1 Military Transformation in NATO: A Framework for Analysis

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Across the North Atlantic Treaty Organization (NATO), member states are undergoing military transformation. For new member states from the former Eastern bloc, there has been transformation with the introduction of democratically controlled military organizations.[1] Some existing member states have also been transforming their militaries to phase out conscription and move toward all-volunteer professional forces.[2] On top of these de facto transformations in military professionalism across Europe, NATO undertook a commitment at the 2002 Prague Summit, to transform its capabilities for, and approach to, military operations, and to lead that effort a specific NATO command was created, Allied Command Transformation (ACT).

Notwithstanding the establishment of ACT, military transformation has been a US-led process centered on the exploitation of new information technologies in combination with new concepts for "networked organizations" and "effects-based operations" (EBO). European states have simply been unable to match the level of US investment in new military technologies, and so for some time critics have warned of a growing "transformation gap" between the United States and the European allies.[3] In recent years, this process of developing transformational technologies and concepts for war has been reoriented toward tackling counterinsurgency (COIN) and stability operations. Here, the experience (especially from colonial times) of states such as Britain and France gives some European militaries a possible transformation advantage over the big war orientated US military.

This study assesses the *extent* and *trajectory* of military transformation across a range of European NATO member states. It considers cases of the ma-

jor European military powers (Britain, France, and Germany), smaller Western militaries (Spain and The Netherlands), and one new member state (Poland). This study offers a more nuanced picture of the much touted transatlantic "transformation gap." It shows the enormous variation among the European allies on the extent of transformation, suggesting that there may be both technological and conceptual gaps *within* Europe.[4] It describes how a complex and contingent mix of international and local drivers is operating to push forward military transformation in each country. And, accordingly, it provides insight into the variable trajectories of military transformation among NATO member states.

In this chapter, we introduce the common analytical framework for the book. Essentially, this centers on breaking transformation down into three discrete elements -- namely, network-enablement, effects based operations, and expeditionary warfare. The extent and trajectory of military transformation in each case-study is assessed in terms of these respective technological, doctrinal, and organizational innovations. A secondary goal of this volume is to assess the process of military transformation in each country. This involves an enormously complex interaction among international, national, and organizational factors in each case. Nonetheless, three discrete scholarly literatures considered in this chapter, on military innovation, norm diffusion, and alliance theory, respectively, do provide pointers for analyzing the processes of military transformation.

WHAT IS MILITARY TRANSFORMATION?

At the turn of the twenty-first century, the United States officially embarked on a process of military transformation. Chapter 2 of this volume discusses the rise of military transformation in detail, and thus we provide only a brief introduction in this section to orientate the reader. In the 2001 Quadrennial Defense Review (QDR), the US Department of Defense (DoD) declared transformation to be "at the heart" of its "new strategic approach."[5] Military transformation is rooted in the US-led Revolution in Military Affairs (RMA) of the 1990s, when it became apparent that advances in information technology (IT), as harnessed by a resource-rich US military, offered the potential to revolutionize the conduct of warfare, in much the same way that mechanical transport, metal steam-powered ships, and manned flight all revolutionized warfare. The spectacular American victory in the 1991 Gulf War also seemed to suggest that a US-led RMA was underway and that US forces were leaping forward in military capa-

bility.[6] Indeed, while a number of NATO states provided air and naval forces to support the US-led coalition, only Britain and France provided significant ground contingents. Moreover, the French 6th Light Division was allocated to the far left flank, well away from the main coalition land offensive, because, unlike the British 1st Armoured Division, it was not deemed to be up to major combat operations.[7] In large part, then, the Gulf War appeared to be a success for the RMA, and militaries around the world began to look closely at the new US military model based on the exploitation of IT. However, no state could hope to match the level of US investment in IT-enabled military capabilities.[8] So while the rhetoric of the US RMA spread rapidly to other militaries, actual emulation of the new US military model, insofar as it occurred, did so selectively and on a surface level only.[9]

