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## Learning in War:

### Organisational Learning in the *Bundeswehr* during ISAF

Tom Dyson

*The formal lessons-learned (LL) processes of European militaries have undergone considerable development since the early-2000s. However, the role that LL play in encouraging the institutionalisation of adaptation in the field as organisational learning has received limited attention in the academic literature. Drawing upon extensive original empirical research, the paper examines the state of play in Bundeswehr (especially Army) LL and the extent to which it has implemented key principles of LL best-practice. It looks, in particular, at the ability of the Bundeswehr to achieve 'knowledge transformation' during its ISAF deployment by effectively combining existing organisational knowledge with new knowledge gained from intra- and inter-organisational learning. In doing so, the paper focuses on learning in four key areas: operational design, training, officer education. It also explores the factors which determine the development of effective military LL. The paper finds that Neoclassical Realism provides the greatest analytical leverage in understanding the sources of military learning. It concludes by making several recommendations for improvements to the governance of LL.*

#### Introduction

The ability of militaries to facilitate and identify successful adaptation in the field and translate it into organisational change is a critical dimension of success in warfare (Catignani 2014; Foley et al 2011). It is especially important during military operations of long duration, such as counterinsurgency (COIN). During the COIN operations of the International Security and Assistance Force (ISAF) in Afghanistan the formal lessons-learned processes (LL) of NATO militaries underwent significant development. However, the role that LL play in encouraging wider adaptation and organisational learning within militaries has received limited scholarly attention.<sup>1</sup>

This paper attempts to address this relative neglect of LL and makes three contributions to the study of military learning. First, it examines the insights of the literature on organisational learning about the central features which should constitute best-practice in Army LL. It focuses, in particular, on the organisational processes which enable knowledge transformation: the ability of a military to realise the potential of knowledge acquired from the operational environment, alliance partners and historical analysis by effectively combining it with existing organisational knowledge (Zahra and George 2002, 190).

Second, the paper explores the development of LL within the German Army. It examines the extent to which it implemented key principles of best-practice in organisational learning during ISAF. The paper focuses in particular on the effectiveness of LL in achieving knowledge transformation in four key areas: operational design, the training of soldiers, officer education and army doctrine (especially COIN). Finally, the paper investigates the factors which

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<sup>1</sup> Foley (2014) undertakes a historical analysis of the development of LL within the British and German Armies during WW1. While a number of articles refer in passing to the establishment of LL within NATO, the only detailed account of the establishment of LL processes is found in the scholarship of Catignani (2014) and Foley et al (2011) on British LL and Dyson (2012) on British and German LL

determine the emergence of effective LL, exploring in particular the insights of strategic and organisational culture, bureaucratic politics and Neoclassical Realism (NCR).

The paper begins by highlighting the importance of LL to COIN. It proceeds by establishing the key organisational processes and behaviours which facilitate effective knowledge transformation. The paper then explores knowledge transformation in the German Army during deployment in Afghanistan. It finds that LL failed to help key areas of military activity keep pace with changes in the field, with negative implications for the *Bundeswehr*'s performance. The paper then examines the variables which have impeded knowledge transformation. It finds that while improvements in LL are driven by the threat of defeat, bureaucratic politics, and especially strategic and organisational culture, emerge as important variables impeding knowledge transformation. The paper concludes by exploring the key steps which should be taken by the civilian leadership of the German Federal Ministry of Defence (BMVg) to improve LL.

### **Lessons-learned as the transmission belt from adaptation to organisational learning**

Adaptation is vital to the successful conduct of military operations, especially COIN. It is possible to identify some basic tenets of COIN which endure over time and space (Cohen et al 2006). However, any attempt to draw firm conclusions from the past about success in COIN must be attenuated by the recognition that there is no complete 'one size fits all' model (Ucko 2010, 35-36). Hence the literature on COIN has, throughout history, placed great emphasis on the importance of adaptation to 'time, place and circumstances'. (Rid 2010, 756).

As Farrell (2010, 569) notes, military adaptation involves 'change to tactics, techniques or existing technologies to improve operational performance' and is distinct from innovation that is characterised by 'a major change that is institutionalised in new doctrine, a new organisational structure and/or a new technology'.<sup>2</sup> Adaptation and innovation correspond with Argyris and Schoen's (1974) distinction between 'single-loop' and 'double-loop' learning. The former relates to adaptive changes that retains existing routines, organisational rules, standard operating procedures (SOP), norms, practices and instruments. The latter involves fundamental change to these organisational features.

Adaptation (single-loop learning) and innovation (double-loop learning) are best considered as existing on a continuum (Farrell et al 2013, 7). Significant change can take place within a military without its formal institutionalisation as reform to existing routines or rules through doctrinal change. For example, change to foundational (basic) training or pre-deployment (mission-specific) training involves adaptation. Similarly, change to operational design for follow-on contingents also usually involves adaptation (Farrell et al 2013, 3). Yet, alterations in operational design in ongoing operations can also be characterised by a dramatic change in approach. Such change goes beyond adaptive single-loop learning, but may not yet be formally codified as innovation though doctrinal change. Changes in officer education and training may also take place before doctrine catches up. Such learning remains adaptation, but is codified in changes to training guidelines or curriculum development, hence it sits between adaptation and innovation and can be thought of as advanced single-loop learning (Stulberg and Salomone 2007, 28).

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<sup>2</sup> As Resende-Santos (2007, 72) highlights, innovation is not restricted to the creation of new knowledge and practices, but can also include the recombination of existing knowledge and practices in new forms.

As Catignani, (2012, 516), Farrell, (2010, 591-92) and Grissom, (2006, 908) highlight, military adaptation and its role in spurring innovation and emulation<sup>3</sup> is under-explored in the literature on military change. However, equally importantly, this literature fails to account for the role of formal learning processes in driving change within militaries. These processes are central not only to adaptation, but also to the institutionalisation of adaptation as innovation or emulation.

Farrell (2010, 571-73) develops a theory of military adaptation which argues that several conditions predispose militaries to explore new operational concepts. These include the threat of defeat; the presence of military entrepreneurs; poor organisational memory; decentralised leadership and personnel turnover. However, Farrell does not explore the conditions which facilitate the transmission of adaptation in the field to changes in the institutional Army (Farrell 2010, 591-92).

Furthermore, poor organisational memory and personnel turnover may lead militaries to fail to institutionalise learning as innovation and to cycles of learning where previous adaptation is lost (Farrell 2010, 591). Under such circumstances an ‘adaptation trap’ can occur whereby individual or group adaptation does not lead to organisational learning (Catignani 2014; Day 1994, 44; Serena 2011, 163). Adaptation in the field is of limited utility for a military campaign if not accompanied by changes to training and, where appropriate, to operational design and doctrine (Thomas and Allen 2007, 125). Moreover, effective learning processes are essential in identifying the failure of soldiers to adapt. In short, by providing the transmission belt from individual and group learning to organisational learning, LL provide a means to ensure that the institutional Army is able to keep pace with developments in the field.

As the NATO Allied Joint Doctrine for the Conduct of Operations notes, LL allow a military to ‘learn efficiently from experience and to provide validated justifications for amending the existing way of doing things, in order to improve performance, both during the course of an operation and for subsequent operations’ (AJP-3 (B), 0454). If well-executed, lessons-learned processes should result in ‘reduced operational risk, increased efficiency, and improved operational effectiveness’ (NATO Lessons-learned 2011, 1).

As Secchi et al (1999, 58) note, a LL process allows a military to identify individual lessons-learned which can be defined as follows:

*‘...a knowledge or understanding gained by experience. The experience may be positive, as in a successful test or mission, or negative, as in a mishap or failure. A lesson must be significant in that it has a real or assumed impact on operations; valid in that it is factually and technically correct; and applicable in that it identifies a specific design, process, or decision that reduces or eliminates the potential for failures and mishaps, or reinforces a positive result.’*

It is important to distinguish between two forms of learning processes. First, formal LL. LL involves the establishment of institutional structures and processes for identifying, managing, evaluating and implementing the lessons of operations for key areas of military activity. Second, informal learning processes, involving the dissemination of lessons through social networks (Zahra and George 2002, 193). These informal processes focus, as Catignani (2014, 31) highlights, on ‘short-term, circumscribed and *ad hoc* problem solving’ and rarely spur

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<sup>3</sup> Adaptation can also contribute to successful military emulation by providing further evidence to verify the relevance of the COIN experiences of other states and alliance partners (Resende-Santos 2007, 58-61).

advanced single-loop or double-loop learning. Informal networks often emerge when deficiencies in LL are present and can undermine soldiers' willingness to engage with LL (Catignani 2014, 32).

LL have a long history. For example, semi-formal LL developed within both the British and German Armies during WW1 and WW2 and within the US military during the Vietnam War (Foley 2014, 287-90; Hart 2004, 208; Mains and Ad Ariely, 2012, 166-67). However, only in the post-Cold War era have improvements in Knowledge Management (KM) IT systems created the potential for the real-time transmission of information and knowledge from the front to the institutional Army and the efficient storage and retrieval of information. As Mains and Ad Ariely, (2012, 168) note, deployed personnel are now only 'two handshakes away from trainers, instructors and doctrine writers...'. Yet revolutionary changes in military technology alone rarely lead to a significant increase in the combat performance of military forces. Only when accompanied by innovation in operational concepts and organisational change can the potential of new technologies be fully exploited (Krepinevic 1994, 30).

The conceptual and organisational problems which undermined the ability of new KM technologies to deliver effective LL during ISAF has led some scholars to be sceptical of the potential of LL. Despite recognising the need for more research on learning, Farrell (2010, 572) argues that LL serve little purpose other than to reinforce organisational routines. Grissom (2006, 926) posits that LL are limited to 'information gathering'.

LL are, however, vital in ensuring that the implications of *ad hoc* adaptation in the field are assessed and, where relevant, integrated into the activities of the institutional army (Foley et al 2011, 254; Russell, 2010, 88-89; Serena 2011, 161). Furthermore, inter-organisational learning from alliance partners helps to contextualise lessons from an Army's operational experiences and shed light on hitherto neglected areas of activity (Coticchia and Moro 2016; Fabrizio 2009, 265; Pedler et al 1989, 7). In short, well-organised LL have the potential to facilitate significant single-loop learning in the field, as well as advanced single-loop learning and double-loop learning within the institutional Army (Marcus 2015; Murray 2011, 24-25; Russell 2010, 203). Understanding the key features of best-practice in military learning and the circumstances which facilitate its emergence is, therefore, imperative.

