

Managing Convergence: German Military Doctrine and Capabilities in the 21st Century

Abstract: Although Germany initiated a far-reaching defence reform process in 2003, it has faced criticism from its NATO Alliance partners for its reticence to contribute to higher-intensity operations under ISAF. The majority of the academic literature focuses upon the impact of German security culture on the willingness of policy leaders to sanction a more offensive role for the *Bundeswehr*. This study explores two neglected dimensions of reform which have an important impact on the *Bundeswehr*'s ability to undertake full-spectrum operations: military doctrine and capabilities. It finds that low 'executive autonomy' continues to incentivise an inappropriate level of political interference in doctrinal development and constrains the ability of the core executive to overcome the impact of organisational politics between the individual Services on capability investment. However, the article uncovers indicators that the *Bundeswehr* is beginning to exhibit greater tactical and operational dynamism, following experiences under ISAF and reforms to the 'lessons-learned process'.

Introduction

In the mid-2000s Germany began a far-reaching defence reform process centered on a selective emulation of the concepts and capabilities associated with the Revolution in Military Affairs (RMA). These reforms were designed to enable the *Bundeswehr* to contribute to global, full-spectrum operations. Germany has, however, faced sharp criticism from NATO Alliance partners for its reticence to contribute to higher-intensity operations under ISAF.¹ The majority of the academic literature focuses upon the impact of German security culture on the willingness of policy leaders to sanction a more offensive role for the *Bundeswehr*.² In contrast, this study argues that low 'executive autonomy' deriving from a set of restrictive domestic material power relations has slowed Germany's convergence with the dictates of international structure.

The article explores, in particular, two related yet neglected dimensions of reform which have an important impact on the *Bundeswehr*'s ability to undertake full-spectrum operations: military doctrine and capabilities. It finds that low executive autonomy continues to incentivise an inappropriate level of political interference in doctrinal development and constrains the core executive's ability to overcome the impact of organisational politics between the individual Services on capability investment. However, the study also uncovers indicators that the *Bundeswehr* is beginning to exhibit greater tactical/operational dynamism, following experiences under ISAF and reforms to the 'lessons-learned process'. The article begins by briefly examining recent US and European defence reforms and the German emulation of the key concepts and capabilities which have characterised the reforms of her NATO partners. The study proceeds by focusing on the process of doctrinal adaptation to the international security environment and examines the management of military input to defence planning.

The Context: US and European Defence Reforms

Post-Cold War US defence reform has been informed by the RMA that has coalesced around three features. Firstly, expeditionary forces characterised by joint command structures.³ Secondly, a shift from weapons platforms to knowledge-empowered networked forces capable of exercising agility and precision in the application of attritional force (Network-Centric Warfare (NCW)).⁴ Effects Based Operations (EBO) has taken centre-stage in conceptual development on NCW and formed, until 2006, the third key feature of US transformation.⁵ EBO, as Ho

demonstrates, are characterised by three dimensions. Firstly, a tactical dimension: 'strategy to task links, the integration with other planning processes and the use of both military and non-military means to prosecute the adversary'.⁶ Secondly, an operational dimension: the conduct of rapid, decisive operations involving close networked coordination to reduce battlefield uncertainty.⁷ Finally, a strategic dimension: the use of networked activities and the mobilisation of all sources of national power (political, economic, military and diplomatic) to achieve first-, second- and third-order strategic effects against near-peer competitors.⁸

However, conflict in Iraq post-2003, Afghanistan and the Israeli experience with EBO in the 2006 Second Lebanon War highlighted significant deficits in NCW and EBO in Stabilisation/Counterinsurgency (COIN).⁹ These problems were recognised in the 2006 'FM 3-24 Joint US Army/Marines Counter-Insurgency Doctrine Field Manual' that emphasises cultural/anthropological approaches and institution-building.¹⁰ The April 2009 US Defence Budget also signalled a focus on capabilities and forces suited to irregular conflict, cutting key RMA programmes.¹¹ Doctrinal and conceptual changes have also been initiated, particularly since the 2007 appointment of General James Mattis as Commander of US Joint Forces Command, who removed EBO from US Joint Doctrine in August 2008.

British and French defence reforms have involved a partial and selective emulation of the RMA. Firstly, the restructuring of command structures and development of joint, expeditionary forces: a process that began in France in 1995/96 and in Britain in 1997/98. Secondly, during the early-mid 2000s, the development of Network-Enabled Capability (NEC) that seeks to exploit technology's tactical and operational advantages, but is more wary about networking's potential to transform warfare and deliver strategic effects.¹² Finally, the UK and France developed an Effects-Based Approach to Operations (EBAO). EBAO recognises that it is not military operations themselves which have changed in character, but the approach to operations. It is conceived of as an approach that, embedded within the Comprehensive Approach (a multi-agency, cross-government approach to the planning and execution of operations) can facilitate the integration of all agencies of government in the delivery of both kinetic and non-kinetic effects.¹³ Since the decline of EBO, UK EBAO has given way to an emphasis on 'Effects-Based Thinking' that shuns the determinism of EBAO, while recognising EBAO's utility in targeting 'closed systems'.¹⁴

Germany's Selective Emulation of the RMA

Networked Operational Command Doctrine

Until 2003 German defence reform was evolutionary. Only in the 2003 Defence Policy Guidelines (VPR) did SPD Defence Minister Peter Struck (2002-05) jettison territorial defence in favour of expeditionary crisis-management and prevention.¹⁵ The reform restructured the military into a 35,000-strong *Eingreifskraefte* ('Rapid-Reaction Force') designed for higher-intensity warfare; 70,000 Stabilisation Troops for low to medium-intensity missions and 147,500 support/logistical forces. The 2006 DWP also outlined the implications of 'transformation' for Army, Navy and Airforce command structures in greater detail by building upon the modularisation of forces outlined in the 2003 VPR.¹⁶ These structural reforms have been accompanied by defence capability acquisition enhancing effective engagement and tactical and strategic mobility.¹⁷

Mirroring Britain and France's identification of the likelihood of 'Three Block Warfare'¹⁸ characterising short to medium-term conflict scenarios, the VPR recognised that there are 'no clear cut dividing lines between the various types of operations'.¹⁹ Hence, while German thinking on networking (Networked Operational Command Doctrine (*NetOpFü*)) was initially closely associated with NCW,²⁰ the selective emulation of the RMA undertaken by Britain and France that focused on the adaptation of RMA technologies to deliver both kinetic and non-

kinetic effects, provided a strong indication of 'best practice' in networking.²¹ These observations have combined with Germany's experiences in the Balkans and Afghanistan to ensure that *NetOpFü* emphasises the capacity of RMA technologies to facilitate the speedy, efficient application of military action 'across the entire conflict spectrum'.²² Germany's understanding of networking's potential contribution resonates with the British 'Manoeuvrist Approach' that lies at the heart of NEC. Operational experiences in complex crisis-management operations have reinforced the importance of *Auftragstaktik* (mission command), a principle that has been central to German military thinking since the Prussian General Staff.²³ Rather than the NCW's capacity to mass firepower and attrition, *NetOpFü* is, therefore, conceived of as a means to enable troops to overcome the impediments of military hierarchy and act with greater speed and adaptability.²⁴

Poor C2ISR and Power Projection Capabilities

Operation Allied Force (1999) acted as a particularly important impetus to C2ISR (Command, Control, Intelligence, Surveillance and Reconnaissance) investment, highlighting the need to enhance interoperability with Alliance partners and reduce dependence on US intelligence.²⁵ A set of investments have, therefore, been instigated since the early 2000s to develop the foundations for a network-enabled *Bundeswehr*, including joint, interoperable, networked radio equipment and investment in a joint intelligence, surveillance and reconnaissance network.²⁶

Despite advances in networking, post-unification restrictions on defence spending and the late shift towards crisis-management have delayed C2ISR's introduction.²⁷ The *Bundeswehr's* focus is on dealing with C2's implications for command structures through joint military exercises and it will not enjoy an initial network enabled capability until 2013.²⁸ The *Bundeswehr* is currently struggling with the creation of a joint operational picture where the three main Services and their different levels of command receive relevant information.²⁹ German units will only be capable of fielding advanced NEC that will achieve shorter reaction cycles by 2020/21 at the earliest.³⁰ Consequently, Germany has faced significant C2 problems in Afghanistan.³¹ Furthermore, several ongoing procurement programmes are more suitable to Cold War conflict scenarios and drain funds from frontline equipment.³² Such programmes include the 2005/06 acquisition of eight P-3C Orion anti-submarine warfare aircraft and 2005/06 ordering of two U212 submarines.³³ As this article will demonstrate, this problem has been compounded by the impact of organisational politics between the individual Services.

