7 (13) 2017

Estonian Yearbook of Military History

EESTI SÕJAAJALOO AASTARAAMAT

VISIONS OF WAR

EXPERIENCE, IMAGINATION AND PREDICTIONS OF WAR IN THE PAST AND THE PRESENT

Estonian War Museum
Tallinn University Press
Viimsi–Tallinn 2017

Estonian
War Museum
GENERAL LAIDONER MUSEUM

Estonian Yearbook of Military History 7 (13) 2017
Eesti sõjaajaloo aastaraamat 7 (13) 2017
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and Predictions of War in the Past and the Present

Estonian Yearbook of Military History is a successor of Yearbook of Estonian War Museum – General Laidoner Museum (issued 2001–2007, ISSN 1406-7625)

This issue is the result of the conference "Visions of War: Experience, Imagination and Predictions of War in the Past and the Present", Tallinn, 19-20 April 2016
All articles have been peer-reviewed

On cover: An anti-war poster using the analogy of Vietnam to argue against South-Africa's intervention in Namibia. Courtesy ECC Archives, University of the Witwatersrand

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Chief editor of the yearbook: Toomas Hiio
Language editing: Päevakera tekstibüroo

ISSN 2228-0669

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Tallinn University Press
Narva mnt 29
10120 Tallinn
Estonia

Print: Pakett

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PREFACE

The Study of War

Martin van Creveld

Starting with Thucydides during the last decades of the fifth century B.C and reaching all the way to the present, there have been many excellent military historians. Their contribution to our understanding of war is immense and growing still. Yet history and theory are not the same. History focuses on the specific, the non-repeatable, and the ephemeral. Its objective is to record what events took place, understand why they took place, and, perhaps where they may be leading. Theory, on which more later, seeks to understand patterns and, if possible, use them to draw generalisations that will be valid for more than one time and one place. It both describes and, at times, prescribes the nature of the subject matter; what its causes and purpose are; into what parts it should be divided; how it relates to all sorts of other things; and how to cope with it and manage it.

In almost every field of human thought and action, good philosophers abound. They examined their subjects, be they ethics, aesthetics, logic, or the existence of God; dissected them into their component parts; and re-assembled them, often in new and surprising ways that helped their readers gain understanding. Not seldom, they masticated them half to death. Yet in two and a half millennia there have only been two really important military theoreticians. All the rest, including some who were famous in their own time, have been more or less forgotten.

Names such as Frontinus (ca. 40–103 A.D), Vegetius (first half of the fifth century A.D), the Emperor Maurice (539–602), Antoine-Henry Jomini (1779–1869), Basil Liddell Hart (1895–1970), and many others matter, if at all, only to specialists in the field. The same is only slightly less true of those who did their work in the post-1945 period. That even applies to Niccoló Machiavelli's *Arte de la guerra* (1521), which gave its title to a whole bevvy of other volumes in several languages. Yet now he

is remembered almost exclusively because of his political thought rather than for anything he said about war and armies.

The reasons why these and so many other theorists were forgotten are close at hand. War is a practical business above all. In this respect it has much in common with playing an instrument or conducting an orchestra. Those who wage war, do so in order to gain victory, not to come up with all sorts of abstract insights. In themselves, not even the best theories can save us from the enemy's sharp sword. This fact made most theorists, who were hoping to proffer practical advice to practically-minded commanders, focus on how to organise for war, wage war, fight in a war, and so on.

As they did so, however, they often overlooked the fact that war is forever changing and will continue to change. Many, including some of the greatest, were unable to rise above their own times and places. This made them go into the kind of detail that has long become irrelevant. Others, by seeking to be as up to date as they could, all but guaranteed that they would be out of date sooner rather than later. Never has the problem been more acute than during the last few decades. As change proceeded at a tumultuous pace, repeatedly it seemed to render everything that came before irrelevant.

To this rule there have only been two exceptions. The first was the Chinese commander and sage Sun Tzu (ca. 544–496 B.C); the second, the Prussian soldier-philosopher Carl von Clausewitz (1780–1831). Over the centuries since they first entered the military stage both have had their exits and their entries. At times they were read, or were supposed to be read, by everybody with an interest in the subject. At others they were dismissed as too old, too limited, too philosophical, or all of these. Clausewitz in particular has been more often quoted than read, let alone studied, understood, and digested. Yet that does not change the fact that both authors stand head and shoulders above the rest. In one form or another they will endure as long as war itself does. If those who claim that the latter is in terminal decline are right, perhaps longer.

That is not to say that either volume is without problems—especially *On War* which, at the time of its author's death, was mostly a mass of confused and confusing papers. First, neither Sun Tzu nor Clausewitz has anything to say about either the causes of war or the purposes for which

it is fought. In the case of Sun Tzu, that is because he opens by saying that war is "a matter of vital importance of the state, the province of life or death, the road to survival or ruin. [Therefore] it is mandatory that it be thoroughly studied." From there, while not blaming it on anybody or anything, he proceeds straight to its preparation and conduct.

The case of Clausewitz is different. Famously, *On War* defines war as the continuation of politics by other means. What the objective of the politics might be is irrelevant. Orders are orders; the author never doubted that, once they have been issued, commanders and soldiers would swing into action. Clausewitz was a member of the Prussian Reform Movement of 1807–1813 whose goal was to close the gap between government and people. He was well aware of the role popular morale could play. But this awareness did not make its way into *On War*. Describing war as an instrument, the latter allowed little or no room for asking "why." That question it explicitly leaves to "the philosophers."

Second, neither Sun Tzu nor Clausewitz have much to say about the relationship between economics and war. Sun Tzu at any rate notes how enormously expensive waging war is. Clausewitz does not even do that; had he been asked why, no doubt he would have answered that economics, while undoubtedly very important, do not form part of war proper. Strictly speaking, he may well have been right. Still, so important are economics, "the dismal science," to the conduct of war that leaving them out can only be called a grave shortcoming.

Third, both writers tend to take the point of view of those who launch and wage war at the top; the politician, the commander in chief, and his principal subordinates. The examples they use reflect that fact. So does their readership; one does not expect every Tom, Dick and Harry—nowadays, every Mary too—to concern him or herself with theory. *The Art of War*, like similar Chinese treatises, was never meant for publication. Instead it was kept secret in the archives where only a few people had access to it. Indeed it is probably no accident that the earliest known text was found in a royal grave dating from the second century B.C. *On War*, on its part, was initially sold by subscription among Prussian officers.

Proceeding from the top to the bottom as they do, both books probably make war, especially war as understood and experienced by the com-

mon soldier and by society at large, appear more rational and more subject to control than it really is. The problem is particularly acute with Sun Tzu. Like his rough contemporary Confucius, Sun Tzu tends to focus on the elite. He sees ordinary people as mere human material to be moulded, shaped and directed towards this or that objective. When he says that, on the battlefield, everything looks like confusion, he omits to add that, to countless combatants of all times and places, it *is* nothing but confusion. The possibility that combatants (and non-combatants) may have their own ideas and that these ideas may influence the conduct of war at all levels does not even occur to him.

Nor do the two theorists have much to say about the most important methods for coping with these problems, i.e. training, organisation, and leadership. In respect to organisation some of what they do say is badly dated; such as Clausewitz's reflections about the optimal number of army corps and the best way to coordinate infantry, cavalry and artillery. Yet it is only factors such as training, organisation, and leadership that turn a mere mob into an army and enable it to function.

Fourth, both Sun Tzu and Clausewitz come close to ignoring the implements with which war is fought, i.e. the field broadly known as military technology. Sun Tzu only has a few words to say about it. Clausewitz on his part does mention it, but only to add that it relates to war as the art of the swordsmith relates to fencing. Both authors knew very well that wars were fought with swords, spears, bows, muskets, cannon, and whatever. Both must also have understood that these and other weapons, as well as technology in general, play a cardinal role in shaping the way every war is waged and fought. Equally obvious, though, they did not see technology as a fundamental factor deserving profound consideration. This fact is surprising. Certainly the subject deserves some reflection and discussion at greater length.

Fifth, neither Sun Tzu nor Clausewitz has much to say about logistics and intelligence. Logistics, however, are the building blocks of war; without which no armed force can exist, let alone operate. To paraphrase the World War II British Field Marshal Sir Archibald Wavell (1883–1950), the combinations of strategy are, in the end, simple enough for any amateur to grasp. It is by looking after the logistics, defined as the practical

art of moving armies and keeping them supplied, that the professional proves himself. Looking at a globe, an armchair strategist may not find it too hard to decide where he or she wants to deploy one's carriers. But taking charge of loading a 90,000-ton vessel with all the tens of thousands of different items it must take aboard before leaving port certainly *is* hard.

As to intelligence, both authors, each in their own way, only refer to certain aspects of it. Sun Tzu focuses on the various kinds of spies a commander may use to obtain intelligence. However, he has almost nothing to say on the way it is or should be interpreted. Clausewitz discusses the nature of military intelligence and the role it plays in war. However, he has barely a word to say about the way it is obtained. Their discourses are valuable, but they stand in urgent need of being expanded and updated.

Sixth, neither has anything to say about war at sea. Possibly this fact reflects the fact that, at the times they wrote, neither China nor Prussia were maritime powers. Or else it is based on the way warfare used to be organised until World War II; a period when armies and navies were managed by separate offices or ministries. Yet war at sea, while probably not as old as war on land, has now been practiced for at least three millennia. Ancient Chinese and Egyptian reliefs show it. Starting with the Battle of Aegospotami in 405 BC, which led directly to the Athenian surrender to Sparta, and ending with the great battles in the Pacific in 1944–1945, on occasion it has been as decisive as any of its land-bound equivalents. But for their command of the sea, the British in 1982 would never have been able to reach, let alone recover, the Falkland Islands.

Other forms of war that, for obvious reasons, neither Sun Tzu nor Clausewitz addresses are air war, space war and cyberwar. And yet, and if only because budgets are going down, as of the opening years of the twenty-first century, no call is heard more often than the one for "jointness." Thus a volume that does address these subjects, linking them both to ground warfare and to each other, is urgently needed.

Seventh, and again for obvious reasons, both authors have nothing to say about what, since 1945, has become by far the most important form of "war." This refers to nuclear war which, though it has not yet taken place, casts a giant shadow over everything else. Whether space war, cyberwarfare, and a host of other kinds of war constantly being dreamt up by

defence officials, officers, and academics around the world are really as revolutionary as they claim to be is moot. What is not, or at any rate ought not to be moot, is that nuclear weapons caused the greatest revolution in military history, and perhaps not only military history, ever seen. Works that, whether because they were written earlier or through the authors' own fault pass over that fact, do so at their peril.

Eighth, neither has much to say about the law of war. In the case of Sun Tzu that may be because such a thing barely existed, or so scholars who have studied the matter claim; in that of Clausewitz, because he dismisses it in a sentence or two. He justifies himself by saying that the law in question hardly diminishes the elementary violence of war. As we shall see, the claim is understandable and, in some ways, quite correct. As we shall also see, this does not mean that law does not play a role in shaping war, as it does any other social phenomenon and can simply be ignored. Some would even say that, since 1945 or so, its importance has been growing – to the point that, in some cases, it threatens (or promises, depending on one's point of view) to choke war to death.

Ninth, neither is much interested in war between asymmetric belligerents. In this context the word "asymmetric" has two different meanings. First, it may mean war between communities, or organisations, each of which forms part of a different civilisation. In the case of Sun Tzu, this lack of interest rests on the fact that he lived, commanded and wrote (if he did) during the so-called Period of the Warring States (ca. 453–221 B.C). His career unfolded against the background of constant warfare among very similar polities in what the Chinese themselves used to call "all under heaven" (*Ti'an*). He may also have been too contemptuous of the "barbarians" to devote a special chapter to them. Clausewitz's focus on intra-civilizational war is brought out by his insistence that European armies were growing more and more alike so that quantity was becoming more important than quality. At the time he wrote, the military gap between Europe and the rest of the world was increasing day by day; and in any case Prussia was not a colonial power.

However, "asymmetric" may also have another meaning. It may refer to a situation where, instead of armies confronting one another, advancing against each other, fighting each other, etc., the belligerents on both

sides are of completely different kinds. Irregulars, broadly known as freedom fighters (partisans), insurgents, rebels, guerrillas, bandits, and, last but not least, terrorists, may face armies that are, initially at least, much stronger than them. Armies may face irregulars who, initially at least, are much weaker than them. Clausewitz in *On War* at any rate pays some attention to this problem. Sun Tzu does not.

None of the above should be construed as attacks on Sun Tzu or on Clausewitz. To seek to equal, let alone replace, their respective tomes would be presumptuous. The objective of this volume, standing as it does on the shoulders of these and other giants, sometimes even repeating what they said, is much more modest. It will try to reach beyond their limitations, both those that are self-imposed and those originating in the times and places in which they did their work; expand on themes which, for one reason or another, they neglected or left untouched; and bring their works up to date wherever doing so seems possible and worthwhile. All this, in the hope of coming up with a framework that will be as systematic, as comprehensive, and, yes, as elegant as possible.

INTRODUCTION

Envisioning Future Wars

Alon Posner and Kaarel Piirimäe

> The popular maxim holds that generals (and, by extension, their armies) always plan for the previous war.[1] The wide-ranging chapters of this volume show the limits of this truism. There is much more to thinking about future war: it is a dynamic and on-going process, influenced by a myriad of political, military, social, economic and cultural shifts. The imagining of future war is an important factor and often a causal element in historical processes, whether or not it is immediately followed by war. The study of the thinking about and the planning for wars in the past not only opens a window on wider societal conceptions and preoccupations at the time, but is also a basis for thinking about (and hopefully implementing) military changes in peacetime.

This introductory paper begins by briefly surveying the history of military thought, focusing on the introduction of change as an immutable element in the character of war – from the Clausewitzian emphasis on the social and the political to the later emphasis on technology. The idea of the transformation of war's nature was the basis of all modern era efforts of imagining and preparing for future war. In other words, throughout the history of warfare, generals had done well preparing for the last war and learning the eternal laws of their profession, but now this was seen as a handicap rather than an advantage. Next the introduction will examine the theoretical foundations of thinking about future war and its impor-

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[1] The origins of the proverb are not clear, but it probably originates from the early 20th century. When Churchill quoted it in 1948, referring to the French defeat in 1940, he said it was "an old joke". Winston S. Churchill, *The Gathering Strom: The Second World War*, vol. 1 (Boston: Houghton Mifflin, 1985), 426. As we shall see, in earlier times, preparing for the last war was the right thing to do, because not much changed in-between wars.

tance to theories of military change and innovation, and continues by reviewing the historiography on war planning in the past.

With their *raison d'être* being preparing for war, militaries must make decisions and implement them in peacetime with regard to a possible future conflict, which is shrouded with inevitable uncertainty and may take place with little warning. Such thinking and planning is necessary and inescapable. Anticipation, the forecasting of possible changes in the future battlefield, is a key mode of military change and innovation (the other mode being adaption, a flexible response to these changes).[2] In this context, researchers have been keen to understand what drives such changes when they occur, especially in peacetime. However, military change is elusive, as it can be grasped at several different levels, ranging from actual operations to theoretical considerations.[3]

Several theorists and practitioners have noted that military anticipation often tends to fail, and claimed that such problems are inherent to the military planning endeavour, the main obstacle being the impossibility of foreseeing the developments of deadly struggle with an adapting adversary. Carl von Clausewitz referred to the phenomenon as the "fog of war," but one should add that anticipating future war through the "fog of peace" may be even more difficult. However, there may yet be a possibility to "fail better," or at least to fail in a way that is not catastrophic. Planning for the next war and attempting to work through its possible developments are necessary, in any event. US President Dwight Eisenhower phrased this paradox in 1957, "plans are useless, but planning is everything".[4]

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[2] Dima Adamsky and Kjell Inge Bjerga, *Contemporary Military Innovation: Between Anticipation and Adaption* (New York, NY: Routledge, 2012).

[3] Adam Grissom, "The Future of Military Innovation Studies," *The Journal of Strategic Studies* 29:5 (2006): 905–934; Theo Farrell and Terry Terriff, "The Sources of Military Change: Culture, Politics, Technology," – *The Sources of Military Change: Culture, Politics, Technology*, ed. Theo Farrell and Terry Terriff (London: Lynne Rienner Publishers, 2002), 3–20.

[4] General Services Administration, N.A.R.S.O.F.R., and United States Government Printing Office, *Public Papers of the Presidents of the United States*, Dwight D. Eisenhower, 1957: Containing the Public Messages, Speeches, and Statements of the President, January 1 to December 31, 1957 (U.S. Government Printing Office, 1999), 818. See also Michael Howard, "Military Science in an Age of Peace," *The RUSI Journal* 119:1 (1974): 3–11; Richard Danzig, *Driving in the Dark: Ten Propositions about Prediction and National Security* (Washington D.C.: Center for a New American Security, 2011); Meir Finkel and Moshe Tlamim, *On Flexibility: Recovery*

However, future war is relevant not only to the study of military change and innovation. Researchers have shown that thinking, preparing and planning for a future war has major impact on peacetime institutions from interstate relations to national politics and various aspects of the economy and society. This approach shows that even planning for a war that never took place could be historically significant, either for its social costs, as is demonstrated in this volume by the case of the US Army exposing its soldiers to high levels of atomic radiation (the chapter by Robert Jacobs), political effects, as in the case of the total defence doctrine in Yugoslavia (the article by Blaž Torkar), or for long-term institutional effects, as shown in the example of the developments in NATO from the 1970s to the 1980s (particularly the chapter by Benedict von Bremen).

In addition, theorists of international affairs, especially neo-classical realists, have focused on state perceptions regarding future war. Military balance, whether real or perceived, is the cornerstone of such theories. In line with this point of view to this point of view, international behaviour can be determined from a balance between "offensive" or "defensive" weaponry and doctrine, as well as from beliefs regarding the costs of war and the relative chances of success between the contesting sides.[5] Therefore, according to this school of thought at least, thinking about future war is always at the heart of international relations.

The changing nature of future war

As with other social phenomena, war can be studied by how it changes through time: does it have a permanent nature, or does it change through history? Questions regarding war's enduring character, even its permanence as a social phenomenon, are a perennial feature of strategic studies field. However, military thinkers from antiquity to the pre-modern world,

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from technological and doctrinal surprise on the battlefield (Stanford, Calif.: Stanford University Press, 2011).

[5] Stephen Van Evera, "Offense, Defense, and the Causes of War," *International Security* 22: 4 (1998): 5–43; Keir A. Lieber, *War and the Engineers: The primacy of politics over technology* (Ithaca: Cornell University Press, 2005).

indeed the major classics of military theory, claimed that the essential nature of war, derived either from basic human attributes or from immutable laws of strategy and tactics, is unchangeable.

Ancient works regarding strategy, such as Sun Tzu's *Art of War,* didn't even need to highlight the immutability of war: this was a given. "Stratagems" (innovative tactics, weapons, etc.) could be decisive in a particular battle, but were nevertheless thought to have limited influence over war in general.[6] However, Iain A. MacInnes' contribution to this volume shows that beliefs about the static nature of war did not preclude thinking and planning for the next conflict, based on a sophisticated reading of local terrain and relative strengths of the warring sides.

The supposedly unchanging character of war was arguably as much a cultural artefact as is nowadays the belief in the possibility of rapid change. War did change substantially throughout ancient and medieval history, but there is limited evidence of a sustained intellectual effort to diagnose and direct such future changes, rather than to remark on past changes.

In retrospect, one of the last huzzahs of an unchanging image of war was "*The reign of George VI, 1900–1925*," which was published anonymously (by Samuel Madden) in 1763. The future George is described rampaging in the monarchical Europe of 1918 at the head of his dragoons, while his battles are quite similar in technology and organisation to the battles of the mid-18th century. I. F. Clarke remarked that the book "appeared during the closing phase of an ancient way of life, on the eve of momentous developments" in technology and social organisation. Madden's book draws our eyes to the perils of extrapolating a linear trend in history, a failing that has been very common in thinking about future war.[7]

A generation later, commenting on the era of Napoleonic Wars, Carl von Clausewitz created what amounts to a systematic model to describe change and continuity in the character of war. When describing changes

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[6] Beatrice Heuser, *The Evolution of Strategy: Thinking war from antiquity to the present* (New York: Cambridge University Press, 2010), 39–40.

[7] Anonymous (Samuel Madden), *The Reign of George VI. 1900–1925; a forecast written in the year 1763* (London: Rivingtons, 1899); I.F. Clarke, *Voices Prophesying War, 1763–1984* (London: Oxford University Press, 1966), 5–6.

in warfare, Clausewitz pointed out that weapons and military techniques were constantly changing, and that a practical art of war would be historically contingent. Each historical epoch (from the Ancients to the Revolutionary and Napoleonic wars) has had its own type of war, dependent on socio-political conditions. Indeed, his work is suffused with the impact of mass conscription and the unleashing of mass public passion on the field of battle. At the same time, Clausewitz also sought to define the "universal element" derived from the nature of war.[8]

Clausewitz's "trinity" (continually re-interpreted), influenced by this novel development, suggested that the future nature of war would be shaped by the interplay of societal involvement, political purpose and military capabilities. It was not only a tool to describe the present, but also a means of understanding the future: "this way of looking at it will show us how wars must vary with the nature of their motives and of the situations which gives rise to them". Such an understanding is "the first, the supreme and the most far-reaching act of judgement" of a commander.[9]

A second key insight of Clausewitz lies in the relationship of tactics and strategy. Clausewitz pointed out that "a change in the nature of tactics will automatically react on strategy," and so the conduct of war at the highest level will be impacted by technical or tactical innovation.[10] For all the importance of understanding the nature of future warfare, Clausewitz's ideas also make it clear why it is such a formidable task: shifts in each part of the trinity are interlinked and change war in turn from tactics to strategy. Exercising Clausewitz's "supreme act of judgement" becomes even more difficult as technology and society are changing rapidly.

Notably, Clausewitz did not attempt to predict the changes likely in future war. The only clear future war scenario mentioned in the peroration to *On War* is a coalition war against France, if it were to renew its hegemonic ambitions. The scenario is mostly used to stress Clausewitz's points on the importance of concentration of forces and strategic focus,

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[8] Carl von Clausewitz (trans. Peter Paret and Michael Howard), *On War* (Princeton: Princeton University Press, 1989), book 8, chap. 6B, 586–591; Azar Gat, *A History of Military Thought: From the Enlightenment to the Cold War* (Oxford: Oxford University Press, 2001), 191.

[9] Clausewitz, *On War*, book 1, chap. 1, 5, 88.

[10] *Ibid.*, book 4, chap. 2, 226.

rather than as a realistic effort to anticipate future war. As it is meant for the short term, it hardly diverges from the realities of the late Napoleonic warfare.[11]

The Napoleonic Wars were conducted largely with hardware available from the late 18th century, and technological change became a key factor in military affairs only around the middle of the 19th century. From that point onwards, military professionals, experts and contemporary researchers looking at military innovation have focused on new technologies, showing that the interplay between technological change and military planning is far from straightforward. Important current or expected changes must be identified and assimilated into weapon systems, tactics and plans, all with the correct timing and in competition with a rival.[12]

However, the Israeli military thinker Azar Gat has claimed that it was not only technological change as such that shifted military thought. Rather, it was the influx of scientific ideas and of political philosophy into the military realm, from Newtonian physics onward. If so, it is not only technologies and other material realities that change, but also modes of thinking about such realities.[13]

Arguments that the very nature of war was shifting gained currency in the middle of the 19th Century. Armies grew larger, their means of transportation, logistics and communications more efficient. Firepower developed rapidly. According to Martin van Creveld, the early 1930s were a watershed. When Carl von Clausewitz completed his seminal *On War* in the 1920s, the impact of new armaments still seemed minute in comparison to political and social factors that had changed the face of war in Clausewitz's own life time.[14] Writing in 1837, the French general and military thinker Antoine-Henri Jomini already noted the growing importance of technology, and a few decades later, just before the Franco–Prus-

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[11] *Ibid.*, book 8, chap. 9, 632–636.

[12] For example, Dima Adamsky, *The Culture of Military Innovation: The impact of cultural factors on the revolution in military affairs in Russia, the US, and Israel* (Stanford, Calif.: Stanford University Press, 2010); *Military innovation in the interwar period*, ed. Williamson R. Murray and Allan R. Millett (Cambridge: Cambridge University Press, 1998).

[13] Gat, *A History of Military Thought*; Martin van Creveld, *Technology and War: From 2000 B.C. to the present* (New York, etc.: Free Press, 1991) argues the same.