By the end of the 1990s, the term "military transformation" had begun to replace that of RMA in describing the program of change in the US military. This shift in terminology highlighted that this process of revolutionary military change involved as much new thinking as new technology. Whereas RMA was focused mostly on IT, transformation was equally focused on the new operational concepts and organizational forms that would enable the US military truly to revolutionize the conduct of warfare. Hence, in 2003 the US Secretary of Defense, Donald Rumsfeld, defined transformation in this way:

> [A] process that shapes the changing nature of military competition and cooperation through new combinations of concepts, capabilities, people and organizations that exploit our nation's advantages and protect against our asymmetric vulnerabilities to sustain our strategic position which helps underpin peace and stability in the world.[10]

Thus, for Rumsfeld, transformation could conceivably involve all manner of things, including a return to cavalry—with US special forces operating on horseback in Afghanistan calling in precision air strikes.[11] Crucial to transformation was new agility in doctrinal thinking, organizational form, and operational approach. In short, transformation involved nothing less that a paradigmatic shift in the US approach to warfare. Accordingly, Rumsfeld called on the military to foster "a culture of creativity and prudent risk taking."[12]

Just as the 1991 Gulf War focused worldwide military attention on the future of conventional warfare, so ongoing coalition operations following the 2001–2 Afghan War and 2003 Iraq War have focused Western military minds on the return of irregular warfare. This, in turn, has had an impact upon the transfor-

mation debate, resulting in divergent perspectives within the US on the content and direction of military transformation. Broadly speaking, it is possible to discern two strands—one focused on conventional warfare, the other on COIN and stability operations. The first strand, more commonly called "Force Transformation," has been the most prominent. As noted above, it has involved innovating concepts, organizations, and technologies for major combat operations. At the same time, in November 2005, the Undersecretary of Defense (policy) issued a directive requiring the (DoD) and military service to give stability operations "priority comparable to combat operations."[13] In truth, it is hard to imagine the army, air force, and navy giving equal weight to forms of operations (such as stability operations) that essentially threaten the purpose of traditional prestige weapon platforms: heavy armor, strategic bombers, and aircraft carriers. Nonetheless, operational demands and experience in Iraq and Afghanistan, and new US military doctrine on small wars and COIN, reinforce the genuine interest in the US military in what some have called "Second Generation Transformation."[14]

Both strands of US military transformation are producing innovations—both in terms of technology and ideas—that are of interest to the European allies. As suggested above, the Europeans have been concerned for a number of years about the "transformation gap," and this is leading them to consider how they need to transform their own militaries in order to be able to continue to fight alongside the US military in conventional wars. At the same time, European militaries (especially those with colonial and peacekeeping experience) will be naturally drawn to COIN and stability operations. And here there has been some two-way transatlantic traffic of military ideas. In 2004–5, the US Army was keen to learn from the European (especially British) experience of COIN. Since 2006, the US Army and Marine Corps have developed new concepts, doctrine, and organizational capabilities, building on lessons learned from Iraq and Afghanistan.[15] The new joint US Army/US Marine Corps doctrine on COIN (FM 3-24) has greatly influenced doctrinal development and the conduct of operations by European militaries.[16]

THE ANALYTICAL FRAMEWORK

This study adopts a focused, structured comparison approach to examining military transformation in six NATO member states.[17] Accordingly, we focus on specific aspects of each case and analysis is structured by a common set of research themes concerning the extent, process, and trajectories of military

transformation. Our case selection provides for analysis of military transformation in a range of European member states. Britain, France, and Germany, as the major powers in Europe, have similar potential to resource military transformation. At the same time, these three cases offer variation in terms of political and military ties to the United States, recent operational experience, and national military culture. We have also selected two additional existing member states—one northern (The Netherlands) and one southern (Spain), and one new member state (Poland). In all three of these additional cases the states are (or have until recently been) sympathetic to US grand strategy, and the militaries have recent operational experience with US forces.

