or the Straits of Singapore and Malacca; (3) inter-state war; (4) attack, physical or otherwise, by state or non-state forces hostile to globalisation; for instance, the mass rallies against globalisation whenever there is a meeting of the economic conglomerates symbolising globalisation, such as the World Bank; (5) catastrophic events such as pandemics, climate change or natural disasters like the recent Typhoon Haiyan in the Philippines; and (6) a lower intensity threat to the system, represented by nonconventional threats including piracy, general disorder at sea, and maritime crime amongst various others, demonstrated by the pirate attacks off Somalia in recent years.¹⁵

the ROK”, in *Korean Maritime Strategy: Issues and Challenges*, ed. Geoffrey Till and Sukjoon Yoon, (Seoul: Korea Institute for Maritime Strategy, 2011), p. 109.

¹³ Geoffrey Till, “The Use of Seapower in the 21st Century: Implications for Maritime Security and Safety”, in *Realising Safe and Secure Seas for All: International Maritime Security Conference 2009*, ed. Joshua Ho, (Singapore: Select Publishing with Republic of Singapore Navy and S. Rajaratnam School of International Studies, 2009), p. 45.

¹⁴ Hans Oust Heiberg, “The Merchant Fleet: A Facilitator of World Trade”, in *The Global Enabling Trade Report 2012: Reducing Supply Chain Barriers*, ed. Robert Z. Lawrence, Margareta Drzeniek Hanouz, and Sean Dpherty, (Geneva: World Economic Forum, 2012), p. 85.

¹⁵ Till, “The Development of Modern Maritime Strategy: Its Implications for the ROK”, pp. 110-112; for contradictions in capitalism, see for instance Daniel Bell, *The Cultural Contradictions of Capitalism*, (New York: Basic Books, 1976); for more details on strategic

Therefore, the roles and capabilities of navies have been affected by globalisation, especially economic globalisation, to a large extent in that under the *direct* influence of globalisation, the fundamental purpose of navies has changed: it is now “to defend the global sea-based trading system either directly by what they do at sea or indirectly by what they do from it”,¹⁶ an altered global approach given the critical significance of the global commons of the sea to the viability of the sea-based trading system. In addition, globalisation, with its political aspect of trans-border internationalisation and its cultural cosmopolitanism, has also made interstate conflict unlikely. In essence, these mean that as a consequence of this change in purpose, although Booth’s triangle of the military, policing, and diplomatic roles of navies still remains relevant, the war-fighting role need no longer be the base of this triangle. Rather, the focus has shifted in favour of the policing and diplomatic sides of the triangle. Booth’s triangle is hence no longer an equilateral one, but an isosceles one in which the war-fighting side has been diminished. Such a shift is of course only possible in light of the four features of sea-based mobility, the size of the sea, and the flexibility and adaptability of navies highlighted above. It is due to these first two characteristics of the sea environment that the global commons of the sea needs to be defended, and the flexibility and adaptability of navies make them the paramount instrument of choice of the state to fulfil such an objective.

In addition, concomitant with globalisation is its inseparable facet of the increasing importance of non-state actors. With globalisation, the role played by non-state actors has grown so significant such that the issue of Westphalian sovereignty is hotly contested in world politics today.¹⁷ In the political realm, transnational non-government organisations (NGOs) such as Amnesty International (AI) are able to influence government policy. Economically, mega MNCs such as Exxon-Mobil boast revenues larger than the GDP of smaller states. Thus, in spite of neorealist claims to the

maritime choke points, see Martin M. Murphy, *Small Boats, Weak States, Dirty Money: Piracy and Maritime Terrorism in the Modern World*, (London: Hurst & Company, 2009); for reactions against globalisation, see Joseph E. Stiglitz, *Globalization and its Discontents*, (New York: W. W. Norton & Company, 2002).

¹⁶ Till, “The Use of Seapower in the 21st Century: Implications for Maritime Security and Safety”, p. 46.

¹⁷ Nye and Welch, *Understanding Global Conflict and Cooperation: An Introduction to Theory and History*, pp. 294-302.

contrary, non-state actors have a growing influence upon the international system in a neoliberal postmodern era of complex interdependence. This is further exacerbated by malevolent non-state actors such as the twin sea-based scourges of piracy and maritime terrorism. Peter Chalk highlights that the “maritime realm is particularly conducive to these types of threat contingencies because of its vast and largely unregulated nature”, and “complicating this maritime threat picture is growing speculation that a tactical nexus could emerge between piracy and terrorism”.¹⁸ Hence, not only has globalisation altered the role and capabilities of navies directly via a strengthened focus upon the constabulary and diplomatic roles, globalisation has also *indirectly* deepened and widened the requirements of these roles as the threats from such non-state actors in the age of globalisation are firstly largely transnational, thereby requiring greater cooperation between different states; and secondly growing, thus necessitating greater capabilities.

From this widened and deepened isosceles triangle of naval roles shaped directly and indirectly by globalisation, four new postmodern missions for navies can be derived, as acknowledged by Geoffrey Till: (1) to maintain sea control and the capacity to manoeuvre, especially against unconventional, asymmetric threats, and including also a cooperative element between navies; (2) to maintain good order at sea, particularly at a holistic level so as to provide a secure environment for trade; (3) to project power ashore in the form of expeditionary operations in order to preserve the conditions for trade in a form of ensuring good order from the sea, including humanitarian assistance and disaster relief (HADR) missions; and (4) to maintain the necessary maritime consensus, building agreement and acknowledging the sea as a global commons required for the entire world.¹⁹ Perhaps the most striking reference to such a role is Admiral Michael Mullen’s “thousand-ship navy” concept proposed in 2005 whereby navies worldwide work to enhance cooperation and interoperability within the

¹⁸ Peter Chalk, *The Maritime Dimension of International Security: Terrorism, Piracy, and Challenges for the United States*, (Santa Monica: Rand Corporation, 2008), pp. 2 and 31; for a more in depth discussion of piracy and terrorism, see also Peter Lehr, *Violence at Sea: Piracy in the Age of Global Terrorism*, (New York: Routledge, 2007).

¹⁹ Till, *Seapower: A Guide for the Twenty-First Century*, pp. 7-12; Till, “The Use of Seapower in the 21st Century: Implications for Maritime Security and Safety”, pp. 46-49.

global commons in a “Global Maritime Partnership.”²⁰ This concept is arguably best encapsulated in the efforts by the international community in dealing with the piracy situation in the waters around Somalia and the GoA where hijackings have dropped dramatically from twenty-eight in 2011, fourteen in 2012, to two in 2013.²¹

A more detailed look at the recently released EUMSS of 24 June 2014 highlights the shift towards postmodern cooperation. The EUMSS is based on “the EU’s founding values of human rights, freedom and democracy” and its purpose therefore to “secure the maritime security interests of the EU and its Member States against a plethora of risks and threats in the global maritime domain” through enforcing international and national law, guaranteeing freedom of navigation, and protecting citizens, infrastructure, transport, the environment and maritime resources.²² In so doing, the MSS is guided by the four principles of: (1) a cross-sectoral approach, involving all partners from both the civilian and the military spheres, including national and EU agencies, cooperating and respecting each other’s internal organisation; (2) maintaining the functional integrity each Member State already possesses and making the best cooperative use of these existing capabilities; (3) respect for rules, principles and existing international laws, settling disputes through arbitration rather than force; and (4) maritime multilateralism, “respecting the institutional framework and the decision-making autonomy of the EU”, cooperating and coordinating with “all relevant international partners and organisations”.²³ Consequently, the EUMSS identified “five main areas of implementation to strengthen to EU’s response” to maritime security: (1) capitalise on “best practices of internal and external policies related to maritime security aspects in order to pro-

²⁰ For more on the Global Maritime Partnership concept, see Stephanie Hsieh et al., “Networking the Global Maritime Partnership”, *Naval War College Review*, 65:2 (Spring 2012), pp. 11-29.

²¹ International Chamber of Commerce International Maritime Bureau, “Piracy and Armed Robbery News and Figures”, accessed 9 November 2014, <http://www.icc-ccs.org/piracy-reporting-centre/piracynewsfigures>; “Piracy Falls in 2012, but Seas off East and West Africa Remain Dangerous, Says IMB”, accessed 9 November 2014, <http://www.icc-ccs.org/news/836-piracy-falls-in-2012-but-seas-off-east-and-west-africa-remain-dangerous-says-imb>.

²² Council of the European Union, “European Union Maritime Security Strategy”, (2014), p. 3.

²³ *Ibid.*, pp. 4-5.

mote better maritime governance”, including a sustained presence of navies at sea so as to “support freedom of navigation” and contribute to “good governance by deterring, preventing and countering unlawful and illicit activities within the global maritime domain”; (2) increasing maritime awareness, surveillance and information sharing; (3) developing capabilities, including increasing support to the “development of dual-use technologies”, “cooperation in standardisation”, and interoperability; (4) “enhance capacity for conflict prevention and crisis response”; and (5) increasing “maritime security research and innovation, education and training”.²⁴

From the EUMSS, it is clear that the intended missions for the EU navies conform to Till’s postmodern missions and an expanded focus for their diplomatic and constabulary roles, along with a decreased significance for the warfighting role; a postmodern isosceles triangle of Booth’s naval roles. As Maria Damanaki, European Commissioner for Maritime Affairs, said in a statement issued with the release of the EUMSS, “today’s threats call for a co-ordinated response”.²⁵ Thus far, EU navies have collaborated in missions such as Operation Atalanta, focusing on anti-piracy in the GoA and the waters off Somalia, the first by the EU Naval Force (EU NAVFOR). Another example is Operation Triton, dealing with illegal migrants in the Mediterranean and which replaced Italy’s singular effort, *Mare Nostrum*, and is, in spite of all the criticisms levelled against it such as limited resources – a postmodern collaborative effort embarked upon by the EU. Such a focus on cooperation thereby underscores the postmodern nature of the navies in the EU and the EU is arguably the foremost exemplar of neoliberal institutionalism enhancing cooperation.

The differences therein between the modernist and the postmodern navy is that whereas the former is largely *conflictual* between states, the latter needs to be largely *cooperative*, connecting states and viewing the sea as a positive-sum global commons in this age of globalisation rather than the traditional zero-sum game of competing interests. Booth’s triangle of naval roles is thereby more equilateral for the modernist navy whilst for the postmodern navy, it is an isosceles triangle in which the war-fighting aspect takes on reduced significance.

²⁴ Ibid., pp. 8-15.

²⁵ Quoted in Brooks Tigners, “EU Moves Forward on Maritime Strategy”, *IHS Jane's Defence Weekly*, 25 June 2014.

The Asia-Pacific: The Nail Sticking Out of the Flat World

On the other hand, the picture is not all rosy. In the globalised postmodern world, “the belief that globalisation has made interstate conflict highly unlikely rests on three propositions”: (1) economic interdependence has made war too costly; (2) cosmopolitanism prevents conflict; and (3) “the spread of democracy and changes in governance required for participation in the global system” will lead to democratic peace.²⁶ Despite its arguments for peace, each proposition has its limitations as well. Geoeconomics has not trumped geopolitics; for instance, the Japanese attack on Pearl Harbour in 1941 resulting in the US entering WWII can be deemed a result of the failure of interdependence. When the US imposed sanctions of raw materials on Japan, Japan thereby looked towards the then-Dutch East Indies which was rich in resources required for their war efforts and therefore conducted a pre-emptive strike on Pearl Harbour despite their extensive trading ties with the US. Additionally, despite the unprecedented levels of globalisation and cosmopolitanism engendered thereof, armed interstate conflict, whilst unlikely, has still not been exterminated as a look at the Correlates of War militarised interstate disputes (MIDs) dataset shows (refer to Figure 1 below).

²⁶ Douglas E Streusand, “Geopolitics versus Globalization”, in *Globalization and Maritime Power*, ed. Sam J. Tangredi, (Washington: National Defense University Press, 2002), pp. 44-46; for a seminal piece on economic interdependence preventing conflict, see Norman Angell, *The Great Illusion: A Study of the Relation of Military Power in Nations to their Economic and Social Advantage*, (New York: G. P. Putnam’s Sons, 1910); see also Graham Allison’s commentary on this issue on the 100th anniversary of the start of World War I, Graham Allison, “2014: Good Year for a Great War?”, *National Interest*, 1 January 2014, <http://nationalinterest.org/commentary/2014-good-year-great-war-9652>; for cosmopolitanism preventing conflict, see Kant, *Perpetual Peace and Other Essays: On Politics, History, and Morals*; for the democratic peace thesis, see Bruce Russett, “Why Democratic Peace?”, in *Debating the Democratic Peace: An International Security Reader*, ed. Michael Brown, Sean Lynn-Jones, and Steven Miller, (Cambridge, Massachusetts: MIT Press, 1996), pp. 82-115.

Figure 1: Distribution of Militarised Interstate Disputes by Region, 1993-2001

Region	Number of MIDs
Africa	63
Europe	65
Asia	71
Western Hemisphere	40
Middle East	52
Oceania	5

Source: Faten Ghosn, Glenn Palmer, and Stuart A. Bremer, “The MID3 Data Set, 1993-2001: Procedures, Coding Rules, and Description” in *Conflict Management and Peace Science*, 21 (2004), p. 136; see also Correlates of War, accessed 28 October 2014, <http://www.correlatesofwar.org/>.

As for the argument that globalisation will lead to open governance and democratisation, and subsequently to democratic peace, authoritarian China is perhaps the lingering spectre disproving this notion that only democracies can participate fully in the global system. Thus, globalisation has not made conflict extinct.

Conversely, globalisation can also conceivably increase the potential for conflict as well in three ways: (1) as a force challenging sovereignty, globalisation can produce economic exclusion rather than integration; (2) economic disparities within states are caused and further deepened by globalisation; and (3) globalisation negatively impacts the ability of the state to provide economic welfare and security to their citizens which can often result in poverty, economic dislocation, or even financial crises.²⁷ An example of the first is North Korea losing access to the socialist economic sphere following the end of the Cold War, exacerbated by its insularity;²⁸ the second is exemplified by the rising income gap within a lot of countries in the world today; and the *sine non qua* example of the third is the Asian Financial Crisis (AFC) sparked by a lack of external investor confidence in the Thai baht.

²⁷ Christopher W Hughes, “Beyond Interdependence”, in *Globalization and Defence in the Asia-Pacific: Arms Across Asia*, ed. Geoffrey Till, Emrys Chew, and Joshua Ho, (Abingdon, Oxon: Routledge, 2009), pp. 43-44.

²⁸ *Ibid.*, p. 43.

Hence, modernist pockets where conflict hold sway may still exist in the postmodern world and this is most evident in the Asia-Pacific. For the purposes of this article, largely following William Tow, the “Asia-Pacific” includes the three distinct sub-regions of Northeast Asia, Southeast Asia, and South Asia, as well as an overlapping “broader Pacific zone” encompassing Pacific maritime powers such as the US and Australia, and the eastern part of Russia.²⁹ This concept is doubtless “highly problematic” and often subject to “sweeping generalisations” as the countries contained within it “have different cultures, histories, political institutions, economies, geographical features, and climates.”³⁰ It is as varied a region as one could possibly imagine. However, it is precisely these contrasts, differences, and the diversities contained within this geographic region that make the Asia-Pacific stick out of the postmodern flat world like a sore thumb. Two inter-related points differentiating the Asia-Pacific region from the postmodern world of unlikely conflict can be made. First of all, Asia-Pacific states are very concerned with modernist Westphalian notions of state sovereignty and territoriality, especially relative to the postmodern part of the world, such as the supranational EU. Part of the reason for this stemmed perhaps from history as most of these states, such as Indonesia, were former colonies of the imperial powers, having had to fight hard for self-determination and independence. Even those not formally colonised were quasi-colonies, such as China which had parts divided up as spheres of influence amongst the imperial powers. Hence, regional organisations are based on the principle of non-interference in domestic affairs, exemplified by the so called “ASEAN Way” within the Association of Southeast Asian Nations (ASEAN) comprising the ten Southeast Asian states. Secondly, whereas the postmodern world is in an era of leading power peace as the leading states form a pluralistic security community – a group among whom war is literally unthinkable and unfathomable,³¹ within the Asia-Pacific, geostrategic

²⁹ William T. Tow, “Setting the Context”, in *Security Politics in the Asia-Pacific: A Regional-Global Nexus?*, ed. William T. Tow, (Cambridge: Cambridge University Press, 2009), fn 5, pp. 5-6; Tow includes Central Asia as well in his consideration, but since this article deals with the maritime aspect, Central Asia is left out from this demarcation of the “Asia-Pacific” as they are largely landlocked, lacking a specific Pacific coast.

³⁰ David C. Kang, “Getting Asia Wrong: The Need for New Analytical Frameworks”, *International Security*, 27:4 (Spring 2003), p. 60.

³¹ Robert Jervis, “Theories of War in an Era of Leading-Power Peace: Presidential Address, American Political Science Association, 2001”, *The American Political Science*

concerns are still the dominant imperatives; and there are hence a lot of territorial disputes between the Asia-Pacific states which have been ongoing for quite a while with no end in sight, especially maritime ones such as the Sino-Japanese spat over the Senkakus or the multilateral dispute over the Spratlys,³² and these are the most probable candidates for causing an outbreak of general violence in the world today. Asia-Pacific states are hence immensely concerned over their own security and these two trends of anxiety over sovereignty and geostrategic concerns interact in a vicious cycle, heightening tensions as the recent row over China's unilateral declaration of its East Sea Air Defence Identification Zone (ADIZ) illustrates. Although these two features identified are somewhat reductionist, similar arguments have been continuously brought up by various analysts such as Michael Leifer demonstrating their salience and enduring character.³³ Already, Asia has the highest number of MIDs in the world, more so than even the conflict prone Middle East or Africa (refer to Figure 1).

The Asia-Pacific is thus a vestigial modernist remnant in a postmodern flat world; therein therefore, although the effects of globalisation on navies are still present, these effects are curtailed and cooperation muted. The military war-fighting role of navies hence remains as important as the other diplomatic and constabulary roles. Within the Asia-Pacific, Booth's triangle of naval roles remains a more equilateral one as compared to that of the postmodern world. This represents a crucial problem as the Asia-Pacific is essentially a maritime region – multiple sea lines of communication (SLOCs) criss-cross and traverse the region linking the Pacific and Indian Oceans³⁴ – critical to the global sea-based trading system. Due to the prevailing modernist sentiments, a number of major barriers to cooperation

Review, 96:1 (March 2002), pp. 1-14.

³² Alan Dupont, "The Environment and Security in Pacific Asia", *The Adelphi Papers*, 319 (1998), pp. 31-34.

³³ Aaron Friedberg, "Will Europe's Past Be Asia's Future?", *Survival*, 42:3 (Autumn 2000), pp. 147-159; Michael Leifer, *ASEAN and the Security of South-East Asia*, Reprinted 1990, First published 1989, (London: Routledge, 1990); for an optimistic point of view, see Amitav Acharya, "Will Asia's Past be its Future?", *International Security*, 28:3 (Winter 2003/2004), pp. 149-164.

³⁴ Ian Storey, "Maritime Security in Southeast Asia and the United States", in *ASEAN-U.S. Relations: What are the Talking Points?*, ed. Pavin Chachavalpongpun, (Singapore: Institute of Southeast Asian Studies, 2012), pp. 39-40.

exists and hinders collaboration both bilaterally and multilaterally, so much so that regional forums have often been labelled as “talk-shops.”

Nonetheless, there are signs showing a certain amount of progress towards postmodern cooperation having taken place if only because globalisation today is quicker and thicker and leaves no stone untouched. The Asia-Pacific, after all, remains part of the global sea-based trading system and thus faces the same threats that affect the global commons of the sea. For instance, the Malacca Straits Patrols (MSP) between Malaysia, Singapore, and Indonesia (MALSINDO), one of the rare concrete instances of cooperation, has been taking place since 2004 in order to provide for good order at sea within the Malacca Straits. However, despite qualified progress in reducing maritime crime since, weaknesses remain evident within the MSP, such as these patrols being coordinated, rather than joint,³⁵ demonstrating that cooperation remains deficient.

An examination of China’s latest iteration of its white paper on its armed forces, including the PLAN, released in April 2013 serves to illustrate the modernist nature of Asia-Pacific navies, but an increasing shift towards the postmodern. The white paper stressed that its armed forces are for the purposes of “safeguarding national sovereignty, security and territorial integrity, and supporting the country’s peaceful development”,³⁶ a much more modernist sentiment than the postmodern EUMSS. In this regard, the PLAN, responsible for safeguarding China’s maritime security and “maintaining its sovereignty over its territorial seas along with its maritime rights and interests”, “endeavors to accelerate the modernization of its forces for comprehensive offshore operations, develop advanced submarines, destroyers and frigates, and improve integrated electronic and information systems”, and further develop “blue-water capabilities of conducting mobile operations, carrying out international cooperation, and countering non-traditional security threats, and enhances its capabilities of strategic

³⁵ Ian Storey, “Securing Southeast Asia’s Sea Lanes: A Work in Progress”, *Asia Policy*, 6 (July 2008), pp. 118-121.

³⁶ The People’s Republic of China Information Office of the State Council, “The Diversified Employment of China’s Armed Forces”, April 2013, accessed 24 November 2014, http://news.xinhuanet.com/english/china/2013-04/16/c_132312681.htm.

deterrence and counterattack.”³⁷ This demonstrates that China sees greater significance for the war-fighting role of the PLAN and this emphasis is demonstrated by China’s continued interests in submarine acquisition and development as well as its recent purchase of its aircraft carrier, the *Liaoning*, platforms of a more offensive competitive nature rather than the more dual-use technologies the EUMSS highlights. However, the diplomatic and constabulary roles are important as well to support the country’s development through international cooperation and countering non-traditional security threats. Indeed, Michael McDevitt and Frederic Vellucci Jr. emphasised that “PLAN development is proceeding on two separate but related tracks”,³⁸ and the white paper is also entitled “The Diversified Employment of China’s Armed Forces”. Of these two vectors thus, the first is the primary wartime mission of defending China’s sovereign territory, such as the “island chain” approach developed by Liu Huaqing; and the second an assortment of missions of a postmodern nature that the PLAN should perform during peacetime such as humanitarian aid and disaster relief (HADR), anti-piracy, or other military operations other than war which serve to contribute to defending the seas as a global commons. For example, to the first, China and the PLAN has since intensified territorial claims within the South China Sea, such as the recent conflict over an oil rig China deployed to disputed waters with Vietnam protected by a Chinese naval flotilla;³⁹ and to the second, the PLAN has deployed anti-piracy missions to the GoA as well as participated in HADR missions like sending its naval hospital ship, the *Peace Ark*, to the Philippines to help in the aftermath of Typhoon Haiyan.

Towards Quantummodern Competitive Cooperation: Donning Two Concurrent Caps

Conversely, despite an increasing shift towards postmodern cooperation, there are competitive elements within such collaboration as well because of

³⁷ Ibid.

³⁸ Michael McDevitt and Frederic Vellucci Jr., “The Evolution of the People’s Liberation Army Navy: The Twin Mission of Area-Denial and Peacetime Operations”, in *Sea Power and the Asia-Pacific: The Triumph of Neptune?*, ed. Geoffrey Till and Patrick C. Bratton, (Abingdon, Oxon: Routledge, 2012), p. 75.

³⁹ For more details, see Richard Javad Heydarian, “The Great South China Sea Clash: China vs. Vietnam”, *The National Interest*, 12 August 2014.

the dominant modernist competitive nature of Asia-Pacific states due to the concern over their security in terms of maintaining Westphalian sovereignty and geostrategic anxiety; in effect, neoliberal pretensions of post-modern cooperation are fundamentally underpinned by neorealist modernist competitive aims of increasing their own security. Such “‘security competition’ thereby takes place by proxy” when navies try to “signal strength, superiority and pre-emptive strategic intent” by demonstrating superior military capabilities, short of engaging in open, armed hostilities that will disrupt the existing peace⁴⁰ necessary for the workings of the global trading system when these navies are acting in their diplomatic and constabulary capacities. “All this is in line with the nature of the Asia-Pacific peace: geopolitical manoeuvres occur under the mantle of a grand regional security architecture of generating confidence building through overlapping security forums and infinite fact-finding dialogues.”⁴¹ This *competitive cooperation* is thus not an oxymoron, but is rather a symptom of the “quantum-modern” nature of Asia-Pacific navies resulting from dominantly modernist Asia-Pacific states having no choice but to cooperate in the face of increasing threats to the postmodern global system which therefore requires Asia-Pacific navies to exist in a state of superposition of modernist competition and postmodern cooperation concurrently even when undertaking post-modern missions.

A short case study of naval counter-piracy missions in the GoA reveals such competitive cooperation. The aforementioned Operation Atalanta by the EU NAVFOR is not the only naval counter-piracy mission within the GoA and the waters near Somalia. Another multilateral force in that area of operations is the Combined Maritime Forces (CMF), “a multi-national naval partnership, which exists to promote security, stability and prosperity across approximately 2.5 million square miles of international waters” focusing on “defeating terrorism, preventing piracy, encouraging regional cooperation, and promoting a safe maritime environment”;⁴² very post-modern tasks for navies. Asia-Pacific states, such as Japan and South Ko-

⁴⁰ “Security competition by proxy” is an idea developed by Alan Chong and Jun Yan Chang; see “Security Competition by Proxy: Revelations of Asia-Pacific Interstate Rivalry Surrounding the MH370 Airliner Incident”, (Unpublished manuscript, 2014).

⁴¹ Ibid.

⁴² Combined Maritime Forces, “About CMF”, accessed 25 November 2014, <http://combinedmaritimeforces.com/about/>.

rea, have contributed naval warships to CMF missions and deployments. Independent anti-piracy naval patrols from Asia-Pacific states such as China and Russia have also been sent to the area to escort their own merchant shipping. Hence, the conventional neoliberal interpretation of such an endeavour is that states recognise that the dangers within the area can potentially threaten the entire global sea-based trading system; and thus the need for international cooperation to solve a trans-border issue. On the other hand, the unconventional explanation is that neorealist self-interests underpin even such cooperative efforts. Hence, even Japan and South Korea has deployed such independent missions,⁴³ thereby demonstrating an element of competition within the overall cooperative efforts, especially considering that China has also sent almost twenty batches of independent anti-piracy patrols to the GoA.⁴⁴ Furthermore, although a series of regular meetings, known as Shared Awareness and Deconfliction (SHADE), between the naval representatives from the independent escort missions and the multilateral EU NAVFOR and CMF⁴⁵ to share maritime awareness and information have begun, such cooperation remains limited with information sharing only at a low level as competition exists even within the cooperative constabulary role of these navies. China's independent anti-piracy naval deployments in the GoA have been further postulated as simply a pretext for establishing a naval presence in GoA and the Arabian Sea, which, along with the need for replenishment bases to support these missions, thereby "chimes with China's 'string of pearls' strategy".⁴⁶

Asia-Pacific navies are hence "quantummodern" in nature. Although this may be a somewhat general argument to make, such competitive cooperation is not only restricted to the big navies or to only the GoA anti-piracy missions. Competitive cooperation can be identified as well in other post-modern cooperative operations such as multilateral search and rescue op-

⁴³ See for instance, Japan Maritime Self-Defense Force, "Anti-Piracy Operations", accessed 25 November 2014, <http://www.mod.go.jp/msdf/formal/english/operation/pirates.html>.

⁴⁴ The People's Republic of China The State Council, "18th Convoy Fleet Executes Escort Mission in Gulf of Aden", accessed 25 November 2014, http://english.gov.cn/news/photos/2014/08/27/content_281474983934394.htm.

⁴⁵ Shishir Upadhyaya, "Piracy in the Gulf of Aden: Naval Challenges", *Maritime Affairs*, 6:2 (Winter 2010), p. 137.

⁴⁶ Philip McCrum, "China and the Arabian Sea", *Middle East Report*, 256 (Fall 2010), p. 25.

erations or HADR efforts. Finally, all navies naturally display a mix of modernist competition and postmodern cooperation and the balance to be struck between modernist and postmodern priorities is the question.⁴⁷ For EU navies, postmodern cooperation dominates, whilst for Asia-Pacific navies, the converse is true and the prevailing balance is tilted towards modernist competition. However, this mix, regardless of which part of the modernist-postmodern continuum it is placed, is not the “quantumodern”. The “quantumodern” exists in the superpositionality of both ends of the spectrum; thereof competitive cooperation within postmodern cooperation.

Conclusion

Navies have been affected directly and indirectly by globalisation, particularly since the most crucial aspect of globalisation is the sea-based global trading system. Booth’s triangle of naval roles has thereby changed from a modernist competitive equilateral triangle, to a postmodern cooperative isosceles triangle in which the diplomatic and constabulary roles have widened and gained importance. The former is present within China’s strategy for the PLAN whilst the latter is illustrated within the EUMSS. Although Asia-Pacific states have been somewhat insulated due to their primary focus on state security based on Westphalian sovereignty and geostrategic concerns, their navies have still made inroads into postmodern cooperation, however limited this might be, albeit one with “quantumodern” characteristics of competitive cooperation as security competition by proxy within postmodern cooperation. Therein, ambiguous anti-piracy missions in the Gulf illustrate the “quantumodern” Asia-Pacific navies.

Finally, it would definitely bode well for the region should Asia-Pacific states eventually be socialised into full postmodern cooperation as an outcome of continued globalisation, giving up their modernist nature, especially since the Asia-Pacific is a maritime region crucial to the global commons of the sea. Until then, if it happens, security competition by proxy and competitive cooperation might continue to reinforce an “uneasy peace” within the Asia-Pacific region, a still considerably more worthwhile alternative to outright war.

⁴⁷ Till, *Seapower: A Guide for the Twenty-First Century*, p. 345.

Part 6

Armed Forces and Society

Austria's National Security Strategy: Reflections on the Concept and Notion of Security

Franz Kernic

Abstract: This paper focuses on the notion and concept of security as outlined in Austria's new National Security Strategy (2013). The fundamental aim of this contribution is to analyze important social and political implications in the term 'security' from a general socio-political perspective. In addition, the paper aims to examine key aspects of modern security concepts by studying Austria's contemporary security policy. It argues that Austria's new security strategy itself has become risky in so far as it stimulates an inflation of the term security, thus resulting in a loss of meaning and importance of traditional security concepts and military doctrines in today's public debate.

In Austria, the term 'security' has become more and more influential over the past decade. It has become an important part of everyday language reflecting a multitude of specific social and political expectations and individual longing. Our modern 'risk society' (Ulrich Beck) seems to be defined by high individual and collective needs for both safety and security, which can be viewed as a direct consequence of an emerging collective feeling of uncertainty, vulnerability and 'lost grounds', especially in what concerns metaphysical and spiritual assumptions of the past. This development towards a post-modern society has also affected the traditional concepts of national defense and military policy, which have become more comprehensive and holistic.

This article focuses on the notion and concept of security as outlined in Austria's new National Security Strategy (2013). The fundamental aim of this contribution is to analyze important social and political implications of the term 'security' from a general, socio-political perspective and to contribute to the current public debate about the country's future security and defense policy.

1. The Notion of Security: Introductory Remarks

Security has become a key term of our everyday language. Moreover, it has become a guiding idea itself, not just with respect to everyday human behavior and communication but even in modern politics, i.e. living without fear and sorrow (*sine cura*). This idea is closely linked to the concepts of safety, predictability and stability, which have started to play a significant role in modern science. One might even say that the longing for predictability, certainty and safety have become a constitutive momentum of modern science. For this reason it can rightly be stated that occidental modernism is connected to a very specific understanding of ‘security’ due to a strong impact of the paradigms of modern natural sciences on human thinking and acting in modern societies.

The dominant positioning of security within the fundamental concept of modernism, which closely links the dimensions of predictability, certainty and safety, results in a general collective expectation among people that modern politics – in all its dimensions and subfields – has to successfully meet contemporary challenges and risks and must provide ‘security’ within the framework of the modern state. Of course, this understanding is based on a rather technical and instrumental approach toward politics. It clearly shows a strong connection to rationality and the general paradigms of our modern age.

In this context, the question must be asked of how this specific understanding of the term security differs from other security concepts and understandings of the term, e.g. compared to other historic eras or different civilizations. Undoubtedly, it must first be stated that the term security has always been defined in an especially wide sense. This has resulted in great difficulty for scientific analysis to operationalize this term and concept. The use of the term in everyday language shows a wide array of meanings ranging from ‘absolute safety’ (absolute *Sicherheit*) to specific feelings and subjective emotions of general fearlessness and being without any worries. Often, also refers to an abstract goal, in which life events become predictable and at least in part calculable. Furthermore, the term often refers to the human longing to be preconscious, to define tomorrow here and now, to recognize and prevent dangers and threats, which could create worries.

The etymological root of the term security refers to such a setting of goals, to a life “sine cura” (se cura), a human longing for certainty, especially regarding one's own life, to master everyday life in the future and take all necessary precautions here and now. Such an understanding of security – which undoubtedly is extremely broad – can generally be found in all civilizations and societies and can also be seen as a constitutive element for certain forms of society and institutions with the goal of providing safety measures. Temples and irrigations in the early civilizations of the Ancient World were also attributed specific societal security and safety functions. Providing security was never just a task exclusively assigned to the armed forces or military guards. It appears that the crucial momentum associated with such a function at both the individual and the collective level, is the longing for consistency. It is not as much about prolonging the status quo (or ‘state’) per se, but rather about taking specific precautions and preemptive action in order to determine future events. This perspective allows us to understand the notion of security as a specific human desire and action to pre-determine the future. Accordingly, the future should not be something ‘beyond our control’, i.e. open and unpredictable, but something that can be influenced and determined at least to a certain degree by each and every human being.