[14] Creveld, *Technology and War*, 167.

sian War of 1870–1871, another French officer, Ardant du Picq, acknowledged: "The art of war is subjected to many modifications by industrial and scientific progress". Both thinkers, it should be noted, were mostly interested in the unchanging elements in warfare, Jomini in the eternal laws of strategy and the operational art, and du Picq in human nature – the "heart of man".[15]

Ardant du Picq went unnoticed in his lifetime, but in the early 20th century he became an authority for the school of thought arguing that on the battlefield, moral factors ultimately trumped all others, including technology, which was quite a twisting of du Picq's original ideas. At the same time, some non-military writers, for example the Jewish-Polish banker Jan (Ivan) Bloch, cautioned that the new realities of modern war would make war economically and socially so destructive as to be "unthinkable".[16] Despite these warnings, the First World War became a textbook example of generals "planning for the previous war," staking their war plans, and national resources, on the idea of a quick victory by offensive strategies and tactics.[17]

In the latter half of the 19th century, navies changed even more extensively than armies, as new technology was proven decisive, then obsolescent, in the span of a few years – this is demonstrated by Michael Clemmesen in his contribution to this volume. Clemmesen also shows that during the four years of the First World War naval warfare changed less dramatically than land warfare, the development of submarines being somewhat an exception, and officer corps on either side of the conflict were well prepared to develop and adapt to the emerging technologies. What proved the problematic element in predictions was not the battlefield effect of new weapons but the extent of the potential escalation toward total war, as well as the officers' promises of decisive and rapid victory.

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15 Gat, *A History of Military Thought*, 115, 297.

16 Heuser, *The Evolution of Strategy*, 171–176.

17 Jack Snyder, "Civil-Military Relations and the Cult of the Offensive, 1914 and 1984," *Military Strategy and the Origins of the First World War: An international security reader*, ed. Steven E. Miller (Princeton: Princeton University Press, 1985), 108–109; Stephen Van Evera, "The Cult of the Offensive and the Origins of the First World War," *ibid*, 58–107.

For several years before the First World War, officers and civilians had debated extensively over the effects of the new technology: would it favour defence or offense, and would it make war shorter or more prolonged. The basic elements of current debates regarding future war originate from the very same period.

Since the industrial revolution, adaptation and innovation have become key indicators for the effectiveness of military organisations, as militaries have been required to perceive and shape future warfare as its technological underpinnings change in time. Both military theorists and historians of the early modern European history have described the interplay of social organisation and technology as a series of "revolutions in military affairs" (RMA). The very term is debatable, but it highlights the risks possible in attempting to prepare for a possible war during a time of peace.[18]

The clearest and the most extreme example so far of military technological change was the prospect of nuclear war. The very possibility of nuclear war forced militaries to adapt to an unknown reality, while at the same time casting doubt on their own expertise (as no one can be said to be an expert on nuclear war). Indeed, as the relevance and influence of nuclear weapons has remained a subject of debate to this day, new scientific and managerial techniques were nevertheless invented and adopted, in order to manage the uncertainty of future nuclear conflict.[19] Robert Jacobs' chapter describes the US Army's frantic efforts to prepare for battlefield nuclear use and to define its own role in a future nuclear war. At the same time, and this seems to corroborate the "generals preparing for previous war" hypothesis, in their operational and tactical thinking Army commanders merely extended their experience of World War Two tactics to a battlefield that now included nuclear weapons. "Nuclear weapons were simply bigger bombs," Jacobs writes, tracing the limits of the imagination of the officers in charge of preparing for World War Three.

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[18] *The Dynamics of Military Revolution, 1300–2050*, ed. MacGregor Knox and Williamson Murray (Cambridge: Cambridge University Press, 2001), 1–14.

[19] Fred M. Kaplan, *The Wizards of Armageddon* (Stanford, Calif.: Stanford University Press, 1991); Andrew J. Bacevich, *The Pentomic Era. The US Army between Korea and Vietnam* (Washington, D.C.: National Defense University, 1986).

Contemporary defence debates focus on the character of current and future war, looking at different timescales and producing vastly different theories. Transformation of war could be the result of further advances in communications and computer technology, or even biotechnology. Tobias Burgers' chapter deals with one facet of this school, namely the advance of artificial intelligence and unmanned warfighting systems, the effects of which are difficult to fathom, but in the worst case scenario may lead to a non-human, perpetual state of conflict. Other theorists point to the shifting international system as marking a change in warfare: either an intensification of sub-state "new wars," a combined "hybrid warfare" or a return to great power conflict. The wealth of contending ideas may indicate both intellectual ferment and a profound worry over the role of Western militaries.[20]

Meanwhile, military historians have tended to return the focus on the enduring characteristics of war. Some have explicitly stated their case to be a remedy against excessive technophilia and optimism regarding either the character of war, or the capacity of Western forces to bring "silver bullet" solutions to the enduring problems of friction and the fog of battle. In this vein, Martin van Creveld's preface in this volume stresses the enduring lessons of military history as the only possible basis for thinking about future war.[21]

Future war in theories of military innovation

A straightforward answer to the question of how to think about future war is normative and Realist: states (and their institutions) perceive "objective" external developments and react to them. What follows from this point of view is that militaries receive policy directives from their civil-

[20] Rupert Smith, *The Utility of Force: The art of war in the modern world* (N.Y.: Vintage, 2008), x–xi; Mary Kaldor, *New and Old Wars: Organised violence in a global era* (Cambridge: Polity, 2013); Martin van Creveld, *The Transformation of War* (New York: Free Press, 1991).

[21] Colin S. Gray, *Strategy for Chaos: Revolutions in military affairs and the evidence of history* (London: Frank Cass, 2002); Barry D. Watts, *Clausewitzian Friction and Future War*, McNair paper No. 52 (Washington: National Defense University, 1996); Colin M. Fleming, "New or Old Wars? Debating a Clausewitzian future," *Journal of Strategic Studies* 32:2 (2009): 213–241.

ian superiors and attempt to develop the most cost-effective solutions in order to achieve the state's political objectives. According to this perspective, war preparation is quite a simple process. However, other researchers (organisational-culturalist theorists) have pointed to the pathologies of military forecasting and anticipation, accounting for the multiple and sometimes puzzling failures of foresight in the field of military preparation for future wars. They have shown that the traditional explanation does not account for the wide variety of human, organisational and cultural factors that intervene throughout this process. It is unclear, as a variety of writings makes plain, how much is left in reality of this supposedly smooth mechanism.[22]

Thinking about future war may be shaped by a considerable range of factors, ranging from cognitive biases and especially perception and learning, socio-economic changes, strategic culture, or organisational factors inside or outside the military. It is apparent that each particular factor is highlighted by a different major school of political science that focus on individual decisions, structural relations or cultural "rules" and frameworks.[23]

Cognitive biases and group dynamics have been shown to affect thinking about future war, as its conjectural nature, possible risks and uncertainty are susceptible to the anomalies that affect individual decision makers, as well as groups. Studies about state (or military) perception and learning can be considered a subset of the cognitive approach, and researchers have often pointed out the difficulties and mistakes of learning in militaries, even after defeat. Militaries may also over-learn, or apply the lessons of the past without due modification. Recent work about military learning has emphasised the importance of pre-existing ideas that allow the translation of complex information into "lessons" that

[22] Stephen van Evera detailed the many misapprehensions that underlay decisions to go to war in *Causes of war: Power and the roots of conflict* (Ithaca, N.Y.: Cornell University Press, 2013), 14–32, see also Gideon Rose, "Neoclassical Realism and Theories of Foreign Policy," *World Politics* 51 (1998): 144–172.

[23] Mark Lichbach, "Social Theory and Comparative Politics," – *Comparative Politics: Rationality, Culture, and Structure*, ed. Mark Lichbach and Alan Zuckerman (Cambridge: Cambridge University Press, 1997), 239–276; Jeffrey Legro, *Rethinking the World: Great power strategies and international order* (Ithaca, N.Y.: Cornell University Press, 2005).

are accessible to the professional soldier and can be disseminated in simpler form throughout the military.[24]

Thinking and presenting the possibilities of future war is a key field of interaction between civilian and military echelons. Officers have to make their case to their civilian overseers (at least in Western democracies) as to the preparations necessary. This process of push-and-pull influence and the struggle over resources has often been fraught with dissatisfaction and conflict. According to Allan R. Millett and Williamson Murray, the ability of the military to acquire the necessary resources depends on the professionalism, the political skills, and the authority of the top officers. From a practitioner's point of view, Rupert Smith has claimed that political constraints limit the options that officers can present to their masters.[25] Michael Clemmesen's article in this volume forcefully illustrates Smith's thesis with examples from the First World War. On the other hand, Barry Posen claims that only top-down civilian pressure brings innovation to hidebound peacetime militaries. In any case, officers have attempted to bring the wider civilian society around to their views regarding future conflict, as typified by Benedict von Bremen's paper in this volume on the popular "World War Three" literature in the 1970's.

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[24] Emanuel Adler and Peter M. Haas, "Conclusion: epistemic communities, world order, and the creation of a reflective research program," *International Organization* 46:1 (1992): 367–390; W. Alexander Vacca, "Learning About Military Effectiveness: Lessons drawn by military observers from the Russo-Japanese war" (APSA 2009 Toronto Meeting Paper), https://ssrn.com/abstract=1451509 (accessed 4 October 2017); Robert Jervis, *Perception and Misperception in International Politics* (Princeton, N.J.: Princeton University Press, 1976), 129–134; Aaron Rapport, "The Long and Short of It: Cognitive constraints on leaders' assessments of "post-war" Iraq," *International Security* 37:3 (2013): 133–171; John A. Nagl, *Learning to Eat Soup with a Knife: Counterinsurgency lessons from Malaya and Vietnam* (Chicago: University of Chicago Press, 2005); Keren Yarhi-Milo, "Knowing Thy Adversary: Assessments of intentions in international relations" (Unpublished PhD Thesis: University of Pennsylvania, 2009); Janine Davidson, *Lifting the Fog of Peace: How Americans learned to fight modern war* (Ann Arbor: University of Michigan Press, 2010).

[25] Allan R. Millett, Williamson Murray and Kenneth H. Watman, "The Effectiveness of Military Organizations," – *Military Effectiveness*, Volume 1: The First World War, ed. Allan R. Millett and Williamson Murray (Cambridge: Cambridge University Press, 2010), 1–30); Smith, *The Utility of Force*, x–xi; Barry Posen, *The Sources of Military Doctrine: France, Britain, and Germany between the World War* (Ithaca, N.Y.: Cornell University Press, 1984).

Military planning, as other aspects of defence policy formation, are classic subjects for bureaucratic politics analysis. From this perspective, war plans can be seen as a type of "standard operating procedures" that limit decision making. In this analysis, militaries as a whole, and also their sub-units, are engaged in a struggle for resources. Bureaucratic political models have been effective in post-hoc analysis, but they have been criticised for their lack of predictive power. A pertinent answer to these shortcomings is an integration of organisational and cultural theories for strategic behaviour.[26]

"Culturalist" explanations of security policy have a long history, rising in prominence with the debate over Soviet strategic culture. According to these theories, culture shapes the service arm, military and national perceptions of future war, and limits the possible range of their responses to change[27]. Later attempts at explaining strategic and military culture (as well as their interaction) have sought to explain the origins of these cultural practices and their actual influence on military doctrine and procurement.[28]

These authors all note that culture shapes military conceptions of future war, from priorities ("what is important") to possibilities. An important insight of culturalist theories is that thinking about future war is not only about enemy capabilities, but also about one's own limitations and preferences. For all their promise, cultural explanations in

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[26] Graham T. Allison and Morton H. Halperin. "Bureaucratic Politics: A paradigm and some policy implications," *World Politics* 24:S1 (1972): 40–79; Robert W. Komer, *Bureaucracy Does Its Thing: Institutional constraints on US government performance in Vietnam* (DTIC Document, 1972); Posen, *The Sources of Military Doctrin*e, 222–223; Steven P. Rosen, *Winning the Next War: Innovation and the modern military* (Ithaca, N.Y.: Cornell University Press, 1994).

[27] Raymond L. Garthoff, *The Soviet Image of Future War* (Washington: Public Affairs Press, 1959); Nathan Leites, *Soviet Style in War*, revised edition (Santa Monica: RAND, 1992); Carl H. Builder, *The Masks of War: American military styles in strategy and analysis* (Baltimore: Johns Hopkins University Press, 1989).

[28] Jeffrey W. Legro, *Cooperation Under Fire: Anglo-German restraint during World War II* (Ithaca, N.Y.: Cornell University Press, 2013); Gil-li Vardi, "The Enigma of German Operational Theory: The evolution of military thought in Germany, 1919–1938" (PhD dissertation: The London School of Economics and Political Science, 2008); Elizabeth Kier, *Imagining War: French and British military doctrine between the wars* (Princeton, N.J.: Princeton University Press, 1997), 144–145; Adamsky, *The Culture of Military Innovation*.

the military as in other spheres tend to treat strategic cultures as immutable, whereas more sophisticated explanations show not only how strategic cultures are constituted but also how they can change through time.[29]

These diverse approaches offer differing expectations regarding military anticipation. Realist theories, as well as most of the official pronouncements by military professionals, would claim that militaries focus on the major threat to national sovereignty and existence. Organisational-culturalist theories, however, claim that militaries (or factions within militaries) focus on threats and missions that are most in-line with their self-identification, such as being most suitable to their preferred weapons and methods. Bureaucratic theories claim that militaries and their sub-organisations would focus on missions that are best calculated to enhance their organisational interests, mainly resources, but also prestige and influence, while at the same time maintaining organisational inertia and mostly putting off change. Next we will discuss briefly where can an historian find plans and ideas about future war, and also trace some trends in the historiography about future wars in history.

War plans and future wars in historiography

Thinking about future war takes place by different groups of soldiers and civilians, for a variety of purposes. Some modern militaries have formal documents that describe their thinking about future war – such is for example the Russian-Soviet view of the military doctrine.[30] Lower military echelons also sometimes put down their views of future warfare, such as the US Army's 1974 "Astarita Report". Such views of future war are sometimes encapsulated in describing a "future operating environment" or "operational concept". The US armed services publish such assessment documents (most recently the Joint Operating Environment of 2016),

[29] Tamir Libel, "Explaining the Security Paradigm Shift: Strategic culture, epistemic communities, and Israel's changing national security policy," *Defence Studies* 16:2 (2016): 137–156; Grissom, "The Future of Military Innovation Studies."

[30] Makhmut A. Gareev, *M. V. Frunze: Military Theorist* (New York: Pergamon, 1988), 380.

meant to guide "long term force generation" across the services.[31] Additionally, the practice of "net assessment" is an attempt to implement a formal method of envisioning future war. [32]

Thinking about future war will also inform military preparations: force generation (such as training and procurement), doctrine, and operational planning. The translation of shifts in thinking to changes in doctrine is not clear cut: Kevin Sheehan claimed that the US Army remained focused on a scenario of mainly-conventional war fought in Europe against Warsaw Pact forces, regardless of frequent doctrinal changes. A more recent work by Benjamin Jensen described processes of doctrinal innovations based on changed thinking about future war in the post-Vietnam US Army.[33]

Chapters in this volume refer to a variety of sources for official images of future war: doctrinal documents, war plans, training material, exercise reports and armed forces official magazines (Robert Jacobs), defence procurement decisions and their explanations, as well as official correspondence (Michael Clemmesen), diaries (Kaarel Piirimäe), pronouncements and even medieval chronicles in verse form (Iain MacInnes). One should also consider unofficial or semi-official sources, such as popular history books, as in the example of Sir Edward S. Creasy's *The Fifteen Decisive Battles of the Word*, published in 1851 and discussed by Oliver Hemmerle in this volume, or fictional histories of future war, which were sometimes written by retired generals and had a huge impact on debates

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[31] COL Harry G. Summers, *The Astarita Report: A military strategy for the multipolar world* (Carlisle Barracks: US Army Strategic Studies Institute, 1981); David A. Fastabend, "That Elusive Operational Concept," *Army Magazine* 51 (2001): 37–44; John F. Schmitt, *A Practical Guide for Developing and Writing Military Concepts* (MacLean, VA: Defense Adaptive Red Team Working Paper, 2002), 2–4; Joint Chiefs of Staff, "Joint Operating Environment 2035: The joint force in a contested and disordered world" (July 2016), at: https://fas.org/man/eprint/joe2035.pdf (accessed June 2017).

[32] "Net assessment" is a particularly US system of handling long-term forecasting in a strategic environment. As such, it is a methodology to encompass imagined war, and to create cost-effective solutions to the problems it presents, Eliot A. Cohen, *Net Assessment: An American approach* (Tel Aviv: Jaffee Center for Strategic Studies, 1990).

[33] Farrell and Terriff, "The Sources of Military Change," 5; Kevin P. Sheehan, "Preparing for an Imaginary War?: Examining peacetime functions and changes of army doctrine" (Cambridge, Mass.: Harvard University PhD dissertation, 1988); Benjamin Jensen. *Forging the Sword: Doctrinal change in the US Army* (Stanford, CA: Stanford University Press, 2016).

and policies in the 1970s (Benedict von Bremen's contribution). The sheer range of sources, each with its own methodological advantages and limitations, shows that envisioning future war can have several different (perhaps contested) meanings and purposes, even in a hierarchical and closed organisation such as armed forces.

Historians have approached operational planning and procurement as processes, and highlighted that the supposedly logical and straightforward planning and procurement process is often dysfunctional. Various relevant factors – group dynamics, cultural explanations and bureaucratic turf-warfare – have been offered as possible explanations for suboptimal outcomes of such processes. War planning has been shown to constrain future action as well as to guide contemporary conduct (both in security policy and in diplomacy).[34]

The history of war planning in times of prolonged peace has only recently become the object of scholarly attention. Emily Goldman attributed the paucity of research on this subject to the focus of researchers on periods of crisis that provide high historical drama. Talbot C. Imlay and Monica Duffy Toft claim that planning in peacetime is mostly characterised by uncertainty. They suggest that future wars are conceived according to three major questions – identifying possible friends and foes, understanding the nature of future war, and determining its timing. Of these questions, or problems, Talbot and Toft claim that determining the timing of a future war is the most difficult, and that it exacerbates other problems.[35]

In contrast, studies of planning have often focused on events leading up to both world wars – a focus shared across other sub-fields of mili-

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[34] For example: Edward S. Miller, *War Plan Orange: The U.S. strategy to defeat Japan, 1897–1945* (Annapolis: Naval Institute Press, 1991); Nicholas A. Lambert, "British Naval Policy, 1913–1914: Financial limitation and strategic revolution," *The Journal of Modern History* 67:3 (1995): 595–626; Henry G. Gole, *The Road to Rainbow: Army planning for global war, 1934–1940* (Annapolis: Naval Institute Press, 2003); Paul Kennedy (editor), *The War Plans of the Great Powers: 1880–1914* (London: G. Allen and Unwin, 1979).

[35] Emily Goldman, *Power in Uncertain Times: Strategy in the fog of peace* (Redwood City: Stanford University Press, 2010), 5; *The Fog of Peace and War Planning: Military and strategic planning under uncertainty*, ed. Talbot C. Imlay and Monica Duffy Toft (Oxon.: Routledge, 2007), 4.

tary history. The run-up periods to either of the great wars (especially the interwar period) also allowed political scientists to compare state behaviour in planning and procurement, and to account for success or failure in the crucible of battle. Other researchers have focused on the planning process itself, either on land, at sea, or for the new air forces, as well as on the process of technological and doctrinal innovation during the period. For example, Kaarel Piirimäe's contribution to this volume shows that small states had to contend with the difficult strategic problems of the interwar period, and weren't exempt from the pitfalls of planning that befell larger states, such as France.[36]

Perhaps the best known and most widely analysed case in this regard is the First World War, both on land and at sea. The war was widely anticipated, yet disastrously different from the projections of armies throughout Europe – despite timely examples, such as the Russo–Japanese war of 1905, and prescient civilian observers. Michael Howard noted that many militaries extracted exactly the wrong ideas from historical experience. The "coming war" was also the subject of a great deal of speculative literature, both military and "civilian".[37]

War planning for the First World War is also often used to point out the price of inflexibility and the importance of planning as a decision-making factor, as well as the dynamics of an arms race. European powers were increasingly tied down in permanent military alliances, and viewed early mobilisation as decisive. The result, according to the commonly accepted wisdom, was a "doomsday machine" of automatically triggered mobilisations and declarations of war. However, recent work on Germany's notorious Schlieffen Plan has instead highlighted the permeable and politically expedient nature of war plans, as well as the need to focus on the "strategic concepts" enshrined in these plans.[38]

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[36] Murray and Millett, eds. *Military innovation in the interwar period*; Lieber, *War and the Engineers*; Rosen, *Winning the Next War;* Posen, *The Sources of Military Doctrin*e.

[37] Michael Howard, "Men against Fire: Expectations of war in 1914," *International Security* 9:1 (1984): 41–57; Antulio J. Echevarria, *Imagining Future War: The West's technological revolution and visions of wars to come, 1880–1914* (Newport, Con.: Greenwood Publishing Group, 2007).

[38] Kennedy, ed., *The War Plans of the Great Powers*; Gerhard Ritter, *The Schlieffen Plan: Critique of a Myth* (N.Y. Praeger, 1958); Hans Ehlert et al., eds., *The Schlieffen Plan: International Perspectives on the German Strategy for World War I* (University Press of Kentucky, 2014).

More recently, researchers have approached newly-opened archives for fresh insights on post-World War II history, including the Cold War, Arab–Israeli wars and nuclear war planning – the imagined war *par excellence*.[39]

Future war has also been imagined outside the military, both in fiction and in purportedly non-fictional works. These works have reflected and influenced military and political debate, for example in the 19th century "invasion literature" boom in Britain before the First World War, which "served as convenient weather-vanes pointing to diplomatic storm centres," shifting from France and Russia to Germany through the decades.[40] As Oliver Hemmerle indicates in his chapter, Edward S. Creasy 19th century book *Fifteen Decisive Battles of the World* has probably influenced the thinking about war to this day, contributing to the perception that great battles decide the outcome of wars and that historically most of those battles have been fought, and won, by Western armies.

Benedict von Bremen's chapter, already mentioned above, refers to another fertile period of popular literature regarding future war, dating from the 1970s. Future war scenarios are still being published, many with the express purpose of influencing defence policy. Recent examples include portrayals of a Chinese surprise attack against the United States, an EU-supported Russian invasion of Norway, or an escalating Russian "hybrid warfare" campaign in the Baltic.[41] Looking further ahead, war has

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[39] Jan Hoffenaar et al., eds., *Blueprints for Battle: Planning for war in Central Europe, 1948–1968* (Lexington, KY: University Press of Kentucky, 2012); Vojtech Mastny, Sven S. Holtsmark, and Andreas Wenger, eds., *War Plans and Alliances in the Cold War: Threat perceptions in the East and West* (Abingdon: Routledge, 2013); Kaplan, *The Wizards of Armageddon*; Michael Joseph Cohen, *Fighting World War Three from the Middle East: Allied contingency plans, 1945–1954* (London: Frank Cass, 1997).

[40] Cecil D. Eby, *The Road to Armageddon: The martial spirit in English popular literature, 1870–1914* (Durham: Duke University Press, 1987), 19–20.

[41] Peter W. Singer and August Cole, *Ghost Fleet: A novel of the next World War* (Boston: Houghton Mifflin Harcourt, 2015); General Sir Richard Shirreff, *War with Russia: An urgent warning from senior military command* (London: Hachette UK, 2016); *Okkupert* (2015), a Norwegian political thriller; and a BBC "mock-documentary" *World War Three: Inside The War Room* (broadcast May 2016) causing consternation in the Baltic states, http://www.bbc.co.uk/mediacentre/proginfo/2016/05/inside-the-war-room (accessed June 2017), Daniel Marcelino Rodrigues, "Conflict Prospects in Popular Culture: TV series, movies and future visions of war," unpublished paper

been a central subject of science fiction, from the late 18th century to our day. Beyond treatments of the effects of new technology on warfare and society, current military organisations have reached for science fiction in attempting to describe war beyond the immediate future.[42]

As the following chapters show, future war is far more than a mindless projection of the last war. It is a multifaceted image that incorporates analogies and deductions from near and far, as well as fears and hopes regarding technology and society, projected onto the uncertain future. Such a nuanced view is also supported by a recent wide-ranging review of the history of future war.[43]

The complexities and pitfalls of imagining future war are more relevant than ever, as future war scenarios still shape the policies of soldiers and statesmen around the world and are drawing greater attention in northern Europe. The common theme of this volume is that the methods and assumptions of militaries in their thinking about future war are an important area for study, analysis and debate. If thinking about future war is allowed to degenerate into an exercise in scaremongering, the failures of imagination that took place before past wars are just as likely to recur today.