At the heart of both transformation strands are two innovations, network-centric warfare (what the Europeans call network-enabled capability) and effects-based operations. There is also a major organizational change—namely, the shift from predeployed forces for territorial defense of Europe to forces configured for expeditionary warfare. Assessment of the extent of transformation in each case concentrates on these three elements of transformation. Empirically, this involves looking at change in doctrine, training, and force structure, as well as at future force development and systems acquisition plans in each country.

Network-Enabled Capability (NEC)

This innovation originates in the US concept for network-centric warfare (NCW). This is the notion that a "system of systems," connecting sensors, information processing centers, and shooters operating as one network across the whole of the battlespace, will replace platform-centric warfare conducted by large, self-contained military units. The Europeans prefer the term "network-enabled capability" (NEC), with "enabled" intentionally replacing "centric"; this indicates the more modest expectations (itself reflecting the more modest resources) of the Europeans in terms of the transformative effect of networking on military organization.

Effects-Based Operations

This concept originated in US Air Force thinking in the early 1990s about the future of striking air power. In its original formulation, EBO was about reconsidering how operational effects could be most efficiently produced through air strikes. Thus, whereas previously the focus had been on destroying targets, under EBO, it may be sufficient or indeed preferable to disable targets. In the late 1990s, the meaning and scope of EBO changed considerably. It was adopted

more widely by all the US services and increasingly by US allies, and was re-
defined more broadly in terms of focusing military operations on the cam-
paign objective—that is, the strategic effect. Arguably, this broader definition
is rather meaningless (because military operations should always concentrate
on campaign objectives), though it does have the virtue of focusing military
attention on how the conduct of the campaign (particular in terms of the level
of destruction) contributes or retracts from campaign objectives. The language
of "effects-based" operations is now widely used in NATO even if there is some
differing on precise terms and meanings. Indeed, NATO's Military Commit-
tee formally adopted the concept of the effects-based approach to operations
(EBAO) in 2006.[18] Like EBO, EBAO focuses attention on the strategic effects
of operations but also places priority on the integration of the various instru-
ments of the alliance and coordination with other international organizations.

Expeditionary Warfare

This element involves the most change—in organizational structure and ca-
pabilities—for the land forces. Expeditionary warfare has always been a core
mission for the US Marine Corps. But now it has become a core mission for
the US Army. This is most evident in the US Army's program for restructuring
from ten divisions to forty-three brigade combat teams (BCTs). There will also
be a sizable number of support brigades, but essentially BCTs will be self-suf-
ficient combat formations. A typical army division had around 15,000 troops,
whereas a BCT has between 3,000 and 4,000. Thus this new modular force
structure promises to give the US Army a more agile force structure, and one
that is better suited to expeditionary warfare. It so happens that a number of
European militaries undertook similar restructuring programs in the mid to
late 1990s, to do away with unsustainable legacy force structures and to intro-
duce new self-sustainable and deployable units; hence Britain began to fold
army regiments into battalions, while France broke up its divisions into ma-
neuver regiments. The development of expeditionary forces needs also to be
viewed in light of the innovative Combined Joint Task Force concept (CJTF),
adopted by NATO in 1994. Introduced to NATO by the US military, CJTFs were
the early version of the current drive to create modular expeditionary forces.[19]
So we would expect to find considerable evidence of this aspect of military
transformation in many of the case studies.

PROCESSES OF MILITARY TRANSFORMATION

Military transformation involves both external processes of military emulation and internal processes of military innovation. To be sure, a central concern of this volume is with the question of whether, and to what degree, European military transformation has been influenced by new military concepts and ideas from the United States. Since the end of the Cold War, the United States has been the unquestioned dominant military power. Moreover, as noted already, the 1991 Gulf War was an apt demonstration of US military prowess. Hence, the US military has provided an exemplar, or template, for European states seeking to transform their militaries for the information age. Driving this European interest in transformation is also a traditional concern with sustaining their alliance with the United States. European states recognize that, should they fail to keep up with the Americans, they will become militarily irrelevant.