2. Security and Modernity

We are now able to see some important aspects as well as crucial differences between the modern concept of security and earlier ones in history, particularly those developed in the Ancient World or in the Middle Ages. I would like to point out two aspects, which describe security thinking in modernity, while distinguishing it from similar concepts in other civilizations.

Firstly, one of the particularities of modern thinking is that an effect on the future is to be caused by human action, i.e. an act of man, an active doing. Post-metaphysical thinking does not leave any space for the thought of transcendence, i.e. the possibility to calm God or the gods or the world of gods through sacrificial offerings. Asking for mercy in order for God to create the desired future (e.g. good harvest, health, no enemies, etc.) is no longer possible. In modernity, it is exclusively the human being itself that has to take the necessary action. The contemporary modern human being is

indeed a subject. Hence, security-building action has to be taken by the human being itself. Consequently, only based on this assumption it makes sense to speak of security policies in the sense of systematic, well-planned, collective human action with the goal of preventing certain threats and dangers and take the necessary precautions in order not to be surprised by harm or the ‘unexpected’.

Secondly, security thinking in modernity follows the paradigm of scientific-mathematical thinking as well as the concepts probably best known to us from political economics, which I would like to call the idea of the continuous maximization of security. Modern thinking polarizes by playing security against insecurity and hence making security, i.e. absolute security, a positive goal in the far future, which can be longed for but never achieved. It consists of a linear process – similar to a straight line in a coordinate system – from 100% theoretically presumed insecurity (= 0% security) to similarly theoretical presumed 100% security (= 0% insecurity). It seems a logical conclusion that real-life would take place in between the two extremes of absolute security and absolute insecurity. This perspective allows us to think and speak of more or less secure environments, of certain degrees of security (high/low security), etc. But to me it is crucial that we are aware of the fact that we are focusing on a utopic goal, a goal, which can never be reached, resulting in our continued striving for a maximization of security. The “vicious circle” of modernity is hence the longing for a perpetual ‘maximization of security’.

3. Key Aspects of Modern Security Concepts

On the basis of this analysis, we are now able to tackle the question of the underlying assumptions and connotations of the contemporary concept of security. In sum, we can identify four key aspects:

1. The enormous width of the term security leads to a necessary distinction between various fields of security. We consequently speak of international, national, social, public, external and internal security etc. The boundaries between those fields correspond to the general socio-political structural patterns of modernity.
2. The conceptualization of security, no matter which field we are referring to, takes place on the foundation of the predominant scientific-technical paradigms of modernity. Hence, our prevailing con-

cepts of security are closely linked to the leading ideas and terms borrowed from physics and technology: balance of power, stability, dominance, causality etc.

3. Constantly striving for the maximization of security, results in a comprehensive and holistic understanding of security that aims to take preventative measure for all possible risks and threats. The obligation to provide 'security measures' is attributed to a wide array of societal institutions (insurances, police, military, etc.), which themselves strive to maximize security (although they might be causing further uncertainty through their behavior - further comments in this regard later on).
4. Another crucial aspect of the concept of security is the distinction between the subjective and objective level. Human beings are capable of feeling uncertainty and fear, which others might judge as being unrealistic or based on wrong perceptions, as can often be seen in everyday situations. On the other hand, human beings might feel perfectly safe even when facing an objective danger. The big issue with this distinction is the question of whether we are capable of making objective statements about the degree of safety. I do not want to explore this issue further, but what matters here is the following: human beings communicate about the degree of safety/security or certainty/uncertainty in their field of life, i.e. there is continuous communication in modern society building a common basis for experience and action (an objective social world), which again retroacts on the reflections and behavior of human beings.

I have come to a point where the dynamics und process character of the perception of security and the longing for security and safety have become evident. And so has the inability to fulfill this longing for "absolute security" achieved by human action. What also becomes visible is the fundamental problem of this conception: This process and longing for a maximization of security itself bears momentums of insecurity, i.e. it puts at risk what has just been celebrated. Social science literature describes this issue as the "security paradox". What this implies is probably best described based on the following situation: If a military organization continues rearmament with the goal of increasing national security, e.g. by increasing the supply of nuclear weapons, sooner or later a point is reached, when society

feels more threatened by the weapons themselves than by those threats, which these weapons are supposed to prevent.

4. About the “Return of Uncertainty” in Late Modernity

The “return of uncertainty”, i.e. an increase of moments of uncertainty in today’s risk society or late Modernity has been discussed in social sciences for the past few years. I consequently would like to focus only on some of the reflections and thoughts of this debate and subsequently address particularly two new approaches to conceptualize security, which I would like to offer for further analysis (with a focus on the key topic of this article).

To begin with, I would like to focus on the societal changes, which have been labeled “return of uncertainty” (I will subsequently focus on the key aspects of relevance for the fields of inner and outer security). An enormous momentum of uncertainty in today’s world politics, i.e. within the international system is undoubtedly caused by the societal transformation process, which could exaggeratedly be called “the end of the national state”. This idea refers to the concept of nation-states as it was established in the field of world politics in modern times, which has suffered from a general loss of meaning and importance. The softening, even continuous disappearance of traditional borders, especially the borders between the various states, and other effects of globalization, has resulted in the predominant concept of (international/national) security undergoing change. The abandonment of the state system results in the end of the distinction of national versus international and inside versus outside regarding security. An emerging ‘world society’ rather refers to a dimension of global/comprehensive security; and national states as the core subjects of the traditional concept could gradually be replaced by regions or supranational organizations. In short: security thinking would not focus primarily on the nation-state concept (and then consequently apply the binary code of national/international security) anymore, but security thinking would be based on the concept of global and transnational security (and hence focus more strongly on a holistic and comprehensive concept of society and community).

Our traditional understanding of security is undoubtedly severely shaken by the current societal transformation, as it is primarily based on the concep-

tion of modern national states. Radical change regarding mobility, communication and technology has been brought about by the rise of non-governmental players in the field of world politics. Furthermore, insecurity has arisen by the fact that small social groups, e.g. social networks, now have the possibility to act globally, frequently even achieving global effects through their local actions. A de-monopolization of force also fosters the uprise of a multitude of small local political entities and units, which increasingly become capable of applying means of political action reaching far beyond their traditional boundaries. One of the core moments of insecurity – especially in the fields of military security – is hence the difficulty to identify and locate new players and their possible threats to global, regional and local security.

I consider two new theoretical approaches toward global security as crucial inputs for sociological reflection and analysis: the first approach is primarily the one of Barry Buzan, who suggests a new theoretical framework for the analysis of international security. At the basis of his thoughts is a ‘security community’, in which nation states keep playing a central role, but with the international level being given higher priority than the national level and with the non-military aspects of security being given higher importance than traditional aspects of military security (defense). The concept of security according to Buzan is based on the nexus between individuals and the communities; it is not state-centric. The second approach goes one step further and focuses more radically on a holistic/comprehensive understanding of security and safety. I am referring to the concept of a “risk society”, i.e. an interconnected globalizing society, which is yet to be scientifically analyzed. This society is characterized by a new understanding of risk awareness, connected with new perception of risk and subsequent analytical reflections.

5. The Notion of Security in Austria’s National Security Strategy 2013

The Austrian National Security Strategy 2013 attempts to systematically analyze the most important structural changes in the international system of the post-9/11 era. It also emphasizes a significant increase in terms of ‘security needs’ in today’s society. The immediate consequence hereof is a new, comprehensive approach to security, which unites various societal as well as political fields and corresponding needs and expectations in a com-

mon holistic system, i.e. a theory. For this reason the new security strategy has been designed to be especially broad. The basic understanding of the notion of security has become extremely wide and comprehensive, so that the term itself seems to gradually lose crucial meaning and accuracy. The authors of the security strategy might have intended this or not. In this context it is important to analyze the consequences based on such wide understanding of the term: the wider the term is, the more it loses in meaning. An utterly wide, holistic, all-inclusive understanding of the term security is characterized by referring to everything, i.e. every possibly imaginable social and political field and hence it is endangered of becoming meaningless. The term security will be the center of communication, but without having any meaning.

As a result, the new security strategy itself has become risky in so far as it stimulates an inflation of the term security. The willingness to include everything becomes visible throughout the documents, e.g. in the beginning of the strategy: “holistic security (...) includes instruments of economic, social, integration, developments, information, (...) communications as well as health politics”.

In this context another problem must be addressed: the security strategy cannot be regarded as a strategy in the strict sense of the term ‘strategy’. It does not systematically outline and provide the goals and instruments for Austria’s security policy. Rather it is a political document outlining and analyzing various sociopolitical trends and possible future developments, expressing Austria’s intention to politically engage in specific societal fields and dimensions. What is interesting in this context is the sheer disappearance of the national foreign-policy dimension as part of the new conceptualization of security. Security, in a nutshell, is seen primarily as a part of European Union’s foreign and security policies, where Austria focuses its hope regarding all aspects and dimensions of security, ranging from foreign policy to defense, social security, political and judicial stability to social justice.

Based on these short reflections it becomes evident that the wide public criticism of the Austrian National Security Strategy, which has arisen over the past year, is justified and may be considered to be based on solid ground. This wide criticism can also provide a basis for a new public dis-

course on security issues, especially goal-setting for security policies and the selection and creation of the necessary governmental and non-governmental instruments. Human perception of security is linked to crucial societal communication processes, as well as to public opinion and decision-making in the political sphere, in which we articulate human needs and desires and take specific political precautions against possible threats.

This article is a (revised) translation of an earlier published article in German language: Franz Kernic, Überlegungen zum Begriff und Konzept von Sicherheit – Theoretische und gesellschaftspolitische Aspekte des Sicherheitsbegriffs der österreichischen Sicherheitsstrategie, in: Thomas Roithner, Johann Frank and Eva Huber (eds.), *Wieviel Sicherheit braucht der Friede?* Münster-Berlin-Vienna: LIT (2013), pp. 17-28.

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NATO Response Forces in Crisis Management

Marta Osypowicz

Abstract

The essence of crisis management consists of preparation, planning, and response in case of an actual crisis emerging, and, in the aftermath, of a removal of the damage and the reconstruction of the economy and the critical infrastructure. The North Atlantic Council and the Civil Emergency Planning Committee as well as the Euro-Atlantic Disaster Response Coordination Centre (EADRCC) are the NATO bodies responsible of crisis management in the case of a natural disaster. In response to a natural disaster, also NATO's military potential in the form of the NATO Response Force (NRF) can be employed. Those crisis response operations are conducted in accordance with Article 5 of the North Atlantic Treaty. The NRF can also be employed in Non-Article 5 crisis response operations such as in evacuation operations or humanitarian aid operations in case of a natural disaster. An example of the versatility of the NRF were covering operations during the Summer Olympics in Athens and the presidential election in Afghanistan, both in 2004, and a humanitarian operation in the United States of America and Pakistan in 2005.

According to *NATO's New Strategic Concept*, adopted by the Heads of States and Governments at the NATO Summit in Lisbon in 2010, crisis management is one of the key tasks (besides collective defense and cooperative security) fulfilled by NATO to guarantee defence and security to member states of the Alliance¹. This document emphasizes that NATO has a good political and military potential to counter, respond to and remove the effects of a crisis situation occurring in a region where an escalation could affect the security of member states². Among the elements creating a military potential of the Alliance is the NATO Response Force (NRF), which

¹ See *Strategic Concept for the Defence and Security of the Member of the North Atlantic Treaty Organization*, adopted by Heads of States and Government at the NATO Summit in Lisbon, 19-20 November 2010, pdf.

² See *Ibidem*.

can be used in crisis response operations in accordance with Article 5 of the North Atlantic Treaty and also in Non-Article 5 crisis response operations such as in evacuation operations or humanitarian aid operations in case of a natural disaster.

In this presentation, I would like to characterize the use of the NATO Response Operation as a response to a natural disaster. In consequence, a key goal of this presentation is showing a practical use of the NATO Response Force during a crisis situation (in particular during a natural disaster), which cannot be overcome by a government of an aggrieved country. This main goal is going to be achieved by finding an answer to the following questions:

1. What is the essence of NATO's crisis management system?
2. How does the process of NATO crisis management look like?
3. For what purpose was the NATO Response Force formed?
4. How does the decision-making process on the participation of the NATO Response Force in responding on a crisis situation look like?
5. What tasks have the NATO Response Force performed during an operation in the United States of America and Pakistan in 2005?

The Essence of NATO's Crisis Management System

The NATO Crisis Management System (NCMS) is based on four sub-systems: NATO Intelligence and Warning System (NIWS), Civil Emergency Planning (CEP), NATO's Operational Planning System (NOPS) and Crisis Response System (CRS). The structure of the NCMS is shown in figure 1.



Figure 1. NATO's Crisis Management System. Source: own

The NATO Intelligence and Warning System is the first and main pillar of involving NATO in crisis management. The main objective of the NIWS is to detect and warn before the probable crisis situation occurs. The NIWS performs its tasks through the acquisition, collection, and exchange of information. For example, during a meeting of the North Atlantic Council or The Military Committee, representatives of the member states may exchange intelligence and information about the past and the probable crisis situations³. The information about the development of a crisis situation (including armed conflicts) can also be raised at individual meetings between partner countries or at meetings of the regional working groups or the Euro-Atlantic Partnership Council⁴. Information collected by the NIWS is analyzed throughout the analytical quality processes described above. Taking into consideration the NIWS's role, it seems to be a correct observation, that only with a well-functioning NATO Intelligence and Warning System, it is possible to make a corresponding decision in response to a current crisis situation.

The **Civil Emergency Planning** involves collecting, analyzing, and sharing information obtained from the national crisis response systems in order to ensure cooperation between the member states to prevent, prepare, and response to the crisis situations⁵.

The institution responsible for civil planning in NATO is the Civil Emergency Planning Committee (CEPC), which is subordinate to the North Atlantic Council. The CEPC tasks include the coordination and planning of civilian activity. NATO's experts for these areas have been tasked with civil protection, transport (civil aviation, maritime transport, and inland waterways), health services and industrial and communication resources⁶.

³ M. Marszałek, *Rola Sojuszu Północnoatlantyckiego w zarządzaniu kryzysowym w wymiarze międzynarodowym*, [w:] G. Sobolewski, D. Majchrzak, *Zarządzanie kryzysowe w systemie bezpieczeństwa narodowego*, AON, Warszawa 2001, p. 244.

⁴ See in: *Ibidem*, p. 244.

⁵ See in: *Planowanie cywilne w NATO*, in: http://www.ock.gov.pl/portal/ock/17/1/PLANOWANIE_CYWILNE_W_NATO.html (13.10.2012).

⁶ M. Marszałek, *Rola Sojuszu Północnoatlantyckiego ...*, op. cit., p. 246.

Another important institution of NATO's civil emergency planning is the Euro-Atlantic Disaster Response Coordination Centre (EADRCC). Its role is to coordinate a response to a crisis situation which takes place on the territory of one of the member states or on the territory of a country which made an official request for support to the NAC. Since 2001, EADRCC is responsible for coordinating the activities undertaken in case of a terrorist attack (with biological, chemical or radiological weapons).

NATO's Crisis Response System can be used during each phase of the crisis, but it is the most effective in the initial stage of risk development. In the process of implementing the procedures, NCRS's institutions may decide to use one of five components: options of prevention, crisis response measures, prevent of surprise, preventing of aggression and alert.

Among the options of prevention, it can be distinguished between diplomatic, economic, and military measures. The diplomatic measures are one way to express a strong support for preparing UN Security Council resolutions relating to specific crisis situations. The economic measures constitute a means of warning. Their use affect the flow of goods and services in the area affected by the crisis situation. They may help to inhibit the worsening of crisis situations⁷.

The crisis response measures are the initial steps comprising nineteen topical areas⁸. They can be used immediately by the member states (or the armed forces) to strengthen NATO's civilian-military preparedness or increase the level of protection⁹.

⁷ See in: Z. Piątek, *Procedury i przedsięwzięcia systemu reagowania kryzysowego*, a second edition, AON, Warszawa 2006, p. 36-37.

⁸ Including: personal resources; intelligence; counterintelligence and security, protection of arms, general operations, ground operations, air operations, naval operations, psychological operations, electronic combat, meteorology, oceanography and hydrography, defense against of mass destruction weapons, logistics, nuclear agents; readiness of the armed forces, systems for communications and information technology, key infrastructure and services, protection of the civilian population, to inform the public.

⁹ See in: Z. Piątek, W. Pączek, *Zasady funkcjonowania narodowego systemu pogotowia kryzysowego*, Stowarzyszenie Ruch Wspólnot Obronnych, Warszawa 2007, p. 76.

The prevention of surprise is focused on civil-military activities. Those measures can be used to give warning of probable crisis situations. This warning enables the employment of a response force in case of an unexpected and sudden attack or to reduce potential losses or casualties in the case of an aggression¹⁰.

The prevention of aggression allows for an armed force's smooth and efficient achievement of the required readiness and the implementation of an appropriate plan¹¹. It can be used in case of an attack by the armed forces of a hostile country or by a terrorist organization. This may be also used in operations outside NATO territory.

The alert is introduced in case of a terrorist attack or sabotage on the territory of one of the member states. There are four levels of alert: Alpha, Bravo, Charlie and Delta. The use of each involves measures adequate to the situation and aims at strengthening the security and defense rather than preventing access to important objects of state and public services¹².

The cooperation between these subsystems allows NCMS to function properly, to prevent crisis situations or to respond to them effectively as well as to eliminate their effects by all available means and methods, including crisis response operations.

The Process of NATO Crisis Management

The North Atlantic Treaty Organization is prepared to respond to different crisis situations and it has available different measures to prepare and conduct crisis response operations (in accordance with article 5 and non-article 5 [NA5CRO]). No matter which of the crisis response measures might have been used, the crisis management process consists of the following six phases: indications and warning, assessment, response options development, planning, execution, and transition (Figure 2).

¹⁰ Z. Piątek, W. Pączek, *Zasady funkcjonowania...*, op. cit., p. 80.

¹¹ See in: M. Marszałek, G. Sobolewski, D. Majchrzak, *Zarządzanie kryzysowe...*, op. cit., p. 154.

¹² See in: *Ibidem*, p. 155.

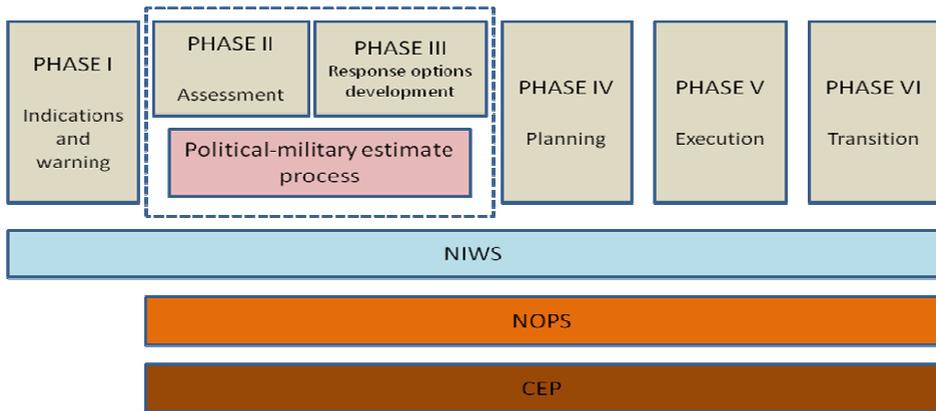


Figure 2. The process of NATO crisis management. Source: own, based on http://www.nato.int/cps/en/SID-56926A04-32533258/natolive/official_texts_75565.htm (24.05.2013)

Phase I, **indications and warning** of a possible risk, is carried out in co-operation with NATO’s Intelligence and Warning System. NIWS provides information about possible risks and about the size of the effects they may cause. According to this information the NAC conducts a strategic assessment of the probable crisis situations.

With these, there are in theory four options the Council can choose from: (i) decide that there is no need for further consideration; (ii) direct focused NATO vigilance and more information for the Council; (iii) consider diplomatic, political and precautionary responses, including civil emergency response, and take into account military implications as appropriate; or (iv) decide to initiate a full assessment of the crisis situation and move to Phases 2 and 3¹³.

The second phase of the NATO crisis management process concerns the **assessment** of the crisis situation. In order to decide on adequate crisis response measures, the NAC should have a detailed and current knowledge of the crisis situations, so the main task carried out during the second and third phase is to enable a political-military estimate process. The process of its preparations includes an assessment of political, military, and civilian conditions dominant in the crisis region and of possible alliances which will be needed to plan and to conduct a crisis response operation and to reconstruct the infrastructure on the theater of operations. Phase III, **response**

¹³ *NATO’s assessment of a crisis and development of response strategies*, in: http://www.nato.int/cps/en/SID-56926A04-32533258/natolive/official_texts_75565.htm (24.05.2013).

options development is to develop the end states of operations and to continue a political-military estimate process.

At this stage, the Council also tasks SACEUR to develop a response strategy. Based on the results of the PME process, the Council may select one of the response options by providing formal political guidance to the NATO Military Authorities (NMA) to conduct operations planning for the chosen option. This decision moves the process to Phase 4. However, at this point, the process does not yet imply a decision by NATO to undertake military action. But, all the possibilities are on the table and political, diplomatic as well as civil measures may have been initiated, primarily under NAC direction¹⁴.

Phase IV of the NATO crisis management process, **planning**, focuses on civilian (non-military crisis situations) or operational planning (military crisis situations).

SACEUR then develops a Concept of Operations (CONOPS) and subsequently an Operations Plan (OPLAN) and submits them to the Military Committee for endorsement and to the North Atlantic Council for consideration and approval. Then, in order to deploy forces, the NAC needs to give formal authorization to execute the OPLAN. A decision to execute moves the process to Phase 5¹⁵.

Throughout phase V, **execution**,

NATO executes the mission and conducts regular assessments of the ongoing operation normally in the form of Periodic Mission Reviews (PMR) in order to assess progress towards the desired end-state and evaluate the required military posture, its capabilities and force structure¹⁶.

Phase VI, **transition**, occurs when the goals set out in the mandate have been reached. Then the NAC decides to end an operation and to transfer responsibility for the maintenance of peace to local security services.

The essence of the NATO Response Forces

The idea of creating the NATO Response Force turned up during the NATO Prague Summit in 2002. The NRF has reached full warlike response abilities in 2006, which was announced while the NATO Summit in Riga¹⁷. This force can be employed in case the security of one or more

¹⁴ Ibidem.

¹⁵ Ibidem.

¹⁶ Ibidem.

¹⁷ See. Art. 23, *Riga Summit Declaration*, issued by the Heads of State and Government participating in the meeting of the North Atlantic Council in Riga on 29 November

NATO member states are being undermined or when, on the territory of one of the members or partner countries, a crisis situation occurs and also when a country affected by any threat makes a request to the North Atlantic Council for help. In particular, however, the NRF is prepared to be employed in crisis response operations¹⁸.

The NATO Response Force is a multinational force consisting of:

1. Land component (based on three Battle Groups),
2. Maritime component (based on: NATO's Standing Naval Maritime Groups and Standing Naval Mine Countermeasures Groups),
3. Air component,
4. Special Forces units,
5. Chemical, biological, radiological and nuclear defence task force.

Each of the NATO member states dispatches units of national Air Forces, Land Forces, Naval Forces and Special Forces. These rules are also applied by NATO partner countries if they get respective acceptance of the North Atlantic Council¹⁹. Direct participation of the national contingents in the NRF is preceded by a national preparation and by six months of training led by the North Atlantic Treaty Organization²⁰.

To sum up, the NRF are prepared to be employed in different situations, e.g. an internal conflict (crisis response operations), to remove the effects of a natural disaster (humanitarian operations) or to protect buildings as well as crisis infrastructure. Examples of the NRF's versatility are its employment to cover the Summer Olympics in Athens in 2004, to cover the presidential elections in Afghanistan in 2004 and to conduct humanitarian operations in the United States of America and Pakistan in 2005.

2006, Press Release (2006) 150, <http://www.nato.int/docu/pr/2006/p06-150e.htm> (13.10.2014).

¹⁸ See. M. Osypowicz, *Sojusz Północnoatlantycki w reagowaniu na kłeski żywiołowe na przykładzie operacji humanitarnej w Stanach Zjednoczonych i Pakistanie*, [in:] G. Sobolewski, D. Majchrzak, *Zarządzanie kryzysowe, Zarządzanie kryzysowe*, AON, Warszawa 2013, p. 215.

¹⁹ See: http://www.nato.int/cps/en/natolive/topics_49755.htm (13.10.2014).

²⁰ See: <http://www.aco.nato.int/page349011837.aspx> (13.10.2014).

The decision-making process regarding the participation in a NATO Response Force in response to a natural disaster

Briefly put: a decision about the participating in the NRF in response to a crisis situation is made by the North Atlantic Council. The decision-making process is differs individually from case to case. An important determinant of this process is a request for help submitted to the North Atlantic Council by the government of an aggrieved country.

In a decision-making process, a key role is played by the **Civil Emergency Planning**, including the Civil Emergency Planning Committee (CEPC) and the Euro-Atlantic Disaster Response Coordination Centre. In NATO, a **Civilian Emergency Planning Committee**, subject to the North Atlantic Council, takes the responsibility for the civilian planning. A Committee comprises four technical planning groups and committees consisting of government experts from members states and partner countries as well as experts from other different areas. They are the consulting organs to CEPC in order to counter and remove the effects of a crisis situation. Further, they are the organs advising a possible “NATO military government” or a national government in order to develop and implement the rules to facilitate the use of civilian manpower and resources in the event of an emergency.

An important institution responsible for a crisis management in natural disaster is the **Euro-Atlantic Disaster Response Coordination Centre** (EADRCC). This institution coordinates a response to a crisis situation in member states, in a country which cooperates with NATO and in an aggrieved country, if its government submits a request for help.

To sum up, aggrieved countries submit a request for help to the North Atlantic Council, which makes a positive decision to help. After that the Euro-Atlantic Disaster Response Coordination Centre coordinates an Alliance operation, including also activities of the NATO Response Force. The NRF’s successful operations in the United States of America and in Pakistan have proven the efficiency of the cooperation of the Alliance’s Civil Organs with the Military. It must be emphasized that the control over the course of these operations was conducted by the EADRCC.

The NATO Response Force during operations in the United States of America and Pakistan

The hurricane Katrina in the United States of America (August 2005)

The hurricane *Katrina* was one of the worst hurricanes ever to have taken place in the USA. On 2 September 2005, the American government made a request for help to the North Atlantic Council. The Council made a positive decision on 9 September 2005. During this operation a joint force of air and sea units was employed. They were responsible for the transport of humanitarian aid from the European countries. During this period of time (12 September to 2 October 2005) the NRF units have performed twelve flights with humanitarian aid transports. They have transported 189 tons of goods, including food, bottled water, water treatment units, medical supplies, necessities, tents, camp beds, generators, water pumps and specialized urban search and rescue units²¹. The operation was finished on 2 October 2005.

The earthquake in Pakistan (October 2005)

The earthquake in Pakistan (Kashmir region) took place on 8 October 2005. The government of Pakistan turned to the North Atlantic Council with an official request for a humanitarian operation in support of the Pakistani people. The Council made a positive decision and NATO started the operation on 11 October 2005. It consisted of two phases. During the first phase, NATO activities were focusing on organizing two airlifts. The air forces transported goods agreed upon by the NATO member states, the partner countries and by the United Nations Office for the Cooperation of Humanitarian Affairs.

The second phase of the operation was conducted by the NATO Response Force, employing in particular military helicopters, field hospitals, medical personnel and military engineers. NATO's contribution to this operation was:

- to maintain airlifts,

²¹ See. *Support to the US in response to hurricane Katrina*, <http://www.nato.int/eadrcc/2005/katrina/index.htm> (13.10.2014).

- to support transport inside the country,
- to build a critical road infrastructure and
- to provide temporary shelter and medical assistance²².

The goal of these actions was to enable the people to survive during the winter²³.

The first groups of military engineers and medical personnel reached Pakistan on 29 October 2005. Within three months (October 2005 - February 2006) NATO's military medical personnel administered medical care for about 4,890 people and performed about 160 operations²⁴. In Arja and Bagh, NATO engineers fixed about 60 km of roads enabling the delivery of humanitarian aid and re-establishment of trade²⁵. Furthermore, schools and hospitals were rebuilt and water was provided for the needy by partly modernizing the water supply system.

The NRF units didn't limit their activities to urban places. They also supported a people living in mountains. An air force unit delivered to them a food and a water (an Alliance helicopters transported about 1 750 ton of procurement) and if that was necessary they conducted evacuation operations (helicopters transported about 7 650 people).

* * *

Taking into consideration the above it seems to be a correct observation that the North Atlantic Treaty Organization increasingly will be involved in Non-Article 5 crisis response operations, including humanitarian aid, not only in military but also in non-military crisis situations. As the examples above show, not only civilian but also military NATO assets can be used effectively in humanitarian operations.

²² Ibidem.

²³ Ibidem.

²⁴ See. *Pakistan earthquake relief operation*, http://www.nato.int/cps/en/SID-C2764295-57861419/natolive/topics_50070.htm (13.10.2014).

²⁵ See. Ibidem.

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Part 7

Defence Management and Economics

Chances, Limits and Risks when Including Economics into Security and Defense Management

Markus Maruszczyk and Johannes Weber

Abstract

In this paper we examine the opportunities that arise when including economics into security and defense management. Viewed from a shifting paradigm in which the more limited terminology on “defense” is transforming to encompass the broader range of “security”, we discuss the possibilities for using economic methods in strategic and operational planning (e.g. resource allocation and operational efficiency). Next, we seek to identify the limits and risks of applying economic methods.

In conclusion, this paper recognizes the benefits of an economic scenario approach to increase the quality and likelihood of predictions used for strategy development. At the same time, however, we find that several factors in regard to measurements and indicators can severely limit the outcomes.

Introduction

Over the past 20 years conditions for defense management have shifted dramatically. We are facing a wide range of “new” threats and challenges, ranging from terrorist organizations, failed states and pandemics to energy shortage and cyberwar, in an ever more complex and interconnected environment. As a result, it is becoming increasingly difficult to “guesstimate” how today’s events will shape tomorrow’s reactions and how to develop comprehensive future scenarios as part of a security strategy that, on its turn, has to be followed by operational planning. In other words, currently, security and defense management constitute a highly complex endeavor, way beyond the restructuring of the armed forces or the procurement of major military equipment. Planners – facing hitherto unknown dynamics – are experiencing a need for new approaches and sources of information to underpin their planning processes.

Given that for instance in the past decade the world saw the fastest change in the world's economic center(s) of gravity ever¹, the importance of economic dynamics and developments for political decision makers have increased dramatically. Today some multinational companies have budgets that exceed those of several small-medium states. The most recent financial crisis, followed by a recession, exposed the susceptibilities of states that the collapse of private sector institutions can trigger. In this paper we will argue that these intertwined and globalized economic sphere needs to be accounted for and their significance in terms of economic dynamics should not be underestimated in defense management. Hence, economics can offer an additional source of information that may augment the defense-management processes.

Furthermore, we will focus on both possibilities and opportunities as well as the limits and risks when applying economic models, such as, cost-benefit-analysis (CBA) or multi-criteria-analysis (MCA) to the operational and strategic development process. We believe, that the integration of economic (growth) models in international conflict and national defense management (and vice versa) and the application of economic methods to security and defense management, can serve to evaluate crises management in the past, to plan reactions to future security threats and, finally, to determine domestic developments in various other growth models related dimensions such as manufacturing, social security or (un)employment.²

To give our ideas broadest possible approach (beyond what one would understand under the general term of a military complex), we decided to use the longer and somehow inconvenient expression “security and defense management” and “security and defense planning”. By doing so we also want to capture “new” security threats and take account for the general

¹ Dr. Joe Strange, USMC War College and Colonel Richard Iron, UK Army: Understanding Centers of Gravity and Critical Vulnerabilities Part 1 and 2, in: <http://www.au.af.mil/au/awc/awcgate/usmc/cog1.pdf> and <http://www.au.af.mil/au/awc/awcgate/usmc/cog2.pdf>, and McKinsey Global Institute “Urban world: Cities and the rise of the consuming class” from http://www.mckinsey.com/insights/urbanization/urban_world_cities_and_the_rise_of_the_consuming_class.

² Taoxiong Liu, Angang Hu and Bihua Zhou: Defense Strategy Transition and Economic Growth under External Predation, Section V. MPRA Paper No. 29286, posted 6. March 2011 Online at <http://mpra.ub.uni-muenchen.de/29286/>.

shift from defense to security in the public und political discourse on the one hand and towards a broader as well as more dynamic and constructivist notion of security on the other hand. The trend towards conceptualizing (minus) developments in more and more areas and fields as problem for a certain kind of “security”³ went hand in hand with the notion of new threats as a result of global interconnectedness and the blurring of the classical inside/outside distinction in political theory. While for instance after the Second World War the discourse in the area of international development cooperation was still framed in terms of “poverty” or “underdevelopment”, in the last twenty years it turned into a discourse about human security. The same holds for areas such as energy shortage, climate change or cyber threats.