EBAO: Reactive Doctrinal Development

German thinking on EBAO accelerated following EBAO's conceptual development within NATO after the November 2006 Riga Summit. The *Luftwaffe* took a prominent role in conceptual development, seeing in EBAO an opportunity to expand its role beyond reconnaissance and strategic lift and released 'The Conceptual Ground Rules of the *Luftwaffe* on EBAO' (*KGv Lw zu EBAO*) in May 2007.³⁴ *KGv Lw zu EBAO* encountered resistance within the Army, who viewed it as overly-formalistic and mechanistic because of its focus on quantitative measures of effectiveness.³⁵ For the Army, this approach appeared to impose a level of rigidity and assumption of knowledge of the operational environment that would be unachievable at the tactical level.³⁶ *KGv Lw zu EBAO* threatened to undermine the *Auftragstaktik* and was at odds with the Army's operational experiences in the Balkans/Afghanistan.³⁷ The Army has instead been receptive to 'Effects-Based Thinking' that coheres closely with its traditional approach to military planning: imagining the preferred end-state and considering the range of kinetic and non-kinetic means required to achieve outcomes. The Army also welcomed the capacity of Effects-Based Thinking to help facilitate the integration of civilian actors in the planning and conduct of operations.³⁸

While 'KGv Lw zu EBAO' initially enjoyed support outside the *Luftwaffe*, particularly within the Bundeswehr Transformation Centre (BTC), the Army's position has been strengthened by operational experience and US/Israeli experiences with EBO.³⁹ EBO's decline has created some uncertainty about EBAO's status as an organising concept of transformation.⁴⁰ However, much will depend upon the position adopted by NATO, highlighting the reactivity of German doctrine. These debates are, in any case theoretical, as *NetOpFü* is not sufficiently advanced to deliver a joint operational picture that will shorten reaction cycles.

'Faktor Mensch' and Networked Security

Like British and French NEC, *NetOpFü* is also based upon scepticism of technology's ability to transform conflict. *NetOpFü* emphasises *Faktor Mensch*⁴¹ (the human factor) as the decisive element in successfully harnessing technological advantage on the battlefield. Training is viewed as critical, particularly to enable lower-levels of command to undertake quick and independent decision-making.⁴² *NetOpFü* is also predicated on the assumption that technology is no substitute for a close understanding of the cultural context of land operations.⁴³ The *Bundeswehr* has, therefore, focused upon the social, intercultural and foreign language skills necessary for 'wars amongst the people'.⁴⁴ Although these assets have been part of general and pre-deployment training for soldiers since operations in the former-Yugoslavia, recent experiences in Afghanistan led to the development of two organizations in 2009 to take the lead on cultural training and advice: The Central Coordination Group for Inter-Cultural Competence and Centre for Intercultural Mission Advice.⁴⁵ Furthermore, *NetOpFü* and EBAO are situated firmly within the 'Comprehensive Approach', termed 'Networked Security' that aims to enable the integration of kinetic and non-kinetic elements of national power.

Executive Autonomy and the Pace of Reform: The Long Road to Convergence

The *Bundeswehr* is, therefore, converging with the defence reforms of the US and its European partners. This isomorphism reflects the insights of Neo-Realism⁴⁶: that the changing systemic distribution of capabilities and new security challenges, coupled with the necessity of survival in a 'self-help' world leads to the emulation of 'best practice' in military affairs.⁴⁷ However, the temporal delay in German reform cannot be explained by Neo-Realism and necessitates a focus on domestic factors and the insights of Neoclassical Realism. Neoclassical Realism argues that while states of similar relative power and geographical position will seek to maximise their relative power over the long-term, they vary in 'state power' (in their ability to extract resources from society) leading to short to medium-term temporal divergence with the dictates of international structure.⁴⁸

The decisive intervening factor determining the pace of German defence reform is a set of restrictive domestic material power relations which have restricted the core executive's autonomy in defence policy.⁴⁹ Germany's status as a federal democracy increases the core executive's sensitivity to the politics of military base closures, disincentivising radical structural reform.⁵⁰ Despite the clear redundancy of conscription by the late 1990s, the close linkages between financial, budgetary and social policy deriving from the large number of conscientious objectors providing cheap labour for the social system also created a powerful material constraint on the core executive's ability to create a fully professional armed force.⁵¹ These interlinked policy subsystems led the German Finance Ministry to promote stasis on structural reform of the *Bundeswehr* due to the negative repercussions for German adherence to EMU's Stability and Growth Pact and budget consolidation.⁵² Military transformation and C2ISR investment has also been impeded by restrictions on executive autonomy deriving from the fiscal constraints associated with reunification.⁵³

'Executive autonomy' is further compromised by the diffusion of competencies on defence policy within the core executive anchored in the Basic Law. Although the Chancellor plays a central role in formulating general policy guidelines, the Defence Minister emerges as crucial in the implementation of policy and in controlling the scope and temporality of policy change.⁵⁴ However, for Defence Ministers with political ambition of the Chancellorship this room for manoeuvre provides an opportunity to steer-clear of upsetting the Finance Ministry by not questioning conscription and to avoid incurring the wrath of powerful Regional 'power barons' in their party through base closures.⁵⁵ Hence only in mid-2010, in the context of proposed cuts of 10% in the defence budget and the overwhelming clarity of conscription's irrelevance to the contemporary operational environment did Defence Minister Karl Theodor zu Guttenberg act as a policy entrepreneur on behalf of a professional armed force.⁵⁶ In doing so, zu Guttenberg was able to build upon the 'policy learning' processes instigated by an advocacy coalition opposed to conscription with its roots in the Greens, FDP, and some sections of the SPD and CDU that had become increasingly prominent during the early 21st Century.⁵⁷

The *Bundestag's* constitutionally-mandated oversight powers over expeditionary troop deployments also appear to circumscribe executive autonomy.⁵⁸ The *Bundestag* enjoys extensive powers: a simple Parliamentary majority is required for the prior approval of overseas troop deployment. The Bundestag can also control a mission's mandate, make decisions on operational issues (rules of engagement (RoE), command and control, risk assessment and budget) and mission duration.⁵⁹ From a Realist perspective, stricter parliamentary oversight presents a limited constraint on executive autonomy, given the malleability of strategic culture and the policy leaders' ability to exploit 'public vulnerability' in the mobilisation of society.⁶⁰ Yet, although culture displays malleability it can under particular circumstances, be a difficult tool to wield. This is the case in Germany, where the Cold War systemic imperatives incentivised the construction of an 'anti-militaristic' policy narrative requiring extensive remoulding to fit post-Cold War expeditionary challenges.

However, the key difficulty lies not in culture itself, but in the impact of domestic material power relations on the core executive's ability to reshape culture. In Britain and France, the unitary state provides a sustained window of opportunity between elections for policy leaders to deploy culture in the articulation of new policy narratives supporting significant changes to the objectives, instruments and institutional forums of defence policy.⁶¹ In contrast, the German federal system constrains on the core executive's capacity to deploy culture as a tool in the mobilisation of society. These constraints stem from regular state elections with important implications for the governing coalition's ability to enact its broader political agenda. In the absence of a clear sense of public vulnerability deriving from pressing crisis, such restrictions on executive autonomy can foster sensitivity to public opinion and parliamentary opposition, incentivising the temporal management of reform and a 'salami-slicing' approach to policy change.⁶²

The impact of 'culture' and 'executive autonomy' on the strategic direction of German defence reform and on the willingness of policy makers to sanction a more offensive role for the *Bundeswehr* has received significant attention in the academic literature.⁶³ This article focuses on the impact of the temporal management of convergence on Germany's ability to contribute to higher-intensity missions under ISAF. Firstly, the limitations imposed by the current doctrine and training of the *Bundeswehr*. The German military has only recently begun a transformation process that will allow it to adapt to the contemporary operational environment. This disadvantage is compounded by the *Bundeswehr's* lack of historical experience in COIN and continued political interference in doctrinal development. Secondly, organisational politics between the Single Services (the impact of which has been heightened by low executive autonomy), has also reduced the dynamism of capability procurement. In short, the temporal management of reform to the objectives of defence policy has had an important knock-on effect

on military doctrine and capabilities, which has further complicated and delayed Germany's convergence with military 'best practice' and the dictates of 'international structure'.