### **Organisational capabilities and knowledge transformation**

The purpose of this section is to briefly establish an 'ideal type' model of LL best-practice. As Weber (1922, 4) notes, an ideal type allows us to consider '...what course human action of a certain kind would take, if it were strictly purposive-rationally oriented, undisturbed by error or emotions' (Weber, 1922, 4). An ideal type attempts to distil a phenomenon's essential features and cannot hope to encompass all aspects of best-practice (Cahnman 1965; Weber, 1922). Hence, this section attempts to map the core organisational processes and behaviours which should underpin effective LL, especially knowledge transformation.

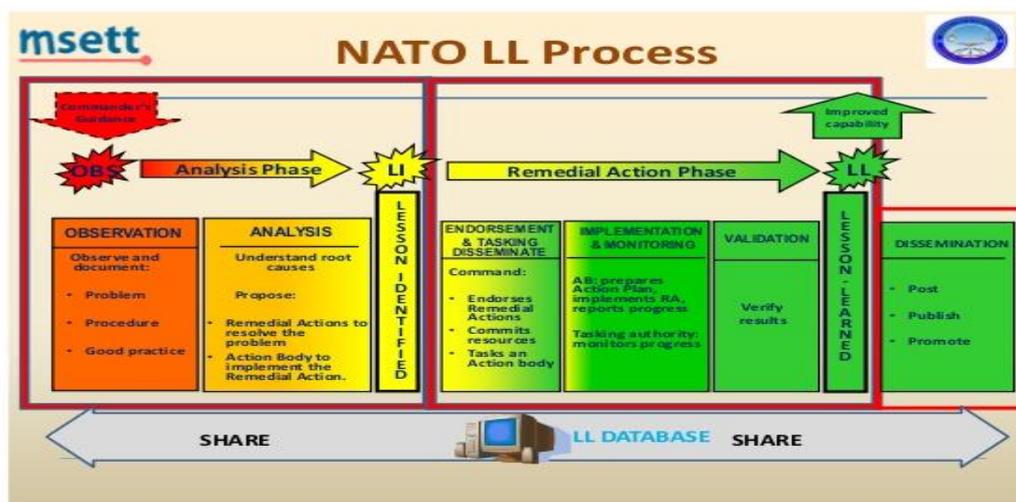
As the NATO LL Handbook (2016, 10-13) highlights, the process of lesson-learning is characterised by four basic stages (see Figure 1). First, the creation of an observation: 'a comment based on something someone has heard, seen or noticed that has been identified and documented as an issue for improvement or a potential best-practice' (NATO LL Handbook 2016, 11). An observation then enters the analysis stage where the seriousness of the problem is ascertained and, if necessary, solutions for improvement are identified (known as a 'remedial

action’). This stage also identifies the appropriate actor/actors who should be tasked with addressing the problem.

At this point a Lesson Identified (LI) has been achieved. As the Handbook (2016, 12) notes, a LI forms ‘a mature observation with a determined root cause of the observed issue and a recommended remedial action and action body, which has been developed and proposed to the appropriate authority’. In addition to LI, a best-practice may also be identified: ‘a technique, process or methodology that contributes to the improved performance of an organization and has been identified as a best way of operating in a particular area as compared to other good practice(s)’ (NATO LL Handbook 2016, 12). Best-practices are usually only relevant to a specific operation, sub-community of practice or time period and hence may not be incorporated in doctrine (NATO LL Handbook 2016, 12).

Following the identification of a LI, the endorsement and tasking phase begins. During this stage a LI is endorsed by the leadership of the LL organisation and an ‘action body’ is formally tasked with implementing a remedial action. The action body must then prepare a plan of action and provide updates on its progress. Once completed, a validation process takes place, which should ensure that the remedial action has been successfully carried out, resulting in measurable improvement (NATO LL Handbook 2016, 12-13). Following validation has been a LI become a lesson learned, defined as ‘an improved capability or increased performance confirmed by validation when necessary resulting from the implementation of one or more remedial actions for a lesson identified’ (NATO LL Handbook 2016, 13). It then enters the final stage of the LL process: dissemination among relevant stakeholders.

**Figure 1: The NATO LL Process**



However, an organisation must develop a wider range of organisational processes and behaviours if it is to ensure that LL operate in an effective manner. The literature on dynamic organisational capabilities provides an opportunity to identify these attributes. The concept of dynamic organisational capabilities developed within the literature on the resource-based understanding of the firm and its sub-field of organisational learning (Schreyoegg and Kliesch-Eberl 2007, Teece et al 1997). Dynamic organisational capabilities recognises that the ‘human elements’ of a firm are central to its profitability and draws together a number of the insights associated with the field of organisational learning. It focuses, in particular, on how knowledge acquisition and the management of knowledge and learning enhance a firm’s ability to adapt

to its strategic environment. The concept also examines the role of formal and informal organisational assets (e.g. organisational routines, norms and practises) in bolstering a firm's performance (Schreyoegg and Kliesch-Eberl 2007, 913-14; Teece et al 1997, 514-15).

Building upon the scholarship of Zahra and George (2002), the paper distinguishes between four dynamic organisational capabilities which are necessary to effectively realise the four basic stages of LL. First, knowledge acquisition: the capability to acquire knowledge from the operational environment and alliance partners. Second, knowledge management: the capability to manage and store knowledge. Third, knowledge dissemination: the capability to disseminate knowledge to relevant individuals, groups and organisations within the military. Finally, knowledge transformation which, as Zahra and George (2002, 190) note, refers to the ability of an organisation to 'develop and refine the routines that facilitate combining existing knowledge and the newly acquired and assimilated knowledge'.

Knowledge acquisition, management and dissemination capabilities collectively establish an organisation's ability to acquire and assimilate knowledge, (potential absorptive capacity, PACAP) (Zahra and George 2002). However knowledge transformation, and especially its key component – the establishment of a culture of experimentation and creativity – is the central facilitator of the realised absorptive capacity of an organisation (RACAP) (Harvey and Wilkinson 2009, 30). In the absence of a culture of experimentation and creativity, knowledge acquisition, management and dissemination processes remain tools, rather than capabilities. They are likely to be underused and to reinforce existing organisational knowledge and routines (Dawson 2000, 326; de Long and Fahey 2000; Pfeffer and Sutton 2000; Murray 2011, 6). Hence the following sub-section focuses on outlining the key features of a well-developed knowledge transformation capability.<sup>4</sup>

*Knowledge transformation: creating a culture of experimentation and creativity*

If an organisation is to achieve knowledge transformation it must be primed not only to learn, but also to 'unlearn' by constantly challenging organisational knowledge (de Holan and Phillips 2004, 1603; 24; Nagl 2002, 19). An organisation should, therefore, make all possible efforts to instil a culture of experimentation and creativity that questions existing orthodoxies (de Holan and Phillips 2004; de Long and Fahey 2000, 125; Murovec and Prodan 2009, 862; Weber 2007, 336). A review of the academic literature on organisational learning highlights a number of essential features of knowledge transformation capability, summarised in Table 1.<sup>5</sup>

**Table 1: Knowledge transformation capability - key features**

Main features	Sub-features
The values of creativity and innovation should be clearly incorporated within the military's core mission	(i) Training and especially officer education should instil intellectual curiosity and critical thinking abilities in soldiers at all levels of military hierarchy.
Organisational structure should be characterised by values such as flexibility, autonomy and cooperation within and between teams.	(i) The delegation of responsibility through mission command to lower levels of command is vital to experimentation and creativity. It permits decision-making about tactical-level activity where knowledge about the nature of problems is likely to be most well-developed.

<sup>4</sup> A discussion of best-practice in knowledge acquisition, knowledge management and knowledge dissemination is provided in the author's ongoing book project *Learning in War: Organisational Learning and Counterinsurgency in Afghanistan and Iraq* that will be published in late 2018/early 2019.

<sup>5</sup> Chapter one of *Learning in War* undertakes a detailed examination of the insights of the literature on the dynamic organisational capabilities about the central features which should constitute LL best-practice.

The military should demonstrate values which support creativity and innovation.	(i) Experimentation and risk-taking should be rewarded and time provided for soldiers to reflect. Information/knowledge hoarding should be discouraged and, when appropriate, punished.
Organisational culture should be supportive of behaviour that encourages soldiers in the field to report problems and successes	<p>(i) Leaders should be involved in coaching, counselling and mentoring their subordinates to encourage a culture of open communication, the tolerance of mistakes and make best use of subordinates' tacit knowledge.</p> <p>(ii) A learning culture should extend to the top of the military. Officers should be trained in how to give and receive constructive criticism</p> <p>(iii) The promotion process should reward continuous self-education and activities by senior personnel which encourage the development of a culture of experimentation and creativity. It should also hold personnel, especially senior officers, to account for failing to act upon important lessons.</p> <p>(iv) The civilian and military leadership should demonstrate commitment to open internal debate and permit external criticism. Opportunities should be provided for key emerging issues, especially at the higher-tactical and operational levels, to be debated within Army-wide and military-wide publications in an open and frank manner.</p> <p>(v) Soldiers should be aware of doctrine and encouraged to be active participants in formal LL by reflecting, in particular, on the utility of doctrine and pre-deployment training. Where possible, soldiers should also participate in online information and knowledge sharing fora for sub-communities of practice.</p> <p>(vi) Organisational culture should be open to the potential benefits which advances in technology can deliver in facilitating information sharing and learning.</p>
Organisational culture should promote the value of speedy decision-making.	(i) LL personnel should ensure that the remedial action and validation stages of LL are completed in a timely manner by the relevant action body/bodies.
Organisational processes should be established within LL to expose the military hierarchy to disruptive thought.	<p>(i) A 'high-level review team' including military and civilian LL personnel should be established to undertake preliminary analysis of information arising from the field and from inter-organisational learning. This team should include a representative from the joint level lessons process.</p> <p>(ii) Decisions about the key lessons to be implemented should be taken by a 'cross-functional team' which should include leading personnel from key areas of Army activity. It should also include personnel from Army/military think-tanks, military history research institutes, the joint level and other Services. In addition, external experts (Other Government Departments (OGDs), NGOs, academics) should be included on the cross-functional team where relevant.</p> <p>(iii) A validation process overseen by the cross-functional team should take place to ensure that key lessons have been institutionalised through the necessary changes to doctrine, training, education etc.</p> <p>(iv) LL personnel should work with knowledge management (KM) consultancies and academic KM experts to understand and measure the effectiveness of LL.</p>

While there is scope for diversity in the detail of LL, the fundamental organisational processes and behaviours outlined in the above model are essential in facilitating knowledge transformation. These features are valid at both the service and joint levels, albeit with a small number of changes. Crucially, just as joint LL are represented on the Army cross-functional team, so it is also vital the Army LL personnel sit on the joint cross-functional team in order to ensure that issues do not fall down the 'cracks' between the two processes.