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42 Echevarria, *Imagining Future War*; Clarke, *Voices prophesying war*; David Seed, *American science fiction and the Cold War: Literature and film* (London: Taylor & Francis, 1999). A notable example of a military forecasting centre commissioning science fiction is: United States Marine Corps, Science Fiction Futures, *Marine Corps Security Environment Forecast: Futures 2030–2045* (Quantico: USMC Warfighting laboratory, 2016).

43 Lawrence Freedman, *The Future of War: A history* (London: Penguin, 2017).

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(Not) Learning the Lessons of War?

The Scottish experience of conflict in the Second War of Independence (1332–1357)

Iain A. MacInnes

Scottish sources suggest that the Scottish king, Robert I, left instructions to his commanders on his deathbed for how war with England should be fought in the years to follow. Although it is unclear as to whether this "testament" was based on any sort of reality, or was simply a literary creation of later years, it is referred to commonly in Scottish historiography as something of a manual for the Scots, based upon the lessons learned by their warrior king. In the years after Robert I's death, however, the Scots lost three battles in fourteen years, and would go on to lose more examples in the decades to follow. Historians of medieval Scotland have, therefore, deduced that those Scottish military leaders who had gathered around their king's deathbed either ignored or forgot the advice of their king. This article aims to challenge this dominant historiographical view of the military history of this period of conflict, with particular focus given to the Second Scottish War of Independence (1332–1357). It will reconsider the extent to which the Scots adhered to the testament of "Good King Robert", and the degree to which they continued the type of war that their king had fought during his own time. It will re-examine the main battles of this second conflict with England and re-assess the extent to which the results of these set pieces should be seen as the dominant factors in relation to this period of war. Ultimately, this article will reconsider the extent to which lessons were indeed learned by Scottish commanders during the Second War of Independence, and the degree to which Scottish commanders, rather than abandoning hard-learned past lessons, instead prosecuted a style of war that aligned closely with the warfare advocated by Robert I.

According to some manuscript copies of a medieval Scottish chronicle, Robert I, the king who had led Scotland to freedom from English domination during the First Scottish War of Independence (1296–1328), called his nobles to his deathbed in his final days.[1] Here he supposedly presented to them his testament. This was a set of instructions to his commanders, and to those who would tutor the king's young successor, David II. They included lessons learned by the king himself on how to best fight the English foe. Included in this testament was military advice of a type that aligned with the style of war the king had prosecuted during his own reign, and with which he had ultimately been successful. As it is reported in verse form:

> On foot should be all Scottish war
> Let hill and marsh their foes debar
> And woods as walls prove such an arm
> That enemies do them no harm.
> In hidden spots keep every store
> And burn the plainlands them before
> So, when they find the land lie waste
> Needs must they pass away in haste
> Harried by cunning raids at night
> And threatening sounds from every height.
> Then, as they leave, with great array
> Smite with the sword and chase away.
> This is the counsel and intent
> Of Good King Robert's Testament.[2]

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[1] *Johannis de Fordun Scotichronicon cum Supplementis et Continuatione Walteri Boweri*, ed. W. Goodall, 2 vols (Edinburgh: Robert Fleming, 1759), ii, 232; see also Walter Bower, *Scotichronicon*, ed. D.E.R. Watt *et al*, 9 vols (Edinburgh: Mercat Press, 1993–1998), ix, 37. The earliest accounts of the king's deathbed scene suggest no last-minute instruction to his men about fighting the future war. Instead, the accounts focus on Bruce's determination to secure the safety of his soul, and for his nobles to choose one from among them who would take the king's heart on crusade (John Barbour, *The Bruce*, ed. A.A.M. Duncan (Edinburgh: Canongate, 1997), 748–754; *The True Chronicles of Jean le Bel, 1290–1360*, trans. N. Bryant (Woodbridge: Boydell Press, 2011), 52–53).

[2] Colm McNamee, *Robert Bruce: Our Most Valiant Prince, King and Lord* (Edinburgh: Birlinn, 2012), 299. The earliest version of this military strategy may come from a now-lost chronicle

Robert I's advice was, then, to continue the guerrilla tactics that had effectively denied English forces an outright conquest of Scotland, and which had been used in turn to transform a largely defensive form of war into an offensive one, with violent raids unleashed against English interests and possessions.[3] Perhaps implicit within such advice was a suggestion that the Scots should avoid facing the English in battle at all. Although this is not stated explicitly in the earliest iteration of this tale, it was developed in sixteenth-century retelling of the episode to form one of the key statements of supposed Scottish medieval military policy. For example, George Buchanan wrote that the Scots should,

> never…bring their whole force against the English at once, nor risk their fortune on the issue of one battle…the English, who inhabit a better country than the Scots, exceed them in the number of men, in money, and, in fine, in all the materiel of war, and, therefore, on account of these advantages, are more accustomed to ease, and more impatient of fatigue; but the Scots, nurtured in a sterner soil, are by their parsimony and constant exercise rendered more healthy, and by the nature of their education better fitted to undergo military toil, and, therefore, better adapted for irregular skirmishes, wearing out the enemy by degrees, and breaking them by occasional attacks, than for meeting them at once in a pitched battle.[4]

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from the period just after Robert I's reign, written by Bernard of Arbroath, chancellor of Scotland (see *Chron. Bower*, vi, 321, xvii-xviii; Michael Penman, *Robert the Bruce: King of the Scots* (New Haven: Yale University Press, 2014), 118). The interpolation of this chronicle fragment into Bower's fifteenth-century *Scotichronicon* makes no reference to this being part of a kingly deathbed instruction. Indeed, a similar description of Scottish tactics, again without reference to a deathbed testament, is also made in Jean Froissart's *Chroniques*, written in the last decades of the fourteenth century. Here the basic tenets of Scottish military strategy are discussed in relation to the events after the battle of Halidon Hill (1333) (*The Wars of Edward III: Sources and Interpretations*, ed. Clifford J. Rogers (Woodbridge: Boydell Press, 1999), 40–41).

[3] For Bruce's military career, see for example Michael Brown, *Bannockburn: The Scottish War and the British Isles, 1307–1323* (Edinburgh: Edinburgh University Press, 2008), 93–103.

[4] George Buchanan, *The History of Scotland*, trans. J. Aikman, 4 vols (Glasgow and Edinburgh: Blackie, Fullarton & Co., 1827–1829), i, 444–445.

Other accounts from the same period would further develop these points and similarly stress the importance of battle-avoidance when it came to fighting the English.[5]

Importantly, however, such declarations insisting that facing the English in battle should be avoided came from a period in which the Scots had indeed faced their enemy several times, and lost on almost every occasion. In particular, the sixteenth-century Scottish disasters at Flodden (1513), Solway Moss (1542) and Pinkie (1547) provided all the examples that contemporary writers undoubtedly needed to stress this particular facet of military strategy.[6] As such, it is little surprise that these writers placed within Robert Bruce's last words an instruction to avoid the battlefield catastrophes that they knew followed the king's reign. However, as indicated above, this statement is a later addition. While the Scots are encouraged to attack the English through "cunning raids at night," and to "smite with the sword and chase away" the enemy upon their retreat, the original account of "Good King Robert's Testament" makes no explicit comment on the importance of battle-avoidance to Scottish strategy. Despite this, historians continue to emphasise the importance of battles, and in particular of battlefield defeat, in their analyses of fourteenth-century Scottish warfare.[7] In part this is because some fourteenth- and early fifteenth-century examples, such as the battles of Dupplin Moor (1332),

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[5] *The Chronicles of Scotland Compiled by Hector Boece*, translated into Scots by John Bellenden, 1531, 2 vols (Edinburgh: Scottish Text Society, 1938–1941), ii, 291–292; *Leslie's History of Scotland*, ed. E.G. Cody, 4 vols (Edinburgh: Scottish Text Society, 1884–1895), ii, 12–13; John Major, *A History of Greater Britain* (Edinburgh: Scottish History Society, 1982), 264–265.

[6] For discussion of all three battles, and this period of sixteenth-century conflict more widely, see Gervase Phillips, *The Anglo–Scots Wars, 1513–1550: A Military History* (Woodbridge: Boydell Press, 1999).

[7] For example, see Alexander Grant, "Disaster at Neville's Cross: The Scottish point of view," – *The Battle of Neville's Cross, 1346*, ed. D. Rollason and M. Prestwich (Stamford: Shaun Tyas, 1998), 15–35; Alastair J. Macdonald, "Triumph and Disaster: Scottish Military Leadership in the Middle Ages," – *Scotland and England at War, c.1296–c.1513*, ed. A. King and D. Simpkin (Leiden: Brill, 2012), 255–282; Michael A. Penman, *The Scottish Civil War: the Bruces and the Balliols and the War for the Control of Scotland, 1286–1356* (Stroud: History Press, 2002), 129, 131; Michael Brown, *The Black Douglases: War and Lordship in Late Medieval Scotland, 1300–1455* (East Linton: Tuckwell Press, 1998), 149; Kelly DeVries, *Infantry Warfare in the Early Fourteenth Century* (Woodbridge: Boydell Press, 1996), 177–178; J. Anthony Tuck, "War and Society in the Medieval North," *Northern History*, 21 (1985): 33–52, at 39.

Halidon Hill (1333), Neville's Cross (1346) and Homildon Hill (1402), appear to be the examples that prove the rule. These large-scale Scottish defeats reinforce the idea that battle-avoidance could have served Scottish forces far better than choosing to face the English on the battlefield. And as a result of this view there has developed an overriding perception that the period of the Second Scottish War of Independence was solely one of Scottish defeat, or at best Scottish survival against the odds. It is one of the objects of this article to question this accepted view.

Another reason for the modern historiographical stress on battle-avoidance relates to the debate currently ongoing regarding the nature of medieval strategy and tactics more broadly. A vigorous discussion continues in which historians have suggested opposing views on the importance of either battle-seeking or battle-avoidance as the key driver of military affairs in the medieval period.[8] This historiographical debate has also influenced those analysing military activity in fourteenth-century Scotland and, while the principal tenets of the wider discussion have not been adopted in their entirety, they have helped to reinforce a particular assumption regarding this period of conflict. This is that the Scottish nobles who gathered around the king's deathbed took apparently little regard of their king's wishes. For the aforementioned battlefield defeats in the period up to 1402 appear to act as exemplars of how not to fight the English. It is this perceived error of the post-1329 generation of Scottish commanders in fighting pitched battles at all that has been a major focus of Scottish historians. As Macdonald has argued, the period of the Second Scottish War of Independence is seen as one in which there was "[a] most radical shift…from highly effective military activity conducted during the reign of Robert I to the military disasters that occurred in 1332–1333, after his death."[9] Indeed, Macdonald underlines that the commanders of this next phase of conflict appear "to have been suddenly incompetent,"

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[8] See, for example, Stephen Morillo, "Battle Seeking: The Contexts and Limits of Vegetian Strategy," *Journal of Medieval Military History*, 1 (2003): 21–41; Clifford J. Rogers, "The Vegetian "Science of Warfare" in the Middle Ages," *Journal of Medieval Military History*, 1 (2003): 1–19; John Gillingham, ""Up with Orthodoxy!": In Defence of Vegetian Warfare," *Journal of Medieval Military History*, 2 (2004): 149–158.

[9] Macdonald, "Triumph and Disaster," 256.

Statue of Robert the Bruce, King of Scots from 1306 until his death in 1329, on the esplanade at Stirling Castle, Scotland, by Andrew Currie. Courtesy Pixabay

and he describes the years of 1332–1333 as "the apogee of apparent Scottish military incompetence."[10] Michael Brown has also argued that only by returning to the ideas laid out in "Good King Robert's Testament," to the policy of deliberate guerrilla warfare, were the Scots able to put behind them two years when they "paid a heavy price in defeat."[11] The fact that later Scottish nobles failed to take on board the hard lessons learned by Robert I has condemned those who led the war effort in the years that followed. Little has been attempted, however, to question this accepted view of medieval Scottish warfare in the years after Robert I's death.[12]

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[10] *Ibid*., 256, 261.

[11] Brown, *Bannockburn*, 93–94.

[12] For a detailed reconsideration of this period of conflict, see Iain A. MacInnes, *Scotland's Second War of Independence, 1332–1357* (Woodbridge: Boydell Press, 2016).

Experience, leadership, and the Brucean way of war

To begin, it is worth returning to Robert I's testament. Although unlikely to have been the words of the king himself, the themes addressed in the testament nonetheless reflect a logical set of tactics to overcome a more numerous, wealthier and better-equipped foe, whether in the fourteenth, fifteenth or sixteenth centuries. The strategy provided in the testament is given greater potency by the idea that Robert I had himself learned these lessons during his own wars as a result of changing tactics following his early defeats. For Robert I's own wartime experience had begun inauspiciously when, adopting "conventional" tactics of siege and battle, he had been defeated by both the English and by his Scottish enemies, to the extent that he was forced to flee the kingdom.[13] Following his return in 1307, Robert I apparently changed his approach and adopted more "unconventional" guerrilla tactics. He attacked castles by stratagem and surprise, and destroyed them after their capture to deny their use to the enemy. He employed destructive raiding as an offensive weapon of war across Scotland, England and Ireland, in an effort to enforce his will on the Scottish people, and enforce the reality of his kingship on England. And he largely avoided pitched battles with English forces, unless in circumstances that suited the Scots.[14] This is, then, the standard against which later Scottish commanders, their strategy and their tactics, have been compared in modern historiography. And looking at the principal war years of 1332 to 1338, it would appear that Scottish commanders actually did, to a great extent, follow the tactics attributed to Robert I. This should not come as any great surprise. Some historians have viewed this second phase of the conflict as being led by a new generation of commanders whose skills were not up to the task, or who did not have experience of the Brucean form of warfare. Macdonald suggests that the years of peace between 1327 and 1332 may have "blunted [the] skills to some extent" of

[13] See G.W.S. Barrow, *Robert Bruce and the Community of the Realm of Scotland* (Edinburgh: Edinburgh University Press, 2005), 188–212; Michael Brown, *The Wars of Scotland, 1214–1371* (Edinburgh: Edinburgh University Press, 2004), 197–202.

[14] Barrow, *Robert Bruce*, 213–242; Brown, *Wars of Scotland*, 202–231; David Cornell, *Bannockburn: The Triumph of Robert the Bruce* (New Haven: Yale University Press, 2009), 152–162.

Scottish soldiers and commanders.[15] He also argues that the new generation of Scottish commanders "fatally failed [their] test…[because] there was no reliable way that battlefield experience could be passed on to inexperienced leaders. They would have to learn lessons from scratch, if they lived long enough."[16] This is, however, something of an exaggeration.

There is no doubt that the Scottish military leadership was deprived of continuity by the deaths in quick succession of the two most experienced commanders of the previous conflict. Thomas Randolph and James Douglas had been Robert I's most trusted and skilled wartime leaders over the course of the preceding war and their loss, in 1330 (Douglas) and 1332 (Randolph), undoubtedly created a leadership vacuum for the Scottish war effort.[17] But beyond these two, the military leadership at the commencement of the Second War of Independence was more representative of continuity from the previous conflict than has been previously acknowledged. Many leading figures had participated in the wars of Robert I. They had experienced victory and success and would take that knowledge into the next conflict. Included amongst their number were the two senior military officers of the Scottish crown, the marshal Robert Keith, and the constable Gilbert Hay. Both men lived on into the period of the second conflict and should have been able to pass on their knowledge and experience to newer commanders and to the men who fought under them.[18] Other figures too had gained battlefield experience, were themselves veterans of Bannockburn and other victories, and again should have been able to bring their experience to bear in the renewed conflict after 1332. These included men such as Earl Malcolm of Lennox, Alexander Fraser, Robert Boyd, and Alexander Seton, prominent figures within the Scottish military leadership and the heads of militarily active kin groups.[19] They represented a potentially quite high degree

[15] Macdonald, "Triumph and Disaster," 279.

[16] Macdonald, "Triumph and Disaster," 279.

[17] No complete account has been written on Randolph's military career, but for some examples of his importance to the Bruce cause in the first war, see Penman, *Robert the Bruce*, 137–138, 140–141, 164–174, 235–239. For Douglas, see Brown, *Black Douglases*, 14–31.

[18] MacInnes, *Scotland's Second War*, 138–140.

[19] *Ibid.*, 118, 141–142.

of continuity of military leadership for Scottish forces in war. Indeed, it was the deaths of some of these men in the battles of 1332 and 1333 that, arguably, diluted the pool of talent available to lead Scottish forces in war in later years and forced the demands of leadership on others with less experience.[20] For this early part of the war, however, Scottish forces were not led by inexperienced men with little understanding of how contemporary war should be fought. It is worth, then, re-examining the nature of Scottish warfare throughout the Second War of Independence, and the extent to which it really aligned with the tactics attributed to Robert I's testament. Through such examination it should be possible to reconsider the pitched battles of the period and fit these into a more refined picture of Brucean warfare across this conflict.

Scotland's topography

Turning first to the use of topography, there is little doubt that Scottish commanders were able to utilise Scotland's terrain and turn it into one of the kingdom's greatest assets in the war with England. Firstly, it ensured that Scotland, unlike Wales before it, could not be encircled by English castles and garrisons and thus controlled in the aftermath of English invasion armies withdrawing south.[21] Successive English kings discovered that the geography of Scotland forced them along well-defined routes when marching their armies through the kingdom, and that these routes were prone to ambush from Scottish forces hidden in areas of

[20] For discussion of the leaders of the Scottish war effort in the period that followed 1333, and of the military experience gained by leading Scottish figures more generally, see MacInnes, *Scotland's Second War*, chapter 4.

[21] Rogers argues that Edward III attempted to pacify Scotland by establishing a "system of fortifications similar to the one his grandfather had built in Wales" (Clifford J. Rogers, *War Cruel and Sharp: English Strategy under Edward III, 1327–1360* (Woodbridge: Boydell Press, 2000), 87). But it is difficult to see how this could have functioned in reality. While Edward III did try and establish a system of fortifications to control southern Scotland, this was only ever intended to impose English order on that part of Scotland ceded to England by King Edward Balliol as recompense for the military aid granted to him by the English king during Balliol's attempts to seize the Scottish throne.

wood and bog.[22] In the Second War of Independence, when English invasion armies crossed the border successively in the winter of 1334–1335, and the summers of 1335, 1336, 1337 and 1338, Scottish commanders consistently avoided direct confrontation with the invading enemy. Instead, they retreated before the English armies, choosing to pick off smaller English bands of raiders and attack the less-protected rear of the enemy force, or to launch counter-raids into England following English retreat back across the frontier.[23] Even in 1333, when the English besieged Berwick-upon-Tweed, an action that led to the battle of Halidon Hill, the Scots at first attempted to lure English forces away by outflanking the besiegers and raiding Northern England. The sight of these northern territories in flames was meant to give the English pause for thought, especially as many of those serving within the besieging army were themselves northern lords.[24] The same tactic had been used by James Douglas during the first war, when in 1319 he successfully raided England and drew off the besieging forces of Edward II from Berwick as a result.[25] That the tactic failed to work a second time, in 1333, was down to Edward III's determination to remain, and the stronger control he had over his force than had his father previously. Although unsuccessful on this occasion, the tactic of withdrawing before an English advance, utilising the topography of Scotland to melt away before reappearing elsewhere when least expected, was one that the Scots would return to time and again in the years that followed.

A particularly detailed example of this Scottish ability is provided by the campaigns of 1336.[26] Led by the pre-eminent commander of the

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[22] For discussion of invasion routes and the topography of Scotland, see Geoffrey W.S. Barrow, "Land Routes: The Medieval Evidence," – *Loads and Roads in Scotland and Beyond: Land Transport over 6000 Years*, ed. A. Fenton and G. Stell (Edinburgh: John Donald, 1984), 49–66.

[23] For a combination of these various tactics in relation to the English invasions of 1337 and 1338, see MacInnes, *Scotland's Second War*, 30–36.

[24] *Ibid.*, 14–16; Ranald Nicholson, *Edward III and the Scots: The Formative Years of a Military Career, 1327 to 1335* (Oxford: Oxford University Press, 1965), 119–133.

[25] Penman, *Robert the Bruce*, 207–208.

[26] For a detailed account of these campaigns, see Iain A. MacInnes, ""To subject the north of the country to his rule": Edward III and the "Lochindorb *chevauchée*" of 1336," *Northern Scotland*, 3 (2012): 16–31; see also Rogers, *War Cruel and Sharp*, 115–123.

period, Andrew Murray, Scottish forces successfully negotiated difficult terrain to appear successively where they could do most damage, at least cost. During the early weeks of the English invasion, Edward III's forces were attacked at various points as they marched through southern Scotland, including ambushes in the "forests and mountains" of the West March, and at the key strategic river crossing point at Stirling.[27] Later in the campaign, while besieging Lochindorb Castle, in northern Scotland, Andrew Murray and his troops were forced to withdraw at the approach of a small English army under Edward III himself. Successfully avoiding a possible attempt by the English king to force them into a confrontation, the Scots headed south as Edward III continued his campaign through northeast Scotland.[28] While Edward III was sacking Aberdeen in the Scottish northeast, Andrew Murray appeared in the south, in Lanarkshire, to recruit forces from his own lands and to foment trouble in areas recently converted to English allegiance by the activities of Edward III.[29] In response to Murray's movements, another English force under John of Eltham, the king's brother, invaded southern Scotland, possibly with the intention of forcing a confrontation with Murray, or to drive him back north towards the waiting Edward III. Once again Murray was able to withdraw from any such confrontation, and made his way back north once more, utilising his knowledge of Scottish terrain and topography to avoid the army of Edward III as he did so.[30] By October, when Edward III was at Andrew Murray's castle of Bothwell repairing its defences, Murray himself was in the Scottish northeast, systematically devastating the lands through which the English king had progressed only two months earlier.[31] No doubt, this ability to appear where the enemy was not had much to do with the smaller forces available to the Scots. Large English invasion armies could not move with much speed, nor could they progress over difficult terrain without leaving baggage trains and supplies behind. Even Edward III's smaller, more mobile force of 1336 struggled at

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27 MacInnes, "Edward III and the Lochindorb *chevauchée*," 17.
28 *Ibid.*, 19–20, 23–24.
29 MacInnes, *Scotland's Second War*, 27–28.
30 *Ibid.*, 28–29.
31 *bid.*, 29.

various times to locate sufficient food for themselves and fodder for their horses.[32] Record evidence shows that English knights even learned to take smaller horses to Scotland as their large destriers were of little use in the Scottish terrain.[33] There is, then, little doubt that Scotland's topography played its part. The knowledge and utilisation of Scottish terrain to allow the ambush and outflanking of English forces was as important in the 1330s as it had been during Robert I's wars.

The tactics of destruction

In relation to the second point of King Robert's testament, scorched earth tactics, this had been a Scottish policy since before Robert I's leadership in war. Indeed, William Wallace was said to have ordered that the fields of southern Scotland be laid waste in 1298 to afford the English armies of Edward I nothing with which to sustain them.[34] The tactic almost worked. Deprived of supplies, the English army was starving and about to return south when word reached them of the whereabouts of Scottish forces, and an English victory at the battle of Falkirk was the eventual outcome.[35] The devastation of the Scottish south in anticipation of English invasions continued in the years to come, as did the removal of sheep and cattle to wooded or upland areas to deny the enemy easy access to such resources. Slash and burn tactics in anticipation of English invasions were, however, only part of the policy of destruction employed within Scotland during this time. For the ravaging of lands with fire and sword was also a regular tactic of Scottish forces within Scotland, as well as during their regular raids into Northern England, or indeed their campaigns

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[32] *Original Letters Illustrative of English History*, 3rd series, ed. Henry Ellis, 3 vols (London: Harding, Triphook and Lepard, 1846), i, 36; Rogers, *Wars of Edward III*, 49; Thomas Gray, *Scalacronica*, ed. A. King (Woodbridge: Surtees Society, 2005), 123.

[33] Andrew Ayton, *Knights and Warhorses: Military Service and the English Aristocracy under Edward III* (Woodbridge: Boydell Press, 1999), 213–214.

[34] Fiona Watson, "Sir William Wallace: What We Do – and Don't – Know," in *The Wallace Book*, ed. Edward J. Cowan (Edinburgh: John Donald, 2007), 26–41, at 34.

[35] Fiona Watson, *Under the Hammer: Edward I and Scotland, 1286–1307* (East Linton: Tuckwell Press, 1998), 65–67.

in Ireland.[36] For the Anglo–Scottish wars were at various points also periods of civil conflict within Scotland between supporters of different claimants to the throne. Robert I of Scotland had won the kingdom to his rule as much at the point of the sword as he had through persuasion, and his destruction of territory in northeast Scotland was said by one chronicler to have reduced it to such utter devastation that people still spoke sorrowfully of it fifty years later.[37] Taking into account chronicle hyperbole, it is undeniable that the Scots fought a war within Scotland that included the deliberate destruction of crops, spoliation of goods and ruination of land that was intended to force submission and allegiance to the Bruce regime. This was a war fought for the loyalty of the people of Scotland during a period when lordship over them was keenly contested. The lord who was able to devastate another's lands demonstrated the weakness of he who currently possessed them. He was, after all, unable to look after his tenants and prevent such destruction. More than this, the lord who was capable of creating such devastation was also, by extension, also powerful enough to prevent its repetition in future and was, therefore, a lord worth following.