As a result, scholars distinguish a lot of different meanings, “types” or fields of security today. The most common are military security, economic security, ecological security and human security.⁴ At a second level this can be combined with four dimensions, namely the reference-system (who shall be protected), the subject-dimension (protection from what), the threat-dimension (what kind of threat are we dealing with) and the space-dimension (what area shall be protected). In doing so, a complex system of areas of security emerges in which the classical notion of a military threat for the state is only a very limited part.⁵

Based on this holistic notion of security, the economic sector can also be a matter of concern to security and defense managers via the idea of “economic security”. One of the triggers for this idea of economic security was the fuel crisis in the 1970s, which called into question the realist concept of

³ Balzacq, Thierry, A theory of securitization. Origins, core assumptions and variants, in: Balzacq, Thierry, *Securitization Theory. How security problems emerge and dissolve* (New Security Studies), Abingdon 2011, pp. 1-30.

⁴ IR-scholars often make an analytical distinction between different sectors and scrutinize securitization processes within these sectors. cf. Albert, Mathias and Buzan, Barry, *Securitization, sectors and functional differentiation*, in: *Security Dialogue*, 42 (4-5), 2011, pp. 413-425.

⁵ Daase, Christopher, *Der erweiterte Sicherheitsbegriff, Sicherheitskulturen im Wandel*, Working Paper 1 / 2010, edited by the project „Sicherheitskultur im Wandel“ at Goethe University Frankfurt, in: <http://www.sicherheitskultur.org/WorkingPapers/01-Daase.pdf>.

international relations merely based on political and military power.⁶ Ever since, security is an important part of economics or rather, the economy constitutes an inherent part of security and the security discourse. The Ukraine crisis is just one recent example for this development.

Simultaneously, but not necessarily directly connected with the emergence of the notion of “economic security”, the use of economic methods and market mechanics in different “fields” of security strongly increased. In an ecological sphere, for instance, a market for CO₂ certificates or climate bonds has been created to deal with ecological threat. Likewise, international development cooperation is mostly organized in a competitive, market-like system, in which the most efficient organization prevails.

Across all areas of security, we can observe a tendency towards measuring the costs for (in)security in monetary terms. Relevant institutions and think tanks calculated the potential cost of the Ebola pandemic for the West African region to reach up to \$15 billion⁷ and the bill for the sanctions against the Ukraine for Austria is roughly €775 million.⁸ In the same manner, many other crises⁹ around the world are discussed in terms of a loss of GDP or similar economic parameters. While this tendency towards a monetization of costs is not necessarily new, it’s striking how willingly values, convictions or basic principles of international law are often traded off against the economic costs of military interventions, sanctions or other means of foreign policy.

In summary, the concept of economic security as well as tendencies towards an economization and marketization of various aspects of security can be interpreted as signs for the increasing importance of the economic factor in defense management. So, it seems to be a common sense approach to consider enhancing the use of economic methods and models in

⁶ Glaser, Charles L., *Realism*, in: Collins, Alan, *Contemporary Security Studies*, 3rd edition, Oxford 2013, pp. 13-27.

⁷ Hussain, Misha, Ebola could cost West Africa \$15 billion over three years, Reuters, 12.03.2015, in: <http://www.reuters.com/article/us-health-ebola-costs-idUSKBN0M81VD20150312>.

⁸ Sanktionen kosten Österreich 775 Millionen Euro, 11.000 Jobs gefährdet, APA, 10.09.2014, in: <http://wirtschaftsblatt.at/home/nachrichten/newsletter/3867782/Sanktionen-kosten-Osterreich-775-Millionen-Euro-11000-Jobs-gefaehrdet>.

the security and defense planning process. In the next part we will try to elaborate on this idea of bringing economic facts and economic methodology into security and defense management.

Economic methodology in security and defense planning

Before elaborating on some examples, we have to make clear what we mean by “economic methodology”. In the context of this paper we want to limit this concept to the analytics of macro-economic developments on the one hand and some core principles of economics, namely benefit maximization, efficiency and the allocation of resources on the other. In the following we will try to demonstrate three ways on how security and defense planning can benefit from economic methodology, namely through (1) the consideration of macro-economic factors in the development of future scenarios; (2) the application of economic models on an operational level in the defense planning process and (3) the use of economic models on a strategic level, in the planning and evaluation of reactions towards security threats.

Security and defense planning in a globalized world

In the highly interconnected and economically globalized world we live in today, macro-economic developments are ever more relevant for defense planning and management. The aforementioned movement in the economic centers of gravity around the globe, the increase of world trade or the number and size of Transnational Corporations and their impact on state decision making are examples of macroeconomic importance.

This reality cannot, and should not, be neglected in the management of security and defense. Parameters like economic development, the interconnectedness of national economies and the strategic relevance of resources affect predictions for the future in at least two ways. On the one hand, conflicts and crisis in different parts of the world have a direct influence on the national economy, even if a state is not involved in the crisis/conflict. For instance, 80% of all goods arrive in Europe by ship. That means that all EU-member states would be directly affected by the dispute between China and Japan over some small islands in the South-China Sea. Likewise, civil wars in Sub-Saharan Africa are particularly relevant for the electronic in-

dustry as the major suppliers of raw materials are in this region. Hence, the Ebola pandemic could have adverse effects on the electronics industry. On the other hand, the economic performance and the demographic development of third states can cause new security threats and limit their capabilities as allies in a system of collective security. An example here would be the increasing migratory pressures towards Europe from the Middle East and Africa, amongst others, due to the lack of opportunities for young people.

Nevertheless, security and defense scenarios typically start with geopolitical, security, or more operational assumptions. Starting statements for guiding objectives are for example “Counter violent extremism, deter and defeat aggression, strengthen international and regional security”.⁹ In the *Quadrennial Defense Review Report* or the *National Military Strategy of the United States* from February 2011, changing strategic environments in the future are discussed but no alternative or new consequences are reviewed¹⁰. Hence, the importance of today’s economic forces is not yet accounted for adequately and a different approach, with an open grounding in new economic realities, which explores the full implications of the shift in economic power is needed. One starting point in the strategic process could be the development of scenarios for possible changes in the global economy or at least those economies that would be most interesting from a strategic point of view. These scenarios may then enable the planning of changes in countries’ economic power in relative and absolute terms. The trends most immediately relevant for security and defense organizations could then possibly be used in strategy planning.

Furthermore this economic-scenario¹¹ approach would enable defense and security administrators to evaluate other causal influences as well, if a particular analysis should require it. This may include public-debt burden, elusive differences among countries’ relative performance (e.g. South Korea has a relatively high amount of defense spending and R&D), education

⁹ The National Military Strategy of the United States of America, 2011.

¹⁰ Economics and National Security: Issues and Implications for U.S. Policy Congressional Research Service. 7-5700 www.crs.gov R41589.

¹¹ Schoemaker, Paul J.H., (1995) “Scenario planning: a tool for strategic thinking” from *Sloan Management Review* 36 (2) pp.25-40, Cambridge, Mass.: Massachusetts Institute of Technology.

levels or demographic trends.¹² An example of using an economic scenario would be to analyze the expected shifts of economic strength with the amplified exploiting of natural resources throughout Africa. Several countries have an avalanche of money and so experienced a surge in economic power. The future developments of these states are of importance to Europe's security and defense organizations on multiple levels.

The domestic economic scenario: the "age of austerity"

In the post-financial-crisis era, austerity and budgetary restrictions turned from limiting factors into cornerstones of political decision-making. This in turn, has affected security and defense management on all levels. Most of the statements on a national base as well as debates about defense cooperation in an EU or NATO context, take defense budget cuts as a given. In the first paragraph of the conclusions of the European Council on the Common Security and Defense Policy in December 2013, for instance, the European heads of state made clear that "Defense budgets in Europe are constrained, limiting the ability to develop, deploy and sustain military capabilities." We can derive from this, that shrinking budgets can be defined as a security threat. How states respond to crises predominantly depends on the budgetary means available. Out of these budgetary constraints, the idea of more cooperation through pooling & sharing or smart defense was born. This, however, is not an attempt to increase but to maintain military capabilities with a limited budget.¹³ Against this backdrop, the application of economic methodology is warranted and increasingly necessary. Scarcity of resources, utility and net benefit maximization as well as individual interactions, be they operative or strategic, are at the core of defense management and they require efficiency and capacity planning¹⁴.

¹² Jonathan Ablett and Andrew Erdmann April 2013. *Strategy, scenarios, and the global shift in defense power: As the strategic landscape shifts, an economic-scenario approach can help defense organizations grapple with uncertainty.* Article McKinsey's Washington, DC, office.

¹³ David Chinn April 2013. *Preserving combat power when defense budgets are falling: Defense ministries can cope with austerity. Here's how.* McKinsey's London office.

¹⁴ Gary D. Eppen, R. Kipp Martin, Linus Schrage, (1989) OR Practice – A Scenario Approach to Capacity Planning. *Operations Research* 37(4):517-527. <http://dx.doi.org/10.1287/opre.37.4.517>.

Military and efficiency has been studied and practiced for quite some time. Carl von Clausewitz already wrote, that a general principle of warfare is to “make the best use of the few means at our disposal.” In general, efficiency can be defined as: “accomplishment of or ability to accomplish a job with a minimum expenditure of time and effort.”¹⁵ In the context of defense, efficiency would refer to achieving the maximum level of defense capabilities with the lowest possible cost, time and effort. Needless to say, in reality the goal of defense management is to maximize the possible level of defense (security) capabilities at the lowest possible cost and resources available.

While it is relatively easy to conceptualize and compute costs like human resource expenditures, or material depreciation other areas of defense and security are more complex to calculate. Several aspects of defense and security spending require more than a strict mathematical model or a bean counter’s mentality. Today’s conflicts do not easily allow and accounting approach to forecast possible developments for planning purposes. Simply for the often insufficient data or the means to fully comprehend the characteristics needed to measure costs or benefits.

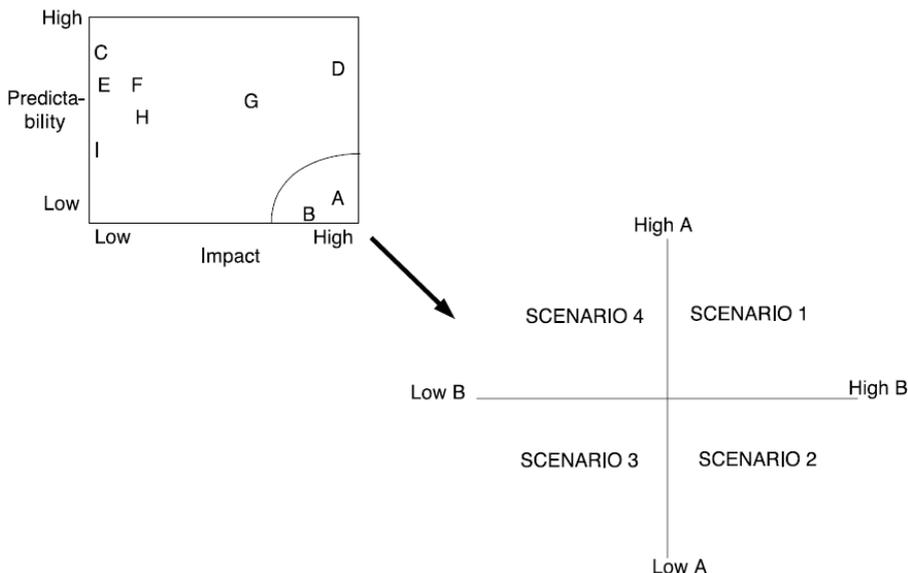
Therefore we turn to the economic-scenario approach as an analytical tool for defense management. The economic-scenario approach¹⁶ highlights, how the global strategic settings can transform in the coming decade. These scenarios would then help organizations identify the potential opportunities, risks, trade-offs, and outcomes that should be considered in the allocation of the limited resources. Possible questions defense management should ask, are¹⁷: What does it mean when the defense spending of allies will continue to decline in relative, and perhaps absolute terms? What proficiencies might these allies be able to deploy in the future? What security relations are desirable and/or necessary to manage the shifting balance of defense power? What might be the implications of such shifts for defense, development and diplomacy programs? How relevant are the European

¹⁵ <http://dictionary.reference.com/browse/efficiency>.

¹⁶ McKinsey Global Institute, Public Sector Practice. Strategy, scenarios, and the global shift in defense power: As the strategic landscape shifts, an economic-scenario approach can help defense organizations grapple with uncertainty. April 2013 Jonathan Ablett and Andrew Erdmann.

¹⁷ McKinsey Center for Government Defense & Security: http://www.mckinsey.com/client_service/public_sector/expertise/defense_and_security.

powers in a strategic calculus? What security relationships should they prioritize to cope with the shifting strategic landscape? One might then set-up a two-dimensional decision space which indicates on the “level of impact” (high/low) and the “level of (un)certainty” (high/low). The (two) most important and most (un)predictable factors are consequently chosen for scenario construction. This method is illustrated below (letters are randomized scenarios).



A sample scenario set-up for evaluation following Postma and Liebl 2005.

In the recent past, governments have been redefining what they want from their defense management, by lowering the demands on the remaining security structure. So, leading to a situation where they have forces that are more (or less) capable than policy guidance would demand. In such a case, scenario planning would transform the large amounts of data that exist as input into a simplified statistic. This approach, however, has limitations when trying to deal with simultaneous trends and countertrends, and tendencies or constellations of trends that are not thought of beforehand or not incorporated, especially the organizational requirements of causality and consistency¹⁸.

¹⁸ T.J.B.M. Postma, F. Liebl / *Technological Forecasting & Social Change* 72 (2005) 161-

The classification of Schoemaker¹⁹ can be helpful to illustrate what we mean here. Schoemaker discusses future relevant knowledge by distinguishing between three classes of knowledge: 1. Things we know we know; 2. Things we know we do not know; 3. Things we do not know we do not know.

When not accommodating all relevant information it can lead to serious problems with scenario users and strategic decisions that are taken, based on this methodology, especially in situations that security management has to deal with.

Economic methodology in a 3D – Diplomacy, Defense, and Development – framework

When compared to defense policy, foreign policy strategists follow a more holistic approach, that tries to balance different tools (often divided into hard and soft power) within a comprehensive, whole of nation, or 3D (Diplomacy, Defense, and Development)²⁰ approach. This becomes even clearer, when the aforementioned challenges – which can all be linked horizontally by economic considerations – are included. Insofar, combining diplomacy, defense, and development opens new doors and opportunities. The combination of the expertise of foreign policy and development experts together with the security capabilities of the defense organizations could be used help mitigate past mistakes (e.g. combating opium farming in Afghanistan), while providing a “softer” and more efficient approach to crisis in the future²¹.

A comprehensive approach to international crisis management could also affects the way countries (re)define their security infrastructure within this

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¹⁹ Schoemaker, Paul J.H., (1995) “Scenario planning: a tool for strategic thinking” from Sloan Management Review 36 (2) pp.25-40, Cambridge, Mass.: Massachusetts Institute of Technology.

²⁰ Christopher Ankersen and Alexander Klimburg February 2012 Civil-Military Cooperation and the 3D Approach – Myth or Reality? Austrian Institute for International Politics.

²¹ Capt Mirjam Grandia. The 3D approach and counterinsurgency A mix of defense, diplomacy and development The case of Uruzgan. <http://www.cimic-coe.org/wp-content/uploads/2014/06/3DandCOIN1present.pdf>.

3D framework and how they are reexamining their strategic posture. Adapting forces to the changing demands of government policy, however, requires a clear strategic direction and the conversion of this strategic direction into specific and detailed requirements for personnel training, equipment, logistics support, maintenance, stock holdings, and infrastructure at the level of individual units and governmental bodies. As a result, a plan can be developed for adapting each capability and thereby releasing no-longer-needed resources. This is a core responsibility of security and defense management in the allocation, to include the respective (strategic) planning, of scarce resources.

Procurement, logistics, IT, and administrative support share a lot of cohesion across the 3D framework. The benefits of these cross-service groups stem not only from economies of scale but also from economies of skill – more capable and specialized functions are often both more efficient and more effective. Some countries have not taken such steps yet, sometimes from fear of change or inertia, sometimes because high levels of threat and military activity make it hard to take the risk of such major change, and sometimes because the funding and authority structure creates powerful incentives for keeping fully integrated individual services. The wide range of problems and challenges states are facing today, the dynamic challenges and opportunities can only be met effectively through a significantly more robust foreign affairs capacity that features foreign policy and assistance professionals.²²

The outbreak of Ebola in West Africa is a very good example in this regard. Apart from the question, if the disease could have caused a worldwide pandemic, the UN Security Council declared the outbreak a threat to international peace and security. The way the international community responded, however, was maybe not the most efficient and effective. A 3D approach combined with a cost-benefit-analysis of different foreign policy tools, like diplomatic efforts in a UN or WHO framework, development aid to support the local health system and military capabilities to avoid the further spread of the disease was not part of it. At least in the beginning. Although we cannot elaborate this example in detail, it is questionable if

²² Lisa Schirch 05/25/2011 *A 3D Approach to US Foreign Policy*. http://www.huffingtonpost.com/lisa-schirch/a-3d-approach-to-us-forei_b_821270.html.

military field hospitals offered and then installed by the United States were the most efficient and effective response.

Tools for allocating resources and managing expectations

Literature research has resulted in two relevant economic methodologies that seem most useful for application in defense management. In fact, the two methods in question, Cost-benefit analysis (CBA)²³ and multi-criteria analysis (MCA) are already widely used in various government areas as an analytical as well as a strategic decision tool. We want to briefly summarize these two methods here.

CBA provides a systematic framework for assessing the advantages and disadvantages of alternative project options, as it aims to express all of the potential effects of an activity in a directly comparable unit of measurement, that of money. By so doing, (hopefully) all effects are given equal consideration in terms of gains and losses. In economic terms, the most efficient option is that which provides the greatest level of wellbeing for organization as a whole. Any option is considered to be economically worthwhile if the benefits of the action outweigh the costs.²⁴

Does an alternative to CBA exist? One that can also be used in evaluating the optimal and efficient allocation of resources? An obvious candidate is Multi-criteria analysis (MCA)²⁵. Multi-criteria analysis is undertaken to make a comparative assessment between projects or heterogeneous measures. In evaluation, multi-criteria analysis is usually an ex-ante evaluation tool, and is particularly used for the examination of the intervention's strategic choices. Nonetheless, an ex-post application is also possible. In ex-post evaluations,

²³ U.S. Army Regulation 11-18 Army Programs The Cost and Economic Analysis Program; Melese, Francois/Richter, Anke/Solomon, Binyam (eds.), *Military Cost-Benefit Analysis: Theory and Practice* (Routledge Studies in Defence and Peace Economics), 2015.

²⁴ U.S. Army Cost Benefit Analysis Guide. 3rd Edition (V3.10) Updated as of: 24 April 2013 Prepared by Office of the Deputy Assistant Secretary of the Army (Cost and Economics).

²⁵ Joint Defra/EA Flood and Coastal Erosion Risk Management R&D Program Evaluating a multi-criteria analysis (MCA) methodology for application to flood management and coastal defense appraisals Case studies report R&D Project Record FD2013/PR1.

multi-criteria analysis can contribute to the evaluation of a program or a policy through the appraisal of its impacts with regards to different criteria.

Aside from their traditional role in project management, CBA and MCA can assist in the realignment and definition of roles in a whole of government approach. In this way leading to a more efficient, case optimized use of scarce resources. Ideally, actors will then be able to allocate the resources for which they bring the best benefits. Insofar, CBA would then be used in finding the best individual for a specific role. This can surely be more efficient than mixing and matching resources, seemingly at random, within the overall strategy.

MCA on the other hand, covers a range of techniques for assessing decision problems characterized by a large number of diverse attributes, which do not need to be expressed in money terms. At a simple level, there is a range of methods to screen out 'worse' options and to identify the 'best' option, without aggregating information across different attributes. This would also allow the application of a scenario evaluation following Postma and Liebl 2005 as mentioned above. In contrast, some of the more sophisticated techniques are aimed at providing a means for aggregating information into a single indicator of relative performance.²⁶

This leads to the discussion of which criteria should be used for the optimal evaluation. In the case of an ex-ante or intermediary evaluations, standard literature points to using various activities that are part of a policy to fulfil a given objective. This assessment would be used to collect the opinions of decision-makers and beneficiaries about the effectiveness of the activities to structure the views of managers about on-going activities. This allows one to discuss the content of the plans and the funding of various activities when drafting a strategy. Consequently, ex-post evaluations of development, diplomacy and defense programs that assist in poverty alleviation, maintaining security, immigration control, or trade development can be managed more effectively when CBA or MCA analysis are used for reviewing their impact. The review allows one to formulate easily compre-

²⁶ Europeaid evaluation methodology: Multi-criteria analysis and European Commission – JRC – IPTS Multicriteria analysis aims to compare different actions or solutions according to multiple criteria and policies.

hendible judgments on these complex operations.²⁷

Limits and risks of bringing economic methodology into security and defense planning

In the last part of this paper we want to discuss limits and risks of using economic methodology in security and defense planning. One of the challenges for the transfer and use of economic methodology in security and defense management is the valuation of non-monetary costs (and benefits). While in economics the value of a cost and benefit measure is usually a monetary measurement, the question of value can be quite challenging in the area of security and defense management. The use of proxies is often possible but not always useful. So, answers to measurement issues need to be addressed early on in the development stage of a model or scenario. Yet, there are differences among the fields of security. With regard to economic security it is relatively simple, but already challenging. When moving into a field with abstract influences like military security or energy security it gets a lot more challenging²⁸. Benjamin K. Sovacool and Ishani Mukherjee, for instance, developed a synthesized approach for the measurement of energy security with 20 separate and distinct dimensions that correspond to 320 simple and 52 complex indicators.²⁹ This is also true for such broad concepts like the notion of human security, which has often been criticized as too vague.³⁰

Secondly, a problem with CBA and especially with MCA application is that the time span and the cost of such a high level of analysis may exceed the timescales and budgetary means usually available for an evaluation. Thus, in assessments where situations are often challenging, multi-criteria analyses

²⁷ Europeaid evaluation methodology: Multi-criteria analysis and European Commission – JRC – IPTS Multicriteria analysis aims to compare different actions or solutions according to multiple criteria and policies.

²⁸ Taoxiong Liu, Angang Hu and Bihua Zhou: Defense Strategy Transition and Economic Growth under External Predation. MPRA Paper No. 29286, posted 6. March 2011 Online at <http://mpra.ub.uni-muenchen.de/29286/>.

²⁹ Sovacool, Benjamin K./Mukherjee, Ishani, Conceptualizing and measuring energy security: A synthesized approach, in: *Energy* 36 / 2011, pp. 5343-5355.

³⁰ Eldering, Marije, Measuring Human (In-)Security, in: *Human Security Perspectives*, 1/2010, pp.17-49.

should be simplified, by comparison of straightforward activities only, and conducted with a limited number of criteria.

Thirdly, an adjustment of capacities takes time and typically happens following major geopolitical changes, such as the end of the Cold War or 9/11. Yet, changes in a broad government policy often take far too long before they are translated into detailed expectations for individual units. The adjustment of military bases Europe after the cold war, the move from “most likely” to “worst case” scenarios in defense planning or the build up of development expertise in different countries are very illustrative examples.

Conclusions

In a nutshell, security/defense and economics are by no means two different spheres. Defense planning, the concepts of security and the perception of threats are strongly influenced by economic models and economic logics that also have abstract influences. Conversely, economic models are mostly used in a very one-dimensional way in these contexts, namely in terms of cost-efficiency. Despite the possible problems and limits that arise, we believe that this should change. Change could happen by incorporating economic methodology and models at an earlier stage in security strategy and management development that precedes cost discussions and allocation decisions.

A major caveat, limit and risk simultaneously, is the unknown and the valuation as well as likelihood of the unknown scenario(s) when using the economic scenario approach. This is related to the idea that the scenario approach has to deal with what is known and what is not known in the same model to be able to provide pertinent data for application purposes. In this way, scenarios specifically aim at predetermined data and uncertain data. Predetermined data occur based on the assumption that the alternative future consequences of events and developments, and their chances, are a priori identified. In case of uncertainties, the outcomes are known but not their probability. Both are relevant for security and defense management.

Subsequently, it can be assured that security and defense management do need analytic tools to help manage uncertainty that is inherent with allocation and efficiency planning, i.e. forecasting to optimally allocate resources. Something that can be done through economic models and methods. Without such tools, there is a risk of being misguided to a single, clear, but in all likelihood erroneous prediction of the prospective development. Alternatively we end up with guesstimating outcomes. Especially when faced with forward-looking planning or strategy development based on policy. At the same time, domestically trends are just as important as those abroad, yet there uncertainty is more manageable. Demographics, smaller budgets and political caution should have no minor part in defense management planning. Economics can assist this process.

A short close and conclusion is, that it would be useful to go beyond a “simple” perspective and scrutinize the further benefits of economics in the area of security and defense management. As we have seen, economic models can be very promising tools for a better allocation of resources and the development of future strategies but they have their limits.

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Private Military Security Contractors: Responsible Outsourcing of Security Tasks to the Private Sector

Christopher Hochmuth

A. Background

Regarding the discourse on the use of Private Military Security Contractors or Companies, many critics focus on outsourcing security tasks involving the carrying of weapons by civilians in conflicts or high risk zones. While their arguments are valid to be debated, there are other issues that should be discussed when addressing the outsourcing of state (public security tasks) competencies to the private sector, with regard to defense and military. Present arguments largely stem from the Blackwater incident at Nisoor Square in 2007, when 6 company contractors opened fire in a busy intersection in Iraq, leading to the death of 17 people. The incident may represent to some the pinnacle of irresponsibility displayed by a security contractor. Following the Nisoor Square incident, Blackwater, up to then, a major security contractor to the U.S. government and other organizations, became a pariah overnight, leading to the company being renamed twice over three years and, finally, sold by its founder Eric Prince. There is much to be learned and understood from Blackwater's role in government outsourcing, however, the past decade has shown the problems associated with irresponsible governmental outsourcing of security competences, lacking oversight, accountability, and regulation of private military and security contractors still persist. Regardless of all mishaps that have occurred, not only does government outsourcing to private military security contractors continue, but, moreover, as a result of the emergence of new security gaps, this type of outsourcing expands into areas previously unexplored by those endorsing regulation of private military and security contractors.

Purpose

The purpose of this paper is to explain the state of the private security industry and its involvement in the public sector. In the process of highlighting its in-

volvement of the public sector, this paper will highlight some of the current problems of security outsourcing in its current form. This paper will conclude with present some solutions to both states and the private sector to recognize, acknowledge and solve the current problem with deepening security outsourcing to the private sector.

B. Private Military Security Contractors

A little over a decade ago, the contracting boom in Iraq and Afghanistan started, leading private military security contractors to both fortune and notoriety. Companies, such as Blackwater are commonly referred to as Private Military Companies, a.k.a. PMCs. To clarify the terminology and in line with the Montreux Document, I will briefly list the varying categorizations in use and I will explain how these apply to companies that have or still exist.

1. Direct-Action Private Military Companies

In 1989, the South African government called up the PMC “Executive Outcomes” to militarily assist the state in the “Border War” with Angola. While the details of the conflict are not relevant within the scope of this paper, it should be noted that Executive Outcome was a private entity from South Africa that enlisted the services of former South African commandos to offer their military skills and services to those who were willing to pay. Executive Outcomes participated in direct action missions against Angolan forces, providing valuable assets to their client state, South Africa. However, the company was dissolved not long after the war was won, which may be related to the ethics of using private entities, also referred to as mercenaries or guns-for-hire to fight alongside states outside the established military and/or state hierarchy. The success and efficiency of Executive Outcomes ultimately established them as a threat to monopoly of force to states.

Nowadays, no state or organization that I am aware of, relies on the services of a PMC for direct action missions. Most private entities working for states or organizations in conflict or high risk zones operate in functions that are defensive. However, the recent emergence of new threats may lead to a shift in this development, which will be discussed in a later section of this paper.

2. *Private Military Contractors (PMC)*

While it may seem odd to use the same abbreviation twice, according to the definition of PMSCs from the Montreux Document, private military contractors are “private business entities that provide ... maintenance and operation of weapons systems; prisoner detention; and advice to or training of local forces and security personnel.”¹ Many nations and international organization use contractors to perform these functions. In Afghanistan, the US Department of Defense (DOD) is employing, as of Q3 2014, 17,914 contractors for maintenance and logistics, which constitutes approximately 35% of the total distribution of contractors working for the DOD in Afghanistan.² In UN missions, for example, UNCIVPOL personnel are also contractors, with the mission of training local national police and security forces. Training of local national military forces is also commonly conducted, at least in part, by contractor personnel. In Liberia, such training was conducted by companies DynCorp and PAE. In most cases, however, these contracts are not led by the UN, but by a contributing nation operating under the UN mandate.³ These private entities fulfill tasks for which the state military does not have sufficient personnel to complete such competences. On the other hand, contractors who fill these gaps in competences are veterans of the military or law enforcement, who are familiar with the tasks that they are contracted with.

3. *Private Military Contractors (PSC)*

The third category, per the Montreux Document description, consists of “private business entities that provide...armed guarding and protection of persons and objects, such as convoys, buildings, and other places.”⁴ Since the number of “official” protection personnel is limited, a lot of organization and states outsource their security needs to such companies. It should

¹ The Montreux Document: On pertinent international legal obligations and good practices for States related to operations of private military and security companies during armed conflict. Swiss Confederation. Federal Department of Foreign Affairs, 2008, Pg. 9.

² Department of Defence, Quarterly Consensus 2014: Contractor Support of U.S. Operations in the USCENTCOM Area of Responsibility, 7/2014, Pg. 1.

³ Mayer, Christopher Thomas. Interview, August 6, 2014.

⁴ The Montreux Document: 9.

be pointed out that the services in mind here, although including armed guards, are only limited to services that apply to defensive activities conducted by contractors. Private Security Contractors do not provide offense solutions to their clients under this definition. Aforementioned Eric Prince, maintains the argument that his company, Blackwater, was fulfilling a security contract for the U.S. State Department at the time of the Nisoor Square incident and other incidents that brought about notoriety to the company's and industry's image. The matter of security also extends to maritime security, most commonly to transport companies, such as Maersk, which have been prone to be targeted by Somali Pirates along the Horn of Africa. A similar, yet less menacing presence can be applied to security companies providing protection for local jewelers, banks, or concerned citizens in many cities, while law enforcement is still a power of the state, providing security and stability is not.

4. Private Military Security Contractors (PMSC)

Irrespective what type of services a company may provide, either PMC or PSC, such entities are commonly referred to as private military security contractors. As such, the aforementioned definitions of PMC and PSC both apply to PMSC and simplify the terminology and division of private entities fulfilling needs of states and non-state clients in security and defensive related matters.

C. Roles, Tasks and Expectations for Armed Forces

While the following accounts serve as analysis for the responsible use of private military security contractors, it is important to note that private military security contractors serve a purpose to modern armed forces. As aforementioned, personnel shortages force states to turn to private actors to fill the roles and tasks that would be normally done by military personnel. As of Q3 of 2014, the U.S. Department of Defense is outsourcing the following tasks to private military security contractors in Afghanistan:

Base Support:	5,239 (10%)
Communication Support	1,947 (4%)
Construction:	5,222 (10%)
Logistics/Maintenance	17,914 (35%)

Security	3,177 (6%)
Training	1,209 (2%)
Translator/Interpreter	3,920 (8%)
Transportation	4,657 (9%)
Medical/Dental/Social Services	253 (1%)
Management/Administrative	4,323 (8%)
Other*	3,628 (7%)
Total:	51,489

**Includes Defense Logistics Agency, Army Materiel Command, Air Force External and Systems Support contracts, Special Operations Command and INSCOM.⁵*

This summary of tasks helps create a basic overview of the roles and tasks that private military security contractors are entrusted with to maintain military operations for the U.S. in Afghanistan. While the majority of tasks and roles are outsourced in Logistics and Maintenance, an underlying development in PMSCs influence over states should be questioned in services such as Special Operations Command or INSCOM (Intelligence & Security Command).

D. Epistemic Power and Blackwater

While most scholars are concerned about the ethical use of private entities in the security tasks, which could challenge the state's monopoly on force, there seems to be less awareness to the influence that some PSMCs could gain through the state's outsourcing of what may be called "inherently governmental" functions.⁶ The term "Epistemic Power" was coined by Anna Leander in 2006 and once again addressed by Ase Gilje Ostensen in 2009, as "an ability to shape security discourses by setting agendas and selecting information and then by shaping security perceptions, defining security concerns and shaping the self-understandings of other security actors."⁷ This applies to a PMSC if they are contracted with roles and tasks that give

⁵ Department of Defence, Quarterly Consensus 2014: Contractor Support of U.S. Operations in the USCENTCOM Area of Responsibility, 7/2014, Pg. 1.

⁶ Clanahan, Keric D: Drone-Sourcing? United States Air Force Unmanned Aircraft Systems, Inherently Governmental Functions, and the Role of Contractors. The George Washington University Law School 2012. Pg. 1.

⁷ Østensen, Åse Gilje, International Peacekeeping. In the Business of Peace: The Political Influence of Private Military and Security Companies on UN Peacekeeping. 20:1/2013, Pg. 35.

them considerable impact on the actions of a state and/or other actors in conflict or high risk zone.

One of the greatest concerns when it comes to the extensive outsourcing of U.S. government to Blackwater in Iraq and Afghanistan was the varying segments of government that Blackwater was doing business with. Eric Prince does not deny having worked with the DOD, the State Department, and humanitarian aid organization, however, in his book, *Civilian Warriors*,⁸ is only able to confirm limited amounts of information regarding his involvement with the CIA. While it may seem dated to rely on the example of Blackwater as an example of private military and security contractor outsourcing, it still serves as a relevant example due to the volume of government contracts that the company had, which make Blackwater's experiences relevant to be analyzed through the scope of epistemic power. Blackwater had through its staggering success gained contracts that allowed it influence government employees and their actions.