*Ensuring the alignment of lessons responsibility with expertise*

The benefits of establishing a separate joint lessons process outweighs the alternative of organising a cross-service lessons process at the joint level which passes information down to the single services. A cross-service LL process would run a significant danger of missing important lessons emerging at the tactical level. In addition, it is unlikely that the resources which would have been invested in single-service LL would be re-invested to establish a cross-service lessons process capable of addressing the needs of the services. Furthermore, a cross-service lessons process organised at the joint level would likely be viewed by the Services as an ‘outsider’ organisation, leading to remoteness between the lessons process and authority holders for tackling lessons at the single service level.

While the establishment of separate joint and single-service LL processes is unavoidable, it runs the risk of misaligning responsibility and expertise for lessons. If LL are to be addressed in an effective manner, it is vital that responsibility for lessons is correctly aligned with the authority that has the resource capability – financial, intellectual and workforce – to resolve problems. It is, therefore, essential that the Services take responsibility for identifying and dealing with lessons which rightly lie within their domain. In particular, responsibilities for the tactical and operational levels must be clearly delineated between the single service and joint lessons processes.

As the joint realm of military activity has grown in importance during the post-Cold War era – and operations are run increasingly at permanent joint headquarters – there has been a dangerous tendency among some NATO militaries to conflate the operational level with the joint level and the single service level with the tactical level (Alderson 2010, 14). While some operations are truly joint, the majority of operations involve a predominance of one service. Locating responsibility for all operational lessons at the joint level runs the serious risk of failing to properly align of responsibility and expertise for operational level lessons which may actually lie largely with an individual service. Operational level learning must therefore also be an integral part of single service lessons processes, otherwise doctrine, officer education and training are unlikely to keep pace with changes in the operational environment (Alderson 2010, 14).

### **Understanding deficits in knowledge transformation during ISAF: strategic culture, organisational culture and bureaucratic politics**

The development of Germany’s knowledge acquisition, management and dissemination capabilities were largely a response to the threat of defeat and reflect the insights of neo-realism<sup>6</sup>. However, knowledge transformation was beset with problems during ISAF (Table 2).

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<sup>6</sup> Neorealism argues that the competitive international security environment provides a powerful motivation for militaries to draw the appropriate lessons from the operational environment. See Resende-Santos (2007, 58-61).

**Table 2: The impact of LL on operational design, training, officer education and doctrine**

Activity	Extent of change and role of LL in informing change <sup>7</sup>
Operational design	LL was important in attaining Ministerial-level support for adaptation on the ground during ISAF (Interviews 7, 10). Post-operational reports (POR) were consulted by commanders in advance of deployment (Interview 10). However, especially in the early years of ISAF, requests via LL for changes to operational design, such as the relaxation of Rules of Engagement (RoE) or the deployment of heavy weapons to permit offensive operations were often not granted (Interview 10). The security situation in Northern Afghanistan had begun to deteriorate in 2006, leading to an increasing number of formal observations from contingents highlighting the need for far-reaching changes to operational design. Yet it was only between 2009 and 2010 that a more offensive approach was adopted. Nevertheless, from 2011 a more cautious, defensive approach was reapplied, despite opposition from company commanders (Interview 18). This approach failed to consolidate the gains of 2009-10 and did not establish the security necessary for the activity of OGDs, NGOs and the Afghan government (Interview 18). Insights from LL led to small improvements in the military's ability to conduct the Comprehensive Approach through the establishment, for example, of Provincial Advisory Teams. However, operational design largely failed to properly integrate the kinetic and non-kinetic dimensions of COIN.
Training	LL led to important changes to pre-deployment training, especially when TTP arose with serious implications for the health and safety of troops (Interviews 1, 2, 3, 4, 5, 6). After 2009 both foundational and pre-deployment training began to focus more heavily on high-intensity combat and the capacity to undertake the 'clear' and 'hold' stages of COIN (Interview 3). However, the continued tendency of some commanders to favour a defensive approach limited the preparation of troops for higher-intensity operations (Interview 10). Furthermore, the Army hierarchy did not perceive the Army's role to be economic and political development, hence the delivery of non-kinetic activities did not receive sufficient attention in training (Interview 3).
Officer education	LL focused largely on the implications of operations for military activity at the lower-tactical levels. LL personnel did not focus on extrapolating the longer-term cumulative implications of changes to TTP for operational art (Interviews, 1, 2, 4, 5, 6, 7, 10). LL therefore had a minimal impact on officer education. However, officer education, while slow to respond to the deteriorating security environment, was able to keep a step ahead of German doctrinal change due to the strong links between educators and the <i>Bundeswehr's</i> doctrinal think-tank, the Working Group on Joint and Combined Operations (AGJACOP) (Interview 9). As a consequence, from 2009 onwards junior officers received a basic grounding in COIN (Interview 9). While few in number, these officers proved to be the most critical of the failure to properly integrate COIN into operational design, training and doctrine (Interview 13).
Doctrine	LL had a limited impact on doctrine development above the level of TTP during ISAF (Interviews, 1, 2, 4, 5, 6, 7, 10). It was not until 2012 that the Training Command received preliminary guidelines for training foreign security forces and the <i>Bundeswehr</i> did not develop explicit COIN guidance for commanders until 2013 (Interviews, 1, 6, 9). COIN guidance was developed with reference to the insights of PORs, post-operational interviews with commanders and the insights contained in the LL publication 'Learning from Operations' (Interview 9). However, it derived mostly from the results of inter-organisational learning by AGJACOP and represented only a partial emulation of British and US doctrine (Interview 9).

The difficulties in knowledge transformation captured in Table 2 derived from three main variables: strategic culture, organisational culture and bureaucratic politics. Strategic culture<sup>8</sup>

<sup>7</sup> Table Two summarises the findings of a section of chapter six of *Learning in War*.

<sup>8</sup> The concept of strategic culture invites us to consider the impact of norms embedded within key political and societal institutions on LL. When strategic culture clashes with the outcomes of bottom-up military learning processes it can induce civilians to exert control over learning processes and stymie dynamic organisational capabilities. Within such a context, the development of best-practice in military learning is consequent upon the impact of one or more of the following variables in altering strategic culture: the role of crisis, normative entrepreneurship from figures within the core executive and competition between strategic subcultures (Bloomfield 2012, 453-54).

has played a critical role in undermining knowledge transformation. German strategic culture is a legacy of the moral and military defeat of WW2 (Dalgaard-Nielsen 2006; Hilpert 2014; Longhurst 2006). It is characterised by a preference for seeking multilateral solutions to international problems, emphasises the importance of reliability and predictability as an alliance partner and contains a strong anti-militaristic sentiment (Dalgaard-Nielsen 2006, 153-55). It has traditionally involved a ‘culture of restraint’ that emphasises the use of military force only in self-defence. The expeditionary deployment of the *Bundeswehr* in the post-Cold War era has, therefore, encountered strong resistance amongst the German public (Breuer 2006; Dalgaard-Nielsen 2006; Duffield 1999; Hilpert 2014; Longhurst 2006).

There is little electoral capital to be accrued from successful reform of the *Bundeswehr* which enhances its capacity to conduct expeditionary operations (Dyson 2007, 11-12). Furthermore, a number of material variables have reduced the autonomy of the core executive in defence policy with implications for the willingness of politicians to act as normative entrepreneurs. First, the German federal political system involves regular regional elections which have important implications for the ability of a governing coalition to guide its broader political agenda through the *Bundesrat* (Dyson 2010, 63-65). These frequent elections foster narrow windows of opportunity for politicians to radically reshape strategic culture (Dyson 2010, 63-65).

Moreover, the linkages between the policy subsystems of defence and budgetary policy have created an incentive for German politicians to sustain strategic culture (Dyson 2008, 772-74). Despite the financial burden of conscription for the defence budget, the presence of conscientious objectors within the German social system created significant overall savings for the state. As a consequence, throughout the 1990s and early 2000s the Finance Ministry placed pressure on the BMVg to maintain conscription (Dyson 2007, 63-64).

As a consequence, post-Cold War Defence Ministers have adopted a ‘salami-slicing’ approach of slow and incremental change to the objectives and instruments of defence policy. By emphasising the importance of strengthening existing dimensions of German strategic culture, especially predictability as an Alliance partner and Germany’s commitment to multilateralism, Defence Ministers have played an important role as normative entrepreneurs in reducing the salience of the anti-militarism in German strategic culture (Baumann and Hellmann 2001; Dyson, 2007; Hilpert, 2014). LL constituted a potential threat to this careful civilian steering of processes of military change. Consequently, defence ministers have sought to exert tight control over military policy. This control has created an organisational culture<sup>9</sup> within the *Bundeswehr* that undermines experimentation and creativity and has negative effects for knowledge transformation.

Organisational culture both affects and is effected by dynamic organisational capabilities (Davidson 2011, 26). The organisational culture in existence at the point when LL are established can play a very important role in facilitating or undermining the effectiveness of learning processes. As Marcus (2015) highlights, if a culture of experimentation and creativity is already present, even in a partial form, at the point when a LL process is launched, it enhances openness to new ideas and provides a foothold that allows a LL process to thrive. However,

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<sup>9</sup> The concept of organisational culture focuses on the cultural idiosyncrasies of military organisations. It accounts for the collective beliefs that militaries hold, not only at the level of the military as a whole, but also the cultures of individual services and regiments (DiBella 2010, 119; Irondelle 2003; Kier, 1995, 70).

the organisational processes of knowledge transformation, such as the establishment of a high-level team and cross-functional team, can also play an important role in helping to overcome culturally-embedded resistance to change.

De Long and Fahey (2000, 116-23) provide a useful framework to conceptualise the ways that organisational culture affects the creation, dissemination and use of knowledge. First, culture shapes the kind of knowledge that is deemed useful within an organisation. Culture also effects the dissemination of information and knowledge by determining the appropriate level at which knowledge should be distributed (De Long and Fahey (2000, 118-20). In addition, it influences the rules and practices of communication in the field on three levels: vertical interaction (the ability to approach commanding officers to discuss sensitive topics); horizontal interaction (the interaction between individuals and units) and the creation of ‘special practices which facilitate knowledge development’, such as the toleration of risk-taking (De Long and Fahey 2000, 120-23). Finally, organisational culture can encourage resistance to learning by fostering path dependence<sup>10</sup> (De Long and Fahey 2000, 123). The following sub-sections explore these four effects of organisational culture on the creation, dissemination and use of knowledge within the *Bundeswehr*. In doing so, they also examine the presence of the key features of best-practice in knowledge transformation (summarised in Table 3).