This strategy continued during the Second War of Independence in a time where an alternative ruling dynasty was supported by Edward III of England, and the adult male representative of that dynasty (Edward Balliol) was actively campaigning in Scotland. The already-discussed Andrew Murray was to the fore in meting out devastating punishment against the territories of those who supported the other side, or those who wavered in their allegiance. As already stated, he targeted northeast Scotland in 1336 as soon as Edward III had departed the area, devastating the region to reassert the continued reality of Bruce

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[36] For Scottish raiding of Northern England and Ireland, see Colm McNamee, *The Wars of the Bruces: Scotland, England and Ireland, 1306–1328* (East Linton: Tuckwell Press, 1997), chapters 3 and 5.

[37] Barbour, *The Bruce*, 332–334. The "herschip" of Buchan, as this event was called, witnessed the particularly violent devastation of lands that belonged to Bruce's enemies, the Comyn family. The actions of Robert I's forces in the region, where they "[burned] all Buchan from end to end, sparing none," was undoubtedly intended to live long in the memory and served as an object lesson to others of the dangers of non-submission.

dominance.[38] The results of this devastation are outlined by one chronicler who commented that "by the continual depredations of both sides the whole land of Gowrie, Angus and the Mearns was reduced to almost irredeemable devastation and extreme poverty."[39] Other regions, such as south-west and south-east Scotland, respectively supporters of the alternate regime and territory conquered by the English, were similarly visited repeatedly by attacking Scottish forces. The Scots used such raids to exact tribute and ransom from local people, and to reinforce the message that the Bruce regime remained active and militarily ascendant.[40] All of this was a deliberate policy. It was intended to enforce submission to the Bruce regime. It was also to remind those who lived in Scotland that, while English armies could traverse through Scotland almost at will in the summer months, it was the Scots who remained during the rest of the year and who were able to enforce their lordship more consistently. This was a direct continuation of the war that Robert I had himself fought in the early years after his seizure of the throne. And while it has far more of a "shock and awe" approach to it than "winning hearts and minds," it was the war that needed to be fought to ensure that the allegiance of the Scottish people remained solidly with the Bruce regime. Medieval lordship had to be enforced. It had to be seen to be operating. As already indicated, the physical demonstration of strong lordship was an essential component of the war being fought. This was a war fought for people's loyalty, as much as it was fought over territory. And as such, the slash and burn approach worked well for the supporters of David II as an offensive tool, to be wielded against recalcitrant or wavering Scots, as much as it could be used as a defensive measure against invading English armies.

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[38] Iain A. MacInnes, "Shock and Awe: The use of terror as a psychological weapon during the Bruce-Balliol Civil War, 1332–1338," – *England and Scotland in the Fourteenth Century: New Perspectives*, ed. A. King and M. Penman (Woodbridge: Boydell & Brewer, 2007), 40–59, at 46–47.

[39] *Chron. Bower*, vii, 115.

[40] MacInnes, "Shock and Awe," 43–49.

Battle-seeking or battle-avoidance?

As for Bruce's supposed instruction that the Scots always fight on foot, there can be little doubt that this referred to battlefield tactics. The Scots, when raiding Northern England and campaigning throughout Scotland, were based predominantly around fast-moving, mounted forces. These allowed them to cover large distances on organised raids, dispensing damage and destruction against the countryside, but with little chance of being pinned down and forced into a confrontation.[41] The Hainaulter chronicler, Jean le Bel, famously wrote of the Scots that,

> when they mean to invade England their army will cover twenty or thirty leagues at a stretch, by day or night. Anyone who didn't know their ways might well be amazed. The fact is that when they invade they're all mounted, except for the rabble who follow them on foot; their knights and squires ride good sturdy rounceys and the others little hackneys. And because of the mountainous terrain in those parts they have no baggage train and carry no supplies of bread or wine…[42]

It was a form of warfare that the English would themselves take up during the Hundred Years War in the tactic which became known as the *chevauchée*.[43] This was the Scots' main means of combating the English, as well as internal enemies, and cannot be aligned with the words of Robert I's testament, where fighting on foot was stressed as the key element.

This comment must, therefore, relate specifically to battlefield scenarios (including smaller-scale skirmishes and ambushes), with the specific adaptation of this point in later years to more explicitly stipulate that the Scots not fight the English in battle at all. As Buchanan had argued in the sixteenth century, the Scots should "never…bring their whole force against the English at once, nor risk their fortune on the issue of one

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41 Alastair J. Macdonald, "The Kingdom of Scotland at War, 1332–1488," – *A Military History of Scotland*, ed. Edward M. Speirs, Jeremy A. Crang and Matthew J. Strickland (Edinburgh: Edinburgh University Press, 2012), 158–181, at 163–164.

42 *Chron. Le Bel*, 35–36.

43 Rogers, *War Cruel and Sharp*, 5–8.

battle."[44] It appears clear, however, that this was not what was originally intended. The suggestion that the Scots fight on foot was nothing new. They had been doing so since at least the twelfth century.[45] Although the Scottish cavalry arm did not fully disappear in the fourteenth century, the role of knights in battle changed as Scottish warfare followed broader medieval trends. Here the knights dismounted and fought as heavily armoured and heavily armed infantry, reinforced by missile troops and lesser-armoured foot.[46] But Robert I's supposed advice appears at first glance to have been of little assistance. For the Scots fought on foot in numerous fourteenth-century examples of catastrophic battlefield defeat. The battles of Dunbar (1296), Falkirk (1298), Dupplin Moor (1332), Halidon Hill (1333), Neville's Cross (1346) and Homildon Hill (1402) provide apparently ample evidence of a basic Scottish inability to succeed in large-scale pitched battles, whether they fought on foot or not. Indeed, such defeats appear to align with sixteenth-century and modern-day comment that the Scots should have learned not to fight large-scale battles against the English at all.

Those sixteenth-century writers, and their modern successors, have benefited from hindsight in knowing what would happen in the battles that followed, and in being able to perceive longer-term patterns of defeat in such situations. The commanders of the Second Scottish War of Independence did not. They may be seen by some historians to have ignored the advice of Robert I and marched to their ultimate defeat at Dupplin Moor (1332), Halidon Hill (1333), and Neville's Cross (1346).[47] But it is arguable that, instead of disregarding the lessons of the past, these men actually fought the battles that they did because they were following where their late king had led. There is no denying that the Scots fought in the post-1329 battles on foot, just as Robert I had supposedly

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[44] Buchanan, *History of Scotland*, i, 444–445.

[45] For Scottish warfare in this earlier period, see Matthew J. Strickland, "The Kings of Scots at War, c.1093–1286," – *A Military History of Scotland*, 94–132.

[46] See Michael Prestwich, "The Wars of Independence," – *A Military History of Scotland*, 133–157; MacInnes, *Scotland Second War*, chapter 2.

[47] For detailed discussion of these three battles, see DeVries, *Infantry Warfare*, 112–128, 176–187.

instructed them. Even if his testament was a later creation, Robert I's wartime example was one where battles were shown to be of major importance. More than this they were battles that the Scots could, and indeed did win. Robert I's success over the English at Bannockburn (1314), as well as smaller-scale victories at Loudon Hill (1307), Myton (1319) and Old Byland (1322), may have been interpreted as just the sort of template for battlefield success that the testament also purported to be for warfare more generally.[48] That Robert I's testament in its earliest form made no mention of battle avoidance should come as little surprise. Why would it? Robert I's victories in battle showed up the myth of contemporary English battlefield dominance, and emphasised that success could be gained, as long as the conditions under which the battle was fought were advantageous.

It is arguable that at least two of the three examples from the Second Scottish War of Independence fit this model of advantageous conditions. Dupplin Moor was a battle against a very much smaller invading Anglo–Scottish force that lacked widespread support.[49] The supporters of David II appear to have been organised in their planning to meet the invasion, and summoned two armies to meet a threat that was thoroughly anticipated. The invading forces met the northern army in battle, and so did not face the full extent of the Scottish military on the field. Still, the Bruce forces outnumbered their enemies to a large extent and appear to have fully expected to win at Dupplin.[50] The Scottish defeat that followed was caused by a combination of Scottish overconfidence, a disorderly charge against a static English defensive line, and good tactics on the part of the invading forces that utilised the potent combination of archers and infantry.[51] Neville's Cross was fought by a young, energetic Scottish mon-

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[48] For modern discussion of Bannockburn and Loudon Hill, see DeVries, *Infantry Warfare*, 66–85, 49–57. For medieval description of the battles of Myton and Old Byland, see *Bruce* (Duncan), 640–646, 684–694. For further examples of Scottish battlefield success, this time in Ireland, see McNamee, *Wars of the Bruces*, 166–205.

[49] MacInnes, *Scotland's Second War*, 11–13.

[50] DeVries, *Infantry Warfare*, 112–119.

[51] *Chron. Bower*, vii, 77–79; *The Chronicle of Lanercost 1272–1346*, ed. H.E. Maxwell (Glasgow: James Maclehose & Sons, 1913), 269–271; *Scalacronica* (King), 109–111; *The Brut or Chronicles of England*, ed. F.W.D. Brie (London: Early English Text Society, 1906–1908), 276–279;

arch during a period when the English king, and the bulk of his army, was fighting in France. David II was also confident of battlefield success because the period immediately before had been one of increasing Scottish military activity and accomplishment.[52] The Scots even went into battle with new tactics, Scottish soldiers wearing improved head protection and lowering their heads when English archers fired upon them to ensure that they did not experience the same blinding effect from English arrows that they had suffered at previous defeats.[53] There was, it could be argued, no better time to fight the English in battle.[54] The eventual defeat outside Durham against a hastily-arrayed force from Northern England occurred in part as a result of the terrain, which broke up the Scottish attack, and the retreat of the Scottish rear division when it could have been brought to bear against the English, as well as the efficacy of the English longbow.

Halidon Hill was somewhat different. It was, at first glance, a battle that could have been avoided.[55] Coming as it did as a result of an agreement reached with the garrison of Berwick to surrender to Edward III if not relieved by a Scottish army in the field, the Scots could have chosen to accept the loss of the town. That the battle occurred at all may be in part a result of the importance which Robert I himself placed on the retention of Berwick-upon-Tweed in Scottish hands. Its capture had been an important symbolic victory for Robert I, and its successful defence against English siege had further enhanced the king's

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Chronica Monasterii de Melsa, ed. E.A. Bond (London: Rolls Series, 1868), ii, 363–364; *Johannis de Fordun, Cronica Gentis Scotorum*, ed. W.F. Skene (Edinburgh: Edmonston and Douglas, 1871–1872), ii, 347; Andrew of Wyntoun, *The Orygynale Cronykil of Scotland*, ed. D. Laing (Edinburgh: William Paterson, 1872–1879), ii, 388; DeVries, *Infantry Warfare*, 119–120.

52 *Chron. Lanercost* (Maxwell), 337–341; *Chron. Bower*, vii, 259–261; *The Anonimalle Chronicle, 1307 to 1334, from Brotherton Collection MS. 29*, ed. W.R. Childs and J. Taylor (Leeds: Yorkshire Archaeological Society, 1991), 27–28; Clifford J. Rogers, "The Scottish Invasion of 1346," *Northern History*, 34 (1998), 51–82, at 61–66; DeVries, *Infantry Warfare*, 183–187; Michael Prestwich, "The English at the Battle of Neville's Cross," – *The Battle of Neville's Cross*, ed. Rollason and Prestwich, 1–14; Grant, "Disaster at Neville's Cross," 25–33.

53 *The Chronicle of Geoffrey le Baker*, trans. D. Preest, ed. R. Barber (Woodbridge: Boydell Press, 2012), 77.

54 MacInnes, *Scotland's Second War*, 48–49.

55 DeVries, *Infantry Warfare*, 120–128.

reputation.[56] As the chief port of Scotland, it was also of prominent economic value to the Scottish kingdom in its attempts to financially afford to continue the war with England. The fact that the Scottish Guardian, Archibald Douglas, like Robert I before him, could not countenance Berwick's loss, and fought an ultimately unsuccessful battle to retain it, may have been as much a result of Robert I's attitude towards the town as Douglas's own.[57] Even so, the Scots attempted to first draw away the English besiegers by means of a diversionary raid into Northern England. When this did not work, they sought to take up a defensive position and invite the English into attacking them. Such tactics could have proven successful, were it not for the reality that the Scots were forced by the siege agreement to attack the English or forfeit the town. As a result, Douglas surrendered his own defensible position and attacked a well-positioned enemy, one that also utilised the same combination of archers and infantry that had been so devastatingly successful at Dupplin.

The defeats of the Second War of Independence can, therefore, be seen as battles that were fought in imitation of Robert I's own success and in response to his supposed advice, or at the least in imitation of his past actions. Dupplin Moor was fought to head off a possible takeover of the Scottish throne by an alternative claimant. It was fought against forces that were smaller in number and with the benefit of Scotland's most recent battlefield experience having been a success. Neville's Cross was fought against the hastily-arrayed forces of northern England, and was a battle that the Scottish commanders could have expected to win, just as they had previously against the local levies assembled against them at Myton. And although Halidon Hill was a battle that was somewhat forced upon the Scottish leadership, it remains that they likely had a numerical advantage, and attempted to manoeuvre the English forces in such a way as to negate their tactical advantage. Moreover, the defeat at Dupplin could have been considered something of an anomaly, considering its nature and the fact that it had been a battle that the Scots should have

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[56] Penman, *Robert the Bruce*, 177–190, 206–210.

[57] *Chron. Lanercost* (Maxwell), 279–280; *Chron. Bower*, vii, 93; *Chron. Anonimalle, 1307 to 1334*, 163–169; *Brut*, 283–286; DeVries, *Infantry Warfare*, 120–128.

won. In such examples, then, far from ignoring the lessons of Robert I, Scottish commanders may have been following quite closely what he had taught them, and indeed were seeking to repeat his victories. That these later commanders were ultimately unsuccessful has led to their actions being seen negatively. And while defeat or victory are the only real outcomes with which to judge medieval battles, greater consideration of the wider context is required before contemporary commanders should be condemned in modern writing. At the very least, they were looking to continue periods of previous Scottish military success, and were attempting to learn from victory, rather than from defeat.

Conclusion

This article has, from necessity, only dealt briefly with the history of this period. A longer and more detailed analysis of the events of this conflict may provide further important points regarding the nature of the war fought at this time, and the extent to which the Scots, and indeed their English foes, learned lessons from their experience. What this article has tried to do is challenge what appear to be accepted views on this war and on those who took part in it. Individuals who were able to survive their experience of one battle, one siege or one campaign, were better placed to do so again in future, and Scottish leaders were similarly well-placed to learn lessons from their experience and to implement changes of tactics and strategy as a result. That a number of Scottish leaders served militarily in the early years of the second war, having experienced success in battle in the first, suggests that there was less of an experience deficit than has previously been suggested. Far from being unable to learn lessons from past defeat, and to implement change to ensure future success, Scottish leaders were also arguably following forms of warfare that had been successful under the leadership of Robert I. They used Scotland's topography to their best advantage to undermine and frustrate a more numerous foe. They used the tactics of devastation and destruction of Scotland's landscape as both a defensive and offensive weapon of war, to deny supplies to the enemy and to ensure that the Bruce cause was

either supported or feared. They adopted the raid as a major form of offensive warfare and employed this successfully in various theatres. And they sought to reinforce these successes through fighting battles. That the examples presented here all resulted in Scottish battlefield defeat should not be allowed to obscure the overall military picture. To focus on battles as the defining military events of the period is misleading for the simple reason that battles were irregular events, and they were rarely decisive. By taking a different perspective towards this period of warfare, it is possible to suggest that the Second Scottish War of Independence was a period of Scottish accomplishment. Armed with the strategies and tactics of Robert I, the Scots were to a large extent successful in their prosecution of a war that resisted English attempts at conquest, rejected English overlordship and successfully denied the imposition of an alternative royal dynasty on the kingdom.

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Learning from Decisive Battles Prerequisites to Define and Identify Them

The legacy of Sir Edward S. Creasy for the imagination and predictions of war

Oliver B. Hemmerle

The idea that wars can be ended with a single blow has hypnotised generals and military thinkers for centuries. However, it seems that the notion of "decisive battle" was firmly established only in the middle of the 19th century by the British author Edward S. Creasy. Creasy's book The Fifteen Decisive Battles of the World inspired a tradition of historiography seeking to define the most important battles in the history of mankind. Importantly, Creasy noted not only the short-term strategic, but also the long-term social and political consequences of the decisive battles of his choice. This essay analyses the original concepts of Creasy, and also the later changes and additions to the tradition, created by Creasy, by the late 19th century and the 20th century Anglo-Saxon and German historians and writers. It argues that "decisive battle" is a concept of hindsight and a tool for historians, as the importance and the decisiveness of individual military engagements can only be gauged from a temporal distance. This has probably been never as true as in the ongoing "war on terror."

Although there may have been forerunners for the term "decisive battle,"[1] the notion was firmly established by the British author Sir Edward S. Creasy in his book *The Fifteen Decisive Battles of the World – From Mara-*

[1] The use of the word "decisive" by Creasy and in this essay is distinct from the modern use of that term by the U.S. Army: "Decisive Victory: […] Whenever the Army is called upon, it fights to win and operates to achieve decisive results at minimum cost to life and treasure." *FM 100-7. Decisive Force: The army in theatre operations* (Headquarters, Department of the Army:

thon to Waterloo, which was published in 1851. It was a best-seller for decades to come. The fundamental problem of Creasy and many of his more or less prominent successors was to define and identify the "decisive" character of military engagements. The most important and innovative factor for the term "decisive battles" as defined by Creasy was the universal or global approach. His battles were certainly limited to the cultures inhabiting Europe, the Mediterranean and North America during the last 2,341 years, thereby ignoring for example any Chinese, Japanese or pre-Columbian American cultures, but nevertheless the choice of Creasy was much more universal and global than any approach before. This liberated the notion "decisive battles" from the nationalistic restrictions of the time and made it a tool for comparison in military history.

The Anglo-Saxon tradition of decisive battles started with Creasy and he dominated the scene up to the inter-war period. But the First World War as a global event with far reaching consequences (especially the collapse of the Russian, German, Austria-Hungarian and Ottoman Empires) necessitated a reformulation of Creasy, which was started by John Frederick Charles Fuller with his *The Decisive Battles of the Western World and their influence upon history*. Fuller began writing the book in the inter-war period, but finished it only after the Second World War.[2] As Fuller tried to become the Creasy of the 20th century, Joseph B. Mitchell was less ambiguous and simply updated Creasy by adding five post-1851 battles to the original fifteen chosen by Creasy.[3] For some time new developments in military historiography seemed to make the approach of Creasy too old-fashioned for modern historians. But his approach prevailed, as many book titles (not only for the popular book market) would prove.

This paper discusses the development of the notion "decisive battle" in the context of the history of military historiography under the guiding questions: Are there lessons to be learned from decisive battles, or is the

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Washington, DC, 1995), 1 of 13. The hint on this important difference in usage was given to the author by the late Lt. Col. Ted Westhusing.

[2] J. F. C. Fuller, *The Decisive Battles of the Western World and their influence upon history.* 3 volumes (London: Eyre & Spottiswoode, 1954–1956).

[3] J.B. Mitchell and E.S. Creasy, *Zwanzig entscheidende Schlachten der Weltgeschichte* (Gütersloh: Bertelsmann, 1968).

debate about the notion of "decisive battles" already the most important learning effect? If and how could the notion of "decisive battles," which was dear to strategists of the long 19th century (until 1914), could still play a role as a theoretical model in post-9/11 warfare.

Birth of the notion "decisive battle"

Description and depictions of famous battles as curiosities are known since Antiquity. In the Age of Nationalism they became part of the national narrative of history, which was created to establish an identity of the nation-state. Probably the most famous of such early 19th century approaches of telling national history by a story of important battles was the *galerie des batailles* [battle gallery] in the Versailles castle, which since the 1830s depicted French history from the battle of Tolbiac to the much more recent Napoleonic Wars.[4] Other examples for accumulations of battle scenes decisive for a national history are in the British memorial rooms in the galleries of the Sandhurst Companies[5] for the army, and in the Gunroom of the Britannia Naval College at Dartmouth for the navy.[6] Decisiveness of battles in such pictorial narratives was rather limited, as only victorious events for the individual nation qualified for entry in the respective memorial room. There were definitely forerunners for the term "decisive battle," the concept was established by Sir Edward S. Creasy in

[4] C. Constans, *Versailles. La Galerie des batailles* (Paris: Khayat, 1984): Tolbiac, Poitiers, Paderborn, Paris, Bouvines, Taillebourg, Mons-en-Puelle, Cassel, Cocherel, Orleans, Castillon, Naples, Marignan, Calais, Paris, Rocroy, Lens, Dunes, Valenciennes, Marsaille, Villaviciosa, Denain, Fontenoy, Lawfeld, York-Town, Fleurus, Rivoli, Aboukir, Zurich, Hohenlinden, Austerlitz, Iena, Friedland, Wagram. The spelling and the order of the battle names always follow the respective book.

[5] Blenheim, Dettingen, Salamanca, Waterloo, Inkerman, Marne, Somme, Ypres, Gaza, Amiens, Alamein, Salerno, Normandy, Arnhem, River Rhine, Burma. D. G. Chandler (ed.), *Great Battles of the British Army as commemorated in the Sandhurst Companies* (London: Arms and Armour, 1991).

[6] The Danes, Sluys, Armada, Santa Cruz, St. James's Day Fight, La Hogue, Passaro, Cape Finisterre, Quiberon Bay, Les Saintes, Glorious 1st June, St. Vincent, Aboukir, Copenhagen, Trafalgar, San Domingo, Basque Roads, Acre, Falkland Islands, Jutland, River Plate, Taranto, Matapan, North Cape, Falklands. E. Grove (ed.), *Great Battles of the Royal Navy as commemorated in the Gunroom, Britannia Naval College, Dartmouth* (London: Bramley, 1994).

his book *The Fifteen Decisive Battles of the Word – From Marathon to Waterloo*, published in 1851. It would be a most popular book for many years to come. Creasy chose his subject for the following reason:

> The Universal Peace Society certainly does not, and probably never will, enrol the majority of statesmen among its members. [...] For a writer, therefore, of the present day to choose battles for his favourite topic, merely because they were battles; merely because so many myriads of troops were arrayed in them, and so many hundreds of thousands of human beings stabbed, hewed, or shot each other to death during them, would argue strange weakness or depravity of mind.

Creasy went on to explain that not the number of casualties makes a battle decisive, because

> [i]t is not because only a few hundreds fell in the battle by which Joan of Arc captured the Tourelles and raised the siege of Orleans, that the effect of that crisis is to be judged: [...] There are some battles, also, which claim our attention independently of the moral worth of the combatants, on account of their enduring importance, and by reason of the practical influence on our own social and political condition, which we can trace up to the results of those engagements. They have for us an abiding and actual interest, both while we investigate the chain of causes and effects, by which they have helped to make us what we are; and also while we speculate on what we probably should have been, if any of those battles had come to a different termination.[7]

The most significant element in Creasy's notion of "decisive battles" was its globalism. His selection of battles was limited to Europe, the Mediterranean and North America in the last 2,341 years; and thus Chinese, Japanese, pre-Columbian American and other cultures were ignored. Nevertheless, Creasy's approach was more universal than any approach before him. This liberated the notion "decisive battles" from the nationalistic restrictions of the time and made it a tool for comparison in mili-

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[7] E.S. Creasy, *The Fifteen Decisive Battles of the World. From Marathon to Waterloo* (London: Nelson, s.a. [first edition: 1851]), 3–5.

tary history. The definition of decisive battles by Creasy was at least half-Clausewitzian as he embraced not only purely military aspects but also the "practical influence of the social and political condition" as a criterion for decisiveness.

"Decisive battles" between Anglo-Saxon and German interpretations

Although it had many forerunners, the concept of decisive battles as used – one might even say discovered – by Creasy had a decisive impact on the military historiographies from the second part of the 19th century at least up to the creation of a military history more inclined to social factors than to battles, i.e. up to the mid-20th century. For the matter of the argument of this essay, the discussion of the tradition or school created by Creasy will be limited to the Anglo-Saxon and to the German followers of Creasy only, as they show the possibilities and deficiencies of his concept in the most comprehensive way.