Doctrinal Weaknesses: Denkverbot vs. Operational Experiences

The core executive's temporal management of reform has hindered conceptual and doctrinal development. It is only comparatively recently that the German Defence Ministry (BMVg) has been liberated from the '*Denkverbot*' (ban on thinking) on conceptual development around expeditionary crisis-management.⁶⁴ While the CDU/CSU government of Angela Merkel looks likely to suspend conscription after the CDU reached agreement on the issue with the CSU in September 2010, a '*Denkverbot*' within the Defence Ministry had long been applied to the question of whether conscription was of use to the contemporary operational environment. Furthermore, the 'ban on thinking' within the Defence Ministry has also been applied to the development of COIN doctrine that will enhance the ability of the *Bundeswehr* to act effectively in 'Three Block Warfare' situations.

The majority of German operational experiences during the early-mid 1990s involved low-medium intensity tasks.⁶⁵ Nevertheless, these operations began to highlight that the *Bundeswehr* would have to be prepared to deploy 'minimum force' in complex crisis-management operations not only in the 'initial-entry' stage, but also to protect civilians in land operations 'amongst the people'.⁶⁶ However, exposure to peace-support operations in the Balkans during the 1990s engendered a strong focus on the necessity to develop the lower-intensity skill sets for 'conflict amongst the people'.⁶⁷ German experience of low-medium intensity peace-support operations reinforced *Innere Führung* that, amongst other values, points to the centrality of culturally-aware and educated soldiers.⁶⁸ The importance of these skills sets has been bolstered by observation of the RMA in practice, particularly the lessons that FM 3-24 draws from the experiences of the US Infantry and Marines in Afghanistan and Iraq.⁶⁹ The emphasis on humanitarian and civilian tasks also highlighted at an early stage the importance of 'networked security', as German deployments proceeded in close cooperation with NGOs and the German Foreign, Interior, Development Ministries.⁷⁰

Skill sets at the lower-end of the conflict spectrum have, however, been developed at the expense of preparation for higher-intensity 'Three Block Warfare' situations. As Dalgaard-Nielsen notes: 'The cult of the warrior was weak or absent within the *Bundeswehr*...'.⁷¹ Matlary also highlights how: 'German troops have an unflattering history of being reticent to fight in situations where it is needed, such as in Prizren in Kosovo in 2004 where they were accused of "hiding in the barracks like frightened rabbits" in a German police report'.⁷² Such accusations of cowardice neglect the impact of excessive civilian interference in military planning that has left soldiers with inappropriate doctrine and training for ISAF. The military's non-offensive military doctrine had also been reinforced by the nature of post-Cold War operational experiences. ISAF is the first time German troops have been exposed to intensive and sustained fighting since WW2. Soldiers trained for high-intensity conventional conflict scenarios during the Cold War, but did not expect conflict to arise. In contrast, the British and French militaries gained significant experience of complex land operations 'amongst the people' during decolonisation. Pre-operational training during the 1990s prepared German units for the 'worst case scenario', yet the majority of missions undertaken in the Balkans were 'only slightly more dangerous than staying in Germany'.⁷³

The *Bundeswehr's* non-offensive approach was outlined in *Truppenfuehrung von Landstreitkraefften Heeresdienstvorschrift 100/100* (HDv 100/100) that was updated in 2000 following deployment in Bosnia. In contrast to British and French Army doctrine that by 1997 pointed to the need to prepare for operations characterised by a 'continuum of conflict', the doctrine separated fighting, peace-support and humanitarian aid into distinct categories.⁷⁴ HDV 100/100 was updated in 2007 and now emphasises the potential for 'reversibility' in conflict

situations. Yet the document continues to place a stronger emphasis on the non-kinetic aspects of operations than British and French approaches to Stabilisation and does not outline an explicit COIN doctrine.⁷⁵ HDV 100/100 fails to deliver a coherent picture of how to undertake 'Three Block Warfare' and combine low and high-intensity actions in 'conflict amongst the people'. The *Einsatzkonzept Operationen gegen Irreguläre Kräfte* (Guidelines for Operations against Irregular Forces) of 2005 offers some guidance on the kinetic dimensions of conflict against irregular forces, yet it fails to integrate the non-kinetic aspects of COIN and does not represent a comprehensive COIN doctrine.⁷⁶

The lower-intensity operational experiences of the initial post-Cold War era are also reflected in structural reforms which created separate low-medium intensity 'Stabilisation' forces and higher-intensity *Eingreifskräfte*. Although the Stabilisation Forces are capable of more robust tasks and are interoperable with the *Eingreifskräfte*, they lack the capacity to undertake the tasks associated with highest-end of 'Three Block Warfare' and the 'clear' and 'hold' stages of COIN.

Hence, despite the 2003 VPR's recognition of the growing tendency of operations to vary quickly in intensity, it is only following recent ISAF operations that the *Bundeswehr* has begun to earnestly consider the implications of 'Three Block Warfare' for doctrine, force structures and capabilities. Since 2006, as the security situation in Northern Afghanistan has shifted from Stabilisation to COIN, ISAF has highlighted the necessity for land forces to be able to simultaneously apply kinetic and non-kinetic effects.⁷⁷ However, the *Bundeswehr* continues to suffer the effects of a *'Denkverbot'* on COIN applied by a core executive that, due to the constraints of the Federal system on executive autonomy, is highly-sensitive to the implications of radical change to the *Bundeswehr's* role. The Army must, therefore, tread a delicate line between putting in place the foundations for higher-intensity operations without officially writing COIN doctrine. Doctrine writers cannot overstep the parameters set by the 'salami-tactic' of their political masters, who have, so far, portrayed the ISAF mission as one of classic stabilisation.⁷⁸

Two factors have also emerged which threaten to undermine the centrality of the principles of the Manoeuvrist Approach and *Auftragstaktik*. Firstly, the practical experience of digitisation in exercises has led to the temptation for commanders to involve themselves in the 'tactical weeds'.⁷⁹ Secondly, networking has been accompanied by enhanced accountability. While the 'fog of war' once made it difficult to discern whether correct procedure has been followed, digitisation leads to a 'data trail' that could end in prosecution for commanders. After the September 2009 Kunduz air-strike that resulted in numerous civilian casualties, there has been a reticence amongst commanders in the field take the initiative.⁸⁰ Decisions are now taken at an increasingly high-level of command. Commanders are gathering inappropriate levels of information and are being pulled down to the detailed tactical level, in order to protect themselves from prosecution.⁸¹

Hence, as a result of low executive autonomy and the incentives this provides for civilian interference in the development of military doctrine, as well as the impact of the largely low-medium intensity post-Cold War German operational experiences, the *Bundeswehr* is struggling to integrate high- and low-intensity effects in 'conflict amongst the people'. This problem has been magnified by the temporal delay in the development of *NetOpFü* that has made determining the role of C2ISR in 'Three Block Warfare' a particularly pressing challenge.⁸² Furthermore, the classified nature of military doctrine reduces the *Bundeswehr's* ability to work with external actors and impedes 'networked security' and makes doctrine unavailable to reservists when not on operation.⁸³