The sub-sections find that the gradual loosening of the strictures of German strategic culture have created greater willingness for the civilian leadership of the BMVg to permit bottom-up learning. However, this has led only to a limited enhancement of knowledge transformation capability. The *Bundeswehr*'s organisational culture remains characterised by fear of challenging superiors from the level of Colonel upwards in a robust manner. Furthermore, the lack of input from external academic experts, NGOs and OGDs to LL and the failure to establish proper high-level and cross-functional teams have reinforced path-dependent opposition to advanced single-loop or double-loop learning. Finally, the sub-sections also find that bureaucratic politics has played an important contributory role in undermining knowledge transformation.

#### *‘Useful knowledge’ and the level of knowledge distribution*

What is perceived as useful knowledge within the *Bundeswehr* is determined foremost by the extent to which it challenges the guidance of the BMVg's political leadership. During ISAF the BMVg was happy for low-level tactical issues such as TTP and the procurement of urgent equipment to proceed with limited interference (Interviews 10, 11). However, knowledge arising from operations with political implications, such as knowledge which supported the need for broader reflection about changes to operational design, training and doctrine, was unwelcome (Interviews 10, 11, 14, 18).

Excessive political interference in higher-tactical and operational level decision-making has stymied the internalisation of the values of creativity and experimentation amongst military personnel. This has important implications for knowledge distribution throughout the institutional Army. The individual services have no independent means of gathering observations from theatre. The nature of the Operations Command as a ‘bottleneck’ for all

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<sup>10</sup> The concept of path dependence derives from the literature on historical institutionalism. It describes resistance to change which is in part ideational, but is also the result of ‘sunk costs’: the significant financial and intellectual capital that has been invested in policy objectives and policy instruments (Hall and Taylor 1996, 941; Powell and DiMaggio 1991, 7).

information arising from deployed contingents was a useful means for the military and political leadership to control knowledge distribution (Interview 11).

Post-operational Reports (POR) are carefully vetted by the Operations Command and the ministerial-level *Einsatzfuhrungsstab* (Operational Leadership Staff) and its successor, *Strategie und Einsatz* (Strategy and Deployment) before release (Interviews 2, 6, 11). Each POR undergoes a ‘process of first control’ within the Operations Command before it is distributed within the BMVg, or to sub-ordinate commands and divisions (Interviews 2, 6, 11). This process checks whether the report contains information of ‘strategic, political or media relevance’ (Interview 6). PORs containing such information are redacted (Interview 6). This information is instead discussed in commander de-briefings with a small number of high-ranking BMVg personnel (Interview 11). Hence, individual and group learning in the field deemed politically-sensitive, usually higher-level tactical and operational level learning, is often not transformed into advanced single-loop or double-loop learning (Interviews 2, 6, 11).

Furthermore, when German troops were involved in incidents resulting in heavy friendly or enemy casualties in ISAF, the After Action Review (SnG) was classified as top-secret and not released to the Army (Interview 14). It was, therefore, difficult for the Army to draw lessons from firefights for training and doctrine (Interview 14). Furthermore, the Army LL Branch<sup>11</sup> would discover that information had been deleted from the Lessons-Learned Staff Officer’s (LLSO)<sup>12</sup> response to questions which they had posed to the contingent (Interview 14). They could only discover this important information by speaking to the units upon their return (Interview 14).

The willingness of low and mid-ranking officers to question operational design and consider the need for the adoption of a COIN approach in ISAF was limited. Personnel within the Operations Command and Army LL Branch have to be wary not to be seen to draw ‘politically incorrect’ lessons from operational experience (Interview 1). To engage in advocacy on behalf of ideas which were politically-sensitive, such as COIN, would have been dangerous to career progression (Interviews 9, 10, 12).

Hence information which challenged the portrayal of ISAF as a stabilisation mission was often deliberately withheld from the military hierarchy by the Operations Command. Personnel at the level of Colonel and above, who had an eye on promotion, did not want to put their superiors in a difficult position in meetings with high-ranking politicians (Interview 14). Superiors were, in the words of one LLSO, ‘protected from operational reality’ (Interview 14).

As a consequence, the Army was able to gain relatively limited information about higher-tactical and operational level issues which were deemed to be politically-sensitive (Interviews 1, 4). It was usually possible for the Army to gain information that through commander debriefings following their return (Interview 1). However, the formal limitations placed on the level of knowledge distribution sends a clear signal to the Army that acting on such knowledge is ‘off limits’.

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<sup>11</sup> The Army LL Branch is located at the Army Command in Strausberg. As knowledge acquisition is undertaken by the Operations Command, its core role is to oversee the remedial action phase once a LI has been raised. The Army LL Branch also plays a key role in knowledge dissemination.

<sup>12</sup> A LLSO is deployed by the Operations Command alongside a contingent. His core role is to gather observations and ensure the effective dissemination of recently-validated LL and best-practices with a contingent.

A poor culture of experimentation and creativity at the higher-tactical and operational levels also affected the distribution of knowledge within the BMVg. There is a significant degree of reticence to be seen to criticise civilian and military superiors within the Ministry (Interviews 9, 10) which has its roots in German history and the political role played by the German High Command in the first half of the 20<sup>th</sup> Century (Interview 10). It was also reinforced by the *Denkverbot* (ban on open discussion within the BMVg about the implications of expeditionary operations) applied during the tenure of former Defence Minister Volker Ruehe (1992-98).

Hence when politically-sensitive issues enter the Operations Staff or *Strategie und Einsatz*, their rise to key decision-makers such as the State Secretaries and General Inspector is dependent upon the bravery of personnel to confront superiors with difficult information (Interviews 2, 6, 9, 10). Even if these mid-ranking officers are willing to push for such issues to be considered, there is no guarantee that their direct superiors will also be willing to risk robust advocacy (Interviews 6, 10).

During and after the tenure of Defence Minister Karl-Theodor zu Guttenberg (2009-11) when the security situation in Northern Afghanistan had deteriorated markedly, the willingness of Defence Ministers to accept ISAF as a combat operation fostered greater openness to knowledge from the field. This had positive implications for operational design which gradually began to introduce a more COIN-oriented approach after late 2009 (Interviews 9, 10, 11). The changing political context also created opportunities for entrepreneurial leaders, such as General Bruno Kasdorf, the Inspector of the Army (2012-15) to rise up the military hierarchy and promote doctrinal change (Interview 9).

However, these improvements are very tentative. A fear of being seen to be out-of-step with the political leadership of the BMVg remains and continues to limit the distribution of knowledge (Interview 10). For example, the commander of the first contingent in the January 2015 mission to provide weapons training to Kurdish Peshmerga fighters found his POR had been blocked and was not sent to the Army LL Branch (Interviews 1, 4).

*Organisational culture and the rules and practices of social interaction: informal lesson sharing within contingents and poor vertical knowledge sharing*

As Martins and Tereblanche (2003, 69-70) highlight, organisational structures which emphasise autonomy, flexibility and cooperation between teams are an important part of encouraging individual learning and adaptation. Organisations must also encourage special practices which facilitate knowledge-sharing, such as the willingness to take risks (De Long and Fahey 2000, 120-23). This section finds that *Bundeswehr* doctrine and training encourage autonomy, flexibility, cooperation and risk-taking at lower-levels of command, thereby creating conditions which are conducive for adaptation to the operational environment. However, it also finds that adaptation was stymied by excessive civilian interference in operational design which led senior commanders to micro-manage the actions of company commanders at the tactical level.

In addition, the section highlights that training helped to develop strong levels of trust within German contingents at lower levels of command (company level and below). However, there was greater reticence to provide constructive criticism to commanders at higher levels of command within contingents. Finally, the section demonstrates how the rules and practises of

social interaction within the BMVg slowed the translation of adaptation in the field into advanced single-loop and double-loop learning, especially in doctrine and operational design.

- (i) Special practices facilitating knowledge sharing: the *Auftragstaktik* and *innere Fuehrung*

The principles of the *Auftragstaktik* (mission command) and *innere Fuehrung* (inner leadership) are central to contemporary German military thought. They provide a significant measure of autonomy for troops to adapt to the operational environment. The *Auftragstaktik* has been a key feature of German military doctrine since the creation of the Prussian General Staff. It focuses on enhancing the ability of lower levels of command to act in a decentralised manner when applying the commander's intent, thereby permitting greater flexibility, speed of action and initiative (Dyson 2010, 251).

The concept of *innere Fuehrung* emphasises, amongst other principles, the nature of German soldiers as 'citizens in uniform' and their duty to uphold the Federal Republic's Basic Law (Innere Fuehrung 2008, pt.106). The principle of *innere Fuehrung* is not directly concerned with promoting adaptation in the field. However, it contributes to a culture of critical reflection by emphasising the duty of soldiers to think in a critical manner about the ethical and moral implications of orders. As a consequence, *innere Fuehrung*, embedded within the *Auftragstaktik*, stresses the centrality of shared responsibility and the importance of building trust across different levels of command (Innere Fuehrung 2008, pt. 612-13).

The application of the *Auftragstaktik* in ISAF was, however, problematic. The domestic political sensitivity of ISAF led company and battalion commanders be especially fearful of being charged with responsibility for the deaths of German soldiers (Interviews 12, 13, 14). Hence until late-2009 higher-ranking leaders in contingents were reticent to permit adaptation which might undermine force protection (Interview 10, 12, 13, 14).

For example, during the early years of ISAF the *Einsatzfuehrungsstab* instructed troops to remain in their vehicles when outside their base, return to their base after dusk and maintain significant logistical support (Interviews 3, 10). However, these caveats did not allow the contingents in Kabul and Kundus to provide security by demonstrating presence among the local population. Hence only when commanders were willing to risk their future promotion did the need to adapt combine with the freedom of the *Auftragstaktik* and led to significant changes to the German approach (Interview 12). For example, in 2006 during the initial phase of the deterioration of the security situation in Kabul and Kundus, proactive commanders began to ignore force protection caveats (Interview 3). However such adaptation was relatively rare. Furthermore, a number of other factors undermined adaptation by commanders at lower levels of contingents as the security situation deteriorated.

First, as highlighted in the following section, a path-dependent commitment to a defensive approach slowed adaptation and the adoption of COIN principles. Second, the lack of offensive military capabilities available to German forces until 2009/10 made it difficult to engage the enemy (Interviews 10, 12, 13). Finally, the threat of legal action fostered reticence to use force (Interviews 10, 12, 13). German troops could only fire upon insurgents when attacked and faced investigation if they were involved in a firefight that led to fatalities or serious injury (Interview 13).