Before the 9/11 Attacks, Blackwater had become well known for its specialized and tailored training courses for members of the military and law enforcement, which peaked after the attacks on the USS Cole and Columbine High school shooting. However, the Special Operations community, as well as the CIA, were faced with a governmental withdrawal of funds and competences.⁹ This dramatically changed after 9/11. Blackwater, through its own ranks, had come into contact with various individuals who became assets to the US intelligence community and their first steps against the Taliban regime, such as Afghan warlord Abdul Rashid Dostum.¹⁰ Through the contacts and information that was made available partly through the efforts of Blackwater, U.S. Special Forces Green Berets were able to launch their first strikes against the Taliban regime in Afghanistan shortly following the 9/11 attacks. These Green Beret missions were mainly described working alongside the Northern Alliance militia and lasing Taliban targets for air strikes.¹¹

⁸ Prince, Erik: *Civilian Warriors: The Inside Story of Blackwater and the Unsung Heroes of the War on Terror*. New York 2013, Pg. 6.

⁹ Boot, Max: Afterword: The CIA and Eric Prince. In: Prince, Erik: *Civilian Warriors*, New York 2013. Pg. 326.

¹⁰ Ebd. Boot: 326.

¹¹ Ebd. Boot: 327.

It is important to point out that the success of the Green Beret mission came from the information that was initially made available through the efforts of Blackwater, at least as it is recounted by Eric Prince in his book. After the 9/11 attacks, the CIA ramped up recruitment to gain personnel that it did not have to fill necessary competences. This increase in recruitment took place again in 2003, when the US prepared military operations in Iraq. This need to fill personnel shortages went so far as to sending inexperienced field agents to work in war zones in Iraq and Afghanistan. Blackwater had attained a good working relationship with the CIA and became one of its preferred companies when it came to static and mobile security, the aforementioned inexperienced field agents were even given instructions to be accompanied by Blackwater contractors when leaving their safe houses or executing operations.¹² Supposedly, some of the inexperienced operatives turned to Blackwater contractors, noting that these contractors had a Special Forces background, to assist in security planning or preparing operations.¹³ This suggests that Blackwater was in a position where it influenced inexperienced CIA operatives and focus on security threats that Blackwater contractors deemed necessary. While information is limited on the details of these operations, the expertise that contractors from Blackwater brought with them to their clients was deemed highly valuable.

Blackwater was never accused of misleading any persons under their protection with false information, however, it is undeniable that Blackwater had epistemic power and had attained contracts to influence clients. This can become very alarming when a state is becoming more inclined to turn to private entities to fill certain functions that the government lacks due to budget cuts to defense or human intelligence, while extending material capacities without the necessary personnel.

E. Irresponsible Outsourcing

Contracting out security and defense should be taken as a serious matter and the Nisoor Square incident was that impetus for the US and other states to review their oversight of PMSCs. Before the Nisoor Square inci-

¹² Boot, Max: Afterword: The CIA and Eric Prince. In: Prince, Erik: *Civilian Warriors*, New York 2013. Pg. 332.

¹³ Ebd. Boot: 333.

dent, PMSCs working for the U.S. government in Iraq were exempt from local jurisdiction and did not fall within the uniform code of justice of the U.S. armed forces, especially those that were not under contract with the DOD. Contractors working in Iraq were essentially in a legal loophole that made prosecuting any crimes committed by them difficult. While they could be discharged as a contractor by their client, prosecuting them was still a challenge. However, four of the six Blackwater contractors that fired the deadly shots in the Nisoor Square incident were finally convicted on October 22, 2014.¹⁴

While the blame for the Nisoor Square incident has been rested on the shoulders of those four contractors, this situation should not have played out as it did and could have been resolved if the government had made greater efforts towards regulating the soaring number of contractors that were and still are present in both Afghanistan and Iraq. In fact, it would have been in the interest of US government to consider some form of regulation when the ratio was a near 1:1 between military personnel and contractors, with over 100,000 contractors working in Iraq in 2007. Still, to this day, the State Department and other segments of the US government are heavily dependent on private military security contractors to provide security for their personnel in high risk / conflict zones, like Afghanistan and Iraq.

Lack of Regulation or lack of endorsement for regulatory mechanisms and certification is irresponsible outsourcing by states and other clients dependent on private military security contractors for defense and security.

F. Emerging Security Concerns & Expanding Service Portfolios

When Erik Prince stepped down as CEO, Blackwater was renamed twice and sold to a group of investors who operate the company “Academi.” However, Academi is just one of many PMSCs that are ready to fill competences for emerging security competences that may arise. These services

¹⁴ Lind, Dara: Why four Blackwater contractors were just now convicted of killing 17 Iraqi civilians in 2007 (October 23, 2014) <<http://www.vox.com/2014/10/23/7047519/blackwater-trial-nisour-square-massacre-2007-guilty-convicted>>, accessed on 19.11.2014.

provided by PMSCs today have expanded from the definitions and categorization of the Montreux Document.

Humanitarian Aid

In 2005, when Hurricane Katrina devastated New Orleans, Blackwater emerge as one of the first to respond and reinstate control over a city which had fallen into a near apocalyptic scenario, where armed looters were running rampant and law and order had failed. Even though the company did not have a contract, contractors were working together with local law enforcement to patrol the streets of the city and mitigating criminal activities committed by those who wanted to take advantage of the situation. Blackwater was successful in their cooperation and were granted by the government a near \$250,000 a day for working together with local law enforcement. In addition, according to Eric Prince, Blackwater saved 121 people who were trapped flood that devastated the city during the hurricane storm.¹⁵

The indiscriminant force by which a natural disaster can destroy and wreak havoc on a modern city was made clear by Katrina, and with the our understand of climate change the chance that natural disaster of similar magnitude can occur again and with increasing frequency, PMSCs have garnered skills and capacities to assist states, organizations, and communities in a worst-case scenario.

While Blackwater assisted in reinstating law enforcement in New Orleans, the fact that private military security contractors can be deputized to enforce law is a concept that some would argue challenges ethical question on the state state's monopoly on force.

Immigration

Both the war in Afghanistan and Iraq have displaced millions of people who are seeking a better life elsewhere from war. In addition, the recent conflict from the Arab Spring in 2011 has also led to more people from

¹⁵ Prince, Erik: *Civilian Warriors: The Inside Story of Blackwater and the Unsung Heroes of the War on Terror*. New York 2013, Pg. 365.

northern Africa and the Middle East to seek asylum in Europe and other parts of the world. This humanitarian crisis is a serious challenge for European governments and have been outsourcing their growing need for detention centers for asylum seekers to Private Military Security Contractors. A prominent example is G4S and its standing contract with the British government. On repeated occasions, G4S has been involved in incidents of physically abusing, as far as leading to death of asylum seekers under their supervision, such as the case of Jimmy Mubenga who died on his scheduled deportation flight from Heathrow Airport after being restrained by G4S contractors.¹⁶ Regardless of their misconduct and abuse of people, the British government maintains their contract with G4S.

In October 2014, a similar scenario took place in Germany, where a local company, European Homecare, was reported for the inhuman treatment of asylum seekers.¹⁷ Pictures were sent anonymously to a reporter that depicted two contractors of European Homecare tying together the hands and feet of an asylum seeker, while one of the contractors placed his boot on the head of the asylum seeker to pose for a photo. When questioned whether the company conducted any type of background check or sensitivity training for their employees, a company spokesperson responded that they did not have enough time to background check their contractors before assigning them to the detention center.¹⁸

There are numerous more occasions of abuse against asylum seekers against companies like G4S, and even though they may not have any epistemic power when dealing with asylum seekers, it should be questioned who is influencing decision makers from revoking contracts with these companies and claim that these incidents are hick-ups in a well-functioning operation. In addition, it is utterly irresponsible to not place greater empha-

¹⁶ Lewis, Paul. & Taylor, Matthew: Jimmy Mubenga death: prosecutor weighs up whether to charge G4S security guards (March 16, 2012). <<http://www.theguardian.com/uk/2012/mar/16/jimmy-mubenga-decision-due>>, accessed 19.11.2014.

¹⁷ German police raid security firm accused of abusing asylum seekers (October 06, 2014). <<http://www.dw.de/german-police-raid-security-firm-accused-of-abusing-asylum-seekers/a-17979500>>, accessed 19.11.2014.

¹⁸ Breitenbach, Dagmar: Germany's refugee abuse scandal triggers police probe (September 29, 2014). <<http://www.dw.de/germanys-refugee-abuse-scandal-triggers-police-probe/a-17961733>>, accessed 19.11.2014.

sis on training and certifying contractors to deal with asylum seekers. Even though immigration has become into a problem to be outsourced by states, not placing emphasis on the aforementioned, in addition to regulating PMSCs is irresponsible by states.

Ebola

While the recent outbreak of Ebola has not garnered much information in regards to how PMSCs are involved in mitigating the problem. Erik Prince has recently taken position that would he still be in control of Blackwater, he would have had the means and determination to respond to the current outbreak.¹⁹

Combating Terrorism / ISIS

In the aforementioned article, Eric Prince also commented that ISIS is “lucky that Blackwater is gone.” However, that hasn’t stopped private citizen to support Kurdish fighters in their struggle against ISIS. Members of the Dutch motorcycle gang “No Surrender” have recently traveled to Kurdish controlled territories in Syria to support Peshmerga fighters in their fight against ISIS. Not much is known about the individuals from “No Surrender,” other than that they were motivated to support the Kurdish fighters after ISIS released videos of people being beheaded, this according to the leader of “No Surrender.”²⁰ In addition, those who left to fight alongside the Kurds all, supposedly, have extensive military backgrounds, and have documented their travels; showing Europeans with tattooed arms, paramilitary outfits and AK type assault rifles posing next to Kurdish fighters in Syria. It is not clear whether these individuals are being

¹⁹ Suebsaeng, Asawin: Blackwater Founder Wants to Fight Ebola, ISIS, and for the GOP to ‘Get Off Their Ass’ (September 19, 2014). <<http://www.thedailybeast.com/articles/2014/09/19/blackwater-founder-wants-to-fight-ebola-isis-and-for-the-gop-to-get-off-their-ass.html>>, accessed 19.11.2014.

²⁰ Pleasant, Chris: The Dutch motorbike gang taking on ISIS: Three members of ‘No Surrender’ group join Kurds to battle jihadis after prosecutor says they aren’t committing any crime (October 14, 2014). <http://www.dailymail.co.uk/news/article-2793128/the-dutch-motorbike-gangs-taking-isis-three-members-no-surrender-group-join-kurds-battle-jihadis-prosecutor-says-aren-t-committing-crime.html>, accessed 19.11.2014.

financially compensated for their risks by the Kurds or any European government, which may want to deny any official participation in the conflict against ISIS. However, the Dutch government has come forward to announce that it is not illegal for Dutch citizens to participating as mercenaries in conflicts, as long as that the belligerent actor is not an enemy of the Dutch government.²¹

This law was recently amended and would suggest that being a gun-for-hire is not illegal for Dutch citizens. In addition, it was also stated that any crimes that these individuals may commit as mercenaries would not be prosecuted in the Netherlands, given the distance and lack of evidence to prosecute them.²² This is a disturbing development when considering the experiences made by the U.S. in Afghanistan and Iraq, when it comes to leaving private military security contractors unchecked with legal ramifications in a warzone.

G. Unmanned Aerial Systems

In 2009, a joint finding by the United Nations Department for Peace Keeping Operations (DPKO) and Department of Field Support (DFS) “identified ‘information gathering’ (more specifically observation/surveillance, night operations capacities and data management and analysis) as a capacities in ‘critical shortage’.”²³ This leads to the outsourcing of emerging technologies to mitigate current security concerns and personnel shortages. Captain Keric D. Clanahan of the U.S. Air Force, published a research paper highlight the outsourcing of unmanned aerial systems, colloquially known as drones, to private military security contractors.²⁴ In his article, he describes the various functions that contractors fulfill for each class of drone. As it turns out, the United States need for maintain and operating drones exceeds its own personnel capacities and, therefore, hires various PMSCs to foremost maintain drones, as to keep military personnel operat-

²¹ Ebd. Pleasant.

²² Ebd. Pleasant.

²³ Østensen, Åse Gilje: UN Use of Private Military and Security Companies: Practices and Policies. Geneva 2011, Pg. 30.

²⁴ Clanahan, Keric D: Drone-Sourcing? United States Air Force Unmanned Aircraft Systems, Inherently Governmental Functions, and the Role of Contractors. The George Washington University Law School 2012. Pg. 11.

ing them. However, tactical drones, such as the Scan Eagle, I-Gnat, Hunter, Warrior-Alpha, Tiger Shark, and other drone types, according to the U.S. Government Accountability Office,²⁵ are outsourced and operated by contractors. It should be noted that the drones listed, to the best of my knowledge, are not used for offensive actions, such as firing missiles or other weapons systems, but used for surveillance and information gathering.

The operation of Combat drones, however, such the Predator, Reaper, and Global Hawk, are also partially outsourced to contractors. According to Captain Clanahan's publication, functions such as maintenance, and intelligence analysis are entirely outsourced to contractors (100%), while Target Identification and Strategic UAV Operations are largely conducted by contractors (>75%), Tactical UAV Operation only half (50%), and laser designating targets only partly (<20%) outsourced to contractors. The only function that is not outsourced to contractors is Targeted Strike UAV Operations.²⁶

The emergence of unmanned aerial systems has revealed a rapidly growing need for contractors to fill the personnel shortages for competences that states do not have personnel for, however, these competences, as Captain Clanahan points out, are to be considered 'inherently governmental functions.'²⁷ As such, when looking at this development through the scope of Epistemic Power, one can see that PMSCs working in intelligence analysis are in a very influential position when it comes to directing the actions (targeted strikes) of the military. For example, in December 2013, a Yemeni wedding was struck by a drone strike near the city of Rad'a. The intelligence that may have led to the strike could have emerged as suspicious since it is a Yemeni custom in rural areas to travel in large groups from the bride's village to the groom's. As the convoy of cars transporting the 60 to 70 people was on its way to the groom's village, a drone opened fire, lead-

²⁵ United States Accountability Office: Unmanned Aircraft Systems – Additional Actions Needed to Improve Management and Integration of DOD Efforts to Support Warfighter Needs. Washington D.C. November 2008, Pg. 11-12.

²⁶ Clanahan, Keric D: Drone-Sourcing? United States Air Force Unmanned Aircraft Systems, Inherently Governmental Functions, and the Role of Contractors. The George Washington University Law School 2012. Pg. 35.

²⁷ Ebd. Clanahan: 37.

ing to the death of 12 people and injuring 15. The Yemeni government paid the survivors of the attacked \$159,000 and 100 Kalashnikovs, which the survivors interpret as an admission of guilt on part of the Yemeni government. When it comes to viewing this movement of 60 to 70 people through an infrared lens on a drone, that image of a large group travelling in al-Qaeda controlled territory, could be mistaken for something other than a wedding procession.²⁸

While there is no direct information available that the intelligence analysis that led to this drone strike had come from contractors, regardless, state's should question whether these functions should be outsourced and/or whether enough is being done to confirm the validity of a target before acting on information gathered. In addition, it is irresponsible on the part of states to outsource drone intelligence analysis for drone strikes to private military security contractors, since this area draws PMSCs closer to definition of direct action private military contractors.

Peacekeeping

When it comes to the application of drones in peace observation missions, the current Special Monitoring Mission in Ukraine by the OSCE has also recently acquired the services of the Austrian aerodynamics company Schiebel, which focuses on the production and operation of UAVs. In August 2014, the OSCE requested a turn-key solution for UAS operations for the Special Monitoring Mission and Schiebel was granted the contract. As more information is becoming available, it is currently known that 10 of Schiebel's Camcopter S-100 are currently being operated by Schiebel employees to gather information on the security situation in Ukraine for the OSCE Special Monitors.²⁹

²⁸ González, Juan: Turning a Wedding Into a Funeral: U.S. Drone Strike in Yemen Killed as Many as 12 Civilians (February 21, 2014). <http://www.democracynow.org/2014/2/21/turning_a_wedding_into_a_funeral#> accessed 19.11.2014.

²⁹ OSCE Newsroom: OSCE Special Monitoring Mission to Ukraine successfully completes the first flight of its Unarmed/Unmanned Aerial Vehicles (October 23, 2014). <<http://www.osce.org/ukraine-smm/125813>> accessed 19.11.2014.

This development was highly problematic for the separatists of the Donetsk and Lugansk People's Republic, and have responded that they would make every attempt to shot down the Schiebel drones, out of fear that the information gathered by the drones would be shared with the Ukrainian armed forces, exposing the positions of the separatists on the ground. This could be interpreted as a legitimate concern when viewing this through the scope of Epistemic Power. Upon taking the contract, Schiebel is operating in an area that could be interpreted as, aforementioned, 'inherently governmental.' If the information is intentionally or even unintentionally shared with the Ukrainian armed forces, Schiebel and its employees are participants in the conflict, since their information is shaping the security concerns and perceptions of the Ukrainian armed forces.

The threat of attempting to shoot down drones was made real on November 4th, 2014, on the day of leadership elections within the Donetsk People's Republic. An S-100 flew eastward from Mariupol, to observe the cease-fire truce between Ukrainian and Separatists forces. The drone was fired upon by an anti-aircraft weapon when the drone spotted a mobile infantry column in separatists controlled territory. The drone was able to land safely without taking damage. The OSCE has condemned the attack and held Separatist forces responsible.³⁰

Thus far, I have discussed some of the current developments in which government competences are being outsourced to private entities, while the future of outsourcing is not entirely certain, developing security concerns and growing gaps in state competences are likely to be solved through outsourcing these needs to the private sector. It is, however, important that state recognize the epistemic power that PMSCs gain when outsourcing drone operations and intelligence analysis to private entities. These functions could shift the actual decision making for targeted strikes from the state the contractors and thus turn, as Capt. Clanahan put it, the state into a rubber stamp of approval for the decisions and analysis of contractors.

³⁰ Ryabchenko, Nikolai: U.S. Accuses 'Russia-Backed' Separatists of Firing at OSCE Drone (November 4, 2014). <<http://www.themoscowtimes.com/news/article/u-s-accuses-russia-backed-separatists-of-firing-at-osce-drone-in-ukraine/510585.html>> accessed 19.11.2014.

States can help balance this development, however, by endorsing organizations and regulatory mechanisms that attempt to bring more control and oversight to Private Military Security Contractors.

H. Regulation

Attempts to regulate Private Military Security Contractors became pressing issues because of events like the Nisoor Square incident. The United States, and also others, realized that rampant outsourcing of governmental functions can lead to incidents for which states are not prepared for. The Swiss Government initiated in 2001 a project to help regulate private military security contractors through the development of the Montreux Document which served as a document to assist states in regulating the industry. However, even with its publications of in 2008, when it seemed that state regulation was highly needed, it had little impact on the willingness of states to regulate the industry. Partly because states within themselves are conflicted to the extent of how to regulate PMSCs and on whose authority. For example, the U.S. Department of Defense had a different opinion on the matter of regulating PMSCs than the State Department.

When regulation seemed to stagnate on the governmental level, the industry, referring to itself as the stability industry, established a “Code of Conduct” by which the members of the International Stability Operations Association, formerly known as the International Peace Operation Association, attracted PMSCs that wanted to distinguish themselves by honoring ethical standards in the services that they provide to their clients. These standards being established and influence by existing international humanitarian and human rights law, such as the “Universal Declaration of Human Rights (1948), Geneva Conventions (1949), Convention Against Torture (1975), Protocols Additional to the Geneva Conventions (1977), Foreign Corrupt Practices Act (1977), Chemical Weapons Convention (1993), Voluntary Principles on Security and Human Rights (2000), Montreux Document on Private Military and Security Companies (2008), International Code of Conduct for Private Security Providers (2010), UK Bribery Act (2010).”³¹ While the attempts of the ISOA and its industry centric approach

³¹ ISOA: ISOA Code of Conduct (October 20, 2011). <<http://www.stability-operations.org/?page=Code>>, accessed on 19.11.2014.

to distinguish ethical companies from others, there is a question regarding the actual enforcement and auditing of its members, and whether or not they adhere to “The Code of Conduct.” In addition, although “The Code” is available in a number of different languages the association only list 53 active industry members, mostly from English speaking countries.

The most recent and internationally successful attempt at regulating Private Military Security Contractors comes again from Switzerland. Building upon the Montreux Document, the International Code of Conduct for Private Security Service Providers (ICOC-PSP) was initiated in 2010, with the intent to creating a multi-stakeholder approach to regulating PMSCs. The goal of this multi-stakeholder initiative was to develop “objective and measurable standards for providing Security Services based upon this Code, with the objective of realizing common and internationally-recognized operational and business practice standards.”³² With the assistance of the American National Standards Institute (ANSI/ASIS), the ICOC established an internationally, albeit limited, accepted standard for private military security contractors. Before the ICOC-PSP developed into the International Code of Conduct Association (ICoCA), it garnered the voluntary support of over 700 private military security companies in September, 2013.³³

While the ICOC created a voluntary bases for companies to adhere to internationally recognized human rights laws, the ICoCA with its reliance on the ANSI/ASIS PSC standard series codified this adherence as a prerequisite for certification and membership to the ICoCA. As of now, the ICoCA lists 140 private military security contractors, 6 governments (USA, Canada, UK, Switzerland, Sweden, and Norway), and 13 civil society organization that support and uphold the Code of Conduct and PSC Standard Series 1-4.³⁴

³² International Code of Conduct For Private Security Service Providers’: Association, Articles of Association, Geneva 2013, Article 7. Pg. 4.

³³ International Code of Conduct for Private Security Service Providers: <<http://www.icoc-psp.org/>> accessed 19.11.2014.

³⁴ International Code of Conduct Association: <<http://www.icoca.ch/>> accessed 19.11.2014.

This is a highly encouraging development but more needs to be done, especially when it comes to overcoming future developments in defense and security concerns for states and other clients. While, the U.S. government and the United Nations require PSMCs to be members of the ICoCA in order to qualify for contract bids, it should be noted that the ICoCA is still in need for more governmental endorsement to become more effective at mitigating the risks of irresponsible outsourcing.

The significance of more government endorsement of the ICoCA is that it would create a Market Darwinist environment where PMSCs that are not associated with the ICoCA and independently audited for maintaining standards, will not gain the required certification that qualifies them for government contracts or that of international organization. In reflection to Epistemic Power, lack of regulation increases the risk of companies influencing the security perceptions of client states, while a standard can assist in mitigating that risk.

I. Conclusion

The purpose of this paper was to present current developments in governmental outsourcing to private military and security contractors. Analyzed from the perspective of Epistemic Power³⁵, potential problems will be put forward. In addition, the current trend of states outsourcing security competences to private military security contractors may very well expand in the near future, thereby allowing private actors to expand their influence on their clients' security perceptions. However, due to their lack of awareness of epistemic power and its potential risks, states may be at a disadvantage when confronted with such problems, similarly as back in 2007, when they were unprepared when it came to prosecuting Blackwater contractors on account of the incident in Nisoor Square. State will be the responsibility for recognizing what epistemic power is and where this applies to their outsourced competences, additionally, states must endorse existing regulatory mechanisms and standards to maintain a balance on the future developments of defense outsourcing to private military security contractors.

³⁵ Østensen, Åse Gilje, International Peacekeeping. In *The Business of Peace: The Political Influence of Private Military and Security Companies on UN Peacekeeping*. 20:1/2013, Pg. 35.

The key to responsible outsourcing, is for states to work together with private entity that embraces the challenges and concerns of states, without the state having to become overzealously involved in the certification of a company. This can be accomplished by endorsing and supporting international bodies that promote an internationally recognized standards for PMSCs, such as the ICoCA and their affiliated certification and auditing bodies.

Internationally recognized standards and trade association for PMSCs serve to help clients to distinguish ethical security providers from questionable ones. This market force, Market Darwinism, helps limit the emergence of companies gaining epistemic power on states and other security actors.

It is questionable how aware States are to the scope of governmental outsourcing, this is partly due to various government ministries having different requirements for PMSCs, as well as to the large amount of contractors working for the state already, such as the near 1:1 ratio of military personnel to contractors in Iraq in 2007. It is clear that were it not for these PMSCs, a lot military functions and power projections of the U.S. military would not be possible today.

Epistemic power may be difficult to quantify but a risk regardless and should not be underestimated by states when outsourcing inherently governmental functions, such intelligence gathering and analysis. Epistemic power is the ability of PMSCs to influence the security perceptions of client states or other security actors.

While the ethical question of outsourcing security is an important one, epistemic power through the outsourcing of intelligence gathering and analysis can develop to be a greater risk to the state's monopoly of force. In that regard, epistemic power could be used to redirect the question on the use of force, but on whose information is force used by the states.

States becomes more at risk to epistemic power when outsourcing intelligence gathering, be it through unmanned aerial systems (drones) or other technological innovations. If states outsource intelligence gathered entirely, as Clanahan presented, to private military security contractors, states could lose the ability to independently verify information and act on the decisions and conclusions of PMSCs than their own.

Currently, too few states support regulation of the industry, while spending millions, if no billions, on outsourcing security competences to private military and security contractors due to personnel shortages. The outsourcing of inherently governmental functions, if left unchecked, can leave states blind to the security environment they interact in, and may lead to states acting and reacting to challenges deemed appropriate by contractors.

Future outsourcing should be done responsibly and limited to functions where PMSCs are limited in their influence of state actors. Humanitarian crises from natural disasters are a place where states can benefit from the regulated assistance of PMSCs to maintain law and order. It is important for states to recognize the threat of epistemic power and limit the roles and tasks of private military security contractors to those where epistemic power can be limited or entirely mitigated.

The administration of asylum centers, albeit limited in epistemic power, should be better regulated by states through the endorsement of ICoCA and requirement for companies to be certified by the regulatory body. Responsible outsourcing to other tasks such as humanitarian assistance in disaster areas could also be possible, through the aforementioned method that states require PMSCs be certified and vetted ICoCA members.

Regarding the application for armed forces 2020, while PMSCs have become sources to fill shortages in personnel for states for military tasks, it is important to identify the epistemic power that PMSCs gain over a state's security perspective in certain roles and tasks that are being considered to be outsourced, especially when considering tasks such as intelligence gathering or clandestine services.

Part 8

Military Education

Civic Education in Armed Forces by the Example of Austria

Christian Krammer

New technologies are increasingly utilised in armed forces. Autonomous systems, robotics and cyber defence, to name just a few, require soldiers to have additional abilities, which have to be taken into consideration in future military instruction. Military instruction is, therefore, becoming increasingly demanding, requiring more time and money. Nevertheless, defence budgets are being reduced throughout Europe. This gap between the requirements – more time and money being needed, on the one hand, and fewer and fewer resources being allocated, on the other – poses special challenges for smaller states in particular. In addition to that, especially talented persons, who are able to successfully complete the demanding instruction, have to be recruited. Quite an amount of time and money is invested into the, by now, complex instruction, so that keeping the soldiers inside the system as long as possible has to be a primary concern of armed forces. But how can this be achieved in the best possible way?

In order to be able to answer this question, the job characteristics model by Hackman and Oldham will be used as a basis. The scientists propose a model with, inter alia, two important characteristics, by means of which proper job satisfaction can be achieved. The first characteristic is *task identity*. This means the degree to which the activity is rated as meaningful in performing one's job and how far the respective part of one's job performance is seen as necessary for the functioning of the entire entity. This means, in practical terms, the individual's contribution to accomplishing a state's military tasks (e.g. disaster relief, humanitarian operations, international peace-keeping or peace enforcement operations ...). A second important characteristic is known by the term *task significance*, which means that one's own job performance is seen as a necessity for the work and lives of others. Or formulated differently: Which part of a soldier's work is relevant to society?¹ In the Austrian Armed Forces the answers to these

¹ Cf. Hackman/Oldham, 2004, p. 200.

essential questions (characteristics) are covered in the field of civic education.

On the one hand, civic education in the Austrian Armed Forces is to contribute to understanding the security and defence-political contexts within the European Union and, thus, also in Austria (CFSP/CSDP, ESS, Austrian Security Strategy, international organisations, ...). On the other, it is to enable soldiers to understand from a European perspective the necessity to protect the Republic of Austria and its democratic social order as well as the meaningfulness of defending the Republic of Austria by means of weapons. In the end, one's efforts in the job need to be perceived as a contribution to military task accomplishment and, thus, to securing the democratic social order.

This research project named "Civic education in the Austrian Armed Forces" is, therefore, concerned with the primary research question: "Why does a democratic state in the centre of Europe need an armed force for its defence?" In this context also the didactic questions arise as to who is to impart which contents, to which target audience, how, and when in the course of its instruction. By systematically preparing the contents the target audience is to eventually find out the answer to the following meta-question: Why do soldiers serve and fight?

Since all members of the organisation "Austrian Armed Forces" contribute to its success, the question of the target audience can be answered quite easily. Civic education has to address all soldiers and civilian employees of the Ministry of Defence. In order to accomplish systematic preparation of the contents, first, the interaction between 'the military and society' has to be explained. Already the humanist Wilhelm von Humboldt arrived at the conclusion that, with regard to security against external enemies, the necessity would arise that reserve duty should

"(...) be given such a direction that it does not only (!) teach the valour, skill and subordination of a soldier, but makes them breathe in the spirit of true warriors or rather noble citizens, who are ready to fight for their fatherland."²

² Humboldt, 2002, p. 102.

The system of content preparation can, in turn, be deducted from subject-didactic fundamentals applying to school-based instruction. In the German-speaking countries the impartation of a competence model is aimed at. By imparting expertise and competence in judgement, methodology and occupation, the fundamentals are to be established, upon which autonomous political thinking going beyond school is to be developed and sustained, and which will allow for active participation in the forming of democratic processes in an intrinsically motivated manner.³

In this way, civic education in the Austrian Armed Forces is aimed at building the fundament for conscripts and short-term professional soldiers, so that they can concern themselves with security and defence-political questions also after dropping out of the Forces. Within the framework of expertise those knowledge hubs, which represent “relative stability” in the sense of basic knowledge, have to be taught.⁴ This basic knowledge, which is cross-linked via hubs, provides the newly generated knowledge with a reference platform of scientifically substantiated definitions, which makes subject classification and, thus, individual evaluation as well as issue and value-oriented evaluation of newly acquired knowledge possible. Sander presents this stable basic knowledge within the framework of civic education by way of basic concepts (e.g. power, law, common good, public sphere, shortage, etc.) in the field of school-based instruction.⁵

Built upon Sander’s basic concepts, the *basic concept of “The military and society”*, which represents in terms of content the “stable” core of civic education in the Austrian Armed Forces, was developed. Only by individually generating this basic concept, a self-reflective and critical examination of all further security and defence-political topics is possible. See the below illustration to obtain a graphic explanation of the basic concept of “The Military and Society”.

³ Cf. Krammer, 2008, p. 5.

⁴ Cf. Kühberger, 2009, p. 52.

⁵ Cf. Sander, 2009, p. 58.

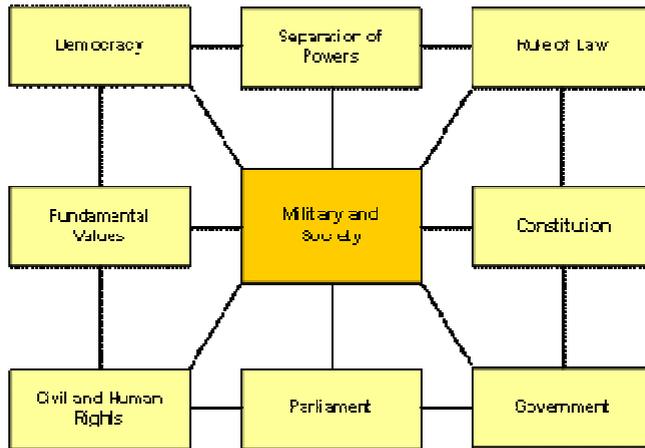


Illustration 4: Basic concept “The military and society”⁶

Through knowledge module “*Democracy*” the target audience is imparted the rights and obligations of Austrian citizens as well as their rights and obligations as soldiers.⁷

Knowledge module “*Separation of Powers*” explains the three state authorities, i.e. the legislature, the executive and the judiciary, underlining their mutual control rights and rights of influence, and the corresponding limitations of power.⁸

On the basis of the principle of “*Rule of Law*” the options to act of a state and its service personnel are discussed in particular with relevance to the Austrian Armed Forces; in so doing, it is elaborated in particular that public administrative acts can be made only on the basis of existing laws and that strict procedures are provided for all actions.⁹

⁶ Kramer, 2012, p. 31.

⁷ Cf. Die Grundprinzipien der österreichischen Verfassung [The fundamental principles of the Austrian Constitution]; weblink: <http://www.parlament.gv.at/PERK/VERF/GRUND/> (4 September 2014).

⁸ Cf. Gewaltenteilung [Separation of powers]; weblink: <http://parlament.gv.at/PERK/PARL/POL/ParluGewaltenteilung/index.shtml> (04 September 2014).

⁹ Cf. Die Grundprinzipien der österreichischen Verfassung [The fundamental principles of the Austrian Constitution]; weblink: <http://www.parlament.gv.at/PERK/VERF/GRUND/> (4 September 2014).