Signs of Adaptation to the Operational Environment

Despite these constraints, there are signs of adaptation to the operational environment and of a gradual lifting of the *Denkverbot*. German experiences in Afghanistan have begun to demonstrate the urgency of preparing land forces for rapid reversibility in conflict intensity.⁸⁴ US pressure for more robust involvement led Germany to take command of Regional Command North in June 2008 and to participation in higher-intensity operations like Operation Harekate Yolo II (October 2007).⁸⁵ The operation involved offensive military action and highlighted the *Bundeswehr's* deficiencies in undertaking COIN, particularly its inability to effectively integrate low and high-intensity tasks.⁸⁶ These conclusions have been underlined by Operation Eagle that provided security in Kunduz before the Afghan elections in August 2009 and involved the use of heavy artillery and the *Luftwaffe* in close ground-support. German leadership, since mid-2007, of the ISAF Quick-Reaction Force in Northern Afghanistan has also provided operational experience at the higher-intensity end of the conflict spectrum.⁸⁷ Furthermore, on 26 January 2010 the German government announced an increase of its contingent under Regional Command North by 500 troops (as well as a flexible reserve of 350 troops). This extra deployment will increase the *Bundeswehr's* presence on the ground and ability to actively protect the population as well as train Afghan troops (a task that will involve high-intensity fighting alongside Afghans).⁸⁸

Debate upon the key competencies necessary for German land forces has sharpened. There is a growing recognition of the need to tailor training to the challenges of Three Block Warfare and to focus not only on 'intercultural competence', 'intelligence', 'strategic ability', the 'ability to organise under pressure' and 'the capacity to work as part of multinational forces', but also on 'resilience/character' and 'warrior qualities'.⁸⁹ Germany is taking steps to overcome its deficiencies in irregular conflict. The military hierarchy⁹⁰ has begun to regard conflict in Afghanistan, as 'Three Block Operations'⁹¹, rather than classic Stabilisation.⁹² The Army is, therefore interpreting the concept of 'Stabilisation' as broadly as possible. Doctrine writers are quietly building the intellectual foundations for a comprehensive COIN doctrine as a supplement to Army stabilisation doctrine by gathering and reflecting upon the lessons of operational experience and undertaking detailed analysis of British, French and US COIN.⁹³

While doctrine does not reflect the nature of operations under ISAF, training has, since 2007, been focused on a more 'aggressive approach', supported by more robust RoE.⁹⁴ The Stabilisation Forces now receive pre-mission training centred around offensive action and delivering effects across the conflict spectrum.⁹⁵ Since 2009 military exercises/training have increasingly sought to develop the capacity to shift operational modes at short-notice.⁹⁶ Preparing for reversibility in conflict intensity is, however, an ongoing challenge. As a BMVg source stated: 'The main challenge for the commander and the soldier over the coming years will be to learn how to switch between operational modes'.⁹⁷ This process of adaptation is, nevertheless, accelerating as a range of far-reaching changes to the German 'lessons-learned' process have been initiated which will enhance the *Bundeswehr's* tactical and operational dynamism and create greater pressure for doctrinal reform.

Managing Military Input to Defence Planning: Enhancing Tactical and Operational Dynamism

It is only recently that the institutional structures which will facilitate Germany's process of 'conceptual catching-up' with her European partners and the continual adaptation of capabilities, doctrine and training have been established. Since 2006, Germany has taken important steps to improve the 'lessons-learned' process that evaluates the short and long-term implications of operations for capabilities, doctrine and training. The *Bundeswehr* has also undergone a set of institutional reforms which will quicken its transformation around the principles of jointness and interoperability with Alliance partners.

Increasing Adaptability at the Tactical and Operational Levels

Before 2006 the German 'lessons-learned' process following military operations lacked coordination. During the expeditionary operations of the early 1990s an officer was appointed to operational headquarters with the specific responsibility for evaluating the key lessons of operational experiences for doctrine, capabilities, command structures and training. This officer delivered daily reports to sections for *Einsatzauswertung* (Operational Assessment) within the Planning Staffs, who analysed information, checked whether other units had encountered similar problems, agreed actions and undertook follow-up.⁹⁸

However, until recently, there has been no formalised process dealing with the broader ('long-loop') implications of operations for capabilities, jointness, interoperability and concept development and experimentation (CD&E).⁹⁹ Following the submission of a written report from the Joint Commander, the *Bundeswehr's* Single Services were expected to identify problems and suggest changes.¹⁰⁰ Hence while the lessons-learned process was strong in determining the short-term implications of operations, it lacked an impartial follow-up mechanism and was weaker in identifying and resolving 'long-loop' issues.¹⁰¹

The complexity of the ISAF operational environment and the increasing number of experiences with consequences for jointness and interoperability has prompted important changes to the lessons-learned process since the mid-2000s. In 2004 the *InfoSysEEBw* database was established at the *Einsatzfuehrungszentrum* (Bundeswehr Operations Command). At this stage *InfoSysEEBw* formed a data collection tool for the storage of operational reports. The key step in the transformation of the lessons-learned process was the June 2008 creation of the *Einsatzfuehrungsstab* (Operations Staff) and section for *Einsatzauswertung*. The Army has also profited from the increasing manpower allocated to the lessons-learned process, particularly at the German Army Forces Command, who are responsible for lessons-learned.¹⁰²

The section for *Einsatzauswertung* is tasked with assessing Operational Quality; its work divided into three core lessons-learned tasks: Operational Analysis/Readiness (the relevance of doctrine, organisation, training, leadership, personnel and capabilities); Operational Effectiveness (the extent to which operations succeed in delivering key effects) and Efficiency (cost-benefit relationships).¹⁰³ Operational Analysis/Readiness has undergone most significant development since June 2008.¹⁰⁴ Observations from field reports are logged into *InfoSysEEBw*, triggering initial analysis by the Bundeswehr Operations Command, who decide which service should lead-up analysis. The individual service must then respond with a plan of action and agree a timetable. Any action taken by the service, including discussions with other actors, such as weapons manufacturers or the *Fuehrungsakademie der Bundeswehr*, are entered into *InfoSysEEBw*. This process ensures that the Operations Command can follow-up the implementation of lessons-learned and any steps undertaken by contingents on the ground. Lessons are also identified through workshops and seminars with commanders conducted by the BTC's Institute of Social Sciences that also prepares questionnaires for commanders which are completed before, during and following deployment.¹⁰⁵

InfoSysEEBw has been a very effective 'staffing tool' in allocating responsibilities and checking follow-up and as a library/database for reports from Mission Contingents. In conjunction with the establishment of the *Einsatzfuehrungsstab* and section for *Einsatzauswertung*, *InfoSysEEBw* has enhanced the efficiency of the collection, analysis and follow-up stages of the 'short-loop' lessons-learned process and has helped to improve key areas such as jointness and C2. These changes have also helped refine pre-deployment training exercises which focus increasingly on actual operational scenarios, and to accelerate training in areas suffering manpower shortages, like forward air controllers.¹⁰⁶ In addition, the lessons-learned process has provided a forum to apply greater pressure to the core executive

to sanction the development of an explicit COIN doctrine.¹⁰⁷ The lessons-learned process has been central in providing the evidence necessary to legitimate a shift towards increasingly offensive and robust RoE under ISAF which allow the German troops to engage insurgents before coming under fire.¹⁰⁸

The inadequate coordination of follow-up on 'long-loop' lessons has also seen recent improvement. Crucially, beginning in early 2009, the individual Services and the Bundeswehr Operations Command have worked jointly to identify a 'Top List' of the main 'long-loop' issues requiring immediate attention (the current list includes CON doctrine).¹⁰⁹ Furthermore, the *Einsatzsofortbedarf* (Urgent Operational Requirements) has enhanced the *Bundeswehr's* capacity to adapt to the operational environment by permitting the Services to meet vital capability requirements as operations evolve.¹¹⁰

Lessons-Learned: A Work in Progress

A set of problems and difficulties have arisen since *InfoSysEEBw's* inception. The first major problem is information overload and *InfoSysEEBw's* inability to assist in 'knowledge development'. While the lessons-learned process has been central in identifying equipment shortages and deficiencies, it has been less useful in quickly identifying and resolving issues at the tactical, doctrinal level. Although training and mission handover allows commanders to learn from the experiences of their predecessor, no search engine exists that can sort the relevant information for different levels of command.¹¹¹ Furthermore, an emphasis on post-mission reports remains, that does not capture the rapidly-changing nature of operations and enemy tactics. When tactical issues are identified, their solution, once agreed, is integrated into the six-month pre-deployment training course. This is a lengthy process that is unsuited to rapidly-changing Stabilisation/COIN operations. A set of proposals are under consideration which will attempt to ensure a more continuous flow of information from the field. However, improvement is constrained by the shortage of German infantry forces under ISAF. The urgent need to maximise troop presence has left little space for officers focusing on speedy report delivery.¹¹²

Moreover, a continual problem of doctrinal stagnation within the individual Services exists that stems not only from the *Denkverbot*, but also from the highly-consensual manner of doctrinal development.¹¹³ No one individual has the capacity to over-ride objections or changes to doctrine, hence even minor alterations involve a highly-bureaucratic process.¹¹⁴ This approach contrasts markedly to France and the UK where doctrine is developed in a more dynamic and evolutionary manner and benefits from the capacity of the 'service agnostic' CICDE (Centre for Concept Development, Doctrine and Experimentation) and DCDC (Development, Concepts and Doctrine Centre) to take the initiative in leading-up change.