In this section we consider three scholarly literatures that are relevant to our analysis of the process of military transformation in individual European states. First is the literature on military innovation, which suggests the factors that shape domestic processes of military transformation. Second is the literature on norm diffusion, which explores the transnational processes whereby US ideas and innovations spread to European militaries. Third is the literature on alliance politics, which points to traditional intra-alliance concerns with interoperability and burden sharing.

Military Innovation

Since military transformation involves a number of innovations, the military innovation literature is of obvious relevance to case studies in this volume.[20] This literature broadly suggests three main factors that shape the trajectory of military innovations: threat, civil-military relations, and military culture. Related literatures on bureaucratic politics and weapons procurement suggest that entrenched institutional interests can also be a barrier to military innovation.

Threat is an obvious spur to military innovation. Indeed, the dominant theoretical approach to International Relations theory (that is, Realism) stresses how alert states are to threatening changes in the international system.[21] Threatened states may respond by forming alliances, but they may also internally mobilize military resources, and that, in turn, may require military innovation. Indeed, the threatening development may itself be military innovation by an opponent

(a new weapon or way of war) that demands an innovative response.[22] States will be particularly sensitive to external military threats in the shadow of war. Moreover, defeat or major setback in war can itself push militaries to innovate.[23] Even militaries that are victorious in war but at very great cost may seek to innovate in order to make future victory less costly. Thus, a British general staff horrified by the human toll of World War I embraced new technologies in the interwar period in order that the next battles might be won "with the maximum of machinery and minimum of manpower."[24]

The military innovation literature also highlights the role of internal factors. With regard to civil-military relations, the key issues are military responsiveness to civilian policy, and the ability of civilian policymakers to effect military innovation. The literature recognizes that civilians are often more ready to contemplate major military change in response to new policy priorities or strategic challenges, precisely because they do not have an organizational stake in existing military practices, equipment, and structures. However, opinion is divided on the question of whether civilian intervention is effective, or even required, in military innovation. One school argues that because militaries are slow to change, civilians must intervene to force them to innovate (especially in peacetime), and that such innovation is most likely to succeed when civilian policymakers team up with maverick military experts.[25] An alternative school argues that militaries must and do innovate by choice. Innovation requires visionary military leaders, who enjoy legitimacy within their organizations by virtue of their formal position, to lead campaigns to effect major change within their organizations. Externally imposed change will fail, it is argued, because civilians lack the knowledge, and mavericks the authority, to effect real change.[26]

The third shaping factor is military culture. Military culture comprises those identities, norms, and values that have been internalized by a military organization, and that frame the way the organization views the world, and its role and functions in it.[27] Military culture is embodied in (and reproduced through) military training, regulations, routines, and practice. Given that military practices, technologies, and structures usually reflect cultural bias, as a general rule we may expect military culture to act as a brake on innovation. That is the point of the military-led innovation school discussed above: since innovation involves changing those things that militaries take for granted, you need a leader with authority to champion what is, in effect, cultural change. Even with such a champion, innovation is unlikely to succeed if it challenges the core identity of the organization.[28] Thus of two innovations attempted by two different

commandants of the US Marine Corps (USMC)—the adoption of maneuver warfare as the overarching war-fighting concept for the USMC under General Alfred Gray (1987–91), and the creation of a "culture of constant innovation" under General Charles Krulak (1995–99)—the former succeeded because it was consistent with the "warrior identity" of the Corps, while the latter failed because it was not.[29] For this reason, innovation that goes against organizational identity usually requires some external shock to military culture, such as defeat in war, in order to jolt the military into a fundamental rethink of its purpose and core business.[30]