Knowledge module “*Constitution*” is used to present the foundation on which state actions are based and to legitimise the institutional structure of the state.¹⁰ From the security and defence-political viewpoint attention has to be called to the constitutional fundament, i.e. articles 9a, 79, 80, 81 and 23j of the Federal Constitutional Law and the Neutrality Act of the Federal Constitutional Law.

The tasks of the Federal Government in relation to the Austrian Armed Forces are addressed in knowledge module “*Government*”. Particularly the procedure for passing domestic and international operations in a constitutional manner is dealt with in this context.

Parliamentary tasks – to examine bills, adopt laws and supervise the work done by the government – are taught in knowledge module “*Parliament*”.

The fundamental freedoms, which are based on the civil and human rights, are explained in knowledge module “*Civil and Human Rights*”, illustrating, thus, the very foundations of orderly and peaceful coexistence.¹¹

Knowledge module “*Fundamental Values*” is the final topic that completes the basic instruction “The Military and Society”. Especially in the field of civic education the relevance of values like peace, freedom, equality and justice as the fundaments of every human comprehensive order needs to be stressed.¹² In addition, the development of value awareness will be required for exceptional circumstances of emotional stress, when decisions have to be taken that are morally consolidated and correspond to the social fundamental values.¹³ The total of these eight knowledge modules of the basic

¹⁰ Cf. Separation of powers; weblink: <http://www.parlament.gv.at/PERK/PARL/POL/ParluGewaltenteilung/index.shtml> (4 September 2014).

¹¹ Cf. Konvention zum Schutze der Menschenrechte und Grundfreiheiten in der Fassung des Protokolls Nr. 11 [Convention for the protection of human rights and fundamental freedoms in the version of Protocol no. 11]; available at: <http://conventions.coe.int/Treaty/ger/Treaties/Html/005.htm> (4 September 2014).

¹² Cf. BMUKK, Politische Bildung in Schulen, Grundsatz erlass zum Unterrichtsprinzip [Ministry of Education, Arts and Culture, Civic Education in Schools, basic directive on the teaching principle] p. 1. GZ 33.464/6-19a/78 – Wiederverlautbarung mit GZ 33.466/103-V/4a/94; weblink: https://www.bmbf.gv.at/schulen/unterricht/uek/pb_grundsatz erlass_15683.pdf?4dzm2 (04.09.2014).

¹³ Cf. BMLVS, Weißbuch [MoDS, White paper] 2008, p. 45. Weblink:

concept make up the stable body of basic knowledge that is required to understand the group of themes called “The Military and Society” and, thus, the legitimisation of armed forces in democratic ways of life.

Subsequently, going beyond the basic concept, a working group defined four groups of themes together with the respective thematic areas and contents, which describe the subject “Civic Education in Armed Forces”. As a supplement, those contents, which are required for understanding security and defence-political contexts, were systematically structured.

The first group of themes deals with “Fundamentals” and is, therefore, subdivided into the thematic areas of “The Political System in Austria“, “The Political System of the EU”, “Fundamental Values”, “The State and Society” and “The Military and Society”. In essence, the contents of the group of themes dealing with the “Fundamentals” also mirror the contents of the basic concept.

The second topic group “*General Topics*” deals with the thematic area of “*Current Conflicts*”, presenting the regional and global security situations and the threats for Austria derived from them. The thematic areas “*The EU & Global Players*” and “*NGOs*” further deepen civic education contents by taking a closer look at the strategic interests of global and major regional actors. At last, “*Contemporary History*” is to cover the time span from the beginning of the Second World War to the present, providing supplementary facts for understanding civic education in the Austrian Armed Forces.

In the centre of the third group are the “*Military-specific Topics of the Austrian Armed Forces*”. Passing through the topic of “*Threat Scenarios*”, the security and defence-political requirements, which are described in the area of “*Security and Defence Policy*”, are to be dealt with. Furthermore, the topics “*Austrian Armed Forces*”, “*Domestic Operations*” and “*International Operations*” are presented, taking into account also the structural framework conditions and tasks as well as the implementation resulting from this.

The fourth group of themes is made up of four thematic areas and comprises the major *International Organisations*. Three of these areas deal with the organisations and interests of the “United Nations”, the “OSCE” and “NATO” as well as the possibilities of cooperation between Austria and these international organisations, which arise out of Austria’s security-political orientation. As a complement to the already addressed topic “The Political System of the EU”, which was addressed in the course of topic “Fundamentals”, the “EU” is presented as an international organisation, with the focus lying on CFSP & CSDP and the consequences resulting for Austria’s security and defence policy.¹⁴

The groups and areas of topics and their contents as described above are summarised in the table below.

Complex of topics	Fundamentals				
Thematic areas	Political system in Austria	Political system of the EU	Fundamental values	The state & society	The military & society (multiculturalism)
Contents	<ul style="list-style-type: none"> • Democracy • Separation of powers • Rule of law • Constitution • Government • Parliament 	<ul style="list-style-type: none"> • Organs (Parliament, Council of the European Union, Commission...) • EU member states/enlargement • Structure and functionality • Austria and the EU 	<ul style="list-style-type: none"> • Concept of value • Change in values • Values in democracies • Discussion of values • Civil vs. military values 	<ul style="list-style-type: none"> • Forms of government • Government types • Ideologies • Civil and human rights 	<ul style="list-style-type: none"> • Defence systems and forms • The soldier and society

 ... Contents of the basic concept

Complex of topics	General topics			
Thematic areas	Current conflicts	EU & global players	Contemporary history	NGOs
Contents	<ul style="list-style-type: none"> • Middle East • Africa • Current regional conflicts 	<ul style="list-style-type: none"> • EU • USA • Russia • China • India... 	<ul style="list-style-type: none"> • 1918 – 1938 • 1939 – 1945 • 1945 – 1995 • 1995 – 	<ul style="list-style-type: none"> • Red Cross

¹⁴ Krammer, 2012, p. 34f.

Complex of topics	Military-specific topics in the Austrian Armed Forces				
Thematic areas	Security policy & defence policy	Austrian Armed Forces	International operations	Domestic operations	Threat scenarios
Contents	<ul style="list-style-type: none"> • Security doctrine & defence doctrine • Military-strategic concept • National Security Council • Comprehensive National Defence • Comprehensive Security Planning • Austrian Armed Forces 2010 	<ul style="list-style-type: none"> • Tasks/legal fundamentals • Structure • Battle Groups (Austrian contribution) 	<ul style="list-style-type: none"> • UN • NATO • PfP • EU • OSCE Austrian Defence Act sec: 2 para 1 e) Assistance in the event of humanitarian and natural disasters 	<ul style="list-style-type: none"> • Austrian Defence Act sect 2 para 1 a) Defence in the event of a military invasion b) Protection of constitutional institutions c) Assistance in the event of natural disasters 	<ul style="list-style-type: none"> • Terrorism • Proliferation of weapons of mass destruction • Irregular migration • Regional conflicts • Failed states • Organised crime • Shortage of resources • Risks of civilisation • Information warfare

Complex of topics	International Organisations			
Thematic areas	United Nations	EU	NATO	OSCE
Contents	<ul style="list-style-type: none"> • Organisation • Austria and the United Nations 	<ul style="list-style-type: none"> • CFSP • CSDP • Austria and the CFSP 	<ul style="list-style-type: none"> • Organisation • PfP • Austria and the PfP 	<ul style="list-style-type: none"> • Organisation • Austria and the OSCE

Table 1: Topics and contents of civic education in the Austrian Armed Forces¹⁵

These groups of topics, thematic areas and contents describing civic education had to be developed at the beginning; then the question of education levels in the Austrian Armed Forces had to be clarified. A recommendation of the European Parliament and the European Council proved helpful here. They recommend the member states to “use the *European Qualifications Framework to compare the qualification levels...*”¹⁶ The main instrument used for

¹⁵ Krammer, 2012, p. 36f.

¹⁶ Empfehlung des Europäischen Parlaments und des Rates vom 23. April 2008 zur Einrichtung des Europäischen Qualifikationsrahmens für lebenslanges Lernen [Rec-

classification is descriptors following the learning outcomes. There are eight levels in total and each of it is characterised by different descriptors, which in turn are composed of knowledge, skills and competences.¹⁷

The Austrian military educational system is made up of basically three vertical education pillars. The first pillar contains the training of professional soldiers, the second pillar militia soldier training and the third pillar the training of the civilian employees in the military. First, all curricular descriptions of learning objectives of all training courses are assessed, with the eight descriptors using descriptions of the European Qualifications Framework (EQF) and the National (NQF) Qualifications Framework as a reference value. In a second and final step the training courses with the same EQF/NQF assignments were subsumed into one education level. In so doing, a total of five education levels emerged, ranging from EQF/NQF Levels 3 through 7. The *five education levels* received the following names starting from EQF/NQF Level 3: *Basic Level* (conscript training), *NCO Level 1* (NCO basic training), *NCO Level 2* (staff NCO training), *Officer Level 1* (basic officer training, BA) and *Officer Level 2* (higher officer training, MA).¹⁸ See the below illustration for a graphic representation of the “*Five-Level Civic Education Model*”.

ommendation of the European Parliament and Council of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning] (2008/C 111/01); available under: http://www.lebenslanges-lernen.at/home/nationalagentur_lebenslanges_lernen/nqr_koordinierungsstelle/der_europaeische_qualifikationsrahmen/ (02 September 2014).

¹⁷ Deskriptoren – Hauptgrundlage für die Zuordnung [Descriptors – major basis for the classification]; weblink: http://www.lebenslanges-lernen.at/home/nationalagentur_lebenslanges-lernen/nqr_koordinierungsstelle/nqr_deskriptoren/ (02 September 2014).

¹⁸ Cf. Krammer, 2012, p. 55-81.

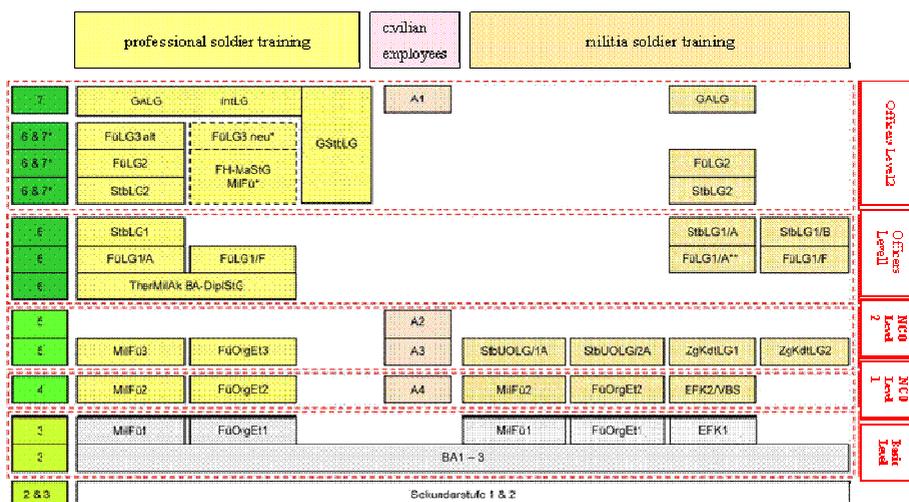


Illustration 2: Five-Level Civic Education Model¹⁹

By using the already developed contents of civic education, the description of the learning objectives for the five education levels could be produced. A special challenge was drawing up the descriptions of the learning objectives for EQF/NQF Level 3 (basic level), because the target audience of this level is mainly comprised of newly inducted conscripts proceeding from the institutionalised school system. Since 2008 civic education has been taught at Austrian schools from 6th grade onwards (12-year-olds) as a separate subject in combination with history. In the sense of connectivity of learning, therefore, the school curricula for civic education were also taken into account. David Ausubel came straight to the point of the implications of theoretical learning by stating that “The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him accordingly”.²⁰ In order to clarify this work step for practical application, only the descriptions of the learning objectives for the basic level are to be outlined as shown in the table below.

¹⁹ Krammer, 2012, p. 78.

²⁰ Ausubel, 1968, p. VI.

	Description of Learning Objectives
Fundamentals	<ul style="list-style-type: none"> ¶The learner is able to describe the democratic principle. ¶The learner is able to understand the principle of the separation of powers into the branches legislature, executive and judiciary. In this context the learner identifies the position of the Austrian Armed Forces as well as other security-political relevant ministries and government organs. ¶The learner is able to generally outline neutrality. ¶The learner is able to describe the fundamental Austrian values.
General topics	<ul style="list-style-type: none"> •On the basic level: none.
Military-specific topics	<ul style="list-style-type: none"> ¶The learner can distinguish between possible threat scenarios from a national perspective. ¶The learner can roughly list the tasks of the Austrian Armed Forces (Art. 79 Federal Constitutional Act, § 2 Defence Act, 9a). ¶The learner understands the basic principles of mutual assistance and the solidarity clause and is able to distinguish between the two.
International organisations	<ul style="list-style-type: none"> ¶The learner is able to identify the general objective of CFSP and CSDF. ¶The learner can list examples of international operations with reference to international crisis management. ¶The learner can generally describe the tasks and objectives of the United Nations, the OSCE and of NATO with a security- and defence political relevance for Austria in a simple form.

Table 2: Description of the learning objectives of the basic level

For the education of conscripts 10 training units used to be available. In the meantime the necessity for civic education has been realised in the offices responsible for training in the Austrian Armed Forces and, thus, the number of such training units was increased to 20. In this process, the author of this study was tasked with making the gained findings available to the forces, first on the basic level (EQF/NQF Level 3) in the form of education products. The requirement for this can be deduced from the complexity of the matter. Civic education in armed forces constitutes a cross-section subject, since, aside from legal contents, also ethical-moral, security-political and historically documented contents are to be taught. It is also important to note that teaching these contents on the basic level (conscript education) poses special challenges for the lecturers – young officers and experienced NCOs – because they have to impart highly complex contents in the simplest form to differently educated target audiences, and this practically in a secondary function.

This challenge was met in such a way that the topic of civic education was developed with reference to the school system in terms of content as a supplement for the military occupational area, filled with security and defence-political contents. For this purpose, *eight lesson plans* (presentations)

with *accompanying booklets* were developed. The eight lesson plans were thematically defined on the basis of the already developed description of the learning objectives for the basic level. The first lesson plan goes by the name of “*Fundamental Values*”. It comprises an introduction into the general concept of value. In the following, civil values are contrasted with military values. The next lesson plan deals with the topic “*Democracy and the State*”. At first, the democratic principle and the state authorities are presented. The focus regarding state authorities lies with the Austrian Armed Forces. The following lesson plan is concerned with “*Neutrality*” and deals with the nature and the influence of Austria’s neutrality as compared to those of Ireland and Switzerland as well as the non-alignment of Finland, Sweden, Malta and Cyprus. This, at first, theoretical comparison of different neutralities is followed by lesson plan “*Solidarity and Mutual Assistance*”, which deals with the practical compatibility of the Austrian neutrality with the European Union, by discussing Austria’s and Europe’s respective obligations of mutual assistance and solidarity. In lesson plan “*European Union*” the fundamental features of the European Union’s political system are presented and an overview of CFSP and CSDP is given. The sixth lesson plan is named “*UN-NATO-OSCE*”; it is about the nature and the influence of three organisations of which Austria is a member (UN), a participating state (OSCE) and a cooperation partner (NATO). The second last lesson plan is called “*Threat Scenarios and Tasks of the Austrian Armed Forces*” deals with the conclusions for the Austrian Armed Forces as derived from the previous lesson plans. This lesson plan provides an overview of the Austrian security strategy and deals with the constitutional tasks of the Austrian Armed Forces. In the eighth and, for now, last lesson plan, due to its military relevance, conscious redundancies are made with regard to the contents to the previous lesson plan. This lesson plan goes by the name “*Participation of Austrian Soldiers*” and it explains the legal framework for the international operations of the Austrian Armed Forces and Austria’s most relevant operations on behalf of the UN, NATO and the EU. Aside from the content-related guidelines, the lesson plans constitute a minimum that should be imparted, and further input of additional information and personal experience is highly welcome. The lecturer may add his personal note, e.g. by relating his own experiences made in operations or use his own photo material, for instance.

For each of the eight lesson plans accompanying booklets have been elaborated, aimed at giving the lecturers a target-oriented and solid teaching aid for preparation. Essentially, the accompanying booklets contain the background information necessary to use the lesson plans in class as a lecturer.

Aside from this support in terms of content by way of accompanying booklets, didactic-methodical support is given in the form of the accompanying booklet *“Didactics”*. The core element of it is what is known as *“Beutelsbach Consensus”*, which provides the guidelines for teaching civic education in the German-speaking area. Because of the historically burdensome legacy, in conveying contents lecturers have to especially observe the *“Prohibition of Indoctrination”*. The following is prohibited in accordance with this act: *“...to take the student by surprise – by whatever means – in the sense of desirable opinions and, thus, to hinder him from arriving at his own independent judgements.”* In addition, any topics and contents have to be presented in the same way that they are presented in science and politics as well. Lastly, this didactic guideline is aimed at providing the students with competences helping them to achieve political maturity so that they are able to analyse a political situation and their own interests.

Before these education products were distributed in the form of lesson plans and accompanying booklets, evaluation was conducted by way of a pre-test and a main test. The aim of the main test was to check the acceptance of lecturers with regard to the handling of teaching material and the understanding on the part of the conscripts, as a result of which targeted improvements could be undertaken. The survey was conducted in accordance with Ministry of Defence guidelines in five different units, comprising 406 conscripts and 21 lecturers. Upon completing this quality assurance measure, the education products were distributed as of 3 November 2013 at the EQF/NQF Basic Level nationwide to the forces, so that the question whether armed forces are required in democracies and, thus, whether one’s contribution as a soldier or civilian employee within the Austrian Armed Forces is meaningful can be presented in a comprehensive manner.

Which challenges emerge in the future in this context?

In analogy to the existing education products, which have already been developed for the basic level, the other four levels of education still have to

be elaborated. In addition, lecturers in civic education (officers and experienced NCOs) have to be prepared for their respective tasks in terms of didactics and methodology as well as the content in the course of their career advancement courses. Since civic education is taught from 6th grade onwards in Austrian schools – in parts filled with security-political contents – the National Defence Academy might offer seminars with a security and defence-political orientation for interested teachers of the institutionalised school system. Cooperation with the Ministry of Education has already been established. After establishing civic education in the Austrian Armed Forces, the learning outcomes would have to be cross-checked by means of learning status diagnoses for the purpose of quality-assured instruction.

On 20 January 2013 a referendum was held on what the Austrian defence system should be like in the future. The people decided on maintaining the universal conscription system. From a defence-political view point the population thus spoke out in favour of maintaining the close connection between the military and society. This popular vote on universal conscription resulted in the establishment of a “Centre for Human-oriented Leadership and Defence Policy”. This Centre should become operational in January 2015. All measures that are still required to flesh out civic education can, therefore, be innovatively launched from a central location. This would certainly be a milestone in teaching the essential question of the military in the 21st century.

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Irritants to Pearls: Military Education, Epistemic Communities, Communities of Practice and Networks of Learning

David Last¹

Abstract: Drawing on interviews and site visits involving 30 institutions in 13 countries, this paper describes common concerns and irritants amongst instructors and administrators in higher education security institutions including military and police academies and staff colleges. These irritants are associated with the challenges of security bureaucracies and universities. Work on epistemic communities suggests that the widespread irritants faced by these institutions may represent emerging common norms, accompanying the emergence of informal communities of practice and networks of learning with more institutional support. Comparison with other professions suggests the potential for transnational cooperation amongst majority countries to improve evidence-based practice in the face of emerging challenges.

This paper began with the larger question, what are security leaders learning as part of their professional education? In the last five years of exploring that question, I have heard similar complaints and concerns in military and police academies and staff colleges in more than a dozen countries. At first, I thought that these issues were incidental to the main questions under investigation. Now, however, I think that these common irritants are significant. When officers are educated in university-like environments, their teachers and administrators adopt university norms. This can help bring them into an epistemic community, which lends itself to research and international communication of evidence-based practices. It is possible that this international epistemic community will make them, and their institutions, more open to human security and international security paradigms than to so-called realist paradigms for competitive national security and war fighting. If there is hope for this outcome amongst majority countries, then

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it is a short leap to suggest that security institutions engaged in higher education might enable military and police leaders to conduct research and communicate internationally, facilitating cooperative solutions to emerging security challenges. The pearl of understanding collaborative security may emerge from the irritants of struggling to work in a military or a police educational institution that strives to be a university.

The Global Security Education Project began with the simple descriptive question: what are the world's security leaders learning? From the resulting descriptive data, a lot of analytical and normative questions can be posed, for example about the role of institutions and professions in shaping security relations between states, about the changing role of states in producing security for territories and peoples, and about the contribution of security education to national goals. At the international level, these questions are most commonly addressed from the perspective of major powers, but we have been concerned with so-called majority countries—those below the top tier of major powers, and above the bottom tier of small or dysfunctional states. Seen from a capital like Washington, multilateral ties are a strategic asset: “It has been the long-standing policy of the United States to cultivate direct and even personal relations between its military and those of other countries focusing in particular on the role of international professional military education.” (Sokolsky, 2014). Big powers may have the illusion that they can control their security environment, often using educational diplomacy as a tool of influence. Majority states have no such illusions, and have more incentives to manage security cooperatively. Smaller countries may be no less calculating and self-serving in their pursuit of multilateral professional educational contacts but for them self interest demands more collaboration.

Theory and data

The conceptual framework for the Global Security Education Project consists of three bodies of theory. (These are reviewed in Last, Emelifeonwu, and Constantineau, forthcoming). First, to understand the international influences on education and the educational influences on national security, we follow Buzan and Waever (2003) and the work of the constructivist school in defining regional security complexes, within which national understandings of security are shaped.

Second, to understand security education institutions, including military and police academies and staff colleges in the context of their larger military and police organizations, we draw on institutionalism in political science. The rationale for combining consideration of military, police, and paramilitary educational institutions is threefold. First, smaller countries must manage with less specialization, and the divisions of function are not as clear as they are for larger states. Second, military and police roles are becoming blurred as military forces are deployed in international constabulary roles, or as police forces are used in paramilitary roles for internal or international security. Third, many challenges – like terrorism, survival migration and environmental disasters – are not intrinsically linked to either military or police roles, but demand collaboration.

The third body of theory is the most important for this paper. To understand the production of knowledge and the emergence of communities of knowledge and practice, we draw on the sociology of knowledge, including social realism, ideas about knowledge translation, epistemic communities, communities of practice, and learning networks. Most of the explanatory sources that follow are from this literature.

Primary data to support this study include interview data from seminars on civil military relations and peace support operations conducted in four countries since 2009, in which officers from more than 30 countries have participated.

Interview data from International Seminars	Site visits and thick descriptive data
Serbia, 2009 BOS, HRV, MTN, KOS, SRB, NLD Botswana, 2011 BEN, BOT, DJI, JOR, KEN, MLI, NAM, NIG, RWA, SEN, TZA, UGA Brazil, 2012 ARG, BOL, BRA, COL, ELS, HON, JAM, URU, CHL, GTM, MEX, PER, CAN Indonesia, 2014 AFG, BGD, JOR, KEN, MNG, MAR, MYS, NPL, NIG, NLD, PAK, KOR, SEN, TNZ, THA	2008 – Netherlands, Mongolia 2009 – Serbia, Croatia, Israel, Palestine 2010 – Japan 2011 – Botswana, South Africa 2012 – Brazil 2014 – Indonesia, Singapore, Malaysia

Table 1 Sources of data; ISO standard country codes are used

The participants have generally been senior officers with an operational rather than an educational focus, although staff and instructors of military academies and staff colleges, and the occasional senior police officer have been included amongst them. The basic interview technique in these settings has been a superficial life-history account of their higher education: what courses have they taken and where; what did they learn. Combined with open-source data, this approach has helped to map more than 300 security education institutions in some detail, and suggests that there are more than 600 such institutions that should be of interest. Because the institution, rather than the individual, is the object of study, and because multiple individuals from any given country or institution contributed knowledge about their programs, k-anonymity protects individual respondents (Sweeney, 2002).

The interview data from seminars, augmented by open sources, tend to provide a superficial picture of an institution. The other source of data is site visits and/or faculty and administrator interviews resulting in thick descriptions of individual institutions and the environment within which they pursue security education. For these data, we have to be more careful about identifying complaints, because teachers and administrators are unwilling to air criticisms of national institutions in public and international forums. However, the provisions of k-anonymity can be met now that more than 25 institutions in a dozen countries have been explored, making it impossible to associate these generic irritants with individual institutions.

Country	Institution (names Anglicized for comparison)	Type-level
Austria	National Defence Academy, Vienna	M-2,3
Botswana	Defence Command and Staff College, Gaborone	M-2,3
Brazil	Naval Academy, Rio de Janeiro Command and Staff College, Rio de Janeiro National Defence College, Rio de Janeiro Military Police Academy Barro Branco, Sao Paulo	M-1 M-2 M-3 G-1
Canada	Royal Military College of Canada, Kingston College militaire royal, St. Jean Canadian Forces College, Toronto	M-1 M-1 M-2,3
Indonesia	Indonesian Military Academy, Magelang* Command and Staff College, Bandung* National Defence University, Jakarta	M-1 M-2 M-2,3
Japan	National Defence Academy, Yokosuka	M-1

Malaysia	Royal Military College of Malaysia, KL National Defence University of Malaysia, KL Armed Forces Staff College, KL Armed Forces Defence College, KL Royal Malaysia Police College, Kuala Lumpur	M-1 M-1,2 M-2 M-3 P-1,2,3
Mongolia	Sukhbattar National Defence Academy, Ulaanbaatar Border Training Institute, Ulaanbaatar National Police Academy, Ulaanbaatar	M-1,2,3 G-1 P-1,2
Namibia	University of Namibia, Windhoek*	M-1
Serbia	National Military Academy, Belgrade*	M-1
Singapore	Singapore Armed Forces Technical Institute Goh Keng Swee Command and Staff College* Home Team Academy	M-1 M-2,3 P,G-1,2
South Africa	Command and Staff College, Pretoria South African Military Academy, Saldhana Bay	M-2 M-1
Sweden	National Defence University, Stockholm	M-1,2,3

Table 2 Institutions visited (or faculty interviewed) 2008-2014

*Interviews only, rather than site visits

M=military, G=paramilitary/gendarme, P=police

1=entry level, 2=mid-career, 3=senior officer

Common Irritants and concerns

What are the common irritants or concerns amongst these institutions? To begin with, information about these irritants was not solicited as part of the research design. Rather, it has emerged from active interviews (Holstein and Gubrium, 1995) with professors, administrators, and students. Without tapes or transcripts, results are impressionistic, but might be confirmed by future discussion or surveys through the collaborative research space established for the project. Issues can be grouped in four categories: those common to public universities; those common to public service; the intersection of these two categories; and issues unique to higher education in security (for military, police, and gendarme officers). The placement of individual irritants or issues in each category can be debated, and may vary across countries. Although we have data from only 30 institutions, anecdotes from scores of others suggest that these are almost universal concerns amongst institutions providing higher education to military and police leaders.

First, in common with public universities, military academies and staff colleges are concerned with academic reputation, the recognition of credentials such as degrees and certificates awarded, and problems of quality assurance. This means that staff attention is drawn to the importance of scholarly publications, teaching standards and pedagogy, research funding, and the use of appropriate technology in the classroom. Sometimes instructors are more concerned about these issues than administrators. Governance of the institution, and the penetration of corporate management into governance decisions becomes a factor in pursuing these university-like objectives. For example, it is common for professors, civilian or uniformed, to opine that some commanders or administrators understand academic requirements, and others do not, or that some administrative actions undermine the academic objectives of the institution. The most common causes of these complaints relate to use of time, demands on students, allocation of funding, and support for research activities.

The second broad category of concerns is shared with other public service units, departments and agencies. This is unsurprising; military and police academies, staff colleges, and training establishments are units of the public service and live by the rules and procedures of government service. The handling of official secrets, the sharing of information, and questions of loyalty are often of concern in this category. Counter-terrorism plans and preparations provide an example that seems to transcend all of the types of institutions under examination. Decisions have to be made about which presentations can be shared with other government departments, with international visitors, and with members of the public. Cooperation with the private sector, commercial interests, and economic pressures to serve particular government agendas also seem to be widespread. The shift from traditional public administration values (Osbaldeston, 1992; Aucoin, 1995) to new public management paradigms (Aucoin, 1995; Barzelay, 2001), and the emergence of digital era governance (Dunleavy et al, 2006; Margetts, 2013) have become points of friction in the management styles of many of the institutions examined.

The third category is the intersection of the first two. Here, language of instruction is a special concern. Countries with many vernacular languages and a common international language introduced in colonial times (usually English, French, Spanish, Russian, or Arabic) face a choice about the lan-

guage of higher education. Many institutions insist on qualification in an international language, and in some, classes are offered in both local and international languages. The decision to offer courses only in an international language, or to insist on a thesis or examination in that language, has implications for national identity, and for the flow of information and access to bodies of knowledge. On the other hand, use of a vernacular language for graduate study causes some instructors and administrators to worry about isolation and loss of international credibility if they can draw only on indigenous sources.

The third category also includes hiring, tenure and promotion decisions, academic freedom or freedom of enquiry and responsibility for advice to the public (rather than advice strictly to government). The roles of specially established centres or institutes as vehicles to generate and publish new knowledge relevant to policy are another area of concern and potential conflict. For example, establishing new centres can provide comfortable sinecures for generals or senior officials, and may produce analytical horsepower and regular publications, but may lack the credibility or reputation of universities, and may compete with them for resources.

Central to this intersection of university and public service demands is the potential for conflict between the intellectual pursuit of truth, and the professional demands of support for government policy. This conflict manifests itself whenever research or evidence contradicts the established ideology, policy or preferences of a government or ruling elite. Here the tension arises from public servants criticizing their employers in public, or living with the frustration of biting their tongues, or facing the consequences of contradicting those in authority.

There is a final category, which seems to be unique to higher education in security, although analogues may be found in other professions. This consists of debates about the appropriate balance of socialization, education, and training, and seems to be a perennial topic of discussion in every institution I have visited. Socialization is the inculcation in students of values, attitudes and beliefs. Education is the cultivation of habits of mind, particularly critical thinking and problem solving, accompanied by knowledge within appropriate disciplines. Training is the development of skills and abilities. All of the institutions listed in Table 2 engage in some combina-

tion of training, education, and socialization, and the balance is often hotly debated, particularly in the form of arguments over timetables.

When professionals in an institution providing higher education are concerned with these four groups of issues, then they may be part of an emerging epistemic community, which has the education of security leaders as its common policy objective. This brings us to the question of epistemic communities: what are they, how do they form, and why are they important?

Epistemic Communities

Epistemic communities are groups of people who think about things in similar ways and take action towards a common objective as a result. Such communities are responsible for managing the Cold War, stabilizing (or destabilizing) financial markets, slowing ozone depletion, fighting climate change, diminishing smoking and advancing public health. Epistemic communities are characterized by: an agreed body of knowledge—what do we know; principled ideas—what facts are important; causal ideas—what causes the phenomena we are most concerned about; and a common policy objective—what are we trying to do (Adler, 1992; Adler and Haas, 1992). The irritants or concerns described above do not, by themselves, indicate the presence of an epistemic community. However, they do indicate common collective expectations about the proper behaviour of higher education security institutions, and this is significant because of the way in which epistemic communities are formed.

Kuhn (1962) describes the establishment of a ‘normal science’ involving the acceptance of a common paradigm. Within that paradigm of accepted analytical frameworks and essential evidence, work continues to test and incrementally accept or falsify hypotheses about relationships and causation. Paradigms, as Kuhn uses the term, have many lives and expressions (Hacking, 2012; Gattei, 2008), but norms – or collective expectations about proper behaviour – are central to most uses of term. As Bloodgood (2008) writes, norms and paradigms travel together, and common expectations about proper behaviour aid the formation of communities. My argument is that the common irritants or concerns of military and police academies, staff colleges, and research centres represent emerging common expecta-

tions about the behaviour of institutions engaged in higher education for security leaders in majority countries. These common expectations are coalescing around university norms – free enquiry, pursuit of the truth, scientific methods and standards of evidence, critical thinking, and research-based teaching to advance knowledge. When they take root in military and police academies and staff colleges, these norms have inevitable consequences for socialization and training, as well as education.

Once established, the norms act as a filter for the adoption of ideas. They make it harder for majority countries to import doctrine and thinking from major powers without critical examination. In the course of that examination, doctrine and thinking is adapted to the unique circumstances of the country. To provide just one example, 15 years ago, most staff colleges in Africa and Latin America were teaching conventional formation operations in brigades and divisions to officers who would never fight in brigades or divisions, and who served in military forces that did not field many of the combat systems for which the doctrine had been developed. They learned about conventional combat from major powers, because that is what was expected of professional officers at the time. But a decade after the end of the Cold War, the proportion of time spent on operations other than war had increased, the number of security and peacekeeping research centres in majority countries had increased, and materials were being published locally, where previously they had been imported. Independent thinking in higher education security institutions had begun to change the paradigms for military operations in majority countries.

Professional education

Professions, and hence security educators, face choices about the norms, causal beliefs, and bodies of knowledge to which they contribute and about which they teach in military academies and staff colleges. Although the bifurcation is a caricature, we can draw attention to the stark distinction between the billions spent on medical technology, hospitals, and cures and the pittance spent on public health and prevention. Most professions face a range of value choices, which in turn shape the epistemic communities and communities of practice emerging from them. In medicine, the spectrum might be cure versus prevention; in law, it might be litigation versus dispute resolution; in military science, it might be war fighting versus peacekeeping

and humanitarian operations; in police science, it might be reactive paramilitary policing versus community policing and social work. The relative influence of the groups adhering to various norms and causal beliefs will have a big impact on resource allocation and public policies relevant to each of these professions.