Institutional Protection for Jointness and Interoperability

The BMVg's civilian leadership has taken important steps to endow the principles of jointness and interoperability with institutional protection through the development of the Bundeswehr Operations Command and the BTC. Since its establishment in 2004, the BTC has played a growing role in the development of doctrine and CD&E within the Services. The BTC is the intellectual and conceptual 'muscle' of the Joint Staff, but unlike the DCDC and CICDE, it does not enjoy the power to lead doctrinal and conceptual development. The BTC is more of a 'think-tank', playing a coordinating role by organising working groups and workshops on doctrine and CD&E.¹¹⁵

The BTC's power lies in its ability to set the agenda on thinking about the key warfare scenarios guiding the trajectory of transformation. Lobbying the BTC and cooption of the organisation at the early stages of conceptual development around doctrine and capabilities is

viewed as increasingly vital by the Services.¹¹⁶ Furthermore, the BTC's competencies are gradually expanding. The organisation has, for example, begun to work closely with Federal Office of Defence Technology and Procurement (BWB) project managers in order to promote increased harmonisation within the capability programme.¹¹⁷ The BTC is also trying to expand its resources and role in coordinating doctrinal development across the *Bundeswehr*.¹¹⁸

Indeed, the urgency of adapting to the agenda of jointness has fostered receptiveness within the Single Services to reforms to their structures, to allow closer cooperation with international partners in doctrine and CD&E. Such changes are viewed by the Services as a vital means to enhance their influence over transformation. For example, the *Luftwaffe* began a structural reorganisation in January 2006 to allow it to respond more rapidly to the operational environment. The restructuring facilitated a closer relationship with NATO's Joint Air Power Competence Centre (JAPCC) and cooperation with NATO by reflecting the Atlantic Alliance's command structures. In this way, the *Luftwaffe* is more exposed to the lessons of 'best practice' consequent upon the experiences of her NATO partners and can better hone its interoperability. These changes also allowed the *Luftwaffe* as to secure influence within the Ministerial-level Coordination Group for Transformation and BTC by adding gravitas to proposals.¹¹⁹

Furthermore, the *Luftmachtzentrum* (Air Power Centre), created in 2006, draws together the conceptual and operational work of the *Luftwaffe* Command sections for planning, telecommunications and operating procedures and leads up CD&E. The organisation provides the conceptual input for the Working Group on *Luftwaffe* Transformation that takes the main decisions on the *Luftwaffe*'s approach to NEC/EBAO and determines the capability proposals will put to the Coordination Group for Transformation. The *Luftmachtzentrum* also liaises closely with the BTC and JAPCC, adding greater weight to these proposals.¹²⁰

Hence, despite the delay in its introduction (when compared to Britain and France), the jointness agenda is being rapidly disseminated throughout the *Bundeswehr*.¹²¹ There is also increasing cross-service cooperation in approaches to the use of the sea as a basis for land and air deployments, on air-land integration and C2 interoperability.¹²² The consensual approach to the development of military doctrine has a positive effect on the development of joint doctrine, due to the high-level of collaboration between the Services.¹²³

Some institutional resistance has been present to the rapid changes wrought since 2003. A 'them and us' attitude toward the development of a culture of jointness and to the role of the Joint Staff in leading up projects continues to persist within certain sections of the Services.¹²⁴ This opposition is, however, being rapidly eliminated, not only through the changes outlined above but also through reforms to training, such as the Advanced Joint Staff Course delivered by the *Fuehrungsakademie* since 2004 that is spreading the principle of jointness throughout the separate Planning Staffs.¹²⁵ It is, therefore, increasingly recognised within the Planning Staffs that for a service to thrive it must comply with jointness and interoperability. It is also important to note that many sections of the BMVg had privately become disillusioned with the retention of territorial defence until 2003.¹²⁶ The focus on jointness that has accompanied the early stages of transformation therefore gained broad support as a means with which to renew the *Bundeswehr*'s relevance in multinational operations.

These organisational changes are enhancing the *Bundeswehr*'s capacity to respond to the operational environment. The process of *Einsatzauswertung* is also developing the institutional mechanisms to enhance the dynamism of *Bundeswehr* in ascertaining and implementing the implications of operations for doctrine, capabilities and training. However, translating these lessons into changes to the capability programme and force posture is hampered by organisational politics between the Single Services. This problem is worsened by the impact of low executive autonomy.

Military Input to Capability Acquisition: The Exacerbation of Organisational Politics

There is a significant inter-Service competition over the definition of the measures necessary for the solution of 'long-loop' issues.¹²⁷ The 'Top List' is agreed at the Coordination and Decision Committee that examines the individual Services' proposals. The Committee includes representatives from the individual Services, the Coordination Group for Transformation, the *Abteilung Ruestung* (Capabilities Department of the MoD), BTC, and specialists in CD&E and training. This broad constituency helps to ensure that solutions are not endorsed which clash with operational requirements. Moreover, institutional protection for financial constraints is provided by the presence of representatives of the MoD Budgetary Section. The work of the Coordination and Decision Committee has been accompanied by the establishment in 2009 of two steering committees (one at the level of the *Einsatzfuehrung*; the other at Desk Officer level) responsible for coordinating the implementation of 'long-loop' lessons-learned.

However, the decision-making authority on the prioritisation of major changes to capabilities, doctrine and training rests with the Military Advisory Board. This Board is dominated by military input, consisting of the Director of the Joint Operational Staff, Chiefs of Staff of the Army, Navy, Air Force, Medical Services and Logistical Support in addition to the *Generalinspekteur*. The Board forms an arena for organisational politics between the Services, restricting the flow of operational lessons into the capability and equipment programme.¹²⁸ The Bundeswehr Operations Command is, therefore, examining mechanisms to further strengthen the efficiency and objectivity of the identification of solutions to lessons-learned by seeking more extensive input from the BTC and NATO Centres of Excellence.¹²⁹

However, the Single Service Chiefs also enjoy significant agenda-setting power on broader military capability procurement. The Services' capacity to secure the agreement of the *Generalinspekteur* and civilian leadership for investment in their main capability projects depends upon the support of the other two branches of the armed forces as well as the *Streitkraeftebasis* and *Zentrale Sanitaetsdienst* (Central Medical Service). This consensual dynamic acts to the detriment of objective decision-making. It also allows organisational politics to emerge in debates at higher-levels of the MoD (such as the Coordination Group for Transformation) on the adoption of conceptual articles and lessons-learned with far-reaching implications for capability acquisition.¹³⁰

Although the organisational structures charged with the implementation of capability projects (the BWB and MoD's IT Department) are composed predominantly of civil servants, the agenda-setting process on military capabilities is dominated by military input, particularly from the Service Chiefs through the Integrated Working Group for Capability Analysis (IAGFA). IAGFA is the key forum for debates on procurement, including *Einsatzsofortbedarf*, and is composed of representatives of the Bundeswehr Chiefs of Staff, Director General of Armaments, Chiefs of Staff of the Armed Services, Director of Defence Administration, IT Director and MoD Budget Director. IAGFA translates the broader direction on capabilities and force postures provided by the 2006 Defence White Paper and Coordination Group for Transformation into major decisions on capability procurement.