The Anglo-Saxon tradition of decisive battles started with Creasy and he dominated the scene up to the inter-war period. (The listing of the traditions does not seek to be complete, it takes the most obvious and in many cases most influential examples for an approach in the tradition of Creasy in different ages (especially for the pre-WW I, interwar, post-WW II periods). The First World War was a global event with far reaching consequences, including the collapse of the Russian, German, Austria-Hungarian and Ottoman Empires. It necessitated a reformulation of Creasy, which was started by John Frederick Charles Fuller in his *The Decisive Battles of the Western World and their influence upon history* (finished after the Second World War).[8] Whereas Fuller's approach was an ambitious one, Joseph B. Mitchell simply updated Creasy by adding five post-1851 battles to the fifteen chosen by Creasy.[9]

One could argue that new developments in military historiography made the approach of Creasy too old-fashioned for modern historians.

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8 Fuller, *The Decisive Battles of the Western World*.

9 Mitchell and Creasy, *Zwanzig entscheidende Schlachten.*

As an example for a modern anti-Creasy approach the book *War in European History* by Michael Howard could be mentioned. Howard took the social status of the soldier as the structure of his military history, whereby the battles to a certain extent were degraded to be just a reflection of the social position of the soldier at any given period (Wars of the Knights, Mercenaries, Merchants, Professionals, Revolution, Nations, Technologists, Nuclear Age).[10] Nevertheless the concept of decisive battle accumulations still has an appeal on the popular book-market.[11] There are other approaches within the broader Creasy tradition, which are less apt for direct comparison as they do not use the chronological approach, but for example an A-Z encyclopaedical order,[12] which was made popular by Harbottle half a century after Creasy.[13] As the Chandler dictionary

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10 M. Howard, *War in European History* (Oxford: Oxford University Press, 1976).

11 P. K. Davis, *100 Decisive Battles from Ancient Times to the Present* (Santa Barbara: ABC-CLIO, 1999) and F. Regan, *Battles That Changed History. Fifty decisive battles spanning over 2500 years of warfare* (London: Deutsch, 2002).

12 D.G. Chandler (ed.), *Dictionary of Battles. The world's key battles from 405 BC to today* (New York: Henry Holt, 1988): Actium, Aegospotami, Aquae Sextiae-Vercellae, Chaeronae, Cunaxa, Gaugamela-Arbela, Leuctra, Victories of Marcus, Metaurus, Milvian Bridge, Palmyra, Pyrrhic Victories, Pharsalus, Rome, Salamis, Victories of Trajan, Ashdown - Saucourt - Paris - Dyle, Catterick, Civitate, Hastings, Lech, Maldon, Mauriac Plain, Roncesvalles - Suntel Mountains, Taginae - Casilinum, Yarmuk, Acre, Agincourt, Antioch, Arsuf, Ascalon, Ayn Jalut, Bosworth, Bouvines, Constantinople, Crecy, Dorylaeum, Kutna Hora, Liegnitz, Morat, Nicopolis, Poitiers, Sluys, Tinchebrai, Belgrade, Breitenfeld, Fontenoy, Lepanto, Leuthen, Lille, Malta, Naseby, Pavia, Poltava, Quebec, Ramillies, Rocroi, Armada, Acre, Assaye, Austerlitz, Borodino, Brandywine, Busaco, Gibraltar, Jena-Auerstaedt, Lake Champlain, Saints, Salamanca, Trafalgar, Valmy, Waterloo, Yorktown, Antietam-Sharpsburg, Balaclava, Buena Vista, Chancellorsville, Colenso, Delhi, Gettysburg, Hampton Roads, Manila Bay, Omdurman, Port Arthur, Sedan, Tsushima, Vicksberg, Amiens, Cambrai, Caporetto, Gallipoli, Jutland, Kut Al-Amara, Marne, Megiddo, Somme, Tannenberg, Verdun, Ypres, Madrid, Mannerheim Line, El Alamein, Ardennes, Arnhem, Atlantic, Berlin, Britain, Corregidor, Crete, D-Day - Seine, Dieppe, France, Gazala-Bir Hacheim, Guadalcanal, Gustav Line, Imphal-Kohima, Kursk, Leningrad, Leyte Gulf, Malta, Midway, Moscow, Okinawa, Pearl Harbour, Ploesti-Peenemunde, Sevastopol, Singapore, Stalingrad, Algiers, Cedar Falls-Junction City, Chinese Farm, Dien Bien Phu, Entebbe, Golan Heights, Goose Green, Hsuchow, Imjin, Inchon, Indonesian-British Confrontation, Jerusalem, Khe Sanh, Khorramshahr, Malaya, Mirbat, East Pakistan, Panjsher Valley, Peace for Galilee, Port Stanley, Pusan, Red River Delta, Rolling Thunder-Linebacker, Saigon, Sinai, Suez 1956, Suez 1973, Tet Offensive. See also D. Eggenberger, *An Encyclopaedia of Battles: Accounts of over 1560 battles from 1479 B.C. to the present* (Mineola, NY: Dover, 1985).

13 T.B. Harbottle and G. Bruce, *Harbottle's Dictionary of Battles* (London: Granada, 1979). Harbottle and Bruce listed well over 1,000 battles.

the book *Strategy* by Liddell Hart was a milestone in modern "indirect" Creasy reception,[14] although it did not stick to the battle approach, but used a discussion by periods instead and did therefore not qualify for the "direct" Creasy tradition.

As the Creasy approach is still very much alive in the Anglo-Saxon world, the choice presented here is necessarily limited.[15] Outside the scientific or popular Creasy reception his concept is used for children's books introducing military history.[16] The comparison of the battles chosen by Creasy (updated in a post-World War II edition by Mitchell) with battles chosen by other authors adopting the Creasy method may help to discover both the nucleus and the analytical possibilities of the Creasy approach (Table 1).

First of all – and there is no surprise – the Anglo-Saxon tradition is very Anglo-Saxon-centred in its choice of post-Antiquity decisive battles. The choice of decisive battles by Creasy with the slight exception of Marathon prevailed within the choice of his followers, whereas the additions of Mitchell especially for the period "1776/1789 to the eve of WW1" did not make it to become part of the tradition. In general it seems that the agreement on what is to be considered as a decisive battle is much easier as more distant the authors are from the relevant period, i.e. there seems to be a consensus on the decisive battles of Antiquity and of the Middle Ages, whereas there has not yet emerged a canon of decisive battles for the 20th century. The decisive battle canon of Antiquity in the beginning of the Anglo-Saxon tradition tended to comprise slightly more Greek than Roman battles, but later added other events from Roman history. It may be an over-interpretation, but Creasy listing three Greek and only

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[14] B.H. Liddell Hart, *Strategy. The indirect approach* (London: Faber and Faber, 1967).

[15] Other editions and re-editions of books in this tradition comprise M. L. Lanning and B. Rosenburgh, *The Battle 100. The Stories behind history's most influential battles* (London: Sourcebooks, 2003); F. Pratt and E. Gorey, *The Battles that Changed History* (Mineola, NY: Dover, 2000); and W. Weir, *50 Battles that Changed the World*: *The conflicts that most influenced the course of history* (New York: New Page Books, 2001). C. Falls (ed.), *Great Military Battles* (New York: Macmillan, 1964) was an important book in the Creasy tradition, but was limited to battles from 1643 to 1944.

[16] Megiddo, Thermopylae, Cannae, Tours, Hastings, Acre, Agincourt, Lepanto, Luetzen, Plassey, Trafalgar, Waterloo, Gettysburg, Sedan, Little Big Horn, Cambrai, Britain, Midway, Kursk – F. Wilkinson, *Famous Battles* (London: Macdonald Educational, 1979).

two Roman battles may still be in the mood of Philhellenism of the early 19th century, whereas later generations may be inclined to emphasise the more direct influence of Roman battles to the creation of modern Europe.

But how did the Creasy approach transform, when it was applied to another country? The German tradition started with a clear reference to Creasy, as the "idea of the editor was to edit Creasy [...] for the German reader," but Christian Friedrich Maurer, author of *Entscheidungsschlachten der Weltgeschichte* [*Decisive Battles of Word History*], declared "to be as independent as possible from the views of the English historian."[17] Much quicker than in the Anglo-Saxon tradition came an update for the changed perspective during the First World War, when Walter Heichen published his *Die Entscheidungsschlachten der Weltgeschichte von Marathon bis Tsuschima.* [*Decisive Battles of World History from Marathon to Tsushima. A book about the struggle of the peoples for the position of power in former and modern times*].[18]

Another try for such an approach was made on the eve of the Second World War in Nazi Germany, when Friedrich von Cochenhausen edited *Schicksalsschlachten der Völker* [*Battles of Destiny of the Peoples*].[19] Cochenhausen and his fellow authors were a mix of retired soldiers very much in the tradition of the pre-1914 German military history writing and of representatives of new Nazi "scholars" seeing military historiography as a tool to foster the aims of Nazi ideology. During the Nazi period the Creasy approach was even adjusted to the racial concepts of Nazism and thereby limited to decisive battles of the Germanic tribes.[20] German

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[17] C. F. Maurer, *Entscheidungsschlachten der Weltgeschichte* (Leipzig: Weber, 1890) ["Der Gedanke des Herrn Verleger war es, E. Creasys *Fünfzehn Entscheidungsschlachten* für deutsche Leser herauszugeben. Ich glaubte, diese Arbeit übernehmen zu können, – allerdings unter der Voraussetzung, mich möglichst unabhängig von den Anschauungen des englischen Historikers bewegen zu dürfen."].

[18] W. Heichen, *Die Entscheidungsschlachten der Weltgeschichte von Marathon bis Tsuschima*. Ein Buch vom Ringen der Völker um die Machtstellung in alter und neuer Zeit (Altenburg: Geibel, 1915).

[19] F.v. Cochenhausen (ed.), *Schicksalsschlachten der Völker* (Berlin: Deutscher Verlag fuer Politik und Wirtschaft, 1937).

[20] K. Pastenaci, *Entscheidungsschlachten der Germanen* (Berlin: Nordland, 1944): Gallien, Teutoburger Wald, Strassburg, Adrianopel, Katalaunische Felder.

Table 1:

Decisive Battles – British/Anglo-Saxon tradition			
	Creasy / Mitchell (1851/1964)	Fuller (1939–40/1954–56)	
Antiquity	**Marathon** **Syracuse** **Arbela** **Metaurus** **Arminius/Varus**	**Salamis** **Syracuse – Aegospotami** **Gaugamela/Arbela** **Metaurus/Zama** **Pydna**	**Dyrrhachium/Pharsalus** **Philippi/Actium** **Teutoburger Wald** **Adrianople**
After Antiquity and before 1776/1789	**Chalons** **Tours** **Hastings** **Orleans** **Armada** **Blenheim** **Pultowa** **[Poltava]**	**Chalons/Mauriac Plain** **Tricameron/Taginae** **Constantinople/Tours** **Hastings** **Manzikert** **Hattin** **Sluys/Crecy** **Orleans**	**Constantinople** **Malaga/Granada** **Lepanto** **Armada** **Breitenfeld/Luetzen** **Naseby** **Blenheim** **Poltava** Rossbach/Leuthen **Plassey** **Plains of Abraham**
1776/1789 to the eve of WW1	**Saratoga** **Valmy** **Waterloo** **Vicksburg** **Koeniggraetz**	**Saratoga** **Chesapeake/Yorktown** **Valmy** **Trafalgar** **Jena/Auerstaedt** **Leipzig**	**Waterloo** Seven Days Battle Vicksburg/Chattanooga **Sedan** Port Arthur
WW1 and WW2	**Marne** **Midway** **Stalingrad**	**Marne/Tannenberg** Sari Bair/ Suvla Bay Amiens Vittorio-Veneto **Warsaw** **Sedan**	**Moscow** **Midway** **El Alamein/Tunis** **Stalingrad** **Normandy** Leyte Gulf
After WW2	–	–	

The names of battles, campaigns, and sieges are given in the spelling used by the different authors.
The distinction in five major periods is added for the purpose of the argument of this essay.
BOLD print: mentioned by 2 authors; UNDERLINED: mentioned by at least 3 authors

	Regan (1992)		Davis (1999)		
	Salamis **Syracuse** **Guagamela** [sic!] Beneventum **Zama** **Actium** **Teutoburger Wald** **Adrianople**		Megiddo Thymbra **Marathon** **Salamis** **Syracuse** Leuctra Chaeronea	**Gaugamela/** **Arbela** Ipsus **Metaurus** Kai-hsia **Zama** **Pydna** Alesia	**Pharsalus** **Actium** **Teutoburger Wald** Beth-Horon Milvian Bridge **Adrianople**
	Taginae Yarmuk **Constantinople** **Lechfeld** **Hastings** **Manzikert** **Hattin** Las Navas de Tolosa **Ain Jalut** **Crecy** Tannenburg ***Orleans*** **Constantinople**	Bosworth Field **Tenochtitlan** **Vienna** **Lepanto** **Armada** **Breitenfeld** Rocroi Marston Moor **Blenheim** **Poltava** **Plassey** **Quebec**	**Chalons** **Tricameron** Badr **Constantinople** **Tours/Poitiers** Pavia **Lechfeld** **Hastings** **Manzikert** Jerusalem **Hattin** Taraori Bouvines	Ain Jalut Hsiang-yang Hakata Bay Brusa **Crecy** **Orleans** **Constantinople** **Granada** **Tenochtitlan** Panipat **Vienna** Cajamarca	**Lepanto** **Armada** Sekigahara **Breitenfeld** Shanhai-kuan Naseby Dunes **Blenheim** **Poltava** Culloden **Plassey** **Quebec**
	Saratoga **Trafalgar** Austerlitz **Waterloo** **Gettysburg** **Koeniggraetz** **Sedan** **Tsushima**		Trenton **Saratoga** **Yorktown** **Valmy** Rivoli Aboukir Bay/Nile **Trafalgar** **Jena/Auerstaedt**	Prophetstown/ Tippecanoe Borodino **Leipzig** **Waterloo** Ayacucho San Jacinto Mexico City Antietam/Sharpsburg	**Gettysburg** Atlanta/March to the Sea **Sedan** Tel el Kebir Manila Bay Mukden **Tsushima**
	Marne **Sedan** **Britain** **Midway** **El Alamein** **Stalingrad**		**Marne** Verdun Brusilov Offensive **Marne**	**Warsaw** Poland [sic!] Dunkirk **Britain** **Moscow**	Pearl Harbour Singapore **Midway** **Normandy** Okinawa
	Dien Bien Phu Six Day War **Second Gulf War**		Israel's War of Independence Huai Hai/Suchow Inchon		**Dien Bien Phu** Tet Offensive **Desert Storm**

military historiography obviously needed a long time to recover from these distortions and it is not by chance that many of the (West) German books on this subject between 1949 and 1990 were mere translations from the Anglo-Saxon tradition.[21] This was even true for children's books.[22] An exception to this rule were the East German historians Walter Markov and Heinz Helmert with *Schlachten der Weltgeschichte* [*Battles of Word History*], which was published in both German states, but Markov and Helmert did not embrace the decisiveness aspect as much as Creasy had.[23]

In 2001 established German academia came out with the book *Schlachten der Weltgeschichte* [*Battles of World History*]. The preface set this publication clearly in the Creasy tradition, but tended to excuse the approach and to explain why the publication could nevertheless be positioned within the current mainstream of German historiography.[24] Directly in the Creasy tradition, but on the fringe of academic German military historiography, was Klaus-Jürgen Bremm with *Im Schatten des*

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[21] F. Pratt, *Schlachten, die Geschichte machten. Von Issus bis zu den Midways* (Duesseldorf: Econ, 1965), and Mitchell and Creasy, *Zwanzig entscheidende Schlachten*.

[22] V. Melegari, *Die grossen Schlachten* (Hamburg: Tessloff, 1982) as a translation from the Italian: Kadesch, Marathon, Salamis, Gaugamela, Cannae, Alesia, Katalaunische Felder, Poitiers, Hastings, Legnano, Kyuschu, Crecy, Azincourt, Orleans, Konstantinopel, Fornovo, Ravenna, Marignano, Pavia – Tunis, Lepanto, Luetzen, Rocroi, Maastricht, Wien, Fleurus, Belgrad, Fontenoy, Culloden Moor, Rossbach, Saratoga, Marengo, Trafalgar, Austerlitz, Waterloo, Balaklawa, San Martino-Solferino, Calatafimi – Volturno, Gettysburg, Koeniggraetz, Little Big Horn, Khartum, Tsushima, Tannenberg, Marne, Skagerrak, Verdun, Vittorio Veneto, El Alamein, Midway, Stalingrad, Dien Bien Phu.

[23] W. Markov and H. Helmert, *Schlachten der Weltgeschichte* (Gütersloh: Prisma, 1983): Kadesch, Marathon, Salamis, Lechaion, Leuktra, Gaugamela, Tschang-ping, Cannae, Pydna, Pharsalos, Teutoburger Wald, Jerusalem, Abrittus, Argentoratum, Katalaunische Felder, Ninive, Poitiers, Lechfeld, Hastings, Legnano, Kalka, Hakata, Takashima, Sempach, Grunwald-Tannenberg, Usti nad Labem (Aussig), Murten, Pavia, Sekigahara, Luetzen, Wien-Kahlenberg, Hoechstaedt-Blenheim, Poltawa, Leuthen, Saratoga, Valmy, Bei den Pyramiden, Trafalgar, Austerlitz, Leipzig, Waterloo, Ayacucho, Solferino, Gettysburg, Koeniggraetz, Gravelotte-St. Privat, Adua, Mukden, Marneschlacht, Verdun, Skagerrak, Cambrai, Zarizyn, Guadalajara, Luftschlacht England, El Alamein, Stalingrad, Kursk, Normandie, Leyte, Berlin, Hiroshima.

[24] S. Foerster, M. Poehlmann and D. Walter, *Schlachten der Weltgeschichte. Von Salamis bis Sinai* (Munich: Beck, 2001), 7–18: Salamis, Gaugamela, Cannae, Hastings, Hattin, Ayn Dschalut, Murten, Panipat, Luetzen, Wien, Leuthen, Waterloo, Cold Harbor, Koeniggraetz, Sedan, Adua, Tsushima, Tannenberg, Verdun, Luftschlacht um England, Stalingrad, Okinawa, Dien Bien Phu, Sinai.

Desasters. Zwölf Entscheidungsschlachten in der Geschichte Europas [*In the Shadow of Disaster. Twelve Decisive Battles in the History of Europe*].[25] A more modern and academically accepted version was *Schlachtenmythen* [*Myths of Battles*] by Gerd Krumeich and Susanne Brandt, whereby the focus shifted from the decisiveness of the battle to the persistence of the myth of the battle.[26]

The German authors can be compared in the following table (Table 2).

As the table shows, most striking is the choice of decisive battles in Antiquity. Before the Second World War, German authors agreed on Gaugamela and the Teutoburger Wald, whereby the victory of Arminius over Varus was at least as much decisive as a 19th century myth for the German nation-state as it was decisive in military terms. Quite remarkably the battle of Cannae practically did not play any role in pre-1945 publications, although it dominated German military thinking from the 1890s to the beginning of the First World War.[27] A trend concerning the choice of decisive battles is obvious: as more recent the period was, the more linked to German history the choice of battles became. The big exception to this rule is Trafalgar, but even this choice of a more recent battle is better explained by German history than by the battle itself. As the navy became an important tool of the politics of Wilhelm II and of national German self-esteem, naval battles had to be represented in such a canon of decisive battles. This is especially true for Heichen and von Cochenhausen.

Beyond the discussion of the canon of the German tradition, it is important to explain the big gap of nearly fifty years between pre-1945 and recent post-1990 publications. German military historiography was so much discredited after the Second World War, that there was in fact a massive break in such publications for nearly the whole Cold War

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[25] K.-J. Bremm, *Im Schatten des Desasters. Zwölf Entscheidungsschlachten in der Geschichte Europas* (Osnabrück: BoD, 2003).

[26] G. Krumeich and S. Brandt (ed.), *Schlachtenmythen. Ereignis – Erzählung – Erinnerung* (Cologne: Böhlau, 2003).

[27] A. v. Schlieffen, *Gesammelte Schriften*. 2 volumes (Berlin: Mittler, 1913), J. L. Wallach, *Das Dogma der Vernichtungsschlacht* (Munich: dtv, 1980) and M. Healy, *Cannae 216 BC. Hannibal smashes Rome's army* (Botley: Osprey, 1994).

period. After the voluntary abuse of military historiography by Jingoism and Nazism and the destruction caused by the two world wars started by Germany, even serious military historiography had a hard time in the public view. That does not mean that there was no serious military history research during that time, but it could not appeal to the scientific and wider public in the same way as this was the case for military history writers in Britain, the USA or France. Therefore it is not by chance that German children's books on these topics were translations from the Italian,[28] that popular military history books were published as "Books on Demand" instead of a regular book by an established publishing house[29] and that the established academia tended to write on battle myths instead of decisive battles.[30]

Another story was the communist (East) German Democratic Republic (1949–1990), where military subjects were from a Marxist perspective much more a topic than in West Germany.[31] Military history books were seen as a tool to foster the defensive spirit of the East German population against the capitalist enemy in the West. However, Markov and Helmert proved that scientifically sound books could be written despite this political context. To conclude the analysis of these two traditions of the Creasy approach, it might be useful to contrast the Anglo-Saxon with the German decisive battles canon in the following table (Table 3).

Perhaps surprisingly, the intersection of the Anglo-Saxon with the German tradition comes out as a perfect match for a possible European canon on decisive battles up to the eve of the First World War: Gaugamela, Teutoburger Wald, Armada, Blenheim/Hoechstaedt, Poltava, Trafalgar, Waterloo/Belle-Alliance and Sedan. It certainly neglects anything outside Europe (ignoring even the American War of Independence due to the German canon), but for a pure European perspective the common nominators are excellent. Both the Greek and the Roman heritage is remembered by a battle, the Middle Ages are somehow neglected, but the choice for early modern Europe up to the second half of the 19th century well

28 Melegari, *Die grossen Schlachten*.
29 Bremm, *Im Schatten des Desasters*.
30 Krumeich and Brandt, *Schlachtenmythen*.
31 Markov and Helmert, *Schlachten der Weltgeschichte*.

Tabel 2:

Decisive Battles – German tradition							
	Maurer (1882/1890)		Heichen (1915)		von Cochenhausen (ed.) (1937)	Bremm (2003)	Krumeich/Brandt (ed.) (2003)
Antiquity	**Plataeae** **Syrakus** **Gaugamela** **Sena Gallica/** **Metaurus** **Teutoburger [Wald]**		**Marathon** **Syracus** **Arbela/Gaugamela** **Metaurus** **Teutoburger Wald**		**Salamis** **Gaugamela** **Zama Regia** **Teutoburger Wald**	**Salamis** **Zama** Alesia	**Marathon**
After Antiquity and before 1776/1789	Troyes/Chalons **Poitiers** **Lechfeld** **Hastings** Vittoria **Orleans** **Armada**	Am weissen Berge Fehrbellin **Hoechstaett/** **Blindheim** **Poltawa** Rossbach	Catalaunische Felder **Tours/Poitiers** **Hastings** Tannenberg **Orleans** **Armada** **Wien** **Hoechstaedt** **Poltawa** Liegnitz		**Tours/Poitiers** **Ungarnschlacht** Bouvines Bornhoeved Konstantinopel **Armada** Breitenfeld **Wien** **Hoechstaedt** **Leuthen**	**Lechfeld** Mantzikert Tagliacozzo **Wien** **Poltawa**	Roncesvalles Peipussee
1776/1789 to the eve of WW1	**Saratoga** Valmy **Belle-Alliance**	**Koeniggraetz** **Sedan** –	**Saratoga** **Trafalgar** Borodino **Leipzig**	**Belle-Alliance** **Koeniggraetz** **Sedan** **Tsushima**	**Trafalgar** **Leipzig** **Sedan** **Tsuschima**	**Trafalgar** **Waterloo** **Koeniggraetz**	Raclawice Pyramiden Srirangapatna Berg Isel **Waterloo**
WW1 and WW2	–		–		Tannenberg Marne 1918 –	Ardennen	Bir Hakeim Stalingrad Seelower Hoehen D-Day
After WW2	–		–		–	–	–

The names of battles, campaigns and sieges are given in the spelling used by the different authors. The distinction in five major periods is added for the purpose of the argument of this essay. BOLD print: mentioned by 2 authors; UNDERLINED: mentioned by at least three authors.