Professions seek to monopolize expert knowledge and command social resources, so they are in natural competition with other professions (Abbott, 1988). They often seek support of external allies. Economic interests, for example, play an important role in supporting, or obstructing, epistemic communities that emerge within professions: the medical-industrial, military-industrial, and security-industrial complexes are examples. The less indigenous research and knowledge-production there is within a profession, the larger the role that economic, ideological or other international interests play in shaping policy and professional practice. This leads us to the role of university-like institutions in developing epistemic communities for security.

Universities might be thought of as factories for generating and marketing useful knowledge but they also produce social understanding of reality. Professions invest in professional schools within universities both to prepare their members and to shape society. As education and literacy rises in the general population, it is increasingly important for professions to command their own “knowledge-production facilities,” even in smaller majority countries. Professional schools help to define language and concepts, which society then uses to describe reality, hence shaping it (Berger and Luckman, 1991). When professors teach professional students, particularly at mid-career, they include both empirical and normative elements (Maton and Moore, 2009). For example, a lecture on strategic air power or military history at the Canadian Forces College and at nearby York University will have quite different content and intent. The relative credibility and influence of the narratives emanating from the two institutions has an effect on social perceptions and on political decisions about resource allocation, so the charisma and authority of scholars in higher education security institutions are important for the future of the profession’s status and capacity in society (Rogers, 2010).

William Clark's (2006), *Academic Charisma and the Origins of the Research University*, demonstrates that western research universities have evolved as ego-driven and individualistic institutions. University incentives are therefore different from those of government departments, even when the university (like most military and police colleges or universities) is a public institution or a unit of a government department. Good staff work is plagiarism – an anonymous bureaucrat pens the letter or speech for a more senior bureaucrat or a minister. Public criticism is not acceptable in most bureaucracies. But good academic practice acknowledges sources and rewards original ideas, intellectual controversy and public debate. The military or police university will therefore always be in potential tension with its bureaucratic parent. This is particularly true when it seeks to generate new knowledge, rather than accept and transmit established doctrine.

The nature of the security professions puts special emphasis on mid-career education. Most professions – medicine, law, engineering, accounting, or religious ministry, for example – begin with a broad body of knowledge, and then encourage individual professionals to become increasingly specialized as they advance (Etzioni, 1969; Abbott, 1988). Soldiers, police, and bureaucrats are different. They begin with a specialized body of knowledge and then develop more general knowledge as they progress to the rank of General. Even civilian bureaucrats may be designated Directors General. The label “General” is important. They begin life as infantry, artillery, naval or flying officers, and learn how to assemble these specialties as they advance to mid-career staff college courses, and eventually to senior leadership courses, which help to integrate military and police forces with government policies and objectives. This inversion of the normal professional pattern is necessary because it takes time to master complexity, and because Generals must merit the trust reposed in them (Allen, 2012).

The inverted profession has an important consequence for professional education. Military universities (there are comparatively few police universities) tend to prepare leaders with a liberal education at entry level, and managerial training at mid-career. Mid-career staff colleges for both police and military officers are comparable to MBAs in the business world; they build on professional experience, and provide group work and exercises to help commanders and staff to work effectively in teams. The increasingly common requirement for individual research to produce a project or thesis

at the master's level is shifting military staff colleges away from being purely technical professional schools, and towards a focus on graduate education. The move towards graduate education helps the military to compete with other professions; it is without rival in monopolizing security knowledge.

The process of competing for a monopoly of expertise drives changes in the nature of higher education security institutions. “Doctor” and “Professor” are more credible to lay audiences than “Colonel,” so there is a premium on formal education and post-nominal labels that are immediately recognized: Colonel, MA, is preferable to Colonel, *pvt*, because the latter is known only to internal audiences. To offer a masters degree through Staff College, the institution has to adapt to university norms, and instructors become more like their academic counterparts, seeking research-based publications.

Smaller countries often import security knowledge from larger countries. Major powers like the USA, Russia, China, and the older colonial powers, Britain and France, consciously market their technology, doctrines, and experiences (Atkinson, 2014). As staff college faculty begin to adopt university norms, they have to question doctrine and experience, and apply more sophisticated techniques to examine evidence. They are rewarded for attracting research funds and for publishing in peer-reviewed journals. They begin to transgress into larger questions – not just the narrow technical issues of how to execute tasks most effectively, but the larger questions of whether the tasks achieve the desired effect. In the social sciences and humanities, much of the military and technical combat orientation doesn't stand up well to university scrutiny. The field of military history, often called to the service of socialization rather than education, produces cogent analyses and critiques in military colleges and universities.

When staff college students are required to write original research papers, they combine their experiences and their access to primary sources with theories and ideas from scholarly work. The result is a changing body of knowledge that is more directly relevant to the experience of future generations of officers going through the institution. This knowledge, and the principled and causal beliefs underlying it, may be at odds with imported doctrine and major-power thinking. A parallel trend might be the decline in

purely technical subjects, as senior officers come to grips with larger security questions. This is evident in an analysis of abstracts for 385 projects and masters theses from the Armed Forces Defence College of Malaysia, over the period 2002 to 2011. They were categorized as relevant to technical subjects, human, national, or international security. Technical subjects received consistently less attention (Figure 3).

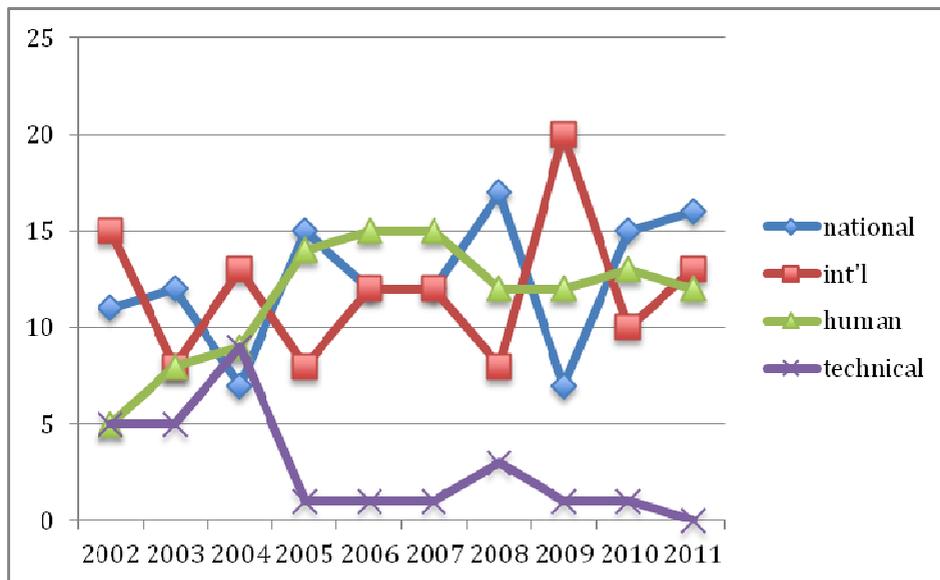


Figure 3 Subjects of theses - MAFDC, 2002-2011

The competition of university norms with doctrine, training, and socialization is one of the major sources of friction in higher education security institutions. This opens the opportunity for security professions in smaller countries to move towards more effective practice, not just in humanitarian and peacekeeping operations, but in the employment of security forces in general, as the balance of thesis research by senior officers begins to suggest.

Evidence-based practice is standard for medical procedures, and is increasingly sought in social policy, in countries where efficacy is more highly valued than ideology. The Cochrane Collaboration, established in 1993, is a global, non-profit network of medical researchers from 120 countries seeking to provide credible systematic reviews of evidence without commercial

sponsorship or conflicts of interest.² Medical procedures and social policy present different problems. Knee surgery and tonsillectomies are all comparable, but the social context of diseases like tuberculosis or AIDS is important, and policies to address them have been more difficult to agree upon. The Campbell Collaboration was established to produce systematic reviews of the effects of social interventions in crime and justice, education, international development, and social welfare, with the overarching questions, “What helps? What harms? Based on what evidence?”³ These are difficult problems, with contentious concepts embedded in them: a solution that helps some interests may harm others, but appeal to evidence can be a common denominator. Major industries are not unbiased, so fields or scholarly journals relying on evidence demand that interests are declared, and regulate the sponsorship and publication of research. Such declarations are unusual in the security field. Western industrial interests sponsor many of the most prominently displayed publications in staff college libraries around the world. It is thus particularly important for majority countries to be able to assess evidence for themselves, and this is emerging as a theme in higher education security institutions, as they move towards university norms.

Communities of practice and networks of learning

Optimistically, we might hope that researchers and teachers in higher education security institutions are part of an emerging epistemic community of security professionals, with the common objectives to preserve societal values and minimize violence. Even more optimistically, we might assume that research and education can improve the practice of the profession, and that some of this will occur in higher education security institutions like military and police academies and staff colleges. Now we are faced with a problem also confronted by other professions like medicine, engineering, and accounting. Although these professions historically evolved within nation states, and respond primarily to legal and governance frameworks within the state, they face problems and issues common to professions in other states. For the security professions – military, gendarmes, and police – new challenges can only be effectively managed by cooperation across

² The Cochrane Collaboration, www.cochrane.org.

³ The Campbell Collaboration, www.campbellcollaboration.org.

national boundaries and within international organizations. This is true even for the largest states, but particularly urgent for majority countries. How might this cooperation evolve between higher education security institutions, which are beginning to behave like universities?

Greenhalgh (2004), one of the leading scholars in knowledge transfer, defines a spectrum of possibilities for spreading knowledge within communities from least to most structured: from “let it happen” to “help it happen” and “make it happen”. When individuals with particular passions and interests get together, they form communities of practice (Wenger, 1998). The result of these communities may be unpredictable, adaptive, and self-organizing, as individuals communicate across boundaries, make sense of problems, and construct new knowledge. This is an emergent process, with which hierarchical and risk-averse security establishments may be particularly uncomfortable. Nevertheless, in addition to bilateral visits, conferences and exchanges, forums like the International Society of Military Sciences (ISMS), and the International Police Executive Seminar (IPES) constitute emergent communities of practice, characterised by those who are most enthusiastic about combining expertise and improving practice.

Other venues for cooperation may involve institutions that negotiate or influence membership in such communities, permitting the sharing of knowledge at the margins, moving from “let it happen” to “help it happen”. The Global Security Education Project (GSEP) may be on the cusp between “letting” and “helping” collaboration to emerge.

When institutions begin to cooperate systematically through exchanging professors, sharing of curriculum, engaging in joint research projects, and funding collaboration, then we are moving towards networks of learning – “make it happen” – which tend to be more planned, orderly, and managed. Managed networks, shared projects, and formal collaboration require commitments and resources, which tend to emanate from major powers, or at least regional hubs. Most examples of such networks involve the defence agencies of major powers, alliances and a hub-spoke pattern rather than a network of equal partners. Defence ministries are typical participants in The Technical Cooperation Program (TICP), and in NATO’s Defence Education Enhancement Program (DEEP), Partnership for Peace Consortium of Defence Academies (PFP CDA), and even in more scientific or-

ganizations like the International Military Testing Association (IMTA).

	“Let it happen”	“Help it happen”	“Make it happen”
Defining features	Unpredictable, unprogrammed, uncertain, emergent, adaptive, self-organizing	Negotiated, influenced, enabled	Scientific, orderly, planned, regulated, programmed, systems “property managed”
Mechanisms	Natural, emergent	Social ← → technical	Managerial
Security Education Examples	Conferences ISMS IPES	GSEP IAPTC IMTA TTCP	Bilateral visits and exchanges DEEP PP CDA ACCHA

Table 3 Building Security Education Communities (Greenhalgh, 2004); adapted from Greenhalgh, 2004

University values can help to generate an epistemic community of security professionals, seeking evidence-based solutions. Those who are passionate about improving security based on evidence may form communities of practice, but may have to contend with institutional indifference or resistance, because security institutions may be hierarchical and exclusive, rather than international and inclusive. With institutional support, there is potential for networks of learning, but these tend to be driven by security bureaucracies, whose values may conflict with the values of the university. Security classifications and vetted publications are obvious examples. Although this conflict is a major source of friction in higher education security institutions, it is also one of the factors driving professional security educators towards communities of practice.

The International Society of Military Sciences (ISMS)⁴ is an institution that “helps it happen” (Greenhalgh, 2004). It has modest formal support from its member institutions, and provides a forum for both supported and unsupported academic work. Most of the individual scholars participating have full or partial subventions for their work, and operate under both aca-

⁴ The International Seminar on Military Strategies (also ISMS) is an annual event hosted by the National Defence Academy of Japan in Yokosuka for about 17 Pacific rim countries. It is probably at the “make it happen” end of the scale.

demic and military-bureaucratic rules. That is, they may choose the subjects of their own research and must meet university standards of academic rigour appropriate to their discipline, but they are encouraged to research on subjects deemed relevant to the profession of arms.

The Global Security Education Project (GSEP), on the other hand, has no direct subvention, and operates exclusively on academic rules. A university research ethics board approved its terms of use. It is hosted on the Ontario Research and Innovation Optical Network (ORION), run on behalf of Ontario universities as a self-sustaining non-profit organization. The Royal Military College of Canada has access to ORION as a participating university, but the activity of individual participants and the content they post is not subject to oversight by their institutions. Terms of use for GSEP state, in part, that:

- I understand that I am using this site in my personal capacity as a researcher and educator, not in any official capacity;
- I have no authority over other users within the site, and will accept the decisions of the moderators.
- I will not knowingly post any classified or sensitive material, to which my organization or employer may object.

Country	Members	Percent
Armenia	2	1.5
Austria	2	1.5
Belgium	1	0.7
Canada	51	37.2
Denmark	4	2.9
Finland	4	2.9
Germany	1	0.7
Hungary	1	0.7
Indonesia	4	2.9
Lithuania	1	0.7
Malaysia	32	23.4
Namibia	2	1.5
Nepal	1	0.7
Netherlands	1	0.7
New Zealand	1	0.7

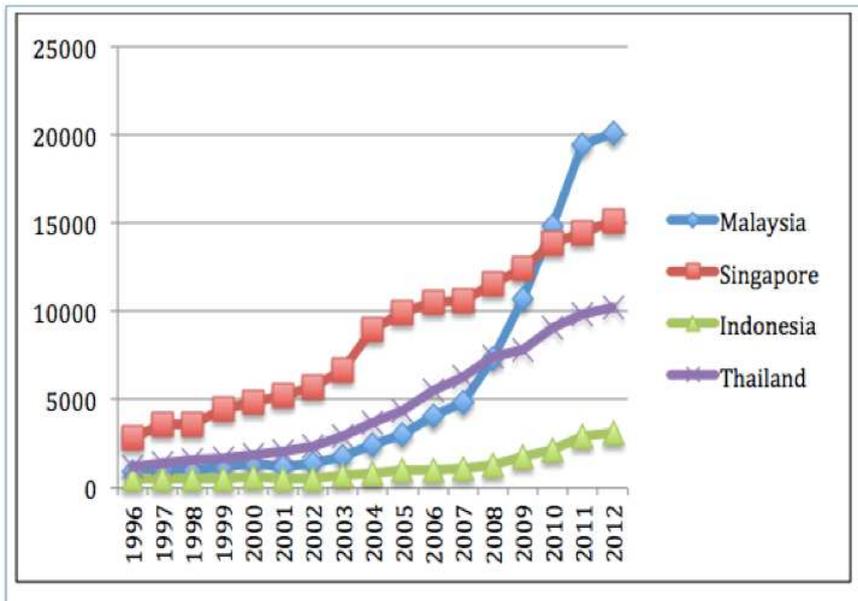
OSCE	1	0.7
Poland	1	0.7
Singapore	20	14.6
South Africa	1	0.7
Sweden	3	2.2
Switzerland	1	0.7
USA	2	1.5
TOTAL	137	100.0

Table 4 Membership of www.othree.ca/globalsecurity, November 2014

Membership of the GSEP site is limited to those who are teaching and researching at higher education security institutions, or universities supporting them:

- Membership is free, but limited to those engaged in security education, acting in their personal capacity.
- We hope to engage researchers, teachers, and scholars around the world, who are teaching in security education establishments like military colleges, police academies, defence universities, and civilian universities with contracts to deliver education modules.
- We are cautious about private contractors who may have an incentive to sell the shared material, so membership is generally limited to those in government service and those less likely to be susceptible to commercial motives.

The experience of GSEP web site use has been “negotiated, influenced, and enabled” (Greenhalgh, 2004). Setting it up was negotiated with both RMC and ORION, influenced by the research ethics process and institutional reactions, and enabled by institutional visits to higher education security establishments organized during a sabbatical, but with the support of Canadian defence attachés in Singapore, Indonesia, and Malaysia. The membership statistics by country (Table 4) reflect the importance of this support, with Singapore and Malaysia together accounting for more than a third of the total membership. This also reflects active recruitment during site visits.



Citable documents, SciMagor

Figure 4 Citable (Peer Reviewed) Documents in leading ASEAN states, 1996-2012

Malaysia's strong representation may also reflect government policy to "help it happen" – "it" being the expansion of knowledge. Malaysia's Blue Ocean Strategy for a knowledge-based economy led to a surge in academic citable documents, surpassing Singapore as the ASEAN regional leader in 2010 (Figure 4). Although the figure reflects all peer reviewed publications in Malaysia, it is reasonable to assume that the combination of university status for higher education security institutions and a national strategy has led to at least some increase in the Malaysian contributions to security knowledge. In practice, most non-technical security knowledge is a small subset of citable documents, mostly in social sciences and humanities. Technical security research is often not published and peer reviewed because it is sensitive or proprietary.

Malaysia's Blue Ocean Strategy has affected each of Malaysia's higher education security institutions. The Royal Malaysia Police College has obtained international accreditation for a Diploma in Policing through Derby University in the UK. The Royal Military College of Malaysia is the first such

institution to receive International Baccalaureate accreditation for entry-level leaders. The National Defence University has expanded its university course offerings and is independently accredited for bachelors and masters degrees. The strategy has influenced the faculty and programs at the National Defence University, the Armed Forces Staff College, and the Armed Forces Defence College. Programs seek academic recognition and faculty are pressured to research and publish. Students are required to complete research as part of their academic programs, and several have gone on to publish in professional journals.

It may be premature to claim the GSEP web site as evidence of a community of practice. Postings and comments have been limited to five users, with the author accounting for more than 90 percent of all posts. However, there have been more than 2400 views in less than 12 months, including more than 700 views of the documents page of the site.

Site page	Content	Views	Percent
Wiki	Pages for 68 countries, not all completed	73	3.0
Researcher profiles	137 members (mostly blank)	301	12.5
Resources	Links to 10 professional journal sites, 5 web site, 5 articles and reports	108	4.5
FAQ	12 questions	78	3.2
Documents for members	188 documents, organized by region	732	30.4
Calendar	Periodic entries	111	4.6
Forums	13 topics	251	10.4
Blog	67 articles	520	21.6
Research team spaces	12 members in four projects	232	9.6
		2406	

Table 5 GSEP web site activity, November 2013-October 2014

Conclusion

What does this mean for building stable and peaceful regional security communities? An epistemic community amongst security leaders might be built on the foundation of university and professional security values, as professional education pushes leaders towards critical thinking and interna-

tional collaboration. This can lead over time to an evidence-based pursuit of security. Multiple communities of practice are already emerging, addressing particular areas of professional knowledge, like the Technical Cooperation Program (ITCP) among America, Britain, Canada, and Australia, or the International Association of Peacekeeping Training Centres (IAPTC) for peacekeeping knowledge amongst more than 40 countries. Networks of learning entail more institutional support, but are also widespread. Examples include the ASEAN Coordinating Centre for Humanitarian Assistance (ACCHA) for disaster response, NATO's Partnership for Peace Consortium of Defence Academies (Pfp CDA), and its Curriculum Development Working Group, and NATO's Defence Education Enhancement Project (DEEP).

It is not inevitable or obvious that an epistemic community will transcend state boundaries. One view is that security leaders are constrained by institutional and national interests, even if they are not constrained by democratic civil-military relations; military and police leaders serve society, and society calls the shots. However, even where this is true, security leaders increasingly influence both operations and policy as they progress in their careers. Their awareness of the broader body of what passes for "security knowledge" is a function of professional education. This includes understanding the causes and consequences of conflict and tools to manage it in the context of their professional police, gendarme, or military responsibilities. Both national and institutional self-interest might be expected to align with evidence about best practices to achieve security.

As majority states face new security challenges from energy and environmental crises, climate change, survival migration, economic dislocation, protracted social conflict, and domestic disorder, we would expect their security professionals to seek mutual aid to deal with them. Epistemic communities, communities of practice, and networks of learning are vehicles for moving towards collaborative solutions for human security, national security, and international security.

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Feedback Evaluation as a Part of Lifelong Education Strategy in FNDU

Juha-Matti Lehtonen, Antti J. Rissanen

Abstract

Finnish National Defence University (FNDU) offers accredited university level education for officers. Modern higher education measures are based on assessment. To fully understand current quality level of education at any university the standard approach as collection and summing items of feedback is not enough. More effort is needed to find out where we are and what can and must be done for the next round.

This study is based on feedback data from three consecutive one-year long senior staff officer courses (SOC). This programme has been mandatory in our officer's career. The main data source is immediate programme feedback questionnaire with 74 items. Basic data are supplemented with delayed feedback questionnaires both from students and their supervisors. The questionnaires were the ones that are currently in use at FNDU and were not designed for this study.

According to literature students' academic achievements are associated mainly with the students' own perceptions of their motivation and effort. The exploratory factor analysis of the immediate feedback produced four factors: knowledge and skills, satisfaction with studies, research skills, and support services. These were different from the survey design as well as from those found in the theory. Students' and supervisors' delayed survey results were found to be broadly in line, but low and skewed responses reduced reliability and also supervisors may have limited knowledge of the impact of staff education on their subordinates. The study highlights that the power of questionnaires which are not specifically designed for answering the research questions or other way standardized for the purpose are limited. Therefore better theory-driven surveys linking immediate and delayed feedback would be more helpful in evaluating mid-career education.

Introduction

The Finnish National Defence University (FNDU) trains officers for the Finnish Defence Forces (FDF) and the Border Guard. The starting level is the Bachelor's degree in military science. After four years' service, candidates advance to a Master's programme. After an average of 10 years in work life and in the rank of captain, an obligatory course in skills and knowledge is given through a yearlong senior staff officer's course (SOC). This programme can be considered an example of adult education as it takes place at the middle of an individual's career and is also a turning point in the career. Based on SOC grade point averages (GPA), less than half of those who finish the SOC are selected to join a one-year general staff officer programme.

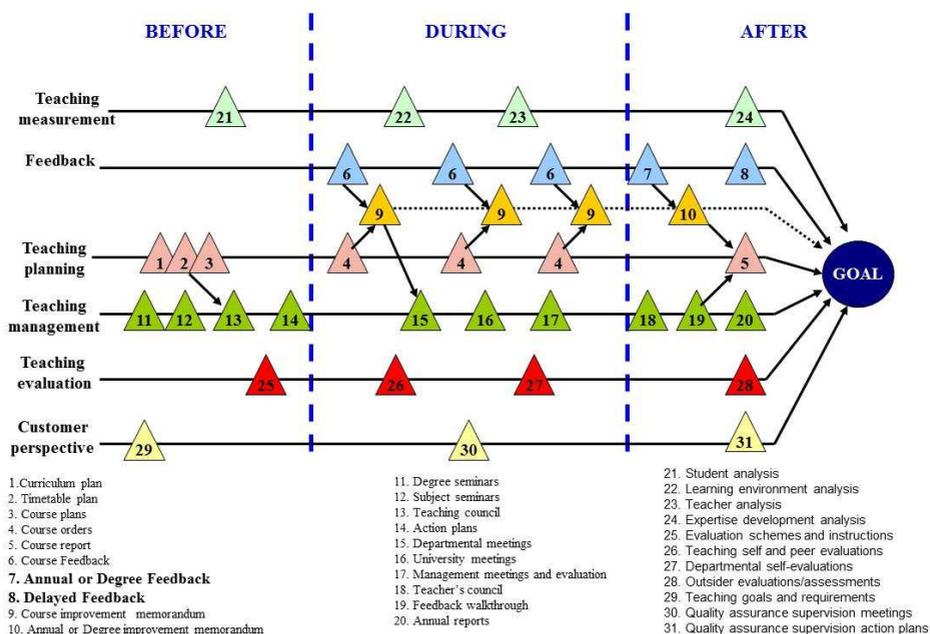


Figure 1. Teaching improvement cycle at FNDU

Longworth and Davies (1996) define lifelong learning as the development of human potential through a continuously supportive process that stimulates and empowers individuals to acquire all the knowledge, values, skills and understanding they will require throughout their lifetimes, and to apply

these with confidence, creativity and enjoyment in all roles, circumstances and environments. The structure of an officer's lifelong education in the FDF consists of academic and professional aspects. One of the aims of university-level teaching is to help students to think critically, to promote skills to analyze situations, and to find possible solutions. The main aims of senior staff officer education include enhancing learners' understanding of how technology is used in military contexts, learning ways to use research-based knowledge in practice and most importantly, to train for staff officer's tasks in his service branch in crisis as well as at peace time.

In this study, student feedback was analysed in order to shed light on senior staff's general full programme and its evaluation. To improve the quality of teaching, a multifaceted approach for collecting and evaluating feedback is required. Figure 1 shows an overall picture of the FNDU teaching improvement cycle model. In this study, only the student survey branch (7. degree feedback and 8. delayed feedback) is presented and analysed.

Measures of Educational Quality

Quality in higher educational institutions is interpreted and measured in a number of different ways (e.g., Cheng & Tam, 1997). As a result, there are local practices that manage only a few selected aspects of university education quality. According to the literature, quality has different meanings for different stakeholders. In educational institutions, both internal and external stakeholders are present. These groups may have dissimilar definitions of quality. As a result, educational quality is a rather vague and controversial concept (Cheng & Tam, 1997).

Therefore, the measurement and management of educational quality is challenging. Governments and other external bodies often may appoint or demand certain mechanisms for assurance (e.g., McKay & Kember, 1999). On the other hand, the emphasis for internal stakeholders is not only on quality assurance, but also on quality enhancement. Such an emphasis may increase the actual quality of teaching and learning.

An internal stakeholder approach is likely to include self-evaluation practices and student feedback. This is due to the hypothesis that students are an integral part of the learning process (e.g., Wiklund et al., 2003). Evalua-

tions based on this approach are formative in nature and may lead to continuous quality improvement practices. Hewitt and Clayton (1999, p. 852) suggest that if the desired output of university education is viewed as increased capabilities and knowledge embodied within the transformed student, including an enhanced capability for further learning, then the system model is appropriate provided there is recognition of the role of the student within all system components.

Literature research states that even if the model of students may vary, most scholars agree that, regardless of a metaphor, student surveys have an important role (e.g. Serenko, 2010). According to Athiyaman (1997), the perceived quality of university education could be expressed in terms of satisfaction with a manageable set of general university characteristics. He names the following services and quality characteristics: emphasis on teaching students well, availability of staff for student consultations, library services, computing facilities, recreational facilities, optimal learning group sizes, learning aims consistent with for student profile, and reasonable student workload.

More than 30 years ago the Finnish higher education measures for the educational quality have gradually moved from inspections to assessment (Atjonen, 2015). As such there is a long tradition of collecting student feedback through student surveys. Generally, in earlier threads of this type of tradition, the main issue in the surveys was research and knowledge rather than accountability aims (e.g., Kuh, 2009). Also many of the current standardised student feedback surveys are aimed for the undergraduate level or for individual courses. As an example, consider the National Student Survey (NSS) in the UK, where students answer questions related to their own university studies, consists of 23 items which cover the following six areas: 1) The Teaching of my Course, 2) Assessment and Feedback, 3) Academic Support, 4) Organisation and Management, 5) Learning Resources, 6) Personal Development, and a specific question asking ‘Overall, am I satisfied with the quality of this course?’ (Canning, 2014).

Military education in higher level has utilized student feedback for decades. On the other hand methodological or systematic data analysis for defence related higher education feedback surveys seems not to be publicly accessible. Therefore we are pragmatically following rather simple classifica-

tion based on our survey's item structure as well as on a generalized university education classification model based on Athiyaman's research results.

To focus purely on the feedback data and results withdrawn from it, other data types e.g. self-evaluation and detailed institutional learning outcome factors are not discussed in this paper.

Research Methods

As Figure 1 shows, student feedback has been collected extensively at FNDU, but only a limited amount of lightly processed data has been used to adjust curricula or lecturing parameters at the level of an individual course. The emphasis on feedback analysis at the course level has focused on qualitative interpretation of free text fields and descriptive statistics, mainly showing average values. In contrast, this study design includes three consecutive SOC programmes that can be compared, in addition to a delayed feedback questionnaire that was gathered from the students and their supervisors two years after the SOC. In the delayed questionnaire, the main issues are how successfully the SOC respond to students' needs and the needs of the employer. The advantage of supervisor survey is that it could provide a non-subjective viewpoint to learning. Longitudinal design was used to determine whether opinions at graduation were sustained after experiences in the field.

A starting point of the study was making use of existing feedback survey responses. The survey questions as well as its administration were not designed and could not be influenced by the researchers. To find out the existence of internal constructs of the immediate feedback surveys, an exploratory factor analysis was applied. The approach is explorative and similar to data mining, where theoretical constructs are not in the foreground and do not lend themselves to clear hypotheses, but, instead, tentative hypotheses are arrived at in the end.

Immediate Feedback Questionnaire Contents

The SOC immediate feedback questionnaires given to courses 64 (2011-12), 65 (2012-13) and 66 (2013-14) contained 74 identical Likert-scale (1-5) questions and nine open text questions. In addition to this, questionnaires

contained some unique questions, such as for SOC65 on equality and sexual harassment. There were also two background questions, one on the military service branch and one on the department that supervised the thesis. The open text questions and unique questions are not analysed in this paper. The 74 identical questions' short descriptions are shown in appendix 1. The Likert-scale questions are divided into the following sections:

- Q1-Q19: Skills and knowledge learned in the programme,
- Q20-Q23: The entirety of the studies,
- Q24-Q28: Atmosphere during the programme,
- Q29-Q41: Effectiveness at own studies,
- Q42-Q61: Experiences with studies in general,
- Q62-Q73: Support functions,
- Q74 Overall grade for the programme.

The division into sections corresponds with the thinking of the questionnaire designers. However, it is possible to suggest different sections as well as placing some questions into different sections. For example, 'student management office' (Q26) could perhaps be situated to support the 'functions' section instead of the 'atmosphere' section. The section 'experiences with studies in general' is a broad one, and consists mainly of questions on the overall teaching quality of each department as well as thesis-related questions.

Even though the same Likert scale is used throughout, the results are not easily comparable between questions due to slight differences in instructions and wording. For example, Q34 ('my motivation stayed good throughout the programme') and Q33 ('my study techniques supported the attainment of learning goals well') contain the attribute 'good' while Q15 ('analytical skills') and Q26 ('student management office managed students' business appropriately') do not contain such a positive attribute. Another example involves Q37 and Q38. Q37 asks if feedback helped to improve studying *throughout* the programme while Q38 asks if peer feedback helped to improve studying. One more issue is that a few questions asked for judgment on two somewhat separate concepts, like Q44 ('teaching methods were versatile and stimulating) and Q22 ('Studies could be completed well time-wise, and I had enough time to study').

The issues in wording make comparing the values of different questions less meaningful but should not affect picking up a change in the same question between different courses. The section structure does not follow either Athiyaman's or NSS structure although it contains similar elements and when some questions could not be placed in different section as has been done by survey designers, the underlying structure is explored through factor analysis.

Delayed Feedback Questionnaire Contents

After one year, the former students of SOC64 and their current supervisors were asked to complete delayed feedback surveys. The Delayed Student Feedback (DFS) questionnaire was given to SOC64 students. At the same time, their supervisors (Delayed Feedback Foremen, DFF) were asked the same questions, except for Q4.3.1. The DFS had 40 and the DFF 39 Likert-scale questions and 20 free text questions, as well as a few background questions, of which 'how long have you been in your current position or service?' was the most relevant. The individual questions were divided into the following sections:

- Peace time competences (Q4.1 – Q4.6),
- Crisis time / war time competences (Q3.1 – Q3.7),
- Competence in international activities including crisis management (Q5.1 – Q5.6),
- Broad competences, motivation, personal and leadership qualities (Q6.1 – Q7.11).

In addition, there were two questions on current position (Q2.1, Q2.2) as well as the overall grade for education in the current position (Q8.1). The delayed questionnaire is shown in appendix 2 using supervisor wording (student questionnaire uses in the first person).

Questionnaire Delivery Method and Response Rates

The SOC immediate feedback questionnaires were delivered at the end of the full programme. The delayed feedback questionnaires were delivered in August 2013, 15 months after the SOC64 (held in the academic year 2011-12) immediate feedback questionnaire. All the questionnaires were adminis-

tered by sending an email with a link to a survey made with Webropol software. The procedure regarding how long the survey was open and how many follow-up emails were sent varied between SOC programmes. The SOC65 questionnaire was open only three weeks and one follow-up was sent, while SOC66 reached the full response rate after five weeks and two follow-up messages. The DFS was open six weeks and the DFF twice that long, during which time three follow-up messages were sent.