The Coordination Group for Transformation and IAGFA were described by one MoD source as a 'bazaar' and 'log-rolling' exercise, in which the Services trade-off support for each others' 'glamour' projects.¹³¹ This situation is worsened by the lack of subordination of the Service Chiefs to the *Generalinspekteur*, who acts as in an advisory role to the Defence Minister and whose only formal power over the Services rests in his ability to relieve the Service Chiefs of their command.¹³² As a consequence, while former *Generalinspekteur* Wolfgang Schneiderhan (2002-09) was able to promote a focus on networked, joint and interoperable forces, his ability to translate these principles into more fundamental reforms to military capabilities/force postures was restricted.¹³³

In contrast to France and the UK, where windows of opportunity to make significant changes to force posture and capability projects emerge following Presidential/Parliamentary

elections, German Defence Ministers face much narrower executive autonomy due to the regularity of *Land* elections. Organisational politics is not so much a causal variable as it is a reflection of the constraints of the Federal political system on Defence Ministers' capacity to take unpopular decisions on base closures and the core executive's sensitivity to job losses in the defence industry.¹³⁴ As a source within the German BMVg noted: 'In Germany we have two (Land) elections per year. Furthermore, the presence of powerful regional politicians makes it very difficult possibility to push through radical reform to capability acquisition or force postures'.¹³⁵ For example, the 6 Type 212 submarines ordered between 1996 and 2006, while of little use to the expeditionary challenges of the post-Cold War era, are of critical importance to the survival of manufacturers Howaldtswerke-Deutsche Werft (Schleswig-Holstein) and Thyssen Nordseewerke (Lower-Saxony). This lack of political will to reform the capability acquisition process also limits the ability of 'service agnostic' organisations like the BTC and Bundeswehr Operational Command to foster greater objectivity in conceptual development and capability procurement.¹³⁶

There is, however, greater possibility for civilian intervention to ensure that the equipment and capability programme remains in line with budgetary constraints. Parliament has the right to make decisions on the purchase of equipment and capabilities costing over €25 million. This instrument is, however, somewhat blunt, as oversight is restricted to rejecting the project or reducing the size of an order. Moreover, parliamentary control further disincentivises alterations to capability investment as once projects are approved the funding cannot be switched to alternative projects without repeating the arduous negotiations with Bundestag's Budgetary Committee.¹³⁷

Parliament also enjoys the right to approve the Bundeswehr's budget, setting tight overall financial constraints on procurement. However, in conjunction with ineffective civilian control over the content of procurement, such financial constraints make it harder for the military to integrate shift serious UORs into the equipment programme. As a result of these problems, the BMVg is considering the introduction of a 'Spiral Development Model' that introduces capabilities at 80% of their technological potential.¹³⁸

The German Federal Auditing Office (FAO) is also mandated to investigate defence procurement projects. The FAO's oversight capacity is, however, circumscribed by the limited manpower devoted to this task.¹³⁹ In addition, data acquired on time slippage and cost overruns is unavailable in the public domain. As a senior figure in the BMVg highlighted: 'This lack of transparency and accountability lies in a complex mesh of interests which are allowed to prevail due to a lack of political will to reform the acquisition process that derives from the reticence of politicians to take on the German defence industry'.¹⁴⁰ As a consequence, reforms designed to streamline the relationship between the *Bundeswehr* and defence industry such as the 2001 Customer Product Management Scheme have had minimal impact on the efficiency and adaptability of the procurement process.¹⁴¹

Conclusions: The Bundeswehr's Stunted Growth and the Avenues for Future Research

Incentivised by low executive autonomy, civilian policy-makers in post-Cold War Germany have exerted excessive interference in military doctrine. This situation contrasts markedly to the UK and French militaries, where higher executive autonomy permitted the instigation of institutional reforms designed to foster dynamism at the tactical and operational levels of defence planning a much earlier stage in the post-Cold War era.¹⁴² The *Denkverbot* that was put in place by civilian policy leaders has left the BMVg with an atmosphere that is unreceptive to critical thinking and open debate on the implications of operational experience for doctrine and training. The doctrinal deficiencies on COIN in HDV 100/100 (2007) are, therefore, unsurprising given the conceptual stagnation that existed within the BMVg during the *Denkverbot*, and the delay in the shift to expeditionary operations. This problem is exacerbated by the *Bundeswehr's*

sparse historical experience in countering insurgency. Nevertheless, the increasingly-rigorous lessons-learned process that has been instigated since 2003 suggests an increasingly fertile environment for tactical and operational dynamism.

The article has also identified significant deficits in German military capabilities, not only in C2ISR, but also in the areas of effective engagement and tactical and strategic mobility. Hamstrung by low executive autonomy, Germany's political elite lacks the will and ability to overcome organisational politics between the individual Services due to the importance of key 'platform-based' weapons projects to German industry and the narrow windows of opportunity to affect radical change. Although post-2003 changes to the content of capability procurement will deliver C2ISR and other capabilities relevant for expeditionary 'Three Block Warfare' conflict scenarios, they will do so at a much later stage than the British and French equipment programmes. This restricts Germany's capacity to participate in higher-intensity operations under ISAF. Consequently, while traveling the road to convergence, the *Bundeswehr* remains, for the time being, deficient in undertaking 'Three Block Warfare' and incapable of participating in combat operations of the scale and intensity of those conducted by the British and US in Southern Afghanistan.¹⁴³ As a source within the German BMVg stated: 'You can't expect a five year-old to do the same tasks as an eighteen year-old'.¹⁴⁴

The study has important implications for empirical research on European defence reforms as well as the theoretical literature on the sources of military change. It draws attention to the need for a closer focus on civil-military relations in defence planning and on the precise balance that should be struck between civilian and military input to effective defence planning. The literature on post-Cold War European defence reform is remarkably quiet on this timely and important subject.¹⁴⁵ The study also raises implications for theoretical debates on defence reform. It demonstrates that although the forces of international structure form the central variable driving the content of defence reform, the timing of reform at the strategic, operational and tactical levels of defence planning¹⁴⁶ is dependent, not upon strategic or organisational culture, or, indeed, upon organisational politics. The key intervening domestic-level variable is, instead, the autonomy of the core executive in defence policy. Furthermore, while the article identifies Neoclassical Realism as the theoretical framework that provides greatest analytical leverage, it points to the utility of a highly-materialist form of the theory. In doing so, the study adds greater parsimony to a Neoclassical Realist literature that is characterised by a significant level of contestation on the nature of the unit-level variables which impact upon the timing of states' convergence with systemic imperatives.¹⁴⁷

¹ Germany contributes 4,800 troops to ISAF's Regional Command North (with an upper ceiling of 5,350). On NATO criticism: Spiegel <http://www.spiegel.de/international/world/0,1518,531841,00.html>, accessed 19 January 2010.

² See, for example: Anja Dalgaard-Nielsen. *Germany, Pacifism and Peace-Enforcement* (Manchester: MUP 2006); John Duffield, 'Political Culture and State Behaviour: Why Germany Confounds Neorealism', *International Organization* 53/4 (1999) pp.765-803; Kerry Longhurst. *Germany and the Use of Force: The Evolution of German Security Policy 1990-2003* (Manchester: MUP 2004).

³ Kevin Reynolds, 'Building the Future Force', *Contemporary Security Policy* 27/3 (2006) p.458.

⁴ Erik Dahl, 'NCW and the Death of Operational Art', *Defence Studies* 2/1 (2002) p.5.

⁵ Theo Farrell, 'The Dynamics of British Military Transformation', *International Affairs* 84/4 (2008) p.779

⁶ Joshua Ho, 'The Dimensions of Effects-Based Operations', *Defence Studies* 5/2 (2005) p.172.

⁷ Ho p.174.

⁸ *Ibid.*

⁹ David Betz, 'Redesigning Land Forces for Wars Amongst the People', *Contemporary Security Policy* 28/2 (2007) p.235.

¹⁰ James Corum, 'Rethinking U.S. Army Counter-Insurgency Doctrine', *Contemporary Security Policy* 28/1 (2007) p.132; Beatrice Heuser, 'The Cultural Revolution in Counter-Insurgency', *Journal of Strategic Studies* 30/1 (2007) p.169.