Related to the military innovation literature is scholarship on bureaucratic politics and on weapons acquisition that underlines the institutional and political barriers to innovation. The large literature on bureaucratic politics,[31] like the work on military culture, points to characteristics of military organizations that produce obstacles to truly innovative military change. Often these vested interests are located in dominant war-fighting communities within organizations (for example, promoters of armor in the army, bomber and fighter pilots in the air force, surface warfare officers in the navy). Military innovation almost always challenges vested organizational interests: new ideas threaten familiar operational practices, and new technologies threaten legacy systems. Crucially, military innovation may threaten the traditional flow of resources.[32] Related to bureaucratic politics are broader entrenched interests that drive military procurement. Studies of weapons procurement highlight military biases toward developing high-performance and high-cost equipment, and the means the military have to advance those biases: institutional longevity, knowledge asymmetry of defense matters, and manipulation of the program process (through things like sunk costs and gold-plating).[33] These studies also point to domestic politics (favoring home-produced systems), national industrial capacity, and industry-government links as factors that influence program choice and outcome.[34]

Norm Diffusion

From the European perspective, military transformation is a transnational process involving an emerging norm of military organization and operations that originates from the United States. As such, the literature on international norm diffusion is relevant here. Much of this literature is concerned with the spread of norms of state sovereignty, good governance, and human rights.[35] More recently, some scholars have begun to look at norm diffusion in the mili-

tary sphere.[36] The norm diffusion literature suggests external processes of military change that are shaped by a number of considerations.

The first consideration is motive. Essentially, with norm diffusion we are not talking about military innovation so much as military *emulation*. The military in question innovates by emulating another—usually we are talking about developing states emulating more developed ones. The norm diffusion literature suggests two motives for emulation. The first is success: militaries will emulate those that have been successful in battle. This is a rationalist account of emulation which suggests that strategic imperatives provide the driving motive. In this sense, the dramatic US victory in the 1991 Gulf War provided the perfect "poster child" for the US model of an IT-intensive military. The other motive is legitimacy: militaries emulate the strongest states, even if such military models are inappropriate for poorer or less threatened states, because strength confers legitimacy. Hence even the militaries of the smallest states, which had little need and could ill afford an IT-intensive military, were emulating the US military model in the 1990s. This is a cultural account of emulation which suggests that legitimacy imperatives provide the driving motive.[37]

The second consideration is norm strength, which may be measured in terms of how well defined the norm is, how long-established it is, and how widely accepted it is.[38] Arguably, transformation has involved the diffusion of two norms, one involving process and the other content. The process norm is one of "constant innovation": transformation aims to produce innovative militaries. Transformation is also about, as we have suggested, a specific mix of technological and doctrinal innovations and organizational changes. In this sense, we may say that there is a fairly well defined "content norm" that specifies network-enabled, effects-orientated, and expeditionary organizations and operations. Both norms are widely accepted by Western militaries. However, our study shows, the process norm is accepted more in rhetoric than in reality. And there is enormous variation in actual interpretation, at a national level, of the content norm. Both norms are also only a few years old, and so neither are well established.

The third consideration is the transmission structure for new international norms. The norm diffusion literature points to the role of institutional structures—legal regimes, international organizations, epistemic communities, and policy networks—in promoting, transmitting, and sustaining the norms in question.[39] Obviously, for this study NATO is the most important institutional structure and, in particular, Allied Command Transformation. Bilateral mili-

tary relations may also be a significant form of transmission structure. This is especially true for Britain, with its close military ties to the United States, but other potential significant bilateral relations include those between France and Germany. For the European member states, the European Union may also be a transmission structure for new military norms.