Questionnaire	Students	Sent	Responses	Rate
SOC64	102	102	99	97 %
SOC65	84	84	67	80 %
SOC66	123	123	123	100 %
DFS	102	65	40	62 %
DFF	102	41	25	61 %

Table 1. Population and response rates

Table 1 shows response rates that are impressive for SOC questionnaires. There were difficulties locating the respondents and their supervisors, which was the reason for sending 65 DFS and 41 DFF questionnaires. The response rates for DFS and DFF were also lower and there finally were only 25 responses to DFF and 40 to DFS. Moreover, there were 21 DFS and DFF responses concerning the same individual, enabling comparison of student's own (DFS) and his supervisor's (DFF) answers.

Results

The average results for all items in the immediate feedback questionnaires are shown in Appendix 1. The actual wording of the questions is longer than shown. An overall average for all questions was 3,6 for SOC64 and SOC66, while being only 3,2 for SOC65. In the DFS questionnaire, the overall average of all responses for all Likert-scale questions was 3,9, and in the DFF 4,0. As such averages are usually of little interest in a survey, the contributions of the respondents and the questions are examined next using variance analysis.

Background variables

SOC studies consist of common courses as well as those that are specific and participated in by one service branch only. For example, teaching tactics and operation may be service-specific while defence acquisition is not.

Service	SOC64	SOC65	SOC66
Army	45	36	63
Navy	11	12	19
Air Force	26	18	31
Border Guard	17	1	10
Total	99	67	123

Table 2. Students' service branch

Table 2 shows the service branches of participants in each SOC programme. The ability of service variables to differentiate the responses was tested with one-way analysis of variance (ANOVA). The results showed that there were 12 (SOC64), 6 (SOC65) and 17 (SOC66) questions out of the 74 questions where the service branch played a role. However, there was not a single question where the service branch variable differentiated the responses in all three courses. Quite a few questions (like Q49) got the lowest points from the Border Guard. A free text answer by one respondent explains: *My professional tasks were practically not treated at all during the programme. The staff officer course aims at Finnish Defence Force needs and they do not serve in any way 99.9% of those working in the Border Guard.*

The thesis work is graded and supervised by different departments in FNDU, and the departments are mentioned in Q48-Q53. Supervising takes place in seminars and ad hoc meetings. The effect of the background variable 'department that supervised your thesis' was studied with ANOVA. The results showed that it differentiated only one question in SOC66 (Q52: 'Military pedagogy teaching supported the attainment of programme goals well') and in SOC65 (Q73: 'Food services performed faultlessly'). The latter is especially hard to interpret as anything other than a spurious result. However, there were seven statistically significantly differentiating questions in SOC64. These questions were Q14, Q15, Q17, Q33, Q39, Q50 and Q66, of which Q17 ('Knowledge of research project') and Q39 ('I knew

how to ask for help?) have the clearest potential implications regarding actual differences in the thesis supervision process between departments.

Time (years)	DFS	DFF
0-0,5	6	5
0,5-1	9	8
1-2	15	12
>2	10	0

Table 3: Times in current position (DFS) and as his supervisor (DFF)

For DFF and DFS surveys, there were quite a few other background variables that were in the questionnaire. Of these, only the time in the current position and, especially, in DFF, the time the respondent had been a supervisor, were noteworthy. The data for this is shown in Table 3. The following two quotes to the open text question highlight the reliability and validity issues: *‘It is hard to say what specifically SOC has brought to his competences’* and *‘Not easy to fill in, because we have had so little time together until he moved on to new challenges.’* Because SOC participants were in mid-career and the programme lasted one year, it may not be easy for a supervisor to distinguish what the student has learned specifically at the SOC and what in his previous career, especially if the supervisor is not up-to-date with SOC teaching content. Getting to know one’s subordinates competences in a number of specific fields takes time and if there has been too little time for that, the reliability of the assessment suffers.

Educational achievement as a variable

In SOC studies, the courses and theses are graded. In the end, a grade point average (GPA) is calculated for each student. Based on GPA, the students of SOC64 and SOC66 were classified into four classes, where the first class contained around 25% of students, and so on. For SOC65 the grades could not be obtained.

Nr.	Question	SOC64		SOC66	
		Correl.	p-value	Correl.	p-value
31	I have accomplished the programme goals	-0,346	,000	-0,33	,000
32	I did as I expected in studies	-0,361	,000	-0,32	,000
33	My study technique was good	-0,363	,000	-0,27	,002

34	My study motivation stayed high	-0,329	,001	-0,38	,000
35	I participated actively	-0,380	,000	-0,36	,000
36	I did my assignments diligently	-0,393	,000	-0,41	,000
41	I'm satisfied with my overall effort	-0,417	,000	-0,24	,009
42	Leadership teaching supported the attainment of programme goals well	-0,271	,007	-0,23	,010
61	I spent enough time on my thesis and thought it was important	-0,424	,000	-0,33	,000
17	Knowledge of research project	-0,273	,007	-0,18	,049
74	I gave an overall grade to the programme and its function	-0,284	,005	-0,22	,017
10	Research and professional ethics	-0,240	,017	-0,29	,001
60	Thesis supervising and other thesis support was adequate	-0,233	,021	-0,30	,001
1	Skills and knowledge for career	-0,245	,015	-0,18	,045
11	Expertise in own research topic	-0,216	,032	-0,21	,021

Table 4: SOC survey items rank correlation to GPA

When GPA class was compared with all 74 questions by using Spearman's rank correlation, it was found that there were 27 (SOC66) and 23 (SOC64) questions that had a statistically significant correlation. All significant correlations were negative, i.e., better students tended to give higher responses. Table 4 above shows all 15 questions in which correlations were statistically significant in relation to GPA class in both SOC64 and SOC66 surveys. The highest correlations were to the questions in the section 'effectiveness of own studies', which is the section that features prominently among significant correlations. These items were related to students' perceptions of their own study efforts and achievement of learning goals. Because feedback survey was given after the ending of SOC programme, the students also knew how their learning was graded in relation to other students. The overall grade for the programme is significant, as well as quite a few questions concerning research and thesis while there is only one question where student's perceptions of skills and knowledge learned in the programme (Q1) is correlated to the learning measured by GPA class.

Differences between SOC courses

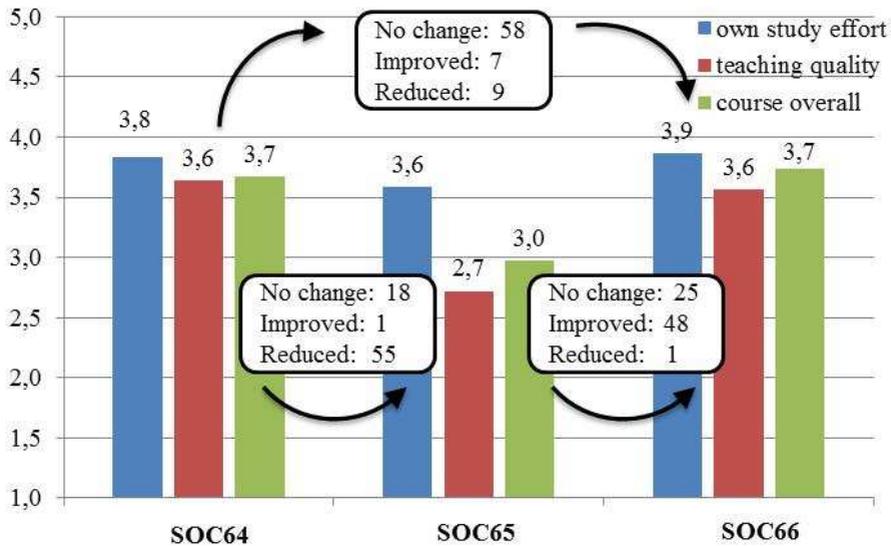


Figure 2. Overview of the differences between SOC courses

Figure 2 compares the response averages of SOC64, 65 and 66 on Q41 (own study effort), Q47 (teaching quality) and Q74 (overall grade for programme). The only significant difference in these questions was that Q47 and Q74 values were lower in SOC65 than in both SOC64 and SOC66. It also shows the total number of items that were statistically significantly different ($p < 0,05$) with the same two-tailed t-test between two SOC. When the three courses were compared in the light of feedback questionnaires, it becomes obvious that SOC65 gave lower grades in feedback than previous and subsequent courses. When comparing the SOC65 answers to the averages of SOC64 and 65, the three questions where the difference was largest were in questions

- Q69 (Internet and intranet operated without problems throughout the programme),
- Q70 (Administrative network operated without problems throughout the programme),
- Q24 (Course manager administrated the programme appropriately).

Differences between supervisor and student delayed feedback

The overall average of all 38 questions was 3,9 for both the supervisors and the students in delayed feedback when students and supervisors were matched, which left only 21 complete response pairs for analysis. When students' delayed responses were compared to the supervisors' responses to the same questions with a paired t-test for each item, there was only one item where students and supervisors had statistically significant differences, Q5.6 ('overall grade, international and crisis management'), where the students, on average, saw that their abilities were 0,57 points better. Q8.1 ('overall grade of competences learned during education in relation to current job') also had a large difference of 0,48 between the groups but was below statistical significance ($p = 0,056$). It is interesting to note that the non-subjective supervisor feedback appears not to deviate statistically significantly from the views of the students themselves, except for the crisis management competences that are not readily observable by the supervisors in Finland.

Exploratory Factor Analysis

In the correlation matrix of all 74 questions for SOC64, the average correlation was 0,23. For Q74, ('overall grade for the programme'), the average correlation to the other 73 questions was 0,37. Because questions exhibited multicollinearity, it could be assumed that there could be underlying constructs that would be useful for explaining the results in a concise way. The questionnaire design with different sections, i.e., groupings of similar items, supports this assumption. It was not assumed that the original design and division into sections would be strictly theory-based, so a confirmatory factor analysis was not applied.

To discover the initial underlying constructs, an exploratory factor analysis was performed for SOC64 and SOC66 feedback questionnaires. Other questionnaires had either fewer respondents than items (SOC65 and DFF) or not enough in order to have reliable results (DFS). The factor analysis was performed with SPSS® software using Varimax orthogonal rotation; correlations under 0,3 were disregarded. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0,621 for SOC64 and 0,767 for SOC66, which can be viewed as adequate by Kaiser (1974).

Exploratory factor analysis involves a considerable amount of judgment. The first issue is determining the number of factors. In both cases there was one dominating factor and then 18 (SOC64) or 19 (SOC66) factors that passed the Kaiser criterion. By looking at the Scree plot and reflecting upon the interpretation of the putative factors, it was decided that SOC64 had five factors and SOC66 had six factors. The next step is interpreting and naming the factors. There were four factors that could be considered common to both SOC64 and SOC66. Appendix 1 shows the four common factors and individual item loadings to these factors in both SOC64 and SOC66 questionnaires so that SOC64 values are on the left and SOC66 values are on the right with “;” separating the values. Based on correlations, the factors were named as follows: F1 (knowledge & skills), F2 (satisfaction with studies), F3 (research skills), and F4 (support services). Correlations under 0,3 were suppressed. The unique factor in SOC64 was ‘curriculum’, with high loadings to Q20-24 and Q42. In SOC66, the unique factor contained, to a large degree, the same teaching and feedback items (Q42-47) that loaded in SOC64 to Factor 1 (knowledge and skills), in effect, breaking this SOC64 factor into two groups. Another was a highly specific factor, ‘goal awareness’, that basically loaded only to Q29 and Q30. In fact, this specificity for a couple of items was the case in many of the small factors fulfilling the Kaiser criterion but not standing out in the Scree plot. An example could be a ‘library’ factor. It received high loadings to Q64-66 and had a small positive one to Q43 in SOC64 and a small negative loading to Q70. The resulting four factors for SOC64 and SOC66 and item loadings are shown in Appendix 1.

Conclusions

The overall level of numerical responses in the three immediate feedback surveys can be said to be rather high, and Q74 (‘Programme overall grade’) were rated accordingly (Figure 2). However, SOC56 had a significantly lower overall level than preceding and succeeding courses in many individual questions. So many individual aspects in different areas can hardly have changed in lockstep back and forth. Therefore it seems likely that what in fact has changed is the student perception, perhaps due to one overall explaining factor, of which there was some anecdotal evidence. The three largest differences pointed to issues involving IT and course administration.

A stronger association, as shown in Table 4, was found between achievement measured by GPA and students' own study motivation, effort and effectiveness, than with their perceptions of learned knowledge and skills, as measured by questions Q1-Q19. It would seem that at subjective level student's perception of motivation is a more associated with learning if measured with GPA than student's perception of learning. However, due to the lack of entry level measurement, it cannot be ruled out that there were differences in this regard among students. For example, a student that did not learn as much new as someone else, could himself perceive having learned less and still have more knowledge as measured GPA. In addition to that, the students were aware of their academic performance at the time of answering immediate feedback survey, so this knowledge may have affected their assessment of their effort and effectiveness.

The explorative factor analysis produced four factors: knowledge and skills, satisfaction with studies, research skills, and support services. These were different from both the questionnaire's design structure as well as the satisfaction characteristics described by Athiyaman (1997). This result, together with issues with the wording of some questions, highlights the importance of refining the feedback survey structure and design, and perhaps a theory-driven approach to survey design. As Saunders et al (2011) point out, secondary data analysis approach has many drawbacks and the data restricts the scope of research questions. However, this has to be balanced with the advantages of the secondary data analysis approach, which in this case included having three years feedback data already collected as well as being able to concentrate on data analysis as survey design, respondent access and survey administration was already accomplished.

The opinions of supervisors and students were not dissimilar regarding the SOC students' competences in the delayed feedback. This would mean that subjective learning measurement could be as reliable as non-subjective measurement but more research with larger samples is needed with that respect. The delayed feedback surveys did not produce many meaningful findings because the items asked for an evaluation of the person and his overall capabilities rather than those ones specifically learned during SOC. However, it would be very hard for the supervisor to ascertain what was specifically learned at SOC at the mid-career phase and especially as the supervisors often did not know the person's abilities with that respect well

enough. This is an issue that significantly reduces the reliability and validity of any such programme learning quality measurement by a non-subjective respondent in a real working environment.

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APPEDIX 1: Item averages and factor analysis results in immediate feedback survey

Item	Short description	Averages			F1: Know- ledge and skills	F2: Satisfac- tion with own study	F3: Research skills	F4: Support services	
		SOC 64	SOC 65	SOC 65					
Q1	Skills and knowledge for career	3,61	3,16	3,66	,602;		,331		
Q2	Presentation skills	2,98	2,61	3,02	,612;				
Q3	Ability to apply learning	3,53	3,06	3,49	,674;				
Q4	Learning skills	3,15	2,49	3,11	,631;				
Q5	Knowledge acquiring skills	3,84	3,16	3,67	,724;		,433		
Q6	Problem solving skills	3,33	2,72	3,15	,633;				
Q7	Foreign language skills	3,03	2,81	2,88					
Q8	Communication skills	3,16	2,76	3,03	,640;				
Q9	International environment skills	3,79	3,24	3,59	,478;				
Q10	Research and professional ethics	3,37	3,07	3,43	,354;		,621;	,640	
Q11	Expertise in own research topic	3,77	3,40	3,63	,310;		,590;	,431	
Q12	Initiative abilities	3,46	2,96	3,26	,732;	,794			
Q13	Flexibility and adapting skills	3,58	3,07	3,46	,728;	,822			
Q14	Teamwork skills	3,68	3,51	3,79	,696;	,458			
Q15	Analytical skills	3,37	2,84	3,33	,577;	,403			
Q16	Knowledge of research methods	3,16	2,82	3,24			,401;	,372	
Q17	Knowledge of research project	3,51	3,30	3,55			,765;	,734	
Q18	Researcher skills	3,54	3,18	3,58			,802;	,872	
Q19	I'm prepared for work after the course	4,07	3,76	4,00			,808;	,851	
Q20	Curriculum was functional	3,26	2,18	3,12					
Q21	Curriculum was followed	3,79	3,30	3,89					
Q22	Adequate time for studies	3,34	2,69	3,32					
Q23	Curriculum adherence	3,77	2,96	3,75					
Q24	Course manager performance	3,79	2,96	4,24				,384;	,316
Q25	Teachers facilitated learning	3,64	3,22	3,79					
Q26	Student management office	4,42	3,81	4,20				,830;	
Q27	Interbranch working was proper	4,39	4,16	4,52					
Q28	Student atmosphere	4,69	4,42	4,53					
Q29	I was aware of overall course learning goals	3,99	3,67	3,91		,419;			
Q30	I was aware of each course learning goals	3,97	3,63	3,96	,320;	,313;			
Q31	I have accomplished the course goals	3,88	3,54	3,85		,790;	,715		
Q32	I did as I expected	3,75	3,46	3,82		,814;	,844		
Q33	My study technique	3,51	3,42	3,54		,784;	,749		
Q34	My study motivation	3,17	2,78	3,31	,388;	,425;	,404		
Q35	I participated actively	3,70	3,40	3,64		,391;		,305;	
Q36	I did my assignments diligently	4,07	3,76	4,09		,388;			
Q37	Feedback	2,83	2,63	2,98	,311;	,313;		,401;	
Q38	Peer feedback	3,04	2,73	3,15					
Q39	I knew how to ask for help	4,07	3,61	3,85	,373;	,371;	,743		
Q40	I got help when I asked for it	4,04	3,61	3,81		,365;	,488		
Q41	I'm satisfied with my overall effort	3,83	3,58	3,86		,792;	,765		
Q42	Studies were well planned as a whole	3,41	2,58	3,36	,324;				
Q43	Teaching based on newest knowledge	3,30	2,91	4,20	,469;				
Q44	Teaching methods	3,26	2,87	4,50	,499;				
Q45	Teachers' readiness for teaching	3,54	3,25	3,28					
Q46	Teachers' readiness for receiving feedback	3,53	3,07	3,11					
Q47	FNDU teaching quality	3,64	2,72	2,82	,306;				
Q48	Leadership teaching	3,22	3,28	3,02					
Q49	Operations and tactics teaching	3,93	3,27	3,62	,329;	,313			
Q50	Strategy teaching	4,27	4,03	3,64					
Q51	Military history teaching	3,85	3,04	3,44					
Q52	Military pedagogy teaching	2,91	3,06	3,72					
Q53	Military technology teaching	2,57	2,57	3,46				,346	
Q54	Foreign language teaching	3,54	3,10	3,56					
Q55	Physical education classes	3,30	3,64	3,70				,326;	
Q56	Learning evaluation methods	2,98	2,64	2,95	,428;	,318			
Q57	Thesis supervising quality	3,57	3,37	3,51		,788;			
Q58	Thesis work thought academic skills	3,51	3,13	3,60		,819;	,430		
Q59	Time to do the thesis	3,05	2,85	2,58		,321;			
Q60	Thesis supervising adequacy	3,60	3,40	3,47		,789;			
Q61	Effort for thesis	4,04	3,88	4,07		,450;			
Q62	Support functions	3,97	3,76	4,00				,465;	,553
Q63	Student management office	4,41	3,90	4,11				,789;	
Q64	Student library's service	4,69	4,52	4,61					
Q65	Student library's range	4,45	4,43	4,45					
Q66	Information acquisition teaching	4,17	4,04	4,10					
Q67	IT administration's service	3,72	3,34	3,79				,453;	,821
Q68	IT support	3,80	3,33	3,88				,500;	,752
Q69	IT (intranet)	2,67	1,40	3,84				,428	
Q70	IT (extranet)	3,68	2,51	3,50				,483	
Q71	Classrooms	3,88	3,22	3,93				,465	
Q72	Exercise facilities	4,53	4,51	4,56					
Q73	Food services	3,78	3,58	3,16				,326	
Q74	Course overall grade	3,67	2,97	3,73	,360;	,323;			

APPENDIX 2: Delayed feedback questions and response averages for supervisor and student surveys

Item	Question	Supervisor	Student
Q2.1	He is motivated for his current position	4,40	4,23
Q2.2	His position corresponds his competences	4,20	4,05
Q3.1	He can function as his branch's staff	4,48	4,03
Q3.2	He is competent in his wartime position	4,36	4,18
Q3.3	He knows how to function as a public authority	4,00	4,23
Q3.4	He is competent as a wartime leader	4,08	4,28
Q3.5	He can use wartime C2 systems	3,88	3,54
Q3.6	He is capable of innovative operative and tactical thinking	4,08	3,97
Q3.7	Overall grade for wartime competence	3,52	3,64
Q4.1	He is competent in his branch's peacetime staff tasks	4,24	4,05
Q4.2	He is competent in his peacetime position	4,32	4,31
Q4.3	He is competent as a peacetime leader	4,36	4,41
Q4.3.1	The course improved my competence as a peacetime leader		3,51
Q4.4	He can cooperate with other public authorities in peacetime task	4,20	4,28
Q4.5	He masters most important laws and regulations for his position	3,96	3,90
Q4.6	Overall grade for peacetime competence	4,04	3,79
Q5.1	He can function in international staff	3,48	3,15
Q5.2	He has necessary competences for international cooperation	3,72	3,54
Q5.3	He has necessary competences for international assignments	3,76	3,54
Q5.4	He has necessary competences for crisis management assignments	3,68	3,33
Q5.5	He has adequate language skills for his tasks	3,80	3,51
Q5.6	Overall grade for international and crisis management competence	3,52	3,03
Q6.1	He has adequate competence for participating improvement work	3,80	3,85
Q6.2	He can apply research methods for his tasks	3,64	3,56
Q6.3	He is capable of innovative operative and tactical thinking	3,92	3,97
Q6.4	Thesis work has been useful for his job	4,40	3,44
Q6.5	Overall grade for improvement and specialist competences	3,52	3,62
Q7.1	He has broad competences for his position	4,12	4,18

Q7.2	He is good in acquiring knowledge	4,16	4,26
Q7.3	He has good interpersonal skills	4,20	4,26
Q7.4	He is enthusiastic and interested in his job	4,16	4,36
Q7.5	He works in professional way	4,32	4,31
Q7.6	He has unprompted improved his professional skills	3,92	4,26
Q7.7	He improves his professional skills methodically	3,72	3,92
Q7.8	He can adjust his leadership style according to situation	3,84	4,03
Q7.9	He recognizes his subordinates differences in his leadership	3,96	4,15
Q7.10	Overall grade in leadership capabilities	3,68	3,82
Q7.11	Overall grade as trustworthy and exemplary officer	4,20	3,95
Q8.1	Overall grade for education for is position	3,72	3,21

Learning for War: Militaries as Learning Organizations

Randall Wakelam

The phenomenon of war and the academy have a long association, if sometimes an awkward or even conflicted one. Like the hackneyed phrase ‘military intelligence’, ‘military education’ is seen by many to be something of an oxymoron. For many academics the notion of military anti-intellectualism was seen as a given. Despite criticisms and misperceptions, militaries, and perhaps more so Western militaries, invest significantly in learning programmes. Oriented in the early stages of a career in uniform towards training and the inculcation of military ethos, there are also high quality education experiences, particularly for officers, which rival those of any other profession.

This investment, while in need of constant reinforcement, was mentioned very specifically in the opening comments of the 2014 conference of the International Society for Military Sciences by both in the Commander of the Austrian Defence Academy and the opening keynote speaker. Lt Gen Erich Csitkovits explained the liberal education which had been included in military education since the 1750s and which was so dramatically seen in the architecture of the in the very architecture of Sala Terrena in which delegates met. Prof Julian Lindley-French then spoke of the central place of education in preparing leaders for the challenges of the future.

The challenges of the future have in one form or another been present for centuries, as has the need for sound intellectual capacity and hence military education and learning programmes. Thus, the intent of my broader research, from which this paper is derived, is to undertake an integrative examination of the major education requirements, philosophies, policies and practices in Western militaries since the 18th century. Fundamentally I am seeking to identify those factors that have and continue to drive military education. My goals in this research are not simply to chronicle what schools, colleges and programmes have operated from time to time, but to investigate and attempt to understand what various nations and their militaries have seen as the need for, and benefit of, learning institutions and

programmes. The core question of my project centres on whether there is evidence of the development of a 'way of learning' and thinking, rather than a 'way of war'. How do the services think about learning? For example, do they as institutions understand or espouse the notion of a 'learning organization' as put forward by Peter Senge? And what if they do, or do not? Is the concept of the learning organization something new or has it been present in all but name for centuries?

My hypothesis at this point is that, viewed broadly, militaries can be seen as learning organizations with members of the services being life long learners, at least within the boundaries of their profession. To be fair, both from the historical evidence and my own experience over the past 40 years, it would be an overstatement to claim that all militaries embrace curiosity and intellectual openness, but many do, either actively or implicitly.

The present paper is divided into three sections. First presents definitions of some fundamental terms. The second offers discourse on professions, professional education, and military education. The third presents three brief case studies from different periods and nations that seem to support the hypothesis.

A first task is to parse out a learning lexicon. Should one speak of education, training, learning, skills acquisition or other? Does it really matter what terms are used so long as we can observe the preparation, either cognitively, morally or practically, of personnel to prepare them to discharge the functions of a military service? It is perhaps significant that when some of the terms discussed in the following paragraphs were presented at a conference for historians of education some in the audience were not familiar with them. One might conclude that a common understanding of basic concepts must never be taken for granted.

Turning to the Concise Oxford Dictionary one finds the following three terms which are to some degree interrelated:

- to educate: to give intellectual, moral and social instruction;
- to train: to teach a skill or type of behaviour through regular practice or instruction;
- to learn: to gain knowledge of or skill in (something) through study

or experience or being taught.¹

Recent pedagogical research links these with the concept of the ‘learning outcome’: what one expects the learner to be capable of at the completion of the learning activity. Generally, although not always, it should be possible to confirm the achievement of the learning outcome through some form of assessment.² Similarly, whether the learner is acquiring knowledge, skills or values leads us to Bloom’s three domains of learning: cognitive, psycho-motor and affective, which seem to capture the range of capabilities and capacities which humans demonstrate. Assessment is somewhat easier to do when dealing with psycho-motor learning and somewhat, perhaps much, harder to do when looking at affective learning.³ How does one confirm that the learner has accepted and will employ, for example, a culture-sensitive approach when dealing with people from other nations, religions or cultures?

In further defining the context of this research we then come to the apparently more recent ideas of learning organizations and life long learning. Learning organizations, as described by Senge, are evidenced by the presence of:

- Personal Mastery: in essence recognizing and managing the “creative” tension between personal vision and the reality before us.
- Mental Models: models which allow us rough order confirmation that our thinking is sound; in other words how did we get from hard data to abstract assumptions and conclusions?
- Shared Vision: a “collective discipline [which] establishes a focus on mutual purpose. People learn to nourish a sense of commitment in

¹ Catherine Soanes and Angus Stevenson, eds., *Concise Oxford English Dictionary*, Eleventh Edition, revised ed. (Oxford: Oxford University Press, 2008), to educate p 455; to train p 1529; to learn p 811.

² See for example Gwennis McNeir, *Outcomes-Based Education: Tool for Restructuring* (Eugene, Oregon: Oregon School Study Council, 1993); Bruno V. Manno, *Outcome-Based Education: Has it Become More Affliction than Cure?* (Minneapolis: Center of the American Experiment, 1994).

³ For example see Benjamin S. Bloom, *Human Characteristics and School Learning* (New York: McGraw-Hill, 1976); Lorin W. Anderson, ed., *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*, Complete ed. ed. (New York: Longman, 2001).

a group or organization by developing shared images of the future they seek to create ..., and the principles and guiding practices by which they hope to get there.”

- Team Learning: “This is a discipline of group interaction. Through techniques like dialogue and skillful discussion, teams transform their collective thinking, learning to mobilize their energies and ability greater than the sum of individual members’ talents.”

Taken together, says Senge, these contribute to “Systems Thinking”: “In a systems approach to a problem, you start by realizing that there is no inherent end to a system. There is no such thing as a complete theory. The quest is to look at a problem more comprehensively. The resolutions come from rethinking how we deal with complexity.”⁴

A second recent addition to learning lexicon is the idea of life long learning which is generally linked to rapid advances in knowledge and technology. In the *Oxford Handbook of Lifelong Learning* Manuel London argues that life-long learning in the workplace can occur where the organization sets up a “learning environment” including policies, practices and activities to encourage learning.⁵ In the same volume Paul Hager reviews the nuances of the term since its first use in the 1970s. Importantly for this paper, he points out that lifelong learning is not an individual activity, but that it can equally apply to organizations.⁶

If these concepts can be seen in the experience of society as a whole then are they also to be found in professional education and in military professional education and learning? Before attempting to answer these questions we are best to define the key characteristics of a profession and professional learning.

⁴ P. M. Senge and et al, “What is Organizational Learning?” Society for Organizational Learning, http://www.solonline.org/?page=Abt_OrgLearning (accessed 06/16, 2014). For a fuller discussion see Peter M. Senge, *The Fifth Discipline : The Art and Practice of the Learning Organization*, Rev. and updated ed. (London: Random House Business Books, 2006).

⁵ Manuel London, “Lifelong Learning: Introduction”, in *The Oxford Handbook of Lifelong Learning*, ed. Manuel London (Oxford: Oxford University Press, 2011), 5.

⁶ Paul J. Hager, “Concepts and Definitions of Lifelong Learning”, in *The Oxford Handbook of Lifelong Learning*, ed. Manuel London (Oxford: Oxford University Press, 2011), 12-25, 24.

In his work, *Professionalism: The Third Logic*, Eliot Freidson argues that “professionalism” exists when “an organized occupation gains the power to determine who is qualified to perform a defined set of tasks, ... and to control the criteria by which to evaluate performance.”⁷ While all occupations contain some blend of skills and knowledge, professions, he says, involve a “special kind of knowledge ... believed to require the exercise of discretionary judgment and a grounding in abstract theory and concepts.”⁸ All training, whether for craft, technical or professional work involves some degree of vocational training, but professions benefit from the broadening experience normally associated with a university milieu and approach to learning.⁹ It is this liberal education that both enables specialist practitioners to later serve in managerial positions and also establishes a societally recognized legitimacy.¹⁰ Moreover, a professional is better prepared by having a broad knowledge of theories which can be a “guide [to] discretionary judgment” rather than a narrow ability in only some of the practical applications of the profession.¹¹

Professors Rod Gidney and Wyn Millar have found similar themes in the evolution of professional education in nineteenth century Canada. In their monograph *Professional Gentlemen* they explore the three traditional professions – divinity, medicine and law, concluding that technical proficiency had to be accompanied by a liberal education which remained “the touchstone of the educated man: it constituted a training in character and culture, the necessary prerequisite to framing technical expertise within ‘scientia’....”¹² This scientia – knowledge – was thus a fundamental component of the individual’s formation, giving the professional the ability, in theory at least, to see the bigger picture while at the same time conferring a certain social status both on the individual and the profession.

While Friedson, Gidney, Millar and others do not discuss the military, there are researchers who do and who see it as a profession. Samuel Hunting-

⁷ Elliot Friedson, *Professionalism The Third Logic* (Cambridge: Polity, 2001), 12.

⁸ Friedson, 13.

⁹ Friedson, 90.

¹⁰ Friedson, 121.

¹¹ Friedson, 95.

¹² Robert Gidney and Wyn Millar, *Professional Gentlemen: The Professions in Nineteenth-Century Ontario* (Toronto: University of Toronto Press, 1994), 355.

ton's 1956 *The Soldier and the State* is a cornerstone of that thinking. In it he argued that twentieth century professional officers were much more than full time practitioners in that they met three essential criteria of professions: expertise, responsibility and corporateness.¹³

Huntington identified that while officers held a variety of qualifications (pilot, intelligence analyst, submariner, etc) there was, however, a common underpinning that could be identified by the phrase, "the management of violence." An officer's associated duties included preparing the force, planning its missions, and directing its actions. An officer's skill was neither "craft" nor "art". "It is instead an extraordinarily complex intellectual skill requiring comprehensive study and training." In Huntington's view, acquiring this intellect required about one third of an officer's career. Mastery came not simply through "learning existing techniques. [The management of violence] is in a continuous process of development, and it is necessary for the officer to understand this development and to be aware of its main tendencies and trends." These statements surely suggest the requirement for life long learning. But even this was not enough, for Huntington posited that the officer must be in tune with the culture in which he operated. This required an understanding of society, of the characteristics of other professions and of human beings themselves.¹⁴ More evidence, one can argue, of the place of scientia.

This concentration on professional development and an associated structured progression within the profession have combined to create three broad levels of service and related education. Ab-initio education prepares young aspirants for junior practice, while progressively more enriched education, both formal and 'on job' experience, helps officers move into middle and then executive leadership roles.

Before moving to the case studies it might be interesting to consider three pieces of evidence. First is an anecdotal observation that the US Marine Corps has for many years understood the difference between training and education. The former, they say helps prepare personnel of make standard-

¹³ Samuel P. Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (Cambridge, Mass: Belknap Press of Harvard University Press, 1957), 8-10.