- 11 NYT <http://www.nytimes.com/2009/04/07/us/politics/07defense.html?pagewanted=1&r=2&hp>, accessed 20 October 2009.
- 12 Farrell pp.786-7.
- 13 'Incorporating and Extending the UK Military Effects-Based Approach Joint Doctrine', 7/06, Development Concepts and Doctrine Centre, Shrivenham, UK MoD, September 2006.
- 14 'Effects-Based Operations: Implications of Recent JFCOM Commander's Guidance', DCDC, 2008; Interviews, DCDC, Shrivenham, 18 November 2009; Interview, UK MoD, London, 20 November 2009.
- 15 *Ibid* pp.122-3.
- 16 'White Paper on German Security Policy and the Future of the *Bundeswehr*', 2006, pp. 95-7.
- 17 Tom Dyson, *Neoclassical Realism and Defence Reform in post-Cold War Europe* (Basingstoke: Palgrave 2010), pp. 51-3.
- 18 'Three Block Warfare' encompasses the idea that land forces will be most likely to encounter the rapid emergence of simultaneous humanitarian, peacekeeping/post-conflict reconstruction and high-intensity conventional warfighting in environments as small as 'three blocs'. Ho pp.182-3.
- 19 'Verteidigungspolitische Richtlinien' (VPR), BMVg, 2003, Chapter V.2, pt.58; Tom Dyson, 'Convergence and Divergence in post-Cold War British, French and German Military Reforms', *Security Studies* 17/4 (2008) p.733.
- 20 Interviews, BTC, Strausberg, 26 November 2009.
- 21 Interview, BMVg, Bonn, 12 October 2008.
- 22 'White Paper...', 2006, p. 77.
- 23 *Ibid* p.78.
- 24 'Sicherheitspolitische Zukunftsanalyse', BTC, 2007, p.16; Van-der-Giet and Schreiber, 'Moderne Informationstechnik: Befähigung zur Vernetzten Operationsführung', *Wehrtechnische Report* 6 (2003) pp.21.
- 25 Interview, BMVg, Bonn 12 October 2009.
- 26 For a detailed analysis of German C2ISR investment see Dyson, 2010, pp.52-54
- 27 Interviews, BMVg, Bonn, 12 October 2009. Britain and France attained an 'initial' level of NEC in 2007.
- 28 Kirchaessner and Marahrens, 'NetOpFue: Fähigkeiten für Stabilisierungs- und Eingreifkräfte', *Wehrtechnische Report* 6 (2008) pp.25.
- 29 Interview, BMVg, Bonn, 12 October, 2009; BMVg, Bonn, 19 October, 2009.
- 30 Interviews, BMVg, Bonn, 19 October 2009; *Führungsakademie der Bundeswehr* 22 October 2009.
- 31 Spiegel <http://www.spiegel.de/international/world/0,1518,646085,00.html>, accessed 20 January 2010.
- 32 On ISAF equipment shortages: Spiegel <http://www.spiegel.de/international/world/0,1518,646085,00.html>, accessed 20 January 2010.
- 33 Fabian Breuer, 'Between Ambitions and Financial Constraints: The Reform of the German Armed Forces', *German Politics* 15/2 (2006) pp.206-20; Timo Noetzel and Benjamin Schreer, 'Missing Links: The Evolution of German Counter-Insurgency Thinking', *RUSI Journal* 154/1 (2009) p.19.
- 34 Interviews, BMVg, Bonn, 12 and 19 October, 2009.
- 35 Interview, *Führungsakademie*, Hamburg, 22 October 2009.
- 36 Interview, *Führungsakademie*, Hamburg, 22 October 2009.
- 37 *Ibid.*
- 38 Interview, *Führungsakademie*, Hamburg, 22 October 2009.
- 39 *Ibid.* Avi Kober, 'The Israeli Defence Forces in the Second Lebanon War: Why The Poor Performance?', *Journal of Strategic Studies* 31/1 (2008) pp.3-40
- 40 *Ibid.*
- 41 'Abschlussbericht zur Studie SFT 21-2040 Mensch in Transformation Workshop Z', BTC, BMVg, 2006, p.13.
- 42 'Abschlussbericht...', p.13.
- 43 Van der Giet and Schreiber p.21.
- 44 'White Paper...', 2006, p. 75; 'Abschlussbericht', pp.68-9.
- 45 Interview, *Fuehrungsakademie*, Hamburg, 22 October 2009.
- 46 On the core premises of Neorealism: Waltz, 1979.
- 47 On military 'emulation': Barry Posen. *The Sources of Military Doctrine: France, Britain and Germany Between the Wars* (Ithaca: Cornell University Press 1984). States can also pursue innovation in military technology and practices. Innovation offers the potential for a significant short-term increase in relative power but is highly-risky and usually undertaken only by primary states. Secondary states, like the European Great Powers, prefer emulation's more certain and cost-effective results. Joao Resende-Santos. *Neorealism, The State and the Modern Mass Army* (Cambridge: CUP 2007) pp.73-4.
- 48 Stephen Lobell et al. *Neoclassical Realism, The State and Foreign Policy* (Cambridge: CUP 2009) p.25; Gideon Rose, 'Neoclassical Realism and Theories of Foreign Policy', *World Politics* 51/3 (1998) p.152.
- 49 Dyson, 2007; 2008. In contrast, the literature on Strategic Culture emphasises the impact of societally and institutionally-embedded norms on the willingness of policy makers to sanction the use of force as an instrument of

German foreign policy and undertake far-reaching defence reform. Military policy is driven by ideas rather than material factors. See: Berger; Dalgaard-Nielsen; Duffield and Longhurst.

⁵⁰ Dyson, 2008 p.752.

⁵¹ Dyson, 2007 pp.62-6; 77..

⁵² Breuer p.212; Dyson, 2007 pp.106; 167.

⁵³ Gerhard Schroeder, *Entscheidungen: Mein Leben in Der Politik* (Hamburg: Hoffmann und Campe 2007) p.88.

⁵⁴ German Basic Law, Article 65a, 115b.

⁵⁵ Dyson, 2007 pp.107-11.

⁵⁶ 'Army's Composition Still Reflects Spirit of the Cold War', *Der Spiegel*, 14 June, 2010.

⁵⁷ On the professional armed forces advocacy coalition, see Dyson, 2007, p.134.

⁵⁸ Janne Haaland Matlary, *European Union Security Dynamics: In the New National Interest* (Houndmills: Palgrave 2009) pp.151-3;156.

⁵⁹ Hans Born and Heiner Hänggi, 'Governing the Use of Force under International Auspices', in *SIPRI Yearbook 2005: Armaments, Disarmament and International Security* (Oxford: OUP 2008) p.206.

⁶⁰ Dyson, 2010, pp.120-28

⁶¹ Dyson, 2008 pp.758-71.

⁶² *Ibid.*

⁶³ Thomas Berger. *Cultures of Anti-Militarism: National Security Cultures in Germany and Japan* (Baltimore: John Hopkins University Press 1998); Dalgaard-Nielsen; Duffield; Dyson, 2007; 2008; 2010; Longhurst.

⁶⁴ Dyson, 2007 pp.66-8.

⁶⁵ Dalgaard-Nielsen p.108.

⁶⁶ Interview, *Führungsakademie*, Hamburg, 22 October 2009.

⁶⁷ 'White Paper...', 2006, p. 72. On the key competencies of the Stabilisation Forces and *Eingreifskräfte*: 'Abschlussbericht...', pp.68-9; interview, BMVg, Bonn, 19 October 2009.

⁶⁸ Dyson, 2007 p.20.

⁶⁹ Interview, *Führungsakademie*, Hamburg, 22 October 2009; interviews BTC, Strausberg, 26 November 2009.

⁷⁰ Dalgaard-Nielsen p.108.

⁷¹ Dalgaard-Nielsen p.112.

⁷² Matlary p.151.

⁷³ Interview, *Führungsakademie*, Hamburg, 22 October 2009.

⁷⁴ *Ibid.*

⁷⁵ *Ibid*; Noetzel and Schreer, 2009 p.20.

⁷⁶ 'Einsatzkonzept Operationen gegen Irreguläre Kräfte', BMVg, 2005.

⁷⁷ Interview, *Führungsakademie*, Hamburg, 22 October, 2009.

⁷⁸ *Ibid*

⁷⁹ Interviews, BMVg, Bonn, 12 October, 2009; Interviews, BTC, Strausberg 26 November 2009.

⁸⁰ Interview, BMVg, Bonn, 12 October 2009.