Tabel 3:

Comparison between the British/Anglo-Saxon tradition and the German tradition			
	Creasy (without Mitchell)	British/Anglo-Saxon tradition (Fuller, Mitchell, Regan and Davis)	German tradition (Maurer, Heichen, von Cochenhausen, Bremm and Krumeich/Brandt)
Antiquity	~~Marathon~~ Syracuse **Arbela** Metaurus **Arminius/Varus**	Salamis Syracuse **Gaugamela** Metaurus/Zama Actium **Teutoburger Wald** Adrianople	**Gaugamela** **Teutoburger Wald**
After Antiquity and before 1776/1789	Chalons Tours Hastings Orleans **Armada** **Blenheim** **Pultowa [Poltava]**	Chalons Constantinople/Tours Hastings Manzikert Hattin Crecy Orleans Constantinople Lepanto **Armada** Breitenfeld **Blenheim** **Poltava** Plassey Quebec	Poitiers Lechfeld **Armada** Wien **Hoechstaedt** **Poltawa**
1776/1789 to the eve of WW1	Saratoga Valmy **Waterloo** –	Saratoga Valmy **Trafalgar** **Waterloo** **Sedan**	**Trafalgar** **Belle-Alliance = Waterloo** Koeniggraetz **Sedan**
WW1 and WW2	–	Marne Midway Stalingrad	–
After WW2	–	–	–

Only battles mentioned in at least three works of the relevant tradition are listed.
BOLD print and UNDERLINED: part of both traditions. CROSSED OUT: not included in any tradition.

Battle of Poltava as depicted by the French painter Pierre-Denis Martin. Poltava did not feature in Creasy's book, but was included in most of the later European historians in the Creasy tradition

represents the European continent and its encounters in the Northeast, West, South and Centre (the Southeast with its Turkish invasions drops out because of the British tradition).

It is another story for the history of the post-1914 world, as the lack of any "measurable" canon by German tradition in the following of Creasy does not allow for the extracting of any intersections of either traditions. How good Creasy was in his choice of battles is highlighted by the fact that fourteen of his fifteen battles made it to persist at least in one of the two traditions (with the sole exception of Marathon, which did not make it for any tradition). The update by Mitchell was less successful for the period between Waterloo and the First World War, as neither Vicksburg nor Koeniggrätz really became generally accepted to be part of the canon. Instead of the choice by Mitchell, both traditions elaborated Sedan to be the most decisive battle for this period. Mitchell was much better for the two world wars as Marne, Midway and Stalingrad became firmly established within the canon of the Anglo-Saxon tradition.

There is only one battle, which was ignored by Creasy when he wrote his book in 1851, but made it into the common canon of the Anglo-Saxon and the German traditions: Trafalgar. As a pure naval engagement it certainly was not part of the focus of Creasy for his initial choice, but probably there are other reasons. Although Nelson was a hero in Britain ever since 1805 (and maybe even some years earlier), it probably took the patriotic impact of the celebration of the centenary of the battle and of his death in 1905 to firmly establish him within the British tradition. Amazingly, Nelson entered the German tradition in 1915 with Walter Heichen, which was clearly an effect of the enormous importance attributed by the German Emperor Wilhelm II and his contemporaries to the navy.

To finally conclude the analysis of the Creasy inspired traditions, a few derivatives have to be mentioned: there were and are still children's books adapting the Creasy decisive-battle-approach to introduce a young readership to military history. Thereby the Creasy approach is probably not taken for methodological reasons, but as a form of Guinness Book of World Records for battles, whereby decisiveness equals the record and thereby justifies the entry. Other approaches in this more or less entertaining fashion are books about *Last Stand! Famous Battles against the Odds*[32] or on *Military Blunders*.[33] On one occasion the concept of decisive battles was, in a book on so-called *Essential Militaria*, transformed into a page long list of "One-Sided Victories."[34]

Was there ever such a thing as a "decisive battle"?

The most basic form of a decisive battle is a fight one-man-against-one-man, a chieftain fighting another chieftain in a duel, thereby symbolising their tribes. By the defeat and/or the death of one of those chieftains the fate of his whole tribe is decided – from subjugation to annihilation. "Democratisation" of warfare following the American and French Revolutions obliterated this concept forever. There was no way to transfer

[32] B. Perrett, *Last Stand! Famous battles against the odds* (London: Cassell, 1991).
[33] S. David, *Military Blunders* (London: Constable & Robinson, 1997).
[34] N. Hobbes, *Essential Militaria* (London: Atlantic, 2003).

this concept into a post-Absolutism-society, as the end of the doctrine of divine right meant the theoretical end of the validity of such representative duels, albeit in practice such personalised fights may never have played a major role.

It has to be mentioned that the ancient Athenian polis and the post-1776/1789 societies shared in their theoretical concept of defence much more than the army of the French King Louis XVI in 1788 shared with the revolutionary French Army of 1792. Decisiveness of battles somehow correlates with the form of the societies concerned. The theoretical shift symbolising the vanishing of the concept of a decisive fight may be illustrated by a Cold War scenario. The duel as a symbol was not so much between US Presidents and USSR General-Secretaries meeting sporadically in Geneva or Reykjavik, but in the area of deterrence between the two confronting nuclear arsenals. To be fair, one has to mention that the arrival of atomic weapons epitomised and somehow perverted the whole concept of a decisive battle. As any nuclear warhead was a decisive battle in its own capacity, the accumulation of decisive battles of two nuclear belligerents may well have annihilated both of them, thereby obliterating the difference between the victorious and defeated party.

The time between Breitenfeld and Waterloo has been described as an age of decisive battles. But as Russell F. Weigley pointed out in his study *The Age of Battles – The Quest for Decisive Warfare from Breitenfeld to Waterloo 1631 to 1815*: "If in a successful battle the enemy army could be substantially destroyed – an outcome occasionally taking place – then the whole course of the war might be resolved in a single day [...]. Yet the age of battles nevertheless proved to be an age of prolonged, indecisive wars."[35]

Despite Weigley's empirical objection, the concept of a decisive battle still influenced the military thinking at the beginning of the 20th century. The most important example for this was the German military commander and thinker Alfred von Schlieffen, who died before the outbreak of the First World War, but was essential for forming the German strategy used during the initial phase of this war. Schlieffen was obsessed with the

[35] R. F. Weigley, *The Age of Battles. The quest for decisive warfare from Breitenfeld to Waterloo* (Bloomington: Indiana University Press, 1991), xiii.

battle of Cannae and studied it with his subordinates again and again. As the Israeli military historian Jehuda Wallach pointed out in his ground breaking study about the dogma of the battle of annihilation, this Cannae obsession by Schlieffen led directly to the barbaric slaughterhouse of Verdun and by that, in a reversion of intentions, to the German defeat – instead of the intended decisive bleeding of the French.[36] Therefore the trench warfare of the First World War reduced the belief in decisive battles, but the re-emergence of speed due to mechanisation in the Second World War produced some new evidence for the thesis of decisive battles. The guerrilla warfare of the de-colonisation period and Vietnam again shattered the belief in such singular events. But there is a theoretical concept of decisive battle outside the actual warfare on the battlefields, as demonstrated by the following table.

Table 4:

Decisive Battle – 1st level:	
Deterministic concept of history	**Open concept of history**
• Ultimate/Final battle/victory • Ordeal (decision by God)	• Turn of the tide, turning point, decisive campaign • Pyrrhic victory
• War to end all wars (militaristic version) / Eternal peace (pacifistic version)	• There is probably no such thing as a war to end all wars or an eternal peace
Decisive Battle – 2nd level:	
Totalitarian version	**Democratic version**
• "Vernichtungsschlacht" / "Mother of all Battles" / "Wunderwaffen" / "Endsieg" / "Endlösung" (Holocaust)	• Spread of freedom
• Eternal peace in the version of Mao	• Eternal peace in the version of Kant

The theoretical concept developed here has two layers or levels. On the first level there is a deterministic versus an open perception of history, boiled down and thereby extremely simplified to some striking philosophical mindsets like the "end of history" by Francis Fukuyama on the one hand and the "openness of the future" by Karl R. Popper on the other hand. The deterministic concept would come with notions such as "ultimate battle/victory" or "final battle/victory." In a pre-modern mindset

[36] Wallach, *Das Dogma*.

the decision by God via an ordeal would fit within this framework. The open concept would prefer expressions like "turn of the tide," "turning point" or a "decisive campaign" (instead of a battle) and would embrace the possibility that there might be Pyrrhic victories. A deterministic concept would believe in a "war to end all wars" in the militaristic version or in an eternal peace in the pacifistic version. An open concept of history would be inclined to the assumption that there is no such thing as a war to end all wars or an eternal peace. The deterministic version seems more inclined to the concept of decisive battles, as the open perception may be more linked to an ongoing-process-concept of history.

The second level needs the differentiation of the first level as a background, but is not directly interlinked with the approaches of the first level. In fact, it seems that both the totalitarian version and the democratic version are more inclined to a deterministic vision. Totalitarian regimes have widely used expressions like "Vernichtungsschlacht" [battle of annihilation], "Mother of all Battles," "Wunderwaffen" [miracle weapons] and "Endsieg" [German expression used by the Nazi propaganda for final victory]. One could even argue that the "Endlösung," i.e. the Holocaust, fell into this category, whereby the former battle character changed to a carefully planned mass murder of innocent civilian population.

The democratic version could simply be described as the spread of liberty as expressed for example by Thomas Jefferson: "May it be to the world, what I believe it will be, (to some parts sooner, to others later, but finally to all,) the signal of arousing men to burst the chains under which monkish ignorance and superstition had persuaded them to bind themselves, and to assume the blessings and security of self-government."[37] It has to be mentioned that there are even totalitarian and democratic versions of eternal peace. Eternal peace as envisioned by Kant is a well-known concept,[38] but Mao came along with quite another interpretation of that notion: "The revolutionary wars which have already begun are part of the war for perpetual peace."[39]

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[37] T. Jefferson, *Writings (Ed. by M.D. Peterson)* (New York: Library of America, 1984), 1517.

[38] A. Dietze, *Ewiger Friede? Dokumente einer Diskussion um 1800* (Munich: Beck, 1989).

[39] Mao Tsetung, *Ausgewaehlte Militaerische Schriften* (Beijing: Verlag fuer fremdsprachige Literatur, 1969), 268–271.

To conclude this chapter some modern developments have to be mentioned. Two studies on the Second World War, which were both published within ten to fifteen years after its end, made slightly different use of the term "decisiveness." Whereas the German book very much embraced the traditional Creasy battle-approach, the British study focussed on decisions as a precondition for battles.[40] The focus on decisions may have been influenced by the atomic bomb experience at the end of the Second World War, when the decision by the commander (plus the preparations by technicians) became somehow identical with the battle (even though this is not the perspective of the people on the ground).

How the notion of decisiveness changed over time can also be demonstrated by illustrations of military history books. Whereas traditional representations would show a plan of a battle or a campaign, this imaginary would be partly replaced at least for the two world wars by graphs demonstrating for example the changing transport capability of the Allies on the Atlantic Ocean. Not the map showing the actual locality of a German U-boat sinking an Allied ship is decisive, but the graph illustrating the number of register tons sank by the U-boats. The parallel of this would be a graph depicting the casualties of a certain decisive battle, but one would probably in most cases search in vain for such a graph in any book predating the 20th century.

Guerrilla + propaganda + media = morale?

Charles de Gaulle in a writing of 1927/28 summarised the German defeat of 1918 with the notion "Defeat, a question of morale."[41] But what might be the minimal prerequisites for a decisive battle? Is it the short term decisiveness (at once) or the long term implications (dominance over a longer period or even a new era)?

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[40] H.-A. Jacobsen and J. Rohwer (ed.), *Entscheidungsschlachten des zweiten Weltkriegs* (Frankfurt: Bernard & Graefe, 1960) and W. B. Smith, *General Eisenhowers sechs grosse Entscheidungen. Europa 1944-1945* (Bern: Scherz, 1956): Invasion, Normandie, Ardennen, Rhein, Ruhrgebiet, Bedingungslose Kapitulation.

[41] C. De Gaulle, *Le Fil de l'Epee et Autres Ecrits* (Paris: Plon, 1990), 617–645.

Let us test the common nominators of the Anglo-Saxon and the German traditions in the footsteps of Creasy. Gaugamela finished off a Persian dynasty, but the Empire of Alexander did not last for long; the Teutoburger Wald somehow marked the limits of Roman expansionism, but the Roman Empire did not collapse immediately and in some form or another stayed on for several centuries; the collapse of the Spanish Armada made an emerging British Empire possible, but Spain stayed on as a big power for nearly two centuries; Blenheim/Höchstädt had importance to the balance of power in Europe in the age of Absolutism, but that era itself was just 85 years away from a decisive revolutionary blow; Poltava ended the greater Swedish Empire and was essential in creating the new Russian Empire; Trafalgar destroyed the French fleet, but coincided with Napoleon's biggest land victory at Austerlitz; Waterloo/Belle-Alliance finished the Napoleonic Empire, but did not stop the ideas related to the French Revolution; Sedan was essential for creating the German Empire, which within two generations was defeated twice in 1918 and 1945.

Even if one might disagree with one or another interpretation, it seems obvious that the criteria for calling a battle decisive are as different as the political, social, cultural and military contexts of these battles. A collapse of an old Empire may as well qualify for a decisive battle as the emergence of a new Empire would do, but the decisiveness of the battle may differ from a causality between the battle and the actual collapse or creation of an Empire to a situation, where the battle was not the real reason but that what finally triggered it. Some modern authors of the Anglo-Saxon tradition have interpreted Little Big Horn as a decisive battle: decisive in the sense that George Armstrong Custer and all his men were annihilated? Certainly. Decisive in the sense that the Indian cause succeeded militarily or politically? Certainly not. But nevertheless Little Big Horn became a symbol, which the Indians in the Civil Right struggle could count on.

There comes a different layer to the notion of a decisive battle: the propagandistic value. At least one author of the Anglo-Saxon tradition has counted Dunkirk as a decisive battle. Why is that? The saving of British soldiers by all boats available did not make Dunkirk a decisive battle in military terms; at most it made it a humanitarian success for a democracy

fighting Nazism. But it certainly was a decisive propagandistic step, as Dunkirk was not only perceived by the British public as a defeat followed by other defeats still to come, but also as a sign of hope. This may not be a rational evaluation of the actual event, but it may well have had practical implications for the propaganda effort of Churchill. And therefore it may well be more decisive in the long run than the German "Blitzkrieg" Panzer assault, which smashed France in 1940 and was quite decisive in the immediate present of May and June 1940.

The most decisive event of the Vietnam War was for many civilian Americans and Europeans not the Tet or any other offensives, but the massacre of My Lai. Although it had no military significance at all, it had a large impact on how the war turned out, because it influenced morale at home. It is trivial to say, but has to be mentioned, that hostage taking by ISIS and other terrorist organizations is terrible for the hostages and their families and a brutal and barbaric act, but has no military importance in itself. Only when Aljazeera, CBS, CNN and Fox report about it (sometimes showing the film footage provided by the hostage takers), it becomes a political and thereby military factor, as it may affect morale within the troops (including for this matter "neutral" aid organisations) and public opinion back home.

This essay is not the place to elaborate on this interdependency, but one has to keep in mind the consequences of the media age as a changed environment or context for decisive battles. Guerrilla fighters and terrorists can create via the media, and at times only by the media, a coverage of certain events, which are then a decisive factor within the conduct of war – and therefore decisive battles can be lost in this field. Could these current events be listed in the way employed by Creasy? At times. My Lai is probably the best example of this, up until now. To complicate things further: "At Alamein, Rommel was utterly defeated but not annihilated: Alamein was a decisive victory but not a complete one."[42]

This interpretation from the memoirs of Field-Marshal Earl Alexander of Tunis reminds us of a basic principle of Clausewitz: "Therefore the war is an act of violence, which forces our enemy to fulfil our

[42] J. North (ed.), *The Alexander Memoirs 1940-1945* (London: Cassell, 1962), 26.

will."[43] As much as the enemy was forced to fulfil our will, the battle was decisive. But what is then the difference between a decisive and a complete victory? "The importance of a victory does not only correlate with the increasing amount of the defeated enemy forces, but rises to higher degrees."[44] To a certain extent the notion "complete victory" is the most decisive short-term outcome of a battle or a campaign. But even a complete victory may not qualify to be a decisive battle. If at Alamein Rommel had been not only utterly defeated but also annihilated, Alamein would have been a complete victory, but not necessarily a decisive battle, as the result would not have changed the position of power of Nazism within the Fortress Europe. The Normandy invasion was in that respect much more a decisive battle, not only by the historical outcome of this engagement, but because even a failure of the Allies would have had a decisive impact on the fate of continental Europe.

Concluding remarks: is there such a thing as a "decisive battle" in the War on Terror?

"There was no silver bullet" to prevent 9/11, argued Condoleezza Rice during the hearings on how 9/11 could have been prevented. As there was apparently no decisive measure to prevent the attacks on 9/11, the question would be, if there are at least in theory decisive battles in the fight against terrorism. After 9/11 a debate about the "war" character of the "War on Terror" started. An argument of – in the terms once used by Donald H. Rumsfeld – "Old Europe" strategists would be that the concept of "War on Terror" is an oxymoron, because the battlefields of terrorism and of armies are so different. Both sides have arguments for their case: decisive battles for some Afghan and Iraqi cities/fortresses on the one hand, ongoing guerrilla activities on the other hand. When the US-led

[43] C. v. Clausewitz, *Vom Kriege. Hinterlassenes Werk*. Ungekuerzter Text (Munich: Ullstein, 1980), 17 ["Der Krieg ist also ein Akt der Gewalt, um den Gegner zur Erfuellung unseres Willen zu zwingen"].

[44] Clausewitz, *Vom Kriege*, 235 ["Die Groesse eines Sieges [steigt] nicht bloss in dem Masse, wie die besiegten Streitkraefte an Umfang zunehmen, sondern in hoeheren Graden"].

war against the Taliban in Afghanistan started, the media reported about the US bombing of the bin-Laden mountain retreat of Tora Bora. The name "Tora Bora" alone, made in Western or at least in civilian Western minds, more allusions to an enemy in a James Bond film than to military fighting by the standards of the 21st century.

Then a massacre by Northern alliance troops of revolting Talibans at the Qala-i-Janghi prison at the fortress of Mazar-i-Sharif was reported. Much less was talked at the time about the capturing of the fortress of Mazar-i-Sharif in the first place and about the effects of the US bombing campaign on the ground (for example in Tora Bora). The media seemed puzzled, when out of the blue the Northern Alliance troops entered Kabul. During the progress of the campaign at least ordinary people (like historians), people without any access to the information of the military high command, could not feel the decisive points of the campaign. Several years and many CNN, Fox and BBC in-depth-reports and analysis have passed since then, one still could not feel the decisive points of this campaign. Were there yet a Stalingrad and a D-Day in the fight against terrorism?

When Kabul fell with surprisingly little resistance, a major campaign was certainly over, but there are still problems to grasp the content of that campaign. The argument would be that the complexity of the war on terrorism makes it even more difficult to grasp the decisive battle within this war – if there is one. The same goes with Iraq. The entry of US forces into Baghdad on 9 April 2003, – after hours and hours, days and days of embedded CNN camera views from the desert – clearly symbolised that the war against any organised Iraqi military under Saddam Hussein's command was coming to an end. We know by now and probably guessed it then, that the fight with terrorist gangs was yet to come. But are there identifiable turning points? Was another purging of terrorist hideouts in Fallujah a turning point? And now with IS/ISIS/ISIL/DAESH? How many recaptures like Palmyra, how many drone strikes, and how many arrests in Brussels and Paris does it take to call it "decisive"?

At least in theory there is still the possibility of a decisive battle. But this decisive battle is what it probably always was: a concept of hindsight, a concept of historians in the tradition of Creasy. After the first Napoleonic abdication in 1814 most people would have seen the Russian Campaign

of 1812 and the battle of Leipzig in 1813 as the decisive battles of the war against Napoleon. When he returned to France from the tiny island of Elba a year later in 1815, it turned out that it would need another decisive battle – the battle of Waterloo – to close this chapter of history. With the experience of Napoleon's return, Waterloo could probably only by hindsight after 5 May 1821 (death of Napoleon at St. Helena), be labelled as the most decisive battle in the wars of the French Revolution and of the Napoleonic period. But most of the ideas represented by the French Revolution and Napoleon were not beaten, they re-emerged during the revolutions of the 1830s and in 1848, today they form in a revised form the essential core of nearly all European democracies. So probably Valmy in 1792 as the first victory of the troops of the French Revolution was more important than the decisive blow against Napoleonic rule at Waterloo in 1815, because the values of 1789 (Liberty, Equality, Fraternity) were much more decisive than the program set out by the self-proclaimed "Holy Alliance" after the defeat of Napoleon?

"From here and today starts a new era in world history, and you can say, that you were present." These were the words Johann Wolfgang von Goethe addressed to his fellow German soldiers, after they had experienced the French victory at Valmy.[45] One has to concede that Goethe caught the decisiveness of the battle on the spot, but how many victories have been declared to be decisive or even final and turned out to be Pyrrhic? Following the line of argument that decisive battles are a concept of hindsight and therefore a concept of historians, it is much too early to identify any decisive battles in the War on Terror. When Sir Edward Creasy wrote his book in 1851, the last decisive battle described by him was Waterloo. Waterloo, whether you accept it as a decisive battle or not, had been history then for thirty six years.

[45] J. W. v. Goethe, *Sämtliche Werke* (Ed. by K. Goedeke). Volume 24: Kampagne in Frankreich – Die Belagerung von Mainz (Stuttgart: Cotta, [s.a.], 51). ["Von hier und heute geht eine neue Epoche der Weltgeschichte aus, und ihr könnt sagen, ihr seid dabei gewesen"].

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The Unavoidable Vision Failure

The Anglo–German First World War naval confrontation

Michael H. Clemmesen

It is almost an impossible challenge for the military professional to predict how a hypothetical future conflict will run and end. When advising politicians, professional leaders will seek to present options that they estimate can bring the relatively cheap, early, and acceptable conclusion that both they and their Government hope for. However, the opponent is an independent actor, and he will do everything possible to avoid or at least delay an unfavourable outcome, and all action and interaction in war is influenced by friction and chance. Another reason why prediction is exceedingly difficult is that even known technologies have not been tested under realistic conditions. If the conflict lasts longer than a few months, latent or immature technologies will be developed to a level where they can influence the outcome of the conflict in a decisive way. It is not only the opponent that is an independent actor, so are allies and formally neutral states, and it is very hard to predict if and how the regulations of international law will be respected by belligerents during the conflict. All these areas of uncertainty are illustrated and highlighted in this case, where the focus is on the expectations and reality of the 1914–18 Anglo–German naval conflict in the North Sea.

To some extent the pre-1914 vision of the coming naval war matched what actually happened. A key part of the confrontation actually did become the decisive struggle between the British Royal Navy and the Imperial German Navy in the North Sea and adjoining narrows. The timing of the war was not a major surprise either. The relaxation of Anglo–German tension at the end of the First Balkan War in spring 1913 may have lowered the feeling of urgency, but during the 1911 and 1912 international crises, leading naval professionals in Britain and Germany, as well

as small neutral Denmark, had considered an early war inevitable. Lord John Fisher, the retired British First Sea Lord, and the German leaders, had considered it likely that the period after the reopening in summer 1914 of the Kiel Canal would increase German willingness to risk war. In November 1912 the Danish Commanding Admiral had made that clear to his government, and during Wilhelm II's War Council on 8 December during the most critical part of the Balkan War Crisis the German Naval Secretary, Alfred von Tirpitz, had actually used the requirement to complete the Kiel Canal and the construction of the Heligoland Base as part of his effort to counter the attempt of the Army Chief of General Staff, Helmuth von Moltke (the younger), to exploit the chance to have an early war. By his criticism of the army's readiness for war he made certain that more money would be spent to reduce the deficiencies in the army's size and quality. The Kaiser asked for an accelerated construction of submarines to enhance the ability of the navy to interdict the British lines of communication across the Channel after Tirpitz had made clear that the German submarine force was far inferior in number and quality to the British. When the Chancellor some days later underlined Germany's financial limitations and that the existing building programme ("Novelle") was promised to be the last, Tirpitz emphasised the importance of completing the ongoing construction of the III. Battle Squadron (with the new *König* Class ships) and reinforcing the manning of the fleet. There were no longer plans to add to the number of large vessels, only to replace old ships such as the obsolete *Hertha* Class cruisers.[1]

[1] On the 8th of December War Council discussion between Wilhelm II and his admirals and generals: Annika Mombauer, *Helmuth von Moltke and the Origins of the First World War* (Cambridge, New York: Cambridge University Press, 2001), 135–153, and her "German War Plans," – *War Planning 1914*, ed. Richard F. Hamilton and Holger H. Herwig (Cambridge, New York: Cambridge University Press, 2010), 48–79; Albert Hopman, *Das ereignisreiche Leben eines "Wilhelminers:" Tagebücher, Briefe, Aufzeichnungen 1901 bis 1920*, ed. Michael Epkenhans (München: R. Oldenbourg, 2004), 268–277, plus and especially 284–290. However, for the "War Council" see also the analysis in: John C. G. Röhl, *Kaiser, Hof und Staat. Wilhelm II. und die deutsche Politik* (München: C. H. Beck Verlag, 1995), 175–202; Jörg-Uwe Fischer, *"Admiral des Kaisers." Georg Alexander von Müller als Chef des Marinekabinetts Wilhelms II* (Frankfurt am Main: Peter Lang, 1992), 128–131; Paul M. Kennedy, "The Development of German Naval Operations Plans Against England, 1896–1914" [1974] reprinted in: *Naval History 1850–Present* vol. I, ed. Andrew Lambert (Aldershot: Ashgate, 2007), 316–317; For the discussions at

Otherwise however, the pre-war vision of the character of the naval war failed to match what happened during the 4½ years of war.