¹⁴ Huntington, 11-14.

ized responses to predicted conditions, while the latter prepares personnel to make reasoned responses to unanticipated circumstances. Second, a 1950s study of the US military education system cited one midgrade officer who also observed on training and education, arguing that training and education were situated at the ends of a coherent “learning spectrum.” In this spectrum, training generally referred to the performance of a task, such as the daily maintenance of a rifle, while education dealt solely with abstract concepts.¹⁵ Finally, it is worth mention that Senge pointed out that the US Army was, in his view, “a pioneer in learning infrastructures”. Senge said that the Army used a variety of learning vehicles, including training and education, practice (simulations and exercises including after action reports), research and published doctrine. He added that that this learning infrastructure was not often seen in business where there was “lots of infrastructure for decision making, but none for learning.”¹⁶

If we now turn to the case studies, the first is one brought to our attention by Huntington. He wrote, in *The Soldier and the State* that the Prussian Kriegsakademie, or ‘War School,’ created at the beginning of the 19th century, like Prussian cadet schools, focused not on rote memorization but on the development of intellectual capability – “upon forming and disciplining the mind and encouraging habits of reflection.” It was Huntington’s view that the Prussian system compared very favourably with twentieth century education theory.¹⁷

The catalyst for the Kriegsakademie and other reforms came in the Prussian defeats of October 1806 at Jena and Auerstedt at the hands of Napoleon. This was a hard tonic for the descendants of Frederick the Great whose Prussian forces had been the model of effectiveness in the mid 1700s. Peter Paret described these circumstances in *The Cognitive Challenge of War*,¹⁸ and in an earlier work, *Yorck and the Era of Prussian Reform*.¹⁹ In the

¹⁵ John W. Masland and Laurence I. Radway, *Soldiers and Scholars: Military Education and National Policy* (Princeton: Princeton University Press, 1957), 51.

¹⁶ Senge, 313-4.

¹⁷ Huntington, 48.

¹⁸ Peter Paret, *The Cognitive Challenge of War : Prussia, 1806* (Princeton, N.J.: Princeton University Press, 2009).

¹⁹ Peter Paret, *Yorck and the Era of Prussian Reform 1807-1815* (Princeton: Princeton University Press, 1966).

latter he points to the intellectual debate fostered by General Gerhart von Scharnhorst even prior to the French victories. In addition to making some changes to officer education, Scharnhorst also behind the *Militärische Gesellschaft*, a professional society of about two hundred members drawn from all officer ranks and including civilians, the purpose of which was to debate various matters related to military reform, these having been suggested by the membership. But such changes, reports Paret, did not receive universal support from the officer corps. One particular suggestion, to allow soldiers more individual freedom of action and decision making while skirmishing, was deemed inappropriate. Prussian battalions had been successful because the rank and file were literally kept in disciplined ranks; skirmishing would allow soldiers to avoid the shock of combat by simply keeping their heads down.²⁰

The real reforms would have to wait until after the Prussians defeats. Some now saw the need to reform both the state and the military. Scharnhorst and his civilian colleague Freiherr vom Stein believed that there were talents and capabilities that the current state and military culture and organizations were failing to exploit. Paret writes: “At the bottom they were educators. Men should be taught to deal more effectively with reality, and institutions had to be devised to accommodate and direct the freer action of intelligence.” Scharnhorst and Stein wanted to see the state grow beyond a structure dominated by government regulation to a point where the potential of individuals could be identified and used.²¹

Perhaps the most important event in the reforms of the Prussian military was the King’s decision to create a Military Reorganization Committee, co-chaired by Scharnhorst. It would operate outside the normal military structure and have direct access to the monarch. The king laid down a range of topics for study, which taken together would examine the means by which the army recruited, trained, employed and disciplined its members. He did not impose his ideas but set out areas of investigation.²² Reforms touched not just the military way to doing things but on but Prussian society as well. Corporal punishment of soldiers was to be done away with; if troops were

²⁰ Paret, *York*, 84-7.

²¹ Paret, *York*, 118.

²² Paret, *York*, 122-4.

to have more freedom of action in battle then they would also need to have freedom to decide for themselves and not to be treated as unthinking peasants in uniform. The officer corps was to be opened to all persons within society; in time of peace a level of education would be required, in addition to some degree of military competency, but in wartime that education could be replaced by battlefield competency thus allowing NCOs and soldiers to become officers.²³ In terms of changes to education programmes, the focus was placed on the officers. There were now “cadet schools which prepared young men for ensign examination, examination commissions, three schools where ensigns learned the essentials of the subaltern’s duties, and a war school for officers [the later *Kriegsakademie*] in which young officers received advanced training and preparation for duty with the General Staff.”²⁴

Can we then say that the Prussian army, and even its parent state were learning organizations? If we see personal mastery not only on an individual level, but from the perspective of the state and the military institution then there is surely a degree of personal mastery: the army had failed and needed to accept that reality and both as an organization and as individuals there was a need to make improvements. A review of and changes to mental models was unquestionably necessary; if the doctrines of Frederick were not working then they needed to be challenged and where necessary revised or discarded. Within the military itself Scharnhorst sought to foster debate and to improve military education so that officers could explore issues logically; the *Militrische Gesellschaft* provided a tool for that debate. It is hard to say conclusively if there was a shared vision and if it was achieved by goodwill. The opposition to early reforms and the need to drop certain naysayers from Military Reorganization Committee suggest that there was never universal acceptance of the reforms. Team learning was evident in the reorganization of the army and the production of new training instructions designed to prepare officers and soldiers to work in those new organizations. It is hard to say if those involved in the first decade of reforms would have seen themselves immersed in a systems thinking model. New ways of considering the phenomenon of war would continue to emerge, the most notable of those being Karl von Clausewitz masterful study *On*

²³ Paret, *York*, 132-6.

²⁴ Paret, *York*, 138.

War. Was the Prussian military of the early 19th century a learning organization? Seemingly yes, but not without limitations in terms of the model.

A century after these Prussian reforms took place the great powers entered the First World War with small and rudimentary air forces, but by 1918 these had grown to powerful military services able to discharge almost all present day air power functions. Along the way the members of these services had had to come to terms with a suite of new technologies, a whole new paradigm of military action, and a need to identify the requirements of these flying services in such a way that both the militaries and their nations could assign and align scarce resources. The case of the flying services presents a unique circumstance – a new organization and technology forced to learn its way under the most trying of circumstances.

Much criticism has been levelled against generals who seemingly failed repeatedly to get around, both literally and cognitively, the challenges of trench warfare, but eventually they did learn and succeed. Were the air marshals any more successful or were they too on a steep learning curve, but one which did not have much of a starting point given that air operations were all but unknown and little understood in 1914? Just in terms of numbers the British Royal Flying Corps expanded from 6 to 86 squadrons by the middle of 1918. Not only had aircraft and personnel numbers increased, but the roles of the air services had expanded from simple reconnaissance to air fighting and aerial bombardment, the latter both over the front and against strategic targets. To achieve all of this, while under the constant strain of air combat required considerable intellectual flexibility and an openness to learn.

Questions of organization, equipment and tactics were among those examined in a 2009 study *The Origins of Air War: The Development of Military Air Strategy in World War I*. The author, retired RAF Gp Capt and business professor Robert Grattan, sought to tease out the ‘how’ of the rapid growth of air services and air power during the period of the Great War. He likened the RFC/RAF experience to a startup enterprise where the kernel of an idea blooms at a great rate, resulting in the need for extensive structure. This structure he said fell into five areas: organization, aircraft, weapons, men and roles and tactics. Together they formed, he suggested, a strategy

for the effective use of air resources.²⁵ As a quick aside, we should note that he was not talking about doctrine, nor does the term appear in the index to his work. Rather, I believe he was looking to identify the factors that allowed air resources to evolve and to be used in certain ways. These would have led to the development of doctrine and to the conceptualization of air power theories such as those of Giulio Douhet in the years after the war. Among his conclusions Grattan stated that the RFC/RAF was a 'learning organization'. He wrote: "Learning is the way that knowledge passes from a source to a person, and the organization structure and culture must facilitate the exchange of knowledge from those who have it to those who need it."²⁶

French and German air services demonstrated similar growth. The French case is particularly interesting. Here we find was a strong aviation culture before the war and many French leaders both civil and military spoke and wrote about the importance of control of the air. Indeed in 1917 it was Marshal Petain who wrote "Il faut être maître de l'air".²⁷ Many of the problems experienced in Britain concerning sufficient supply of engines and aircraft dogged the French as well, but they were sufficiently focused on quality that they supplied the British with both aircraft and engines at certain points.²⁸ French doctrine too seemed to be more advanced than the British, with clear statements of function and organization coming from the air staff at the Grand Quartier General.²⁹ For all that, though, the French were not prepared to create an air service³⁰ as the British did and there was internal fighting among senior officers over the creation of a centrally controlled air division that stripped away squadrons from corps and armies.³¹

²⁵ Robert F. Grattan, *The Origins of Air War : The Development of Military Air Strategy in World War I* (London: Tauris Academic Studies, 2009), xii-xiii.

²⁶ Grattan, 208-9.

²⁷ Patrick Facon, *Histoire De L'armée De L'air* (Paris: La documentation Française, 2009), 57.

²⁸ Facon, 48-51.

²⁹ Jérôme de Lespinois, *La Doctrine Des Forces Aériennes Françaises 1912-1976* (Paris: La documentation Française, 2010), 81-4.

³⁰ Facon, 57-60.

³¹ Facon, 68-71.

Can we today say that the air services met Senge's criteria? Constant reflection and improvement were essential to the ability of the organizations, at all levels of operation and management to keep pace with not just enemy action, but also with the expanding needs of the armies, and with evolving technology and growth and complexity of the organizations themselves. This growth required the development of mental models, both simple and complex to test the efficacy of day to day flying as well as the why, what, and how of what air arms should and could do. Was there a shared vision? In the case of the French there seems to have been at least a common recognition and acceptance of the value of air power, if not regarding the actual organization of the service and its subordinate parts. Similarly within the Royal Flying Corps there was little argument about the desire to make the most of the new technology, but there was certainly a difference of opinion about the roles of air services seen in the difference in tactics and equipment operated by the RFC and the RNAS. Team learning does seem to have occurred: there was during the war a reasonable degree of open dialogue and exchange of ideas both within and between services and between the French and British themselves. Systems thinking would, it could be argued, need to wait for the peace and the emergence of air power theorists.

The third case is a more recent one and like the Prussian example looks at an organization which had failed. In this case it is the Canadian Armed Forces that by the end of the 1980s had a strong record in peacekeeping success. That was to change quickly in 1993 with failure at the level of on-scene leaders in Somalia, where a local teenager was beaten to death while in custody. These events were quickly made public, but the handling of the situation at the strategic level led to the replacement of two Chiefs of Defence Staff. The in 1994 Canadians witnessed the failure of the UN mission in Rwanda, that mission led by Canadian general Romeo Dallaire.

So shaken was the nation that a Royal Commission was struck to examine the ethical failures of military leaders at all levels. The commission's report *Dishonoured Legacy* and follow-on studies called for a complete overhaul of the military education system, directing among other things that all entry level officers were to have an undergraduate degree, that the curriculum of the Royal Military College (Canada's cadet school which offers baccalaureate degrees in engineering, sciences, and the arts) be revised to include a

core of liberal education and that there be enhanced leadership and ethics education across all rank levels.³² At RMC a revised curriculum was instituted that required all students to take courses in psychology (including leadership and ethics), English or French literature, Canadian history and military history and thought, political science, economics, maths, and sciences.³³ A Leadership Institute was created which produced a number of texts on professional leadership, ethos and ethics to be used in addition to academic works; these replaced a little used Canadian army manual dating from the early 1970s.³⁴ These texts were introduced into the curriculum of the Canadian Forces College, the senior officer professional education school of the Canadian Armed Forces, which began shifting from a prescribed syllabus to one offering electives, these, as well as many core subjects, being taught by civilian faculty exercising full academic freedom.³⁵ The learning outcome ought was a body of senior officers with a strong ethos and morale compass and with the intellectual capacity to deal with 'wicked' problems and ambiguous circumstances.

In this example the learning organization seems closer to the Prussian example. It was the state and the entire military organization that had to accept a reality other than the preferred vision of the profession of arms; if personal mastery meant understanding and operating ethically and within the rule of law then some members of the profession had failed. Similarly the mental models being employed required updating; few if any senior members of the profession had any acquaintance with the 30 year old army

³² See Canada, Department of National Defence. *Dishonoured Legacy: The Lessons of the Somalia Affair* (Ottawa: Department of National Defence, 1997); Hon. M. Douglas Young, "Report to the Prime Minister on the Leadership and Management of the Canadian Forces" (Ottawa: Department of National Defence internal document, 25 March 1997); Hon. John Fraser. "Minister's Monitoring Committee on Change in the Department of National Defence and the Canadian Forces Final Report—1999" (Ottawa: internal document, 1999).

³³ RMC Board of Governor's [sic] Study Group, "Review of the Undergraduate Program at RMC — Balanced Excellence: Leading Canada's Armed Forces in the New Millennium" (Kingston, Department of National Defence internal document, 30 April 1998).

³⁴ Between 2002 and 2014 the Canadian Forces Leadership institute has produced a suite of five leadership doctrine manuals. These are described at <http://www.forces.gc.ca/en/training-prof-dev/index.page#leadershipdoctrine> (accessed 30 October 2014).

³⁵ The syllabi of the full ranges of programmes offered at the CFC are available at <http://www.cfc.forces.gc.ca/248-eng.html> (accessed 30 October 2014).

publication. I can say that while some in uniform felt that the criticisms and correctives went too far, hindsight suggests that there were major shortcomings that needed attention and in that sense a shared vision and team learning did, largely, contribute to sorting out things that were broken. There has been a systems approach to this reformation. Those who manage the learning both in the classroom and in the field units are today at least still aware of the failings that the 1990s presented. They are equally aware that the solutions are not perfect or permanent and require ongoing validation.

These are but three examples that seem to indicate the presence of learning organization characteristics across time and nations. Can we build a general model based on these? Can we say that all militaries show the characteristics of learning organizations or that they even understand those characteristics? Certainly not, but one can at least in some part allay concerns that militaries and their states are not interested in broader learning and in the acquisition of scientia. We might reasonably conclude that 'military education' is not an oxymoron; rather, it is a longstanding hallmark of western nations.

'So what?' one might ask. If we can conclude that militaries are learning organizations, albeit imperfect ones, then military educators will take some comfort in knowing that they are doing a generally sufficient job, both practically and philosophically, and parent societies will know that military education, seen through a broad pedagogical lens is effective, valid and useful.

Concluding Keynote Address

Wolfgang Wasolsobe

It is a challenge to give a concluding key note to a Conference which has covered such a width of issues. I will therefore not go back to the details of your discussion but rather stick to what is my profession at the moment: Provide the whole range of military expertise to the European External Action Service, conduct the political strategic level military planning for our operations and missions and contribute to the shaping of European Member States' Armed Forces from the perspective of European external action. This covers the range of tasks of the EUMS. It is the latter, capability planning, which brings me closest to your topic, to look ahead into 2020 and beyond.

2020 is quite close. 6 years is a very short period of time in terms of capability planning, and it is also short from an operational point of view. Our operations in the Balkans started in 1995 and 1999, respectively, ISAF in 2002, and the EU has taken over the operation in Bosnia and Herzegovina in 2004 and has been conducting the Anti-Piracy operation in the Horn of Africa since 2008. So even in operational terms, 6 years is short.

We can try to look at six years from an alternative perspective: If we add up what has happened in Europe, while focussing on a European perspective as of 2008, then the extrapolation of the six year timespan towards 2020 becomes daunting. Besides the economic and financial crisis which had a far reaching impact on the shape, size and sustainability of all EU MS Armed Forces, we also had to face issues that had a direct impact on Europe: The broad and still widening range of consequences stemming from the Arab awakening, the Libya-crisis and the resulting developments in other parts of the Sahel, Syria and now ISIL, the Ukraine-crisis with the specific impact of hybrid warfare.

Hybrid warfare will continue, and Europe has to be prepared for it. ISIL is far from defeated, while political settlements in Syria and Libya appear to have gloomy outlooks. SSR in its broadest sense will remain an imperative

in the Sahel, in parts of Sub-Sahara Africa, in South Sudan, and in the Horn.

To face this, there are 28 European Member States Armed Forces, and several Third States closely linked to Europe, all building on a broad variety of national security strategies and objectives. 22 of these States are NATO-Allies and therefore, to a considerable extent, tend to shape their military forces in alignment with NATO objectives.

The scenarios of the past decade have clearly shown that neither defence nor crisis management can be envisaged on a purely national level. This is recognized by all, with only a divergence to the methods on how to build common action. The range of options is well known: NATO as an Alliance, the EU in the framework of CSDP, the UN, and the coalition of the willing.

Looking at 2020 and beyond, it is clear that we need to envision a two pronged approach.

- To make cooperation more effective and
- to prepare Armed Forces in a way that they can face the new challenges in a multinational context.

The EU is still in a learning process when it comes to the improvement in the insertion of the military instrument into the comprehensive approach, and more generally, when building genuine comprehensiveness that goes beyond civil-military aspects. We will need this if we want to make our undeniable, but still young and partial, successes durable and lasting.

The European Union maintains the ambition to be able to conduct the full range of military operations. Most of high-end capabilities needed here are identical with those defined by NATO, to fulfil Article 5 and expeditionary tasks.

The EU's military ambition will remain outside the EU territory, thus in the foreseeable future, the EU will not become a defence alliance. In looking at European capabilities, the spectrum we observe should be larger than

merely CSDP operations. EU-Member States should be able to act in coalitions, possibly under the umbrella of Article 44 TEU¹, they should be able to contribute to the UN and the OSCE. Of course, the highest degree of EU visibility, acceptance and political impact remains with a broadly supported EU tag. But there remains some impact if contributions of an EU Member State to non-EU political frameworks are substantial. In addition, we have to think about the sustainability of the European Defence industry. A Defence Industry which remains at the technological edge is key to long term decision making autonomy.

If I were to prioritise from an EEAS point of view, I would consider CSDP first, then coalitions and contributions to other organisations, then industry interest. What we most urgently need for CSDP is the full spectrum of ISR and to a lesser extent ISTAR, CIS, including Cyber, strategic lift. The need for rapid reaction is constantly increasing.

Improvements in all these capability areas are essential for a credible EU military dimension. But its value would vanish if there are no sufficiently clear and shared political objectives, leading to rapid decision-making processes. This is not for the military to develop, however the military can strongly contribute to illustrate the added value of swift political decision making.

Allow me to illustrate in more detail some of the key aspects of the developments we expect and foster for the years to come.

The Comprehensive Approach is a central aspect which needs to be further developed. It is a joint undertaking and its success a shared responsibility for the EU institutions, as well as for Member States whose policies, actions and support significantly contribute to more coherent and more effective EU responses. It is more than civil-military interaction.

The EEAS Joint Communication on the EU's comprehensive approach to external conflicts and crises establish the following measures: Develop a shared analysis; Define a common strategic vision; Focus on prevention; Mobilise the different strengths and capacities of the EU; Commit to the

¹ Treaty of the European Union

long term; Linking policies and internal and external action; Make better use of EU delegations and work in partnership.

Develop a shared analysis

A coherent political strategy for conflict prevention, preparedness and response starts with all relevant players sharing a common understanding of the situation or the challenge. A shared analysis should set out the EU's understanding about the causes of a potential conflict or crisis, identify the key people and groups involved, review the dynamics of the situation and assess the potential risks of action, or non-action. It must also identify the EU interests and objectives and our potential role to contribute to peace, security, development, human rights and the rule of law, taking into account existing EU resources and action in the country or region in question.

Define a common strategic vision

Building on this shared analysis, the EU should, whenever possible, work across institutions and with Member States to develop a single, common strategic vision for a conflict- or crisis- situation and for future EU engagement across policy areas.

Focus on prevention

The military role in prevention needs to be developed. Whenever possible the EU must seek to prevent conflict before a crisis emerges or violence erupts. Prevention contributes to peace, security and sustainable development. It saves lives and reduces suffering, avoids the destruction of homes, businesses, infrastructure and the economy, and makes it easier to resolve underlying tensions, disputes and conditions conducive to violent radicalisation and terrorism. It also helps protect EU interests and prevent adverse consequences on EU security and prosperity.

Mobilise the different strengths and capacities of the EU

Effective and proactive EU-policy responses to conflict and crises should draw on the different strengths, capacities, competencies and relationships of EU institutions and Member States, in support of a shared vision and common objectives.

This Comprehensive Approach should commit to the long term

Long-term engagement in peace- and state-building and long term sustainable development are essential to address the underlying causes of conflict and to build peaceful, resilient societies. The overall objectives of sustainable peace and development must be at the core of the EU's response from the outset, but the EU must also have a long-term vision for its short-term engagements and actions.

Linking policies and internal and external action

EU internal policies and actions can have significant external effects on conflict and crisis situations. Likewise, external action and policy can also influence the internal dynamics of the EU. Also, the pull factor of the EU through the perspective of joining the Union, in combination with intense diplomatic engagement, continues to play a vital role in conflict prevention and longer-term stabilisation.

Make better use of EU Delegations

The EU Delegation and the Head of Delegation in particular, are the focal point of an EU presence in third countries and should play a central role in delivering and coordinating EU dialogue, action and support.

Work in partnership

In facing complex global challenges, the EU needs to engage and work together with other international and regional actors. The role of the EU is linked to the action, resources and expertise of others. EU-UN; EU-AU – cooperation has to be translated into capacity-development and we have to enhance our own ability to deal with such partnerships.

The main implications of the comprehensive approach in terms of capability development/ procurement /operational use, are to develop greater synergies between civilian and military research and development, as well as the dual - use capabilities where dual-purpose assets create better synergies with regards to procurement and mutual support/reinforcement can be achieved. This also enhances the compatibility and "interoperability" between civil missions and military operations. This means that there are specific future requirements which have to be taken into account, in particular

when addressing these new challenges: Maritime Security, Cyber, Space, Energy security. Followed by the commitment of the European Council 2015 to deliver key capabilities and address critical shortfalls through concrete projects eg. Remotely Piloted Aircraft Systems (RPAS) – in the broader context of ISR, Governmental Satellite Communication (SAT-COM), Cyber security, Air to Air refuelling. The European Council 2013 calls for more systematic and longer term European Defence Cooperation: including via work on a "Policy framework" (EDA) and CDP Capability Development Plan (EDA-EUMC). Pooling and Sharing can still be an efficient way to have access to capabilities. The European Air Transport Command (EATC) is a good example that goes far with the sovereignty issue but starts with few countries and a step by step approach.

It calls also for enhancing EU-NATO cooperation to ensure specific nature: 22/28 complementary and mutually reinforcing, and to support capability development and interoperability to improve the EU's CSDP deployability. There is a need to improve the EU military rapid response (RR) capabilities, e.g. through more flexible and deployable EU Battle-groups (EU BG is one of the tools) – RR is joint, flexible, modular – broader than BG (which is part of the land component). But also the need of building strategic capabilities in areas such as ISR and Command and Information Systems (including Safe use of Cyberspace), Force Projection - Strategic Air and Sea Transport, Air-to-Air Refuelling - will remain essential to enable military operations outside the EU. And at last the Cyber areas where one may question whether the future will lie with network separation rather than a continuation on further building comprehensive networks.

Furthermore, we should likewise consider our overall approach, which should be characterised by more durability and success sustainability.

Financing

In times of financial constraint, the optimization rather than the expansion of resources is a crucial underpinning philosophy. More flexibility on sources of financing could provide a beneficial impact on the whole decision-making process, including force generation and critical military capabilities. In this respect, there is need for a more flexible interpretation of article 41 of the Lisbon Treaty. This should involve more balanced funding between civil and military missions or operations with similar tasks in sup-

port of the EU's Comprehensive Approach, particularly non-executive military missions dedicated to training. Moreover, potential financial synergy through greater and structured cooperation between military and civilian missions and operations should be explored, notably for those deployed in the same geographical area.

We should also take into consideration the increasing role of the contractor support to operations. In this respect, the development of flexible and agile contractual tools, such as Rapidly Usable Enabling Contracts would certainly improve readiness. Nevertheless, such options need to be carefully scrutinised; they should be cost - effective, must not present any costs if not used, and - if for a capability that should be force-generated - should be used only as a last resort.

Capacity Building

The ultimate objective of Training and Equipment (T&E) is to enable third countries and regional organizations to take responsibility for their own security. In this respect, we need a systematic and inter-institutional approach to capitalize on the opportunities offered through a coherent EU response.

T&E is a long-term commitment that goes beyond the primarily short-term actions of CSDP Military Missions and Operations, thus it requires a coordinated effort to transition from CSDP missions or operations to long-term capacity building/development, involving other EU institutions. T&E will not be effective unless there is a strong commitment of all interested parties. Consequently, local authorities must be kept fully involved throughout the programmes' life span and encouraged to actively participate to build a sense of ownership.

Nevertheless, there are risks associated with T&E, especially when lethal equipment is concerned, Utmost care should be taken to assess all the risk factors to avoid potential damages to the prestige and credibility of the EU. The necessity for a sustainable approach to T&E would entail a long term commitment by the EU to supported countries and regional organisations that goes beyond the mandate of CSDP Military Missions. Experience shows that a failure to provide sustainable T&E would only preserve a “culture of dependence” as opposed to a sense of ownership.

The financing of non-lethal and dual-use military equipment as well as some specific non-military projects that would be identified during the decision making process, or subsequently indicated by Mission/Operations Commanders, could be ensured through other EU financial instruments insofar as the delivery of such equipment is different from a military operation. Experience shows that basic requirements, such as first aid-kits, better living conditions, health care, etc., can be satisfied with a relatively modest investment and would dramatically improve the effectiveness of training and the trainees' operational capabilities.

The lack of equipment is often compounded by poor governance, insufficient maintenance and logistic support and, in some cases a lack of ability to account for the donated equipment. Consequently, there is a need for the so-called "cradle to grave"-approach that is to say the provision of equipment should be complemented with a dedicated training and a long-term logistic support package. These efforts should be closely linked to capacity-building programmes focused on materiel management, logistics support, auditing, etc. Lastly, "co-funding" should be explored as a possible means to build the sense of ownership and engagement of supported countries/regional organisations.

Intelligence

Intelligence is becoming increasingly important, both internally and externally. History shows that since the world wars in the last century the character of conflict has changed. War-type operations are getting shorter and shorter, whereas stabilization - and transition-periods last longer and longer. In the past, wars were fought mostly in the interest of enlarging own territory and at the same time they were fought between states. Nowadays we see a kind of privatization of war on the one hand and on the other hand, future conflicts will focus on access to natural resources (for industries) such as potable water. Additionally, as a result of inequality and the uneven distribution of wealth, migration from 'poor' or less developed regions (not necessarily states!) to 'richer societies' will cause unrest and instability.

Due to the fact that most of the natural resources needed by the northern and the well developed hemisphere can be found in less developed regions

in the southern hemisphere, conflicts will predominantly occur there. In addition, the ongoing trend to urbanization will concentrate conflicts in zones of high population density. Therefore, equipment wise (recce and intel only), sensors must be capable of penetrating infrastructure, while HUMINT capabilities are indispensable, and air conditioning of buildings/vehicles is a must. As poor regions have at the same time less developed infrastructure, air mobility and airborne recce (UAV) is mandatory. Also equipment must be easily serviceable (robust against heat, dust, no sophisticated maintenance required).

However, conflict parties' sympathizers can influence own operations easily by CYBER efforts from outside of theatres. Therefore, limiting network connectivity is mandatory to prevent attacks.

Rapid Response

These mentioned indicators show that we have to cope with an increased pace of change and that there are good reasons to consider "rapid response". In the foreseeable future in the short-medium term, it will become more apparent that the deployment of huge forces on the ground will be progressively minimized, while the demand to deploy forces at short notice will increase. Therefore, joint rapid reaction forces in every main domain (land, maritime and air) are probably most demanded in the future.

To achieve an overall EU Rapid Response, both political reaction and a possible response by military means needs to be fast and effective. The EU overall rapid response encompasses: Firstly, an extremely compressed decision making process; secondly, to finalise all phases of Crisis Response Planning in a very short period of time following the agreed Crisis Management Procedures; and finally, the use of forces which are already held at very high readiness by MS and are made available for a specific case by the EU Battlegroup pre-agreed roster; the Land, Maritime and Air Rapid Response databases; and the force generation process. In order to maximise the EU's military ability to respond, either within or without an EU BG context, there is a need for a more flexible, multi-Service EU Military RR suite of assets, or "toolbox", with supporting and interconnected RR mechanisms. Land, Maritime and Air auxiliary/niche capability modules could then be added to the activated Rapid Response option (e.g. BG) if that non-core capability is required at the time of crisis.

This approach acknowledges that there is a wide spectrum of potential tasks open to the Rapid Response, from combat and peacekeeping operations, through support to humanitarian operations, to training advisory missions; it is difficult for each Rapid Response option to be ready and configured for the whole gamut. Some would have a very specialist role in support to particular operations/missions. Thus, with a wider selection of enablers available for deployment, the Rapid Response package, tailored at the time to the mission, becomes more usable in that it is able to respond just as rapidly while meeting a wider set of tasks more appropriately.

The adoption of this modular approach will bring additional capability and flexibility to the EU without significant resource impact therein. MS would bear the additional resource implications of offering modules to the various Rapid Response Databases.

Operaitonal Coordination

Recent examples have shown that EU military missions and operations are usually deployed in crisis areas where other national or international operations are also present. This is typically the case in the Indian Ocean (presence of EUNAVFOR, NATO OOS, CMF and national independent Navies), in Mali (FR operation SERVAL initially, followed by BARKHANE, MINUSMA), in CAR (FR operation SANGARIS, MISCA then MINUSCA) and in Somalia (AMISOM).

Such simultaneous deployments require coordination in theatre at the appropriate level, in order to ensure de-confliction of activities, avoid duplication of efforts and to promote mutual support. Depending on each situation, this is usually put in place at the theatre level through the establishment of Liaison Officers or an ad hoc information exchange forum, but it can also be formalised at a higher level through the definition or the set up of overarching operational coordination measures and mechanisms. The Counter Piracy Framework Document (CPFD) signed by the three big counter piracy players in the Indian Ocean is a good example of such structured operational coordination.

At the tactical level, interoperability between concerned forces remains of importance, notably with regard to Communication, Information Systems,

in order to allow routine and real-time information exchanges.

Recent EU military engagements have shown that the EU is unlikely to be the first military force to enter a crisis area, as nationally-led operations or ad hoc-coalitions would probably be quicker to intervene seeing that their decision-making processes are often swifter. Mali and RCA are good examples of an EU military presence following a national intervention. In such cases, the EU can usually rely on some initial support, including intelligence, medical or logistics provided by the leading nation and which would facilitate the EU deployment. If one or several EU Member States are already deployed, then the re-hatting of units would certainly be of value, in order to benefit from local field experience and immediate operational capability.

In case of already ongoing national operations, the EU, at an early stage, should consider the type of complementary military efforts that could be offered, therefore focussing on gaps or new areas (including longer term capacity building and training for instance) which need to be covered. The EU Training Mission in Mali is a perfect example of where the EU managed to invest in an area (re-building of the Malian Army and long term Defence Reforms) that was not initially covered by the ongoing national operations, given the urgency of the situation. EUFOR RCA focus on 3rd and 5th district in Bangui, also demonstrates the added value of allowing other deployed military actors to rebalance their efforts and expand to wider areas.

However, the EU contingents should not only be considered only as follow-on forces, as the bridging operation examples of EUFOR Chad-RCA and EUFOR RCA demonstrate the need to develop EU forces that are capable of quickly deploying and performing executive tasks to maintain a Safe and Secure Environment and prevent any deterioration of the security situation. Seeing that a transition to the UN is one of the most probable scenarios, coordination mechanisms could be further developed and lessons learned implemented IOT facilitate any EU-UN joint efforts in the future.

Which leads us to some general characteristics:

- EU is never acting alone - always to be coordinated – harmonised
- EU rarely will be initial entry – could change with Art 44
- EU can be a follow-on or bridge force
- EU can ensure transition from bridging SASE to long term stability and local ownership

Conclusion

In conclusion, we ought to look also at what the EU and the military should do:

For the EU, it should considerably improve its strategic communication to enhance MS' understanding of common interest. Beyond interests, contributions to EU, including military should be understood as a long term investment. The EU should improve decision-making mechanisms, to make them more comprehensive and faster. This, again, depends on MS' understanding of what should be better done with the EU.

The EU should create a genuine comprehensive approach which truly encompasses all actors and should improve the tools to make these policies sustainable, particularly the need for new and improved approaches to intelligence. And last but not least, the EU should continue to further develop models which allow for a quick reaction based on a group of Member States.

For the military it is first the political leadership who has to clarify long-term objectives. It cannot be left to the military to define their own long-term shape and role. Nevertheless, enhancing reactivity, ISR and ISTAR, and preparing self-sustaining specialized capabilities, remain key tenets of capability development. This alone would not lead to common strength. For decades, NATO has showed the way and demonstrated how the operational side can be effectively coordinated. But also NATO had (and still has) great difficulty when reducing the number of different equipment pieces that answer to the same capability requirement.

Therefore, also on the EU-side we should continue to organize and collect as many relevant capabilities as compatible with the respective MS's con-

siderations about national sovereignty. Moreover, there is a need to better prepare the military contribution to the Comprehensive Approach. In terms of training, this translates in multifaceted cultural awareness. Furthermore, enhancing the flexibility of C2 structures and of logistics is necessary, in order to allow for a large variety of solutions of co-operation between organizations.

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The title “Armed Forces for 2020 and beyond – Roles|Tasks|Expectations” opened the door for a broad thematic approach. This volume is the compilation of the broad range of papers presented during this conference in Vienna. Selected papers offer specialized views on the overall topic, mirroring the nine ISMS working groups. Scholars, professors and researchers from various backgrounds and areas of expertise present their research results on actual subtopics. Observations on future forces in Europe as well as an outlook on EU’s tools and areas of improvement in the Common Security and Defence Policy give the thematic frame to this volume.

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