Hence between 2006 and late 2009 the *Auftragstaktik* was set aside. Fearful of civilian and *Bundeswehr* casualties, senior commanders bypassed command levels and micro-managed operations at the lower-tactical level (Interviews 12, 13, 14). The *Auftragstaktik* was implemented more successfully between 2009 and 2011, permitting greater freedom for company commanders to adapt, take risks and experiment with new tactical-level approaches (Interview 18). However, as battalion commanders once again began to implement a defensive approach from 2011, greater control was exerted over the actions of German soldiers, amounting to what one company commander termed ‘a long screwdriver’ approach to leadership (Interview 18).

(ii) Knowledge-sharing within contingents

‘Horizontal’ (to peers) knowledge-sharing within contingents was relatively unproblematic (Interviews 1, 4, 12, 13, 14). A high-level of trust existed between personnel of similar ranks (Interviews 1, 4, 12, 13, 14; Seiffert, 2014). Personnel in the field were, therefore, willing to share knowledge of successful adaptation informally with their peers (Heer 2015, Interviews 12, 13, 14). Soldiers were also willing to share knowledge about successful adaptation with peers in the following contingent during the handover process (Interviews 3, 4, 12). However, the limited personnel numbers dedicated to LL within the Operations Command restricted its ability to establish online fora for sub-communities of practice within the contingent to share their tacit knowledge in a formal setting (Interview 6). Hence peer-to-peer ‘horizontal’ knowledge communication outside of contingents was limited.

Vertical knowledge-sharing within contingents was more difficult. Trust between leaders and subordinates is developed through training methods which emphasise the importance of mutual learning, mentoring and constructive criticism (Interview 3). The Army has a long tradition of Combined Leader and Force Training which encourages all soldiers to provide constructive criticism to their patrol leader and company commander (Interview 3). During the early and mid- stages of ISAF a large proportion of the young leaders within the Army at the level of sergeant and lieutenant did not have experience in ISAF (Interview 3). Hence this training was especially useful in allowing them to learn from their subordinates (Interviews 3, 10).

However, vertical knowledge sharing within contingents became increasingly difficult the higher personnel were in the military hierarchy (Interview 12). Combined Leader and Force Training helped to ensure that communication between troops up to the level of Sergeant was characterised by openness (Interview 3, 12), but trust in leadership and the willingness to share information began to deteriorate at the top-level of contingents. While some officers would discuss problems with higher-ranking personnel, there was often hesitation to provide constructive criticism about operational design (Interviews 3, 12, 14).

As the mission progressed an especially problematic relationship between younger soldiers /younger officers and the higher-levels of Command within contingents emerged. Younger soldiers and officers were displayed a greater willingness to deploy higher-intensity force in an effort to clear areas of insurgents (Interview 13). Furthermore, there was a noticeable improvement in the frequency and quality of constructive criticism from younger officers who had been educated about COIN and saw flaws in the approach of their commanding officers (Interview 13). However, higher-level commanders, whose formative experiences were in the Balkans and had little COIN education, were not receptive and often blocked initiatives from junior officers (Interview 14).

(iii) Knowledge-sharing between contingents and the Operations Command

Vertical communication between the contingent and the Operations Command was undermined by German troops' poor understanding about the role of LLSO (Interviews 4, 12). Until LL was included in doctrine in 2014, the importance of engagement with LL did not receive emphasis in foundational and pre-deployment training (Interviews 3, 4, 6, 12). Hence many troops viewed LLSO as 'controllers' sent by the Operations Command to 'keep an eye' on their actions (Interviews 4, 6, 12, 13, 14).

This problem was enhanced by what two former LLSO described as a 'culture of blame' and limited tolerance for mistakes (Interviews 1, 12, 18). Troops were worried to be seen to make a mistake for fear of disciplinary action (Interview 12). Rather than recognise the need for better training to ensure that mistakes did not occur, the focus of the Army was on punishment (Interview 12, 18). In addition, while troops are rewarded financially for identifying efficiency savings, there are no explicit rewards for raising important observations which may become LL (Interview 12).

Furthermore, shortages of personnel meant that inappropriate LLSO from the Air Force and Navy would be deployed on operations (Interviews 4, 6, 12). Hence a culture of informal lesson sharing developed within German contingents, leading to what one former LLSO deployed during ISAF termed 'learning in secret' (Interview 1). As outlined earlier, the unwillingness of troops to speak frankly about events during combat also undermined the ability of LLSO to obtain information (Interviews 12, 14). Moreover, many older commanders were reluctant to admit problems and difficulties and suspected that LLSO had been sent to judge their performance (Interviews 12, 14).

(iv) Knowledge-sharing between the Operations Command and BMVg

Vertical knowledge sharing between the Operations Command and the BMVg was also undermined by the *Bundeswehr's* organisational culture. Commanders were in daily communication with Operations Command and consulted with a legal advisor embedded to ensure that each day's activities were within legal boundaries. (Interviews 7, 10) When German commanders felt the need to change RoE and adapt operational design, it was communicated to the BMVg's higher echelons via the *Einsatzfuehrungsstab/Strategie und Einsatz* (Interviews 7, 10). However, especially between 2006 and 2009, vertical communication was weakened by the unwillingness of senior officers to confront the military hierarchy and Defence Ministers in a robust manner for fear that it would negatively impact their promotion prospects (Interviews 2, 6, 7, 10; 12; 13; Muench 2015, 98-99). The willingness of officers to challenge the existing orthodoxy was sharpened by the high-level of competition for senior positions in the *Bundeswehr* (Interview 19; Muench 2015, 63-65).

Hence military personnel within the *Einsatzfuehrungsstab* were unwilling to recognise the changing nature of the mission in Kundus between 2006 and 2009. As the security situation deteriorated blame was not placed on deficits in operational design, but on the failure of troops to correctly apply the stabilisation approach at the tactical level (Interview 10). The 2009 recognition by zu Guttenberg of the nature of ISAF as a combat operation came in the words of one source, 'like a breath of fresh air...it was like opening up a sealed box. After this we started to talk properly about the need for changes at the higher-tactical and operational levels' (Interview 10).

Finally, the Army's poorly-developed culture of experimentation and creativity impaired lesson-sharing with alliance partners and led to 'knowledge hoarding' (Byrne and Bannister 2013, 91). German engagement with NATO LL was limited. Most LLSOs were not aware of the possibility to formally share lessons within NATO and when attempted to share lessons they were blocked from doing so by the Operations Command. This reticence to share knowledge derived from the fear of possible legal and political repercussions of information entering the public domain (Interviews 1, 4, 14). On only one occasion during ISAF did a German lesson learned shared with NATO (Interviews 1, 4).

*Organisational culture and path-dependence: the emergence of three visions of military professionalism*

Path dependence that derives from the *Bundeswehr's* lack of historical experience with COIN fostered resistance among leading figures within the *Bundeswehr* to sanction changes to operational design and doctrinal development. The *Bundeswehr's* approach to doctrine and operational design in Afghanistan was shaped by two key historical legacies. First, the experiences of the *Wehrmacht* in WW2, which formed the blueprint for thinking on 'timeless' tactical principles in high-intensity warfare during the Cold War (Sangar 2015, 431). As a consequence, during the post-Cold War era there was little-to-no consideration of COIN in Army training and officer education (Interviews 3, 13; Lemke 2014, 104-08; Muench 2015, 85-86; Sangar 2015, 424-31). Second, the experiences of peacekeeping in the Balkans dominated the Army's understanding of expeditionary warfare (Sangar 2015, 431-33). These deployments led to an understanding of stabilisation operations as characterised by the consent of all parties involved in the conflict.

Hence in the early stages of ISAF German forces expected that their role would be as non-offensive impartial mediators who could delegate civil-reconstruction to NGOs and OGDs. From 2006 onwards observations from German forces which arose through LL began to challenge these assumptions. However, they encountered resistance from the military hierarchy that was composed of officers shaped by the Cold War and Balkans. For these soldiers the solution to the failure of the 'stabilisation' model in Kundus was the application of high-intensity force against insurgent forces, rather than the integration of civilian and military activities in support of an approach that would gain the support of the local population (Interviews 9, 10).

A division began to emerge within the Army hierarchy about the need for doctrinal reform and changes to operational design. Personnel exposed to the COIN doctrinal developments of NATO allies and younger officers whose main experiences of deployment were in ISAF recognised the need for the development of COIN doctrine that would better integrate the kinetic and non-kinetic dimensions of operations (Interviews 9, 10). Officers whose perceptions of conflict were shaped by their experiences of the Balkans and an officer education that focused on the lessons of WW2 were resistant to COIN. They viewed the appropriate response to the deterioration of the security situation in Kudus as the application of higher-intensity force (Interviews 9, 10; Sangar 2015, 435-39).

These observations are supported by Naumann (2014, 306) and Seiffert (2014, 329-32) who highlight that the German military is polarised between two visions of military professionalism. First, '*Generation Einsatz*' (Generation Deployment), which includes younger soldiers and officers whose formative experiences of military deployment derived from ISAF following the

deterioration of the security situation in 2006. These personnel not only have the experience of higher-intensity combat, but also of involvement in the Comprehensive Approach and have also had to cope with the challenges and paradoxes associated with the unclear strategic objectives which characterised ISAF (Chiari 2014, 155; Naumann 2014, 306-08).

It is, however, important to be careful not to paint an overly-homogenous picture of *Generation Einsatz*. Soldiers below the level of company commander were not automatically exposed to COIN principles in education and foundational training (Interview 18). Only younger company commanders who had benefitted from the basic COIN education at the Officer Training School were active in passing on their learning to platoon commanders and rank and file soldiers in pre-deployment training and in the field when planning patrols (Interview 18).

The formative experiences of the military hierarchy lie in the Cold War and Balkan deployments (Muench 2015, 98-99). These military personnel have been termed the 'Training Area Generation' by 'Generation Einsatz' (Seiffert 2014, 329-32). Although some of these personnel served in Afghanistan at higher-levels of command, their professional self-image focuses on the efficient application of force within clearly specified strategic goals (Naumann 2014, 310). They are uncomfortable with the political considerations and uncertainties associated with COIN which they view as an 'aberration' from 'proper soldiering' (Naumann 2014; Kiszely 2006, 20). While they viewed higher-intensity force as the solution to the deterioration of the security situation in Kundus, they did so only hesitantly, as many of the 'Training Area Generation' also had extensive experience of the Balkans, which rarely necessitated offensive action (Interviews 7, 10).

Indeed, the reticence to apply high-intensity force was especially pronounced among soldiers who joined the *Bundeswehr* in the 1990s (Interviews 10, 12, 13, 14). While these personnel received some training in the application of high-intensity force, they were particularly influenced by the defensive approach of the Balkans (Interviews 10, 12, 13, 14). Wary of being seen as out of step with the political leadership from the late 1990s, officers had focused foundational training heavily on stabilisation rather than high-intensity fighting (Interview 14). The limited focus on preparation for high-intensity fighting was exacerbated by poor coordination between doctrine writers and trainers (Interviews 2, 3, 4, 5).