The fourth consideration in norm diffusion is the end-point of the process—that is, norm internalization. Crucial to transnational norms taking root in national contexts is the degree of match or mismatch between the new norms and existing military culture. Also important is the degree of match with strategic culture—that is, beliefs shared and practiced by national policy communities about when and how to use force.[40] Strategic culture is broader than national military ways of war. It covers the fundamental beliefs of a national polity about the place and purpose of force in that country's foreign policy.[41] This raises the question of how military transformation, with its model of a high-tech military postured for expeditionary operations, fits the various strategic cultures of European states.[42] Broadly speaking, where there is a cultural clash, mere rhetorical observation if not outright rejection of the new military norms is likely. However, driving strategic imperatives to introduce new ways of war may override pre-existing military cultural biases. We may also expect to see some degree of adaptation of new transnational norms to suit local conditions in the process of internalization.[43] Such local conditions include military culture, political imperatives, economic considerations, and bureaucratic interests.

Alliance Theory

Alliance theory mostly concerns the conditions that lead states to operate in alliances; these include foreign and domestic security threats,[44] as well as shared ideology and norms.[45] However, this literature does suggest certain conditions that also might affect the processes of military transformation in NATO.

The first is the impact of variable transformation on the institutional efficiency of NATO. Alliances produce efficiency in the generation of military power when states are able to mass force through operational collaboration, and realize economies of scale through collaboration on military procurement and logistics.[46] The emerging "transformation gap"—both between the US and Europe, and possibly between the major and minor European states—thus threatens alliance efficiency by reducing the capacity for multilateral operations and common procurement and logistics.

The second condition is the politics of burden-sharing within alliances. At the heart of alliances is an alliance security dilemma, whereby states fear abandonment but also at the same time fear entrapment.[47] This dilemma is most acute when it comes to crises and war. But at a more minor level it also operates in terms of force development in the problem of burden-sharing. Here there is also a dilemma, between the fear of contributing too much and being taken for a ride (similar to the fear of entrapment), and the temptation to contribute too little and take others for a ride. Restraining this temptation is the fear of abandonment: that if one overtly free-rides, disillusioned alliance partners may end collaboration.

The third condition is the two-level game involving domestic and alliance politics.[48] For the governments of developing states, alliances (especially with more powerful allies) promise to bring resources—social and material—that may be used to bolster political stability.[49] For governments facing internal challenges to their authority, "internal balancing" concerns will outweigh the "external balancing" concerns posited by realist theory.[50] These domestic political concerns may be especially evident, therefore, in the case of new member states of NATO, who may use the legitimacy and security apparatus of NATO to secure themselves politically. In this sense, participating in an overall alliance program of military transformation increases the legitimacy connection between the new member and NATO. In developed states, domestic politics also plays in a role in terms of producing pressures that may run counter to the direction of alliance policy. Alliance theory also points to the strategic use of domestic politics by policymakers for leverage in debates with alliance partners.[51]

In closing, we note that external threat is an important condition that operates in tandem with others listed above. It can give added impetus to the drive for institutional efficiency. It also affects the burden-sharing problem by making the fear of abandonment more acute, and thereby reducing the attraction of free-riding. However, the alliance theory literature does suggest that far more important to the long-term functional effectiveness of an alliance is commonality of interests and ideology. The historical record suggests that alliances formed out of shared fear and nothing else don't work well and rarely survive.[52]

In each of the chapters that follow, case study experts analyze the extent and trajectory of military transformation in their respective national militaries, paying particular attention to the development of EBAO, NEC, and expedi-

tionary warfare capabilities. Each chapter also considers the process of trans-formation in that country, looking at the interaction of international forces and local conditions, and the mix of strategic, political, and cultural influences that explain why and how European militaries are transforming. The literatures discussed above point to key themes that emerge in many of these chapters. One theme is the importance of military culture, civil-military relations, and resource considerations in shaping European military transformation. Another theme is the diffusion of US military innovations and how those innovations are received, adapted, and adopted by European militaries. A final theme is the imperative for European members of NATO to respond to US burden-shar-ing concerns, and the "legitimacy benefits" of military transformation for new members of NATO. A concluding chapter returns to these themes in exploring the cross-country patterns and national variations in European military trans-formation.