I shall argue in this essay that this failure was basically unavoidable due to the difficulties in peace-time of seeing and accepting the dynamics and uncertainties of war and preparing accordingly, of foreseeing in-conflict technological development and interaction, and of understanding the basic character of the political-military process when the denied slide towards escalation happens anyway.

Problem one: the length and character of naval war

The previous naval war, the naval part of the Russo–Japanese War, had been decided conclusively by the battle of Tsushima, and both sides in the naval confrontation between Germany and Britain expected a similar outcome in the coming North Sea war.[2]

One very clear source of the naïve expectations is the retired Rear-Admiral Sir Sydney Marow Eardley Wilmots' small publication from 1913, *The Battle of the North Sea in 1914*. Wilmot had served as Deputy Director of the Naval Intelligence Department in the late 1880s. Thereafter he had been an ordnance – gunnery and torpedo – specialist until he retired in 1909 at the age of 61. He contributed professional articles to the 1911 version of *Encyclopædia Britannica*.

In his small fiction of the coming war, the conflict would be started with destroyer raids against the British fleets at Rosyth and Dover. The raid against Rosyth was a half-failure with the destroyers sunk and only four British battleships too damaged to join the fleet. Two more British battleships were sunk by the German destroyers on the way to Dover. The North Sea battle between the German High Seas Fleet and the Grand Fleet, the main fleet of the British Royal Navy, took place four days after

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the Danish November 1912 crisis meetings: Michael H. Clemmesen, *Det lille land før den store krig. De danske farvande, stormagtsstrategier, efterretninger og forsvarsforberedelser om kriserne 1911–13* (Odense: Syddansk Universitetsforlag, 2012), 287–312.

[2] For a clear analysis of the popular expectations: Jan Rüger, *The Great Naval Game. Britain and Germany in the Age of Empire* (Cambridge: Cambridge University Press, 2007).

the start of hostilities with a battle cruiser engagement and ended with a "most complete and glorious (British) victory" fought at 8,000–9,000 yards in the very centre of the North Sea. The Royal Navy had no ships sunk, but casualties amounted to 200 killed and 600 wounded. In a modern repetition of Trafalgar the British captured eighteen German battleships and four cruisers. After the battle, the war moved to the eastern Mediterranean with a combined Austrian-Italian attempt to conquer Egypt that failed due to Italian half-heartedness. There then followed great power reactions against German violations of Danish neutrality, with Russia, France and Great Britain each reinforcing Denmark with a force of 60,000 soldiers, the two first still formally non-belligerents. The risks of a general European war deterred Germany and made her accept a peace where she gave-up her ambitions to create a great power navy.[3]

Let us return to reality. The creator of the German Navy and its State Secretary at the start of the war, Alfred von Tirpitz, had assumed that the risk his fleet presented to British economic interests would convince the City of London to keep Great Britain out of a war between Germany and a Franco-Russian combination. If the British intervened anyway, the German intent was to weaken the British Grand Fleet by a campaign of attrition with light forces against the expected blockading forces in the German Bight. It would be followed by an attempt to catch and destroy a part of the British battle fleet and thereby achieve a more favourable force balance in the follow-on operations. The high technical quality of the German High Seas Fleet units was expected to bring a clear advantage in battle. The outcome would be achieved in weeks or months using ships available or in the final stages of construction. There was no need to start construction of new large units as the war would be decided before they could become operational.[4]

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[3] Eardley Wilmots, *The Battle of the North Sea in 1914* (London: Hugh Rees, 2013), 44–76.

[4] General analysis in Rolf Hobson, *Imperialism at Sea. Naval strategic thought, the ideology of sea power and the Tirpitz plan, 1875–1914* (Boston: Brill Academic Publishers, 2002); Eva Besteck, *Die trügerische "First Line of Defence," zum deutsch-britischen Wettrüsten vor dem Ersten Weltkrieg* (Freiburg: Rombach, 2006); Matthew S. Seligmann et al. (eds.), *The Naval Route to the Abyss. The Anglo-German naval race 1895–1914* (Farnham, Surrey: Ashgate, 2015).

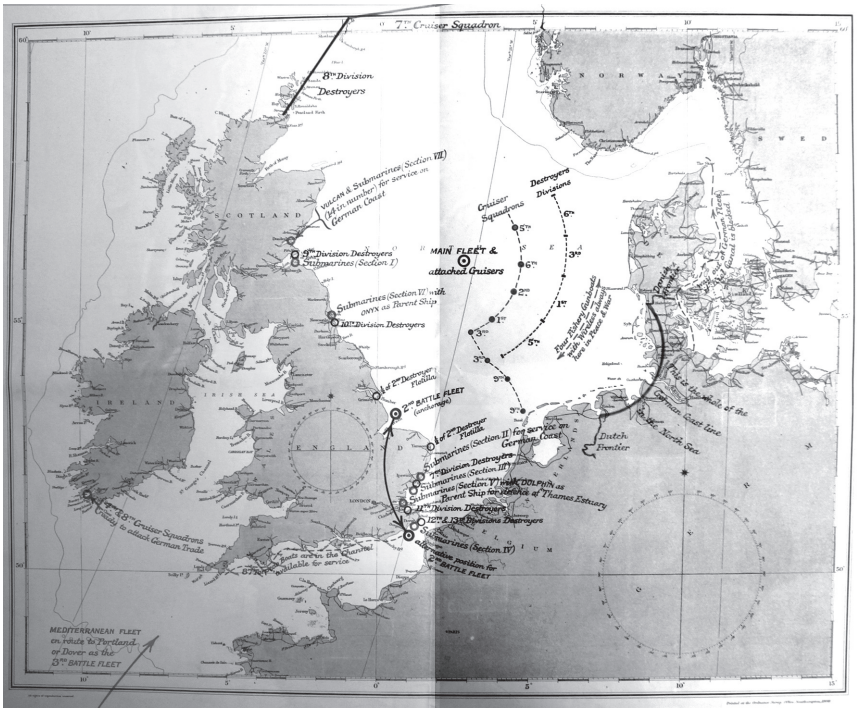

Chart from the March 1909 War Plan G.U. from Admiral of the Fleet John Fisher's personal files. Green marking by Fisher probably from 1916. Courtesy: Fisher Files, the Churchill Archives Centre

The British were aware that the Germans would hesitate to risk their fleet in battle against their numerically superior Home Fleets (regrouped as the Grand Fleet during the war). Therefore they looked at different ways to lure the High Seas Fleet far enough out into the North Sea to be able to insert part of the Grand Fleet between the High Seas Fleet and its bases in the Bight to block its retreat and then destroy it in as in a trap controlled by radio from the Admiralty War Room. After the destruction of most of the German fleet it would be possible to enter the Baltic Sea to make the blockade fully effective.

Different measures were considered to make the Germans leave their bases. One would be to capture one of the German North Sea Islands, another to make the blockade so effective that the Germans would be

forced to try to break it by an attack against the blockading forces. However, after 1912 the professional leadership of the Royal Navy realised that it could not press the Germans to sally to its destruction. Thereafter the main tool of the navy would have to be a trade and other economic warfare that was expected to be decisive far quicker that actually proved to be the case. However, even with the emphasis on the blockade it was hoped that the Germans would be caught and thereafter brought to battle in the regular "sweeps" conducted by the Grand Fleet and its cruiser squadrons towards the German coast. Like the Germans, the British considered that the war would be too short to expect new large ship construction to influence its outcome, and when construction on some specialised large units was started by late 1914, the emphasis was on accelerating construction to make sure that they would arrive in time to influence the outcome.

The British Navy's political leader Winston S. Churchill, the First Lord of the Admiralty since 1911, disagreed with the War Plan outlined above, as he found it to be too passive. He believed it was essential that the service made a highly visible contribution to the expected early victory and he worked constantly to bully the admirals to begin risky offensive operations that would be more dramatic and visible than economic and other pressure.[5]

The period of the war where the naval warfare protagonists remained encouraged by the chance of a decisive battle lasted 22 months and finally ended at the Battle of Jutland: With the Germans handicapped by the distant trade blockade at the northern and southwestern parts of the North Sea, they could not expose the British forces to the planned attrition and

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[5] As note 1 plus Avner Offer, *The First World War: An agrarian interpretation* (Oxford: Clarendon Press, 1989); Nicholas A. Lambert, *Planning Armageddon. British Economic Warfare in the First World War* (Cambridge, Mass.; London: Harvard University Press, 2012); Matthew S. Seligmann, *The Royal Navy and the German Threat 1901–1914. Admiralty Plans to Protect British Trade in a War Against Germany* (Oxford: Oxford University Press, 2012); Shawn T. Grimes, *Strategy and War Planning in the British Navy, 1887–1918* (Woodbridge: Boydell, 2012); Christopher M. Bell, *Churchill and Sea Power* (Oxford: Oxford University Press, 2013); Stephen Cobb, *Preparing for Blockade 1885–1914. Naval Contingency for Economic Warfare* (Farnham: Ashgate, 2013); Michael Hesselholt Clemmesen, "The Royal Navy North Sea War Plan 1907–1917," *Fra Krig og Fred. Dansk Militærhistorisk Kommissions Tidsskrift* 2 (2014): 88–109.

had to limit their operational endeavours to trying to catch and destroy part of the British Grand Fleet. That fleet pursued the concept of trying to trap the German Fleet by blocking its retreat to bases without success.

With their failure to win a decisive battle, the only option left to the navies was to focus exclusively on the trade-economic contribution to the total war effort. The Royal Navy had already intensified its effort early in 1916, but the German Navy had to wait for the Government to decide a return to unrestricted U-boat warfare.[6]

Professional advisors to the political decision-makers have to offer War Plans that will bring the desired results, such as an offensive or defensive victory within a limited time, and limited disruption of their own society and economy.

The Tirpitz Plan "*Risikoflotte*" should have deterred British participation in the war, and if that failed, his fleet should have gradually weakened the closely blockading Royal Navy light forces and destroy the supporting larger ships by locally superior German forces. It was supposed to bring results quickly. When the British adjusted their strategy to that of a distant blockade, Tirpitz had no immediate response, and with Kaiser Wilhelm II unwilling to lose his ships in risky forward operations (such as a raid against the British transports to France in the Channel), the German Navy entered the war without any viable plan for influencing the outcome of the war and soon had to combine the hope for a miracle with the use of emerging weapons such as the U-boat in unrestricted trade war, and air ships in air raids against Britain.[7] Even the massive raid against the British east coast, and torpedo boat raids against British battle ship bases that the Royal Navy had feared and discussed since 1904, were never planned by the Germans.[8]

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[6] James Goldrick, *Before Jutland. The Naval War in Northern European Waters, August 1914–February 1915* (Annapolis: Naval Institute Press, 2015); Michael Epkenhans et al. (eds.), *Skagerrakschlacht. Vorgeschichte – Ereignis – Verarbeitung* (München: Oldenbourg, 2009); John Brooks, *The Battle of Jutland* (Cambridge: Cambridge University Press, 2016); Eric W. Osborne, *Britain's Economic Blockade of Germany 1914–1919* (London; New York: Frank Cass, 2004), 44–152.

[7] Besteck, *Die trügerische "First Line of Defence,"* 60–69.

[8] To be covered by Michael H. Clemmesen, "The Japanese Torpedo Boat Raid on Port Arthur on 8 February 1904 and Naval Risks and Threats Perceptions the Next Ten Years," to be pub-

As mentioned, the Royal Navy autumn 1912 War Plan failed to take risks as it emphasised the use of slow-working trade warfare and could only hope that battle came as a result of a German mistake. It did not match the expectations and requirements of the foreseen short and decisive war. Therefore Winston Churchill, worked and schemed hard from early 1913 to after the start of the war to replace that plan with something more aggressive and decisive. As his key staff officers failed to comply, they were replaced in spring-summer 1914, but until the Dardanelles operation in spring 1915, he failed to get his way.[9]

Problem two: unclear capabilities of even familiar operational technology

During the decades up to the start of the war most technologies relevant for naval operations developed very quickly, and the implications for battle tactics were nearly impossible to predict. Computer supported operational analysis was still unavailable, and thus the only way to gain an impression was to conduct practical experiments under controlled conditions. Safety and costs are always likely to limit realistic experiments that fully tests weapons and human-equipment interaction, and the limited knowledge about the opposing force capabilities reduces the value of even the most realistic test.

Both some of the well-known and newest technology proved to be a costly and ineffective waste of resources when exposed to the reality of war. One proven, but now ineffective, type of unit was the former second most powerful type of warship, the armoured and protected cruisers. They required large crews, but their armament, protection, limited speed, and endurance meant that they were neither suitable for the battle line, nor as effective cruiser scouts for the ever faster battle fleet, or on blockading independent patrolling work. The loss of the three *Cressy*-

lished in the *ACTA of the 42nd International Congress of Military History* 3–9 September 2016 in Plovdiv, Bulgaria.

9 Clemmesen, "The Royal Navy North Sea War Plan."

class cruisers with nearly 1,500 killed to one U-boat on 22 September 1914 might have been explained by stupid behaviour, but even the newest German armoured cruisers, the *Scharnhorst*, *Gneisenau* and *Blücher*, proved to be completely outclassed by their battle cruiser successors off the Falklands and at Dogger Bank during the first winter of the war. The *Edgar*-class protected cruisers that were deployed in less exposed roles in the 10th Cruiser Squadron on the distant blockade of Germany at the northern access to the North Sea were replaced by more suitable Armed Merchant Cruisers from December 1914 onwards.

The Zeppelin and other similar German airships were impressive to watch, but were basically a waste of resources. The weather conditions in the North Sea made airships less suited as fleet scouts than expected, and their dependency on weather, combined with their vulnerability to counter action by fighters, meant that they were ineffective as bombardment platforms.[10]

Neither the unexpected low value of the slightly older cruisers nor the unrealistic expectations for the airship had any significant impact on the development of the war. In this sense the view of the risk from torpedo attack was different. The main naval battle weapon was still the increasingly heavier and longer range artillery. However, the parallel development of ever faster and longer range automobile torpedoes on battleships, cruisers, and especially in the fleet torpedo boat/torpedo boat destroyer flotillas, complicated battle tactics, as it was obvious that an extended column of battleships would present an attractive target for a mass torpedo attack, especially in the limited visibility conditions likely to influence a North Sea battle. Torpedo technology developed quickly in the decade before the war. The traditional compressed air engine technology then gave a range of 1,100 yards at 35 knots, but the development of the fuelled so-called wet-heater torpedoes with increased range at high speed complicated prediction. In 1916 the British 21 inch torpedoes' range was 4,200 yards at 44–45 knots, 10,750 at 28–29 knots and approximately 17,000 yards at 18 knots. The German 50 cm torpedoes had a range of 5,450 yards at 35 knots

[10] Douglas H. Robinson, *The Zeppelin in Combat. A History of the German Naval Airship Division. 1912–1918* (Atglen, PA: Schiffer Military/Aviation History, 1994).

and 10,950 yards at 28–28.5 knots.[11] Greater launch range would limit torpedo boat vulnerability to the small and medium range anti-torpedo boat self-defence batteries carried by the larger ships. The main defence thereafter had to become a timely deployment of own flotillas against the enemy threat. As the speed of ships increased, the torpedo boat targeting became more difficult, and the development of evasive drills such as turning parallel to incoming torpedoes reduced the chance of hits.

The British were deeply worried about the capabilities and aggressiveness of the German torpedo boat force, and not only about its deployment in battle. As already mentioned they foresaw that the German boats would try to execute an effective repetition of the pre-emptive Japanese raid against the Russian ships at Port Arthur that started the Russo–Japanese War, and the Royal Navy therefore moved its bases north to Scotland beyond the range of the German boats. Intelligence about German torpedo boat tactics was one of the key interests of the pre-war British naval attachés to Berlin and Copenhagen. Captain Hugh Watson, who served in the position from 1910 to 1912, used friendly Danish naval officers to get first hand intelligence. They were highly valued as sources because the Danes had the possibility of observing German torpedo boat exercises in the Baltic Sea and off the Danish coast.[12]

However, as a successful torpedo attack could at one stroke change the battle situation, the fleet commanders had to take the threat seriously, and as it was basically impossible to gain clarity through realistic experiments prior to the actual battle, the Grand Fleet Commander-in-Chief, John Jellicoe, acted cautiously when the fleets met on 31 May 1916. In the Battle of Jutland the combination of fighting distance, fast movement, manoeuvrability of fleets and limited range, and especially the speed of torpedoes, meant that the main roles of the fleet torpedo boat and destroyer forces proved to be defensive.[13] During the confused and dynamic battle under difficult conditions of shifting bad visibility the

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[11] John Brooks, *The Battle of Jutland*, 91–96.

[12] Michael H. Clemmesen, *Det lille land før den store krig*, 225–231; Matthew Seligmann (ed.), *Naval Intelligence from Germany* (London: Ashgate for the Navy Records Society, 2007), e.g. Report No.34/11, Berlin 30 November 1911, 344.

[13] Michael H. Clemmesen, *Det lille land før den store krig*, 208–214, 235–239, 323–326.

German units fired approximately 110 torpedoes with around 90 from torpedo boats, but only hit one battleship without sinking it.[14]

With the knowledge gained by all *after* the battle of the limited effects of the torpedo under realistic battle conditions, it becomes clear that Jellicoe could have taken more risks to achieve the destruction of the High Seas Fleet in the battle. As a result of the disappointment that the battle did not become the Trafalgar of the First World War that Wilmot had predicted in his fiction, the actions of the Commander-in-Chief were exposed to severe criticism in the clarity created by the actual events.[15] It may be considered a parallel to the post-event criticism of Helmuth von Moltke (the younger)'s management of his heritage from his predecessor Alfred von Schlieffen.

Problem three: unrealised potential of existing and latent technology

The naval war was less influenced by latent technology than land warfare, where improved chemical weapons, tanks and artillery counter-battery systems transformed the character of battle from 1916 onwards, together with aviation that matured into a key element in creating the conditions for operational victory.

Aviation did not mature enough during the war to contribute in a similar way to the naval battle beyond adding ability to tactical over-the-horizon reconnaissance. Submarines were different. With the adoption of the diesel engine, radios, gyro-compasses and the improved torpedoes, the slow, diving torpedo boats then called submarines had developed in the five years up to the war to become an effective weapon system, but the concept for their use was still immature.

The German Navy gave low priority to the U-boat service until 1912. It could only be seen as a supplementary tool in the initial attrition of the

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[14] Ibid., 505.

[15] One such example is *Jutland. The Naval Staff Appreciation*, edited by William Schleihauf (Barnsley: Seaforth Publishing, Pen & Sword Books, 2016).

British blockading forces in the Bight. The situation did change a little after the Balkan War Crisis. The not unexpected short time before the outbreak of war only gave time for new construction of smaller vessels such as submarines as the Kaiser had ordered on 8 December 1912. The realisation that the British strategy had changed to a distant blockade meant that a key mission of the U-boats would be an attempt to ambush the Grand Fleet off its new northern bases.

The professional leadership of the Royal Navy under its First Sea Lord from 1904 to 1910, John Fisher, was acutely aware of the future potential of the submarine in both influencing the freedom of movement and operations of fleets, and in conducting "cruiser warfare" against enemy merchant shipping. He developed his understanding in a close dialogue with his submarine expert, Captain Sydney S. Hall. The dialogue continued after Fisher had retired and Hall had been replaced by Commodore Roger Keyes as head of the Submarine Service. In mid-1913 Fisher informed the First Lord of the Admiralty, Winston Churchill, that Keyes was making a mistake by trying to add a fast steam-powered submarine to the service, able to give submarines the additional role of escorting the fleet. Hall had underlined that the existing engine technology only gave two potential missions to British submarines: coastal defence, and a forward presence in patrols off the enemy coast. Churchill answered politely, but continued to support Keyes' unrealistic ideas.[16] The exchange of views and concerns that summer also involved the former Conservative Prime Minister, Arthur Balfour. Balfour worried that future development of large numbers of long range submarines would deny the use of the sea around Britain to both sides. He wrote in May 1913 that due to that lack of means to find and destroy the opponent's submarines:

> … we might conceivably find ourself surrounded by seas in which no enemy's battle-ship could live, and which no enemy's troops could cross, but which would yet be as little under our control, for military or com-

[16] Churchill Archives (Cambridge, United Kingdom), FISR 1/13, S.S. Hall to Fisher, 4 July 1913 & 19 August 1913; Churchill, Confidential to Fisher of 30 August 1913; S.S. Hall to Fisher (document 721 of unclear date) September1913.

> mercial purposes, as if we were the inferior maritime power. If there was any chance of such an extreme hypothesis being realised, we should not only be useless allies to any friendly Power on the Continent, but we should have the utmost difficulty in keeping ourselves alive.[17]

Fisher answered that, unfortunately, "our Admirals are so blind to these developments … Lord C. Beresford wrote an official letter calling submarines 'playthings'! Sir Arthur Wilson hates oil and loves coal!"

Fisher was now employed by the Government to investigate all the implications of changing from coal to oil fuel as head of the "Royal Commission on Fuel and Engines" and used that post energetically as his new platform. Late June Fisher had thought deeper about Balfour's points and concluded:

> It will be impossible for submarines to deal with merchant ships in accordance with international law. Is it presumed that they will disregard this and sink any vessel heading for an English port, commercial or otherwise? It is assumed that allowance must be made for an enemy attempting this and provision made as far as possible to meet it … It would be an altogether barbarous method of warfare, but if it is done, the only thing would be to make reprisals.

He noted that one step to reduce the risks would be to arm merchant ships, but that would give the submarine the excuse that it acted in self-defence. Fisher also foresaw that neutral ships would be sunk because of the difficulty of recognising a flag through a periscope.[18]

After consulting his close advisors, as usual primarily the naval strategic thinker and the Admiral's loyal pen, Julian S. Corbett, Fisher developed a memorandum to the Committee of Imperial Defence on the submarine issue in December 1913.[19]

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[17] Ibid., Arthur Balfour to Fisher, document nos. 683 and 691, of 6 May 1913 and 20 May 1913.

[18] Ibid., Fisher to Balfour, document nos. 691a and 704, of 25 May 1913 and 26 June 1913.

[19] Churchill Archives, FISR 1/14, documents no. 726, 731, 751, 752, 753, 754, 755, 756, 758, Fisher to Hall, Private and Secret, Marienbad, Bohemia 4 September 1913; Balfour to Fisher, Private, of 12 September 1913; Fisher to Corbett, 29 November 1913; Corbett to Fisher, 30 November 1913; Fisher to Corbett, 1 December 1913; Corbett to Fisher, 3 December 1913;

In the memorandum "The Oil Engine and the Submarine (A Contribution to the consideration of future Sea Fighting)" Fisher noted that "(T)he submarine was the coming type of war vessel for sea fighting", and the diesel engine was the key in that development. He covered the different roles of submarines and noted that enemy submarines already ruled-out the feasibility of a close surface blockade, but use of own submarines could deter any enemy inclination to launch an invasion by sea and carry-out the blockade themselves. Fisher continued with his estimate of the future developments and then proceeded with comments on the vulnerability of Britain's food supplies to submarine attacks. He argued that German submarines could not work effectively within international law:

> Under these circumstances, is it presumed that the hostile submarine will disregard such law and sink any vessel heading for a British commercial port and certainly those who are armed or carrying contraband? … The fact remains … that there is nothing else the submarine can do except sink her capture … The essence of war is violence and moderation in war is imbecility.[20]

The view that German submarines would be used against British imports was not limited to Fisher. In the instruction during the Balkan War Crisis that the Danish Fleet Staff gave the fishery inspection ship *Islands Falk* about to depart for an Icelandic patrol in March 1913, the staff noted that the risk from the submarine attacks might even stop the traffic to the British western ports.[21]

Churchill reacted immediately to Fisher's memo stating that he was "indebted … for the epoch making Memo", but three weeks later, on 1 January 1914, he made clear that:

Dumas to Fisher, 4 December 1913; Corbett to Fisher, 4 December 1913; Hall to Fisher, 11 December 1913.