Although training began to focus on a more offensive approach during ISAF, especially following 2009, some commanders remained hesitant to apply force, leading to continued deficits in training for COIN. The content of pre-deployment training was the outcome of dialogue between contingent commanders, trainers and BMVg guidance on RoE and the mandate. As ISAF progressed, so the number of trainers with experience of combat in ISAF increased, leading to a greater willingness of trainers to focus on preparing for the 'clear' and 'hold' dimensions of COIN. Yet, even after 2009, the defensive mentality of some commanders left them wary of trainers' recommendations to train thoroughly for intense firefights and SnGs with important implications for training were often ignored (Interviews 3; 13).

Hence while Naumann (2014) and Seiffert (2014) point to two visions of military professionalism, it is possible to identify a third: the 'Stabilisation Generation', who were, in effect, specialist peacekeepers (Interviews 10, 12; Kiszely 2006, 20). During ISAF many of these soldiers had already attained higher-levels of command (Colonel and above), or were deployed earlier in the mission, and were not exposed to high-intensity combat. Their training and experiences created a reticence to conduct the 'clear' and 'hold' dimensions of COIN

(Interview 10). Hence even post-ISAF a significant number of officers lack a well-developed understanding how to apply high-intensity force and are struggling to prepare for some activities within NATO's Readiness Action Plan (Interview 14).

Between 2006 and 2009 pressure grew from younger Generation Einsatz soldiers and officers for a change in operational design. However, when these soldiers identified observations with implications for operational design, the Operations Command and BMVg that was unwilling to push for change and often buried critical observations (Interviews 1, 2, 4, 6, 10, 18). Yet even after the adoption of a more offensive approach in 2009 the presence of three understandings of military professionalism continued to affect training and left the majority of German soldiers under-prepared for COIN.

Between 2009 and 2010 the application of the *Auftragstaktik* began to improve as the German political class began to recognise the nature of ISAF as an armed conflict (Interview 18). Company commanders were, therefore, given a significant measure of leeway to prepare their troops for operations and carry out operations as they saw fit. However, this freedom led to a highly-fragmented approach to operations at the tactical level. The lack of German COIN doctrine and the limited COIN understanding among senior commanders meant there was no common understanding of COIN (Interview 18). Company commanders were therefore often left with thin guidance about the commander's intent. The lack of clarity and coherence in operational design was exacerbated by the de-centralisation of command in PRT Kundus which undermined the unity of effort by the German contingent (Interview 18).

When combined with the presence of three different understandings of military professionalism among officers, poor guidance about operational design led to significant differences in pre-deployment training. Hence, while many companies received training that focused on high-intensity conflict, the defensive mentality of the stabilisation generation undermined the integration of insights from LL into pre-deployment training for some companies (Interview 3). Fear and panic under fire also had a negative impact on the ability of soldiers to display courageous restraint by leading to the application of overwhelming suppressive firepower not only in firefights with insurgents, but also following IED incidents (Interview 18).

As a consequence, companies would arrive in Kundus with different competencies. Some companies, albeit a minority, had received training that prepared them better for both kinetic and non-kinetic activities (Interview 18). The training for other companies continued to focus on a defensive approach better-suited to the provision of security in a permissive operational environment. However, the majority of companies had received little training outside preparation for high-intensity combat and manoeuvre warfare (Interview 18). Hence they were not well-attuned to the importance of sustaining and improving the support of the local population in the immediate aftermath of clearing operations when conditions remained too insecure for OGD and NGO activity (Interviews 3, 16, 18). The dominance of the Training Area Generation and Stabilisation Generation also reduced the contribution of the LL process to the development of an explicit COIN doctrine (Interviews 8, 9).

Bureaucratic politics<sup>13</sup> plays an important additional role in undermining the effectiveness of the analysis and remedial action phases of LL. Organisations within the Army use their position

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<sup>13</sup> The bureaucratic politics approach to military change argues that military organisations form 'complex political communities', whose political nature is reinforced by the impact the organisation – and its services and

as experts at the analysis phase of LL to convince the Operations Command that no action is necessary when a potential LI is identified (Interviews 1, 2, 4, 6, 11). Alternatively, if the remedial action phase is launched, they slow the tasking and implementation phases. This is done by claiming, after further investigation, that responsibility for tackling an issue lies elsewhere or by disputing its priority and claiming that there is no time to deal with a LI (Interviews 1, 14).

The Army LL Branch often finds support for changes at the working level within sub-ordinate commands. Personnel at this level are, in words of one LLSO and former LL Branch member ‘hungry for information to improve their work’ (Interviews 3, 5, 14). However, the higher levels of the military leadership at the level of Colonel (Branch heads and above) have shown resistance to implementing LI when they are perceived as a challenge to an organisation’s autonomy or budget share (Interviews 12, 14).

Individual agency also plays a role in blocking advanced single loop learning or double-loop learning (Allison 1971, 166; Murray 2011, 6). Army organisations have, on occasion, rejected LI due to the embarrassment of its leader that he did not identify the problem and act upon it sooner (Interview 14). This defensive reasoning has led to the implementation of LI ‘in secret’, whereby personnel informally adopt changes in training and officer education (Interview 14).

#### *The politicisation of LL and the exacerbation of path-dependence and bureaucratic politics*

Path-dependence and bureaucratic politics have been exacerbated by the politicisation of LL. As Weber (2007, 336) highlights, if resistance to advanced single-loop and double-loop learning is to be overcome, it is essential for a learning culture to extend to the leadership of an organisation. There is broad recognition within the *Bundeswehr* LL is vital in improving TTP. However, the difficulties of managing the outcomes of LL within a highly-politicised environment have fostered a lack of active support for LL within the military hierarchy, which is most exposed to the consequences of politically-sensitive lessons (Interviews 1, 4, 6, 7, 10, 11). Hence the Army’s leadership has not provided sufficient support for the Operations Command and the Army LL Branch, with negative implications for LL (Interviews 1, 4). The failure to make LLSO a first priority for deployment on missions until 2016 and the lack of authority of the LL Branch both have their roots in the low priority allocated to LL. It is also a major factor in the limitations on LL personnel numbers.

Finally, the upper echelons of the Army Command display indifference to the activities and outputs of the LL Branch, including the LL Branch’s ISAF Campaign Study (Interviews 1, 4). Furthermore, there is scant interest within the upper echelons of the BMVg’s Planning Office to use ideas generated from the academic literature on organisational learning as a means to help establish a stronger culture of experimentation and creativity at the higher-tactical and operational levels (Interview 8).

#### *The absence of a high-level review team and cross-functional team*

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their various sub-organisations – have on the lives of its members (Rosen 1998, 41). Military innovation involves a struggle over competing theories of victory (Rosen 1988, 142). Those promoting advanced single-loop or double-loop learning must first overcome actors who are pursuing their own distinct interests in the service of their institutional and personal roles (Allison 1971, 323-24). They must successfully challenge leadership of Services, or their sub-organisations who are seeking to defend a particular vision of doctrine, or other military activity, which maximises the budget share and autonomy of their service or sub-organisation.

The negative impact of path dependence and bureaucratic politics on knowledge transformation and dissemination is worsened by the institutional structure of LL. The Operations Command is composed of personnel from across the Services. This should, in theory, enhance its ability to act in an impartial manner when assessing the accuracy, relevance and value of knowledge from contingents. Furthermore, the Operations Command enjoys formal authority in the organisational hierarchy (though only with respect to ensuring that the Services are able to deliver appropriate force packages for current operations). It also has centrality in the *Bundeswehr's* information network by virtue of its access to key military and civilian decision-makers through *Strategie und Einsatz*. Finally, the Operations Command enjoys a strong measure of control over scarce financial resources through its ability to lobby the BMVg to unlock funding to complete the remedial action phase of LL (Interviews 2, 6, 7).

However, these positive attributes are undermined by several factors. First, the Army LL Branch only enjoys the status of a Branch within the Army Command's sub-Division Deployment. Hence it lacks the ability to place pressure upon the Office for Army Development or the Training Command to undertake changes to which they are resistant (Interviews 1, 2, 3, 4, 5, 6, 11). This lack of authority is compounded by the Operations Command's inability to pursue changes within the Services which do not have an immediate impact on current operations (Interviews 1, 2, 6).

Second, there is no high-level review team to assess the accuracy, relevance and value of knowledge arising from the operational environment. J357 (the Department responsible for LL within the Operations Command) exhibits some important dimensions of best-practice in the key features necessary for a knowledge transformation capability. Personnel in J357 are able to check the accuracy of information and knowledge arising from a contingent through LLSO. Members of J357 are also drawn from different Services and many have recent experience of deployment (Interviews 1, 2). In addition, both J357 and the Army LL Branch are staffed by mid-ranking and senior officers, including a number of LTCs and each branch is led by a full Colonel (Interviews 1, 2).

However, personnel usually stay in post no longer than two to three years. In the absence of civilian personnel this short tenure does not allow J357 and the Army LL Branch to build up the necessary expertise to properly assess of the value knowledge arising from the operational environment (Interviews 1, 2, 4, 6, 12). Furthermore, there are no representatives from OGDs/NGOs, academic experts or staff from the *Bundeswehr* Centre for Military History and Social Science (ZMSBw) involved in lesson identification (Interviews 1, 6). Hence when a Service argues that no action is necessary at the analysis stage, personnel within J357 are often unable to contest this decision (Interviews 2, 6, 11, 12).

ZMSBw scholars answer to the BMVg rather than the Services and enjoy long-term contracts. This security of tenure provides a measure of intellectual autonomy. However, the ZMSBw has been highly-reluctant to provide practical lessons which can be used for ongoing or future military operations and strategy. The *Reichsarchiv* (the predecessor to the MGFA<sup>14</sup>/ZMSBw), played an important role in providing a flawed historical narrative that contributed to German inter-war revisionism (Sangar 2015, 428). Hence, as Sangar (2014, 172) notes, the MGFA: 'saw the primary value of historical education in the promotion of intellectual reflection,

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<sup>14</sup> The *Militaergeschichtliches Forschungsamt* (Bundeswehr Military History Research Office, MGFA) was established in 1957 and was subsumed as part of the new ZMSBw, which was created in 2013.

leadership qualities and skills of moral judgement, and not in the production of directly applicable lessons'. ZMSBw staff play no formal role in the analysis or remedial action phases of LL, removing an important source of objective input which could help overcome defensive reasoning and enhance knowledge transformation (Interviews 1, 2, 4, 5, 6, 8, 9, 15, Sangar 2015, 428).