⁸¹ *Ibid.*

⁸² Interviews, BTC, Strausberg, 26 November 2009.

⁸³ *Ibid.*

⁸⁴ Interviews, BMVg, Bonn, 19 October, 2009; interview, *Führungsakademie*, Hamburg, 22 October 2009; interviews, BTC, Strausberg, 26 November 2009.

⁸⁵ Alistair Miskimmon, 'Falling into Line? Kosovo and the Course of German Foreign Policy', *International Affairs* 85/3 (2009) pp.571; Timo Noetzel and Benjamin Schreer, 'All the Way? The Evolution of German Military Power', *International Affairs* 84/2 (2008) p.220.

⁸⁶ Interview, *Führungsakademie*, Hamburg, 22 October 2009; Timo Noetzel and Benjamin Schreer, 'Counter What? Germany and Counter-insurgency in Afghanistan', *RUSI Journal* 153/1 (2008a) pp.45-6.

⁸⁷ Interview, *Führungsakademie*, Hamburg, 22 October 2009.

⁸⁸ *Süddeutsche Zeitung*, <http://www.sueddeutsche.de/politik/991/501249/text/>, accessed 26 January 2010.

⁸⁹ 'Abschlussbericht...', pp. 50-1; 68-9 .

⁹⁰ BMVg interviewees were keen to emphasise that the *Bundeswehr* is conducting COIN in Northern Afghanistan.

⁹¹ 'Three Block Operations' reflects the view that while higher-intensity action is necessary, winning the local population's support through non-kinetic action must stand at the centre of operations.

⁹² 'Bundeswehrverband: Deutsche Soldaten sind in Kunduz im Krieg', *Frankfurter Allgemeine Zeitung*, 11 September, 2009; Interviews, BMVg, Bonn, 19 October, 2009; interview *Führungsakademie*, Hamburg, 22 October 2009.

⁹³ Interview, *Führungsakademie*, Hamburg, 22 October 2009; Noetzel and Schreer, 2009 p.20.

⁹⁴ Interview *Führungsakademie*, Hamburg, 22 October 2009; interview BMVg, Berlin 10 November 2009; Spiegel <http://www.spiegel.de/international/germany/0,1518,637646,00.html>, accessed 20 January 2010.

⁹⁵ Interview, *Führungsakademie*, Hamburg, 22 October 2009.

-
- ⁹⁶ *Ibid.*
- ⁹⁷ Interviews, BMVg, Bonn, 19 October 2009.
- ⁹⁸ Interviews, BMVg, Bonn, 19 October 2009; interview BMVg, Berlin, 10 November 2009.
- ⁹⁹ *Ibid.*
- ¹⁰⁰ Interview, BMVg, Berlin, 10 November 2009.
- ¹⁰¹ *Ibid.*
- ¹⁰² Interview, *Führungsakademie*, Hamburg, 22 October 2009.
- ¹⁰³ Interview, BMVg, Berlin, 10 November 2009.
- ¹⁰⁴ *Ibid.*
- ¹⁰⁵ *Ibid.*
- ¹⁰⁶ Interview, *Führungsakademie*, Hamburg, 22 October 2009.
- ¹⁰⁷ Interview, BMVg, Berlin, 10 November 2009.
- ¹⁰⁸ *Ibid.*
- ¹⁰⁹ *Ibid.*
- ¹¹⁰ Equipment must cost under €5 Million, 'off the shelf', and deployed within 12 months.
- ¹¹¹ Interview, BMVg, Berlin, 10 November 2009.
- ¹¹² *Ibid.*
- ¹¹³ Interview, *Führungsakademie*, Hamburg, 22 October 2009.
- ¹¹⁴ *Ibid.*
- ¹¹⁵ Interviews, BTC, Strausberg, 26 November 2009.
- ¹¹⁶ Interviews, BMVg, Bonn, 12 October 2009.
- ¹¹⁷ Interview, BMVg, Berlin, 10 November 2009.
- ¹¹⁸ Interviews, BTC, Strausberg, November 26 2009; interviews BTC, Strausberg, 26 November 2009.
- ¹¹⁹ Interviews, BMVg, Bonn, 12 October 2009; interviews, BMVg, Bonn, 19 October 2009.
- ¹²⁰ Interviews, BMVg, Bonn, 12 October 2009; interviews, BTC, Strausberg, 26 November 2009.
- ¹²¹ Interviews, BMVg, Bonn, 12 October 2009.
- ¹²² *Ibid.*
- ¹²³ *Ibid.*; Hans Belde, 'The Doctrine, Training and Education Synergy in Germany', *Doctrine 2* (2004) p.31.
- ¹²⁴ *Ibid.*
- ¹²⁵ Interviews, BMVg, Bonn, 12 and 19 October 2009; Interviews, BTC, Strausberg, 26 November 2009.
- ¹²⁶ *Ibid.*
- ¹²⁷ *Ibid.*
- ¹²⁸ Interview, BMVg, Berlin, 10 November 2009; interviews BTC, Strausberg, 26 November 2009.
- ¹²⁹ *Ibid.*
- ¹³⁰ Interviews, BTC, Strausberg, 26 November 2006.
- ¹³¹ *Ibid.*
- ¹³² *Ibid.*
- ¹³³ *Ibid.*
- ¹³⁴ *Ibid.*
- ¹³⁵ *Ibid.*
- ¹³⁶ Interviews, BTC, Strausberg, 26 November 2009; interview, BMVg, Berlin, 24 November 2009.
- ¹³⁷ Interview, BMVg, Berlin, 24 November 2009; interviews, BTC, Strausberg, 26 November 2009.
- ¹³⁸ Interview, BMVg, Berlin, 24 November 2009.
- ¹³⁹ *Ibid.*
- ¹⁴⁰ Interviews, BTC, Strausberg, 26 November 2009. The author made repeated requests to the BMVg's Armaments Division for information on cost over-runs/time-delays, but received no reply.
- ¹⁴¹ Interview, BMVg, Bonn, 24 November 2009; interviews, BTC, Strausberg, 26 November 2009.
- ¹⁴² On French defence planning processes at the tactical and operational levels, see Dyson, 2010, pp. 236-8; On defence planning and military adaptation in the UK, see Tom Dyson, 'Defence Planning under the Labour Government: Tactical Dynamism and Strategic Inertia', *British Journal of Politics and International Relations* (2011, forthcoming).
- ¹⁴³ Interview, BMVg, Bonn, 12 October 2009; interview BMVg, Bonn, 19 October 2009; interview, *Führungsakademie*, Hamburg, 22 October 2009; SWR, <http://www.swr.de/nachrichten/-/id=396/nid=396/did=5389428/1wdq8r5/index.html>, accessed 15 October 2009.
- ¹⁴⁴ Interview, *Führungsakademie*, Hamburg, 22 October 2009.
- ¹⁴⁵ Notable exceptions include the work of Rynning (2001/02: 90-92) on French defence reform, Cornish and Dorman (2010) on military input to the strategic-level decision-making processes surrounding major post-war UK defence reviews and Soeters et al (2010) who briefly touch on the issue of civil-military relations in doctrinal decision-making processes and military adaptation. Finally, Farrell (2010) provides a fascinating examination of the organizational characteristics of the British Army which enabled it to adapt to changing operational exigencies

in Helmand province. See Paul Cornish and Andrew Dorman, 'Breaking the Mould: The UK Strategic Defence Review 2010', *International Affairs*, 86/2 (2010), pp.395-410; Theo Farrell, 'Improving in War: Military Adaptation and the British in Helmand Province, Afghanistan, 2006-09', *Journal of Strategic Studies* 33/4 (2010), pp.567-94.

Sten Rynning, 'Shaping Military Doctrine in France: Decision-Makers Between International Power and Domestic Interests', *Security Studies* 11/2, (2009), pp.85-116; Joseph Soeters et al (eds), *Managing Military Organizations: Theory and Practice* (Abingdon: Routledge, 2010).

¹⁴⁶ It is possible to distinguish between three levels of defence planning: the tactical level involving the planning and execution of individual battles; the operational level, that involves the planning and conduct of campaigns and operations and finally, the strategic level, involving the overall configuration of military capabilities on behalf of national security objectives.

¹⁴⁷ Lobell et al, 297-8.