[20] Nicholas Lambert (ed.), *The Submarine Service, 1900–1918* (London: Ashgate for the Navy Records Society, 2001), 213–231.

[21] Rigsarkivet (The Danish State Archives, hereafter: RA), Marinestaben 1904–1932 A. Emneordnede Sager. 35-35a. Neutralitetsbestemmelser m.m., Læg, Tillæg til Instruks for Islands Falk 1913, Flaadens Stab, Fortroligt of 3 March 1913 to Chefen for Inspektionsskibet *Islands Falk*.

> …There are a few points on which I am not convinced. Of these the greatest is the question on the use of submarines to sink merchant vessels. I do not believe this would ever be done by a civilised Power. If there were a nation vile enough to adopt systematically such methods, it would be justifiable and indeed necessary, to employ the extreme resources of science against them: to spread pestilence, poison the water supply of great cities, and, if convenient, proceed by the assassination of individuals…[22]

Churchill only had to wait a little more than a year before the inconceivable became reality. After the debate in the German Government since November 1914 about whether to start a counter-blockade against England, the issue was decided after the Dogger Bank Battle on 24 January 1915. High Seas Fleet operations to cut-off and destroy part of the Grand Fleet seemed to be unrealistic, and on 4 February the German naval warfare was stepped-up to include an unrestricted U-boat campaign in the declared War Zone around the British Isles. The campaign lasted till mid-September that year, when U.S. reactions made the German Government withdraw the U-boat flotillas from their trade warfare operations in British waters.[23] The other new effort, the Zeppelin bombardment of London, was decided a few days later, in mid-February.

The unrestricted U-boat campaign was resumed on 1 February 1917 after another extended debate to make a final attempt to force Britain out of the war. The debate had intensified after the narrow escape of the High Seas Fleet on 1 June 1916 following the inconclusive Jutland Battle that made clear that seeking a decisive battle by fleet warfare was far too risky. An intensified strategic air war followed in spring 1917, now mainly carried-out with new heavy bomber aircraft far more effective than the airships.

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[22] Churchill Archives, FISR 1/14, documents no. 763, Churchill to Fisher, Secret, of 1 January 1914.

[23] Goldrick, *Before Jutland*, 285–298; Jürgen Rohwer, "U.Boot-Krieg," Gerhard Hirschfeld, Gerd Krumeich, Irina Renz (eds.), *Enzyklopädie Erster Weltkrieg* (Paderborn: Ferdinand Schöningh, 2009), 931–934; Richard Compton-Hall, *Submarines at War 1914–1918* (Penzance: Periscope, 2004), 193–206; Edwyn A. Gray, *The Killing Time. The German U-Boats 1914–1918* (London: Seeley, 1972), 72–115.

As made clear by this analysis, the failure to face the risk of full utilisation of the submarine in trade warfare was not a failure of prediction. Both Balfour and Fisher saw and considered the possibility. Instead it was a result of political unwillingness to accept the likelihood of escalation towards what would be called total war.

Problem four: the expected and actual fate of the neutral states in the naval war

As already mentioned in the summary of Admiral Eardley Wilmot's *The Battle of the North Sea in 1914*, it was generally expected that neutral states such as Sweden, Norway and Denmark would have their neutrality violated in the coming great European War. The expectation was common to both the great powers and the neutral states' own policy-makers.

Even if rather pessimistic about the likelihood of success, the latter would try to stay out of the conflict by acting according to their legal obligation as neutrals and by pro-active diplomacy.

What the legal obligations would mean in relation to the territorial waters of the Nordic States had been made clear by the common declaration of neutrality agreed and issued in December 1912 during the Balkan War Crisis.[24] With different defence ambition levels, these three states all wanted to discourage belligerent use of their territory by guarding and defending the parts of the territory considered most likely to be violated and used against the opponent.

Sweden was expected to be involved on Germany's side in the war against its arch-enemy Russia. Russia expected Sweden to break with neutrality and invade Finland to support the population against Russian rule. The invasion would either take the form of a landing on the southwest coast of Finland, or as a land offensive around the northern end of the Gulf of Bothnia via Tornio. The invading force was expected to be of two army corps' strength.[25] The Swedish establishment agreed that the coun-

[24] Clemmesen, *Det lille land før den store krig*, 336–343.

[25] Pertti Luntinen, *The Imperial Russian Army and Navy in Finland 1808–1918*, Studia historica 56 (Helsinki: SHS, 1997), 221–226.

try would be involved in a great war on the side of Germany, but expected this to be the result of a Russian invasion, either around the northern end of the Gulf of Bothnia – possibly supported by a sea landing to outflank Swedish defences – or of a landing in central Sweden. The final objective of the Russian operation could still be to get possession of ice-free ports on the Norwegian coast, as had been the case before the break-up of the Swedish-Norwegian Union in 1905. The possibility of a German–British naval war and the likelihood of British-Russian co-operation in such a war meant that the Royal Navy might try to establish bases in the archipelago and fiords on the west coast of southern Sweden, or maybe even invade further inland from that coast.[26]

What the Swedes suspected the Royal Navy might do was actually what Churchill wanted. He intended to be able to conduct the naval war more aggressively than foreseen by the Admiralty War Staff War Plan. As mentioned Churchill considered limitations of international law important in submarine operations against merchant shipping essential for Britain. However, violations of small state neutrality were a different issue. Such acts might be necessary, and in the First Lord's "Secret and Personal" instructions from 31 January 1913 to the aggressive Rear-Admiral Lewis Bayly for the study work he was to conduct independently of the War Staff, Bayly was to report "on the question of seizing a base on the Dutch, German, Danish or Scandinavian Coasts for operations of Flotillas on the outbreak of war with Germany, the other countries named being either unfriendly neutrals or enemies." In his final report from 30 June 1913 Bayly did as instructed. It discussed a major operation against Esbjerg in Denmark and destroyer bases at Borns Deep off Holland, Læsø Channel in Danish territorial waters in Kattegat, Kungsbacka Fiord on the Swedish west coast and Egersund ("Ekersund") in Norway off the

[26] Gunnar Åselius, *The "Russian Menace" to Sweden. The Belief System of a Small Power Security Élite in the Age of Imperialism* (Stockholm: Almquist & Wiksell International, 1994), 248–406; Arvid Cronenberg, "Säkerhetspolitik och krigsplanering. Huvudlinjer i arméns operative planering 1906–1945," – Bo Hugemark (ed.), *Neutralitet och försvar. Perspektiv på svensk säkerhetspolitik 1809–1985* (Stockholm: Militärhistoriska Förlaget, 1986), 60–66; Bertil Åhlund, *Svensk maritim säkerhetspolitik 1905–1939* (Karlskrona: Marinlitteraturföreningen, 1992), 67–90; Knut Wichman, *Gustaf V, Karl Staaff och Striden om Vårt Försvar 1901–1917* (Stockholm: P.A. Norstedt, 1967); Clemmesen, *Det lille land før den store krig*, 389–431, 464–474.

North Sea approach to Skagerrak. His interest and focus continued, and by mid-June 1914 Churchill instructed the First Sea Lord to develop a "Plan T" for a destroyer base at Stavanger as a supplement to the existing too passive main War Plan.[27]

From 1911 onwards, Norwegians considered it likely that the Germans would violate the neutrality of their country by establishing a naval base in the south-west to be able to bypass a British attempt to block the northern end of the North Sea, and in early 1913 the German Minister to Christiania (Oslo) reported that Norwegian contacts thought that the German Navy needed "a German Gibraltar" at Kristiansand or Bergen. In August that year the scenario for the Norwegian Navy exercise included a German attempt to establish a base on the coast in order to break the British blockade.[28]

During the Balkan War Crisis in winter 1912–13, the British Admiralty War Staff Operations Department considered how it should react to German cruiser use of the Norwegian Fiords as temporary bases. In the "General Instructions" of the new War Plan developed from draft to a version agreed with the Commander-in-Chief of the Home Fleets from November to December 1912, the Director of the Department underlined to the fleet commander that he should consider "the possibility of the enemy being already established in force on the outbreak of war on the west coast of Norway, or of enemy's flotillas being in occupation of fjords or inlets on that coast …" In a memorandum a couple of months later, the Director dealt with both the situation before and after the start of hostilities was considered. In the former case the British action depended on the size and character of the German force. If "war was considered inevitable" and the German force consisted of armoured vessels or "a large flotilla of torpedo craft", the British would be likely to destroy the force as soon as

[27] The National Archives of the United Kingdom (hereafter: TNA), ADM 137/452, 7–6, 16, 40–46, 89–113, Churchill to Bayly, M-180/13 of 31 January 1913; Lewis Bayly, Admiralty, 30 June 1913, 21; ADM 116/3096, Churchill to First Sea Lord, Secret, of 11 June 1914, "War Plans".

[28] Tom Kristiansen, *Tysk trussel mod Norge? Forsvarsledelse, trusselsvurderinger og militære tiltak 1940* (Bergen: Fagbokforlaget, 2008), 102–103; Bundesarchiv, Militärarchiv (hereafter: Barch), RM 5/1639, Auswärtiges Amt. Abschrift. Ad A.4317 pr. 1. Märtz 1913, Kristiania 23 February 1913, Vertraulich!; Riksarkivet, Norge (hereafter: NRA), KA 549, Bilag B, Underbilag 1. Hemmelig, Eskadrens krigsøvelser. August 1913, Almindelige forudsætninger.

hostilities started, even if this would be "offending Norway". When discussing the situation after hostilities started, the War Staff made clear that "If Great Britain is ever engaged in war with Germany, it may be a life or death matter, and under such circumstances a great Power cannot reasonably be expected to forego an advantage of possibly vital consequenses [sic?] in order to respect the susceptibilities of a neutral State in a matter which is not after all vital to the latter."

The staff noted that such action would not be the first in British history. "If Germany is prepared to lay Belgium waste in order to get at France, international opinion could hardly find any fault with Great Britain for taking action which, although it might violate strictly neutral rights, would be unlikely to cause appreciable loss of neutral life or property…" The Director's superior officer, the Chief of War Staff, suggested that Norway should be informed via diplomatic channels at the outbreak of war that the British would attack the sheltered German force after 24 hours. Churchill concurred, but underlined that "*All this is most secret and is not suited for an ordinary filed paper*". Neither the Cabinet nor the Foreign Office should be formally consulted in the preparation of the matter. Churchill did consult the Foreign Secretary, Edward Grey, who had "*no objection to provisional instructions*".[29] However, as already noted, Churchill preferred to take the initiative and establish a base at Stavanger rather than wait to react to a German violation.

Placed astride the straits between the North and Baltic Seas, Denmark was far more likely to be directly affected by an Anglo–German naval war than Norway or Sweden, and the pre-war discussion in Copenhagen was focused on when and where, rather than if, there would be a major violation of her neutrality. The traditionalists in the army and their Conservative group political supporters felt convinced that Germany would either seek control of the country by a pre-hostilities coup against Copenhagen, or by a later landing followed by a bombardment in the same way that the British had done in 1807. The navy leadership and most moderate liberal politicians could not be certain that the traditionalists were wrong, but they also saw the possibility that Britain would coerce Denmark to side

[29] TNA, ADM 116/3412, 7–33, 230–242.

with her by the threat of naval bombardment, and they considered it possible that Germany could be convinced to respect Danish neutrality until such time when a decisive British naval victory in the North Sea had made German control of the Straits urgent. The navy also understood that the British might try to invade North Germany and threaten the Kiel Canal via a landing at Esbjerg or further north on the Jutland Peninsula, rather than trying to force Denmark to take sides by threatening her capital.[30]

The German Navy had actually wanted to do as the Danish Army leadership suspected, but in February 1905 the German Army had succeeded in convincing Kaiser Wilhelm II that it could not find the two army corps necessary for an early invasion of Denmark at the start of a war. Therefore Danish neutrality should be respected until she joined Germany's Western enemies, or they violated her neutrality to attack Germany via Jutland, or tried to enter the Baltic Sea.[31]

Even if the British Navy wanted to enter the Baltic Sea as early as possible in a war with Germany, most of the British Admiralty planners agreed with the Danish Navy in its view of the situation. After having analysed the options up to 1909 they understood that they had to wait to enter the Baltic Sea until after a decisive defeat of the High Seas fleet. Another important factor was that the British Army attitude mirrored that of the German Army: it rejected the use of part of its limited forces in secondary operations such as employment in Denmark in support of some Royal Navy objective.[32]

When war came, all three Nordic States (as well as the Netherlands) survived without the foreseen violations of neutrality. The reason was not only that the great battle of the North Sea, when it finally came, ended without a decisive victory. The character of the long naval war with its focus on the nearly unexpected submarine warfare against trade and the endeavours to protect own merchant ships meant that the violations of

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[30] Clemmesen, *Det lille land før den store krig*, mainly 69–100, 165–202, 318–322, 345–354, 451–464.

[31] Clemmesen, *Den lange vej mod 9. april. Historien om de fyrre år før den tyske operation mod Norge og Danmark i 1940* (Syddansk Universitetsforlag, Odense 2010), Chapters 1 to 5.

[32] Neil William Summerton, *The Development of British Military Planning for a War Against Germany, 1904–1914* (Unpublished thesis: London University, 1970), mainly chapters 6–8, 10.

neutrality that did take place became limited to territorial waters. The reason was not that the belligerents lost interest in the territory of the neutral states. Germany restarted formal war planning against Denmark (and the Netherlands) in autumn 1916, in spring 1917 against Norway, and in a more limited way against Sweden. British plans for the establishment of bases on the Norwegian coast at first Kristiansand and thereafter Stavanger started in 1916 and ended spring 1918 with a fully developed plan for a large base west of Stavanger.[33]

Two main reasons for the passivity can be identified. The first reason was the belligerent armies' unwillingness to take increasingly scarce resources away from the main fronts. This must be seen as a reinforced extension of the German and British Armies' successful pre-war resistance to the use major forces in support of naval warfare objectives.

The second element was the effects of the German invasion of Belgium and the character of the German Army behaviour there. It was used energetically and successfully by Allied propaganda. The Admiralty War Staff Director of Operations was mistaken in winter 1913 when he predicted that German destruction of Belgium would legitimise later British action. On the contrary, the violation of Belgium made it nearly impossible for all belligerents to violate small state neutrality elsewhere later. The limitations on British actions created by the role as "protector of the small states" had been noted in an intelligence report from Denmark from August 1915 that reported on the opinion of the Danes. Such a protector "… could not violate the neutrality of a small state, after having declared war motivated the violation of Belgian neutrality". The intelligence officer also underlined that the Danes thought that their country had been spared a German invasion of Jutland as a result of the German experience with Belgium.[34] That the Danish view of the role of Belgium was correct became clear in the renewed German war planning against Denmark from late summer 1916: Any German action should be triggered either by British action or clearly hostile Danish moves.[35]

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[33] Clemmesen, *Den lange vej mod 9. april,* chapters 10, 13, 16, 26, 28–31, 45.

[34] RA 171 Tyske arkivalier om Danmark, DANICA AA, Pk. 55, Abschrift 12 August 1915, Friderici, Bericht aus Dänemark, page 5.

[35] Clemmesen, *Den lange vej mod 9. april,* 167–179.

That the German agent's 1915 report about Danish views on British constraints mirrored reality was made clear three years later by Admiral David Beatty, then Commander-in-Chief of the Grand Fleet. When ordered in August 1918 to mine Norwegian territorial waters east for the new Allied North Sea anti-submarine mine barrier, Beatty underlined that if the Norwegians resisted, blood would flow and this "would constitute a crime as bad as any the Germans had committed elsewhere." The Admiralty yielded, and the Norwegians laid the minefield themselves.[36]

After Belgium, it became important to all belligerents that an operation against another neutral was triggered by the opponent's violation. When the war started, the German Foreign Office had seemed to be little more that the official mail office for handing over notes and ultimata from the General and Admiralty Staffs. The diplomatic costs of Belgium meant that this changed. Thereafter envoys to small neutral states such as Ulrich Count von Brockdorff-Rantzau in Copenhagen and Paul von Hintze in Christiania, gained a key role in pursuing German interest using the hosts' acute knowledge of German military power and thereby reducing the risks of its actual use.[37]

Concluding summary

The initial land battles of World War I had much in common with how armies had fought during the 19th century. Four years later the army organisation and mode of combat more or less mirrored the combined arms fighting of the rest of the 20th century. This dramatic change had been largely unexpected, and anticipating the new situations and demands, and absorbing the effects of technological and political change, had probably been impossible prior to gaining direct and painful experience on the battlefield.

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[36] Arthur J. Marder, *From Dreadnought to Scapa Flow. The Royal Navy in the Fisher Era 1904–1919, Volume V*, *1918–1919, Victory and Aftermath* (Oxford: Oxford University Press, 1970), 72.

[37] Clemmesen, *Den lange vej mod 9. april,* e.g. 155–159, 329–330, 387–389. The work of both envoys was so appreciated in Berlin that their next job became Foreign Secretary.

Here the naval warfare was different. Both the British and German naval officers' corps had an acute understanding of the need to absorb all the developing and emerging technological possibilities into the various parts of the fleets. They did well considering the rapid revolutionary development in such fields as communication, weapon range, scientific fire-control, and submarine weapons at a time where testing by operational analysis support did not exist. On both sides the navies had gained a fairly accurate understanding of how the new technology would interact in *battle*. Prediction proved insufficient because the naval war was not decided by battle, but by raw and extended.

Both sides of the political-professional "strategy bridge" between the political intention and the militarily achievable found it impossible to face that war was most likely to become extended, and the longer a conflict, the more difficult accurate prediction of conflict development and results would be. Expectations of decisive action may have been built on naïve belief in the certainty of symmetric views and action. In war the opponents choose asymmetric and humble paths to avert defeat, and immature technology may quickly reach full usability and gain a major role such as submarines did here. It will also provoke the development of technological and tactical responses not foreseen in peace. Latent technology may emerge to become important tools. As the conflict escalates, some moral and legal constrains of peace are likely to become politically irrelevant. Peace-time prediction of freedom of action may prove anachronistic. But in the course of war new unpredicted constraints may limit the freedom of action.

In peace-time an acutely open-minded and broad professional may outline risks to decision-makers who are considering the option of war. That is their maximum contribution. It is irresponsible and pseudo-scientific arrogance to present any outcome of choosing war as certain.

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Preparing for War in the 1930s

The myth of the Independence War and Laidoner's "active defence"

Kaarel Piirimäe

The ability to draw the right lessons from the First World War has been pinpointed as a key factor in the military effectiveness of armed forces in the inter-war period. Estonia can be seen as another case of a country leaning on the concepts and practices that had brought success in the previous war but rendered anachronistic by the rapid social and military developments preceding the Second World War. However, as the Estonian leadership chose not to fight in 1939-1940, estimates of the Estonian army's fighting power rest on indirect evidence and will always remain speculative. The decision to capitulate before the overwhelming power of the Soviet Union can even be interpreted as a sign of prudence and recognition of the limitations of a small country. On the other hand, the trumping up of the myths and the spirit of the Independence War, questionable operational and tactical ideas displayed by the army commanders, and the unimaginative and overoptimistic scenarios at army manoeuvers that were noted by foreign military attachés, do call for a critical analysis of the Estonian imaginations and preparations for future war in the 1930s.

For more than two decades since *glasnost* and the end of Communist historiography, Estonian historians have been studying the country's readiness for war in the autumn of 1939. The focus of researchers has been directed at two problems. First, why did Estonia not resist? In this respect, Estonia's decisions have been compared to those of Finland. The northern neighbour was in a comparable political-strategic situation (although it was a larger country), but decided to resist the Soviet Union militarily, while Estonia, and also Latvia and Lithuania, chose to sign mutual assistance pacts allowing Moscow to establish military bases on their territory.

President Konstantin Päts (to the right) and General Johan Laidoner (with the cigarette) inspecting manoeuvres. Courtesy: The Society of Estonians in Sweden, Estonian Film Archive

This compromised Baltic defences and made their later annexation by the USSR, completed in August 1940, a much easier prospect. Finland, however, fought two wars and remained independent.

The difference from Finland has raised questions about the military effectiveness of the authoritarian regime that Estonia (and also Latvia and Lithuania) had established after the coup d'état of 1934. Historians have asked about the "moral right" of the authoritarian leaders, primarily President Konstantin Päts and the Commander-in-Chief (C-in-C) General Johan Laidoner, to take decisions affecting the fate of the entire nation without consulting the people.[1] This has been the grounds for criticism by the Finnish historian Martti Turtola, but also for example from the Estonian political scientist Rein Taagepera. Taagepera notes among other

[1] According to most authors these were "authoritarian regimes," Andres Kasekamp, *A History of the Baltic States* (Basingstoke; New York: Palgrave Macmillan, 2010), 111–2. However, the political scientist Rein Taagepera uses the term "dictatorship," Rein Taagepera, *Maa ja laul: Sada aastat Eesti poliitikat* (manuscript in author's possession).

things that Estonia had not been abandoned by potential allies in September 1939, as has been claimed, but decided to act alone even before anyone could offer assistance. From 1918 to 1919 Estonia had been a pillar of strength, on which Latvia could lean. Now, in 1939, Estonia proved to be the "weak link whose capitulation also demoralised the southern neighbours". For Taagepera, Päts was not a dictator fostering militarism; Laidoner worried about defence, but in reality economised on defence in the 1930s. The purge of internal enemies was more important than building fortifications and purchasing new armaments for the army, Taagepera claims.[2]

The second important line of enquiry has concerned military affairs, but not primarily the art of war, but the technical side of warfare and systems of mobilization. As a result of this research, we know the structure and the organization of the Estonian defence forces in peace time, and their likely wartime deployment. Historian Toe Nõmm began researching the armaments of the Estonian army and the development of the Estonian defence industry already at the end of the 1980s.[3] Largely due to Nõmm's prolific work we have ample data about the equipment of the Estonian army. In the 1930s, the main effort was not directed at procuring new weapons, but at updating old ammunition neglected in the 1920s. As a result of these largely invisible efforts, the Estonian situation in terms of ammunition was probably the best among the Baltic countries (including Finland), at least relative to the number of soldiers. Stocks were large enough to wage a war the size of the Finnish–Soviet Winter War, 1939–

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[2] Martti Turtola, *President Konstantin Päts: Eesti ja Soome teed*; transl. by Maimu Berg (Tallinn: Tänapäev, 2003); Martti Turtola, *Kindral Johan Laidoner ja Eesti Vabariigi hukk 1939–1940*; transl. by Maimu Berg (Tallinn: Tänapäev, 2008); Taagepera, *Maa ja laul*. But compare with Seppo Zetterberg, *Eesti ajalugu* (Lohkva: Tänapäev, 2009), 418, 478–479.

[3] Toe Nõmm, "Eesti Vabariigi kaitseväest 1939–1940," *Akadeemia* 3 (1989): 585–599; "Eesti kaitseküsimusest," *Postimees* (9. oktoober 1991), 4; "Browning 1903 ja Eesti sõjaväepüstolid 1918–1940," – *Laidoneri Muuseumi aastaraamat 2001*, ed. Leho Lõhmus (Tallinn: Laidoneri muuseum, 2002), 102–114; "Arsenali püstolkuulipilduja," – *Laidoneri Muuseumi aastaraamat 2002*, ed. Leho Lõhmus (Tallinn: Laidoneri muuseum, 2003); 129–142; "Eesti tankitõrje 1940. aastani," – *Laidoneri Muuseumi aastaraamat 2003*, ed. Leho Lõhmus (Tallinn: Laidoneri muuseum, 2004), 106–133; "Eesti sõjaväe varustus, sõjatööstus ja relvastuspoliitika," – *Sõja ja rahu vahel I. Eesti julgeolekupoliitika 1940. aastani*, ed. Enn Tarvel, Tõnu Tannberg (Tallinn: S-Keskus, 2004), 226–264.

1940.[4] However, weapons were mostly old, originating from the period of the First World War. For example, there were 234,000 shells, but artillery pieces were obsolete. The modern howitzers that Estonia ordered were never delivered, and would have needed new shells anyway.

Estonia had probably the best anti-tank gun parks in the Baltics, but almost no mortars. Air defence was considered the weakest link: twelve new Bofors 40mm AA-cannons that were acquired before the war were literally a drop in the ocean. The new German 20mm, 75mm and 37mm cannons were delivered too late, in 1940, to have an impact on the Estonian defence policy, which had by the time become entirely dependent on the USSR.[5] But perhaps the greatest weakness was the fact that the Estonian army had not been able to standardise its weapons systems, so by