Crucially, there is no cross-functional team to coordinate knowledge transformation and dissemination. Personnel responsible from J357, the Army LL Branch, the Office for Army Development and Training Command do not meet on a regular basis (Interviews 2, 6). Limited face-to-face contact complicates finding consensus on the implications of new observations and overcoming difficulties with ongoing LI. There are no civilian LL personnel at the Army LL Branch or J357 and external academic experts are not involved in the remedial action phase of LL (Interviews 1, 2, 4, 6).

The absence of a cross-functional team allows the leadership of the Divisions, the Training Command and the Office for Army Development significant leeway to develop solutions to LI which involve only limited changes to the status quo (Interviews 1, 4). J357 rarely challenges the Single Services and usually accepts their position (Interviews 1, 2, 4, 6, 11). Furthermore, while the Army LL Branch contains personnel with different specialisms, they have no authority to challenge higher-ranking experts. Moreover, such is the workload of J357, that it is often more concerned with being able to formally close a LI rather than determining that the action taken is appropriate (Interviews 1, 4). Personnel within J357 and the Planning Office are also in favour of the appointment of permanent civilian LL personnel (Interviews 2, 6, 7, 10, 11, 12, 14). However, the BMVg has not been supportive of requests for such personnel (Interviews 14, 17).

In summary, the Army's knowledge transformation capability contains a number of deficiencies which result from the impact of strategic culture, low executive autonomy, organisational culture and bureaucratic politics. These variables are especially potent for issues at the higher-tactical and operational levels and have a more limited impact with respect to urgent TTP which have implications for force protection. However, a significant proportion of observations which require advanced single-loop or double-loop learning stop as LI and get stuck at the remedial action phase (Interviews 1, 6, 8, 12).

**Table 3: Bundeswehr knowledge transformation capability**

Main features	Presence of sub-features
The values of creativity and innovation should be clearly incorporated within the military's core mission	(i) Doctrine, training and officer education emphasise the importance of the <i>Auftragstaktik</i> and <i>Innere Fuehrung</i> . However, strategic and organisational culture have undermined the implementation of the <i>Auftragstaktik</i> . They have also stymied vertical knowledge sharing within contingents and between the Operations Command and BMVg.
Organisational structure should be characterised by values such as flexibility, autonomy and	(ii) The <i>Auftragstaktik</i> and <i>Innere Fuehrung</i> place emphasis upon the importance of autonomy in the execution of command. They also emphasise the active participation of soldiers of all levels of command in decision-making in theatre. Flexibility, autonomy and cooperation within and between teams is also reinforced by Combined Leader and Force Training. However, the

cooperation within and between teams.	application of the <i>Auftragstaktik</i> during ISAF was limited by excessive civilian interference at the tactical level.
The military should demonstrate values which support creativity and innovation.	(i) Displaying initiative in the field may be rewarded with promotion. Training for the <i>Auftragstaktik</i> emphasises the importance of measured risk-taking by lower-levels of command. However, engagement with LL is not explicitly rewarded. Sufficient time was allocated to companies to undertake thorough pre-deployment training. Furthermore, commanders usually permitted companies the time to reflect upon the successes and failures of patrols/operations and plan new patrols and operations.
Organisational culture should be supportive of behaviour that encourages soldiers in the field to report problems and successes	<p>(i) Combined Leader and Force Training fosters a strong bond between commanders and their direct subordinates at the level of company and below. It encourages troops to share tacit knowledge with their immediate superiors. However, the willingness to share knowledge and provide constructive criticism of superiors is weaker higher up the chain of command. Mentoring takes place in pre-deployment training through the participation of recently-returned junior officers from the previous contingent. It is also present in LLSO training. Training about the <i>Auftragstaktik</i> emphasises that soldiers have the space to make mistakes (within reason) should they learn from them. However in practice a culture of blame exists, whereby the Army's focus on punishing mistakes undermines knowledge sharing.</p> <p>(ii) Combined leader and force training emphasises the importance of constructive confrontation in the relationship between commanders and subordinates during deployment. While constructive criticism was common at the Company level. However, the fear of presenting 'bad news' meant there was little constructive criticism of decision-making by officers at higher-levels of command (Colonel and above). Public constructive criticism of superiors is frowned upon, limiting open debate between Bundeswehr personnel about the effectiveness of doctrine, operational design and training, especially at the higher-tactical and operational levels. Commanding officers are usually open to constructive criticism from their immediate subordinates under 'four eyes'. Whether this criticism is given serious consideration is usually a consequence of the personality of the individual leader</p> <p>(iii) While officers are encouraged to pursue academic study which is recognised in the promotion process, promotion does not recognise or reward activities which develop of a culture of experimentation and creativity. Promotion is dependent upon emulating the professional role conceptions of superiors. Officers are strongly discouraged from challenging the status quo and critically engaging with the senior military leadership/ political leadership of the BMVg. Rather, the performance of senior officers is measured by their ability to avoid allowing bottom-up lessons to challenge the core tenets of German strategic culture and the Bundeswehr's organisational culture. Hence mechanisms to hold senior officers to account for demonstrating a persistent failure to learn and act on important lessons are very limited.</p> <p>(iv) '<i>Y</i>' and <i>Bundeswehr Aktuell</i> contain very little critical reflection on contentious issues at the tactical and operational levels. <i>Europäische Sicherheit und Technik</i> and <i>Strategie und Technik</i> focus primarily on developments in military technology. The <i>Security Policy Reader</i> provides opportunities for external academics to reflect on broader trends in international security and the <i>Military History Journal</i> of the ZMSBw offers interesting analysis of historical events. However, these publications do not provide opportunities for internal and external critical perspectives on contemporary operational concepts, training, education or doctrine. Officers' dissertations on the General Staff Course provide opportunities for critical engagement by the officer class. However, few papers reflect on the implications of history, or experiences of alliance partners for contemporary operations. Furthermore, they are not routinely disseminated across the Bundeswehr.</p>

	<p>(v) Key doctrinal principles are communicated in training and education. Although doctrine failed to keep pace with changes in the operational environment during ISAF, officer education included analysis of alliance partner COIN doctrine and doctrinal working papers by 2009. A post-deployment questionnaire provides an opportunity to reflect on the utility of training, however it is not compulsory and response rates are low. Furthermore, outside the MXS and bi-annual Army Operations Conference there are few opportunities for information and knowledge sharing by sub-communities of practice in the Army. Limitations on personnel numbers restrict the ability of the Operations Command to organise online fora for sub-communities of practice to share tacit knowledge.</p> <p>(vi) There is recognition within the BMVg, Planning Office, Operations Command and Army LL Branch that technology should be harnessed to improve LL. However, resource, manpower constraints and frequent personnel rotation leaves little time for reflection on the potential of technological advances to improve learning.</p>
<p>Organisational culture should promote the value of speedy decision-making.</p>	<p>(i) Decision-making about key TTP issues with implications for the safety of troops is undertaken quickly by OCGs and is usually speedily followed up quickly by sub-ordinate commands and Divisions. However, issues which raise the potential for advanced single-loop or double-loop learning in training, officer education and doctrine are often delayed and deliberately stalled by Commands and Divisions (for reasons related to path dependence and bureaucratic politics). The lack of authority of the Operations Command and its limited personnel numbers also restricts its ability to ensure that deadlines are met for implementing LI.</p>
<p>Organisational processes should be established within LL to expose the military hierarchy to disruptive thought.</p>	<p>(i) Information and knowledge filtering is undertaken by military personnel in the Operations Command and by experts within the Services. Many senior personnel have recent experience of operations (i.e. within the last five years). However, J357 does not constitute a high-level team. No civilian LL personnel are involved in information and knowledge filtering. Knowledge filtering also lacks the input of staff from the ZMSBw, academic experts and staff from OGDs and NGOs.</p> <p>(ii) The Operations Command has control over scarce resources and centrality within the information network. It has limited authority within the organisational hierarchy as it is unable to force sub-ordinate commands to make changes unless they have an immediate impact on their ability to provide forces for ongoing operations. A cross-functional team has not been established. No external academics, ZMSBw personnel, NGOs, OGDs or retired personnel are involved in decision-making about LI. Furthermore the Army LL Branch, which is mandated by the Operations Command to lead up Army LL lacks sufficient formal organisational hierarchy to steer the remedial action phase. Hence organisations such as the Office for Army Development and Training Command have a significant measure of discretion to decide the extent of action needed to remedy a LI.</p> <p>(iii) A validation process is undertaken by the Army LL Branch which checks that changes have been implemented successfully and that LI can be considered a LL. However, the Operations Command and LL Branch lack the ability to challenge Divisions and other Commands in the event of inactivity or inappropriate action.</p> <p>(iv) Aside from engagement with IT companies during the tendering for new software, the personnel in the Planning Staff and Operations Command spend little time engaging with KM consultancies and academic experts on organisational learning. Very little oversight is undertaken by the BMVg, Planning Office or Operations Command to measure the effectiveness of the Bundeswehr LL processes in helping to share and use knowledge.</p>

## Conclusions: The Importance of Civilian Intervention to Support LL

In accordance with the insights of NCR<sup>15</sup>, the threat of defeat forms a powerful motivator for improvements in dynamic organisational capabilities, particularly PACAP. Hence as Huntington (1957, 57) notes, while war must be subject to political purposes, it is also an autonomous science and military professionals need a measure of leeway to adapt and to learn if they are to prosecute a campaign in an effective manner. However, bureaucratic politics and organisational culture can intervene to block knowledge transformation and advanced single-loop and double-loop learning. It is, therefore, especially important that the BMVg's political leadership helps to promote the organisational processes which bolster dynamic organisational capabilities (Lis 2012, 24-25).

ISAF has left an important legacy by further legitimising the use of military force as a tool of foreign policy and reducing the constraints that strategic culture imposes on the core executive, thereby establishing a more facilitative macro-political context for LL. As Hilpert (2014, 3) notes of post-ISAF German defence and security policy:

‘...if need be, Germany can go all the way. It can battle an insurgency, it can participate in offensive operations aimed at defeating a military adversary and it can protect its interests with military force’.

The growing importance of the military as a tool of German foreign policy has been confirmed by recent initiatives of the core executive. At the 2015 Munich Security Conference the current German Defence Minister Ursula von der Leyen (2013-) outlined Germany's intention to ‘lead from the centre’ in international security by contributing its ‘best resources and capabilities to alliances and partnerships’ (von der Leyen 2015). Germany has made good on these promises by taking a lead role in bolstering NATO's capabilities to defend its Eastern borders by contributing to key elements of NATO's Readiness Action Plan. It has increased the number of Eurofighters participating in air policing over the Baltic States and doubled its personnel at the Multinational Corps North-East. Most importantly, the German-Netherlands Corps will form a key element of the Very High-Readiness Joint Task Force that will attain operational readiness in 2017 (Gutschker 2015). The growing importance of the military as a tool of German foreign policy has also been signalled by the 2015 decision to raise the German defence budget by 6.2 percent between 2015 and 2020 (Telegraph 2015).

However, if the Bundeswehr is to be capable of meeting these challenges, more effective BMVg oversight of the institutional structures of LL will be essential to ‘kick-start’ a culture of experimentation and creativity and ensure that the key features of knowledge transformation capability are implemented. A number of issues stand out as in need of urgent attention.

First, some of the recent 6.2 percent increase in the German defence budget should be used to ensure that LL is better-resourced. Extra resources should be spent on the appointment of civilian personnel within the J357 and Army LL Branch to establish the foundation for greater

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<sup>15</sup> NCR recognises the impact of the competitive international system and the consequent need for the state to maximise its capacity to compete externally through innovation or the emulation of military ‘best-practice’, as the key independent variable driving military change (Dyson 2010, 236-38). Yet the theory also points to the importance of domestic factors. They act as intervening variables which impact the capacity of the state to generate resources from society on behalf of foreign and security policy goals (‘state power’) and slow the process of convergence with the dictates of military best-practice (Zakaria 1998: 9). NCR is able to accommodate and blend the insights of bureaucratic politics, organisation theory and strategic and organisational culture about the factors which slow innovation and emulation in military learning and can, on occasion, lead to long-term failure to implement best-practice in military learning (Meyer and Strickman 2011 Rathburn 2008).

critical engagement with Army sub-ordinate commands and divisions in the remedial action phase of LL. Furthermore, a small team of personnel (2-3 members) should also be appointed within the BMVg's Planning Office who are devoted exclusively to reaching out to external KM consultants and academics to improving the organisational processes which support LL. These personnel could develop institutional expertise in organisational learning and the challenges associated with improving organisational learning in different areas of military activity.

The establishment of a single Army Command responsible for training, doctrine and military education, which places LL at an equal level of authority to these other areas of activity (i.e. a German Army Training and Doctrine Command or TRADOC) would improve the coordination of work across these areas of military activity and enhance the ability of LL Branch to enforce change. At a minimum, resources should be devoted to increasing the number of LL Branch personnel within the Services to allow them to embed personnel within other Commands to act as their 'eyes and ears'.

The development of a more open culture of debate within the *Bundeswehr* is also vital. Many personnel within the Army hierarchy have spent their careers within an organisation where critical engagement with higher-tactical and operational level issues is as a danger to career progression (Interview 18; Muench 2015, 98-99). Civilian intervention will, therefore, be necessary to encourage greater critical reflection. The German Army would benefit greatly from the establishment of a professional army journal, based perhaps at the ZMSBw, to provide a forum for debate for soldiers of all ranks as well as external contributors. Furthermore, there is an urgent need to rethink the role of the ZMSBw. It is high-time that civilian and military elites tapped into the potential of the research expertise at the ZMSBw to help establish a culture of open debate and to bring fresh ideas into LL and areas of military activity such as operational design, training and doctrine.

In addition, several deficiencies in officer education must be addressed. First, curriculum development and instruction at the Leadership Academy and Officer Training School needs greater input from external academics and ZMSBw. Their involvement would help foster a more dispassionate and objective approach to curriculum design and help redress the inter-organisational learning capabilities lost with the 2013 abolition of AGJACOP. Second, the intermediate (BLS) and General Staff (LGAN) courses should pay greater attention to cultivating their students' understanding of security policy, which constitutes only a small part of these courses. While officers are expected to undertake a Masters degree, usually at the Bundeswehr Universities in Hamburg and Munich, their degrees are often in civilian areas such as engineering or business studies. As a consequence of this limited focus on defence and security policy, few officers read critical perspectives about German defence and security policy (Interview 19). This lack of officer exposure critical thought about their profession and its broader political context does little to engender a culture of open debate and instead reinforces path dependence and defensive reasoning.

Civilian intervention will also be necessary to support and retain *Generation Einsatz* (Interviews 10, 11) who should to be fast-tracked to key leadership positions within the German Army. This would serve two important purposes. First, it would develop a broader understanding of the role of the military professional. Second it would ensure that a greater

proportion of the military hierarchy have been exposed to the negative implications of the failure to learn from operational experience (Interview 18; Seifert 2014, 331).

Furthermore, the Bundeswehr urgently requires the establishment of a Joint Chiefs of Staff, supported by a Joint Staff, with access to the intellectual muscle of the Planning Staff. Currently, the General-Inspector is the key source of military advice to the Defence Minister about longer-term issues at the higher-tactical, operational and strategic levels. However, the General-Inspector is an isolated senior voice at the top-level of the Defence Ministry and sits below the State Secretaries and Parliamentary State Secretaries in the organisational hierarchy. He is supported by a deputy General-Inspector, his own office and number of subordinate Divisions within the BMVg, including *Strategie und Einsatz*. However, *Strategie und Einsatz* is predominantly political-strategic, not military-strategic, despite its claim to be ‘double-hatted’ (Interviews 10, 11, 13). The Division’s sensitivity to political pressure reduces its openness to disruptive thought. It therefore fails to make proper use of the intellectual resources within the Planning Staff to develop new ideas and generate inter-organisational learning.

As a consequence, the General Inspector is insufficiently exposed to ‘ground truth’ from operations. He faces the danger of being socialised into unrealistic expectations of his civilian masters about what can be achieved on operation, or about the nature of operations on the ground. This isolation can lead to a failure to provide robust advice and, in turn, sends a powerful signal down the BMVg and Bundeswehr hierarchy that knowledge which challenges the political status quo is unwelcome. A Joint Chiefs of Staff with a greater focus on military strategy would provide a better balance between senior civilian and military figures at the highest levels of defence. It would deliver more powerful and resonant voice of critical military-strategic advice to the Defence Minister, State Secretaries and Parliament, both when preparing new operations and when considering changes to the parliamentary mandate and operational design of ongoing deployments.

The establishment of a joint staff has been resisted by due to the role that General Staff played in German revisionism in the first half of the 20th Century. However, there is now a growing recognition with the LL community that the Bundeswehr cannot allow German history preclude it from critical engagement with Parliament and the core executive. If Germany is to deliver on its ambitions for a more proactive role in international security, the Bundeswehr cannot repeat the failure during ISAF to challenge unrealistic political expectations about operational and tactical activity.

Finally, a Joint Staff would also provide a more powerful sponsor for joint level LL, which urgently requires its own separate LL process. By centralising knowledge acquisition at the Operations Command and allowing this organisation to act as a gatekeeper to observations from contingents, the current LL process encourages a misalignment of responsibility and expertise for lessons. The lessons process is therefore viewed by senior officers as a process that is partially removed from the Army hierarchy. This reduces the ability of LL to achieve traction among the Army organisations with the financial, manpower and intellectual capabilities to action lessons.

Furthermore, the establishment of a joint lessons process at the Operations Command would form the organisational foundation for a clearer delineation of responsibility for operational lessons. Until now, operational lessons have largely been ignored by the LL process, or dealt with on an *ad hoc*, informal basis through personal relationships between the Operations

Command and *Strategie und Einsatz*. It is imperative for the intellectual vibrancy of the Army that it takes greater responsibility for higher-level and operational doctrine development in the Land environment. While the AGJACOP did a good job of developing and advocating COIN under difficult circumstances, the delegation of higher tactical and operational level doctrine development to a joint working group did not help establish a culture of experimentation and creativity within the Army (Interview 18).

The involvement of a Joint Staff, participating in a joint-level cross-functional team would endow joint LI with greater authority and speed their adoption as lessons-learned. Crucially, it would provide a more direct and powerful link between the top levels of the Defence Ministry and emerging lessons. In particular, the joint cross-functional team would provide a mechanism for the services to pass up difficult or contentious issues at the nexus of the operational and strategic levels. The establishment of a separate, joint-level LL process would also allow the Services, each with their own TRADOC, to operate their own LL processes at the tactical and operational levels and exert greater control over knowledge acquisition and management. This would not only endow lessons with greater clout within the Army, but also ensure a much freer flow of information from the field to the Army LL Branch.

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## Interviews

- Interview 1, Two interview partners, Army Command, Department for Deployment, Military Intelligence and Training, LL Branch, Strausberg, 2 February 2016.
- Interview 2, One interview partner, Bundeswehr Operations Command, Division J357, LL Department, Potsdam, 13 April 2016.
- Interview 3, One interview partner, Army Training Command, Subject Group 2, Department 2, 15 April 2016.

- Interview 4, One interview partner, Army Command, Department for Deployment, Military Intelligence and Training, LL Branch, Strausberg, 19 April 2016.
- Interview 5, Four interview partners, Office for Army Development, Department 1 (2) Leadership Principles, Cologne, 27 April 2016.
- Interview 6, One interview partner, Bundeswehr Operations Command, Division J357, LL Department, Potsdam, 28 April 2016.
- Interview 7, Two interview partners, Bundeswehr Operations Command, Operations Coordination Group Afghanistan, Potsdam, 28 April 2016.
- Interview 8, Two interview partners, Bundeswehr Planning Office, Department for Interoperability, Koepenick, 4 May 2016.
- Interview 9, One interview partner, Bundeswehr Planning Office, Department for Interoperability, Koepenick, 4 May 2016.
- Interview 10, One interview partner, Bundeswehr Operations Command, Operations Coordination Group Afghanistan, Potsdam, 3 June 2016.
- Interview 11, One interview partner, Department for Strategy and Deployment, BMVg, 14 June 2016.
- Interview 12, One interview partner, former LLSO, ISAF 2011, Cologne, 28 June 2016.
- Interview 13, One interview partner, former LLSO, ISAF 2013, Strausberg, 6 July 2016.
- Interview 14, One interview partner, former LLSO, ISAF 2010, Veitshoechheim Barracks, Wuerzberg, 11 July 2016.
- Interview 15, One interview partner, ZMSBw, Potsdam, 17 March 2016.
- Interview 16, Email correspondence with interview partner, Army Training Command, Subject Group 2, Department 2, 5 October 2016.
- Interview 17, Telephone interview, Department for Strategy and Deployment, BMVg, 6 October 2016.
- Interview 18, Two interview partners, Army officers (company commander; staff officer) deployed during ISAF (2010/11), Leadership Academy, Hamburg, 19 October 2016.
- Interview 19, Email correspondence, Instructor, Leadership Academy, Hamburg, 6 February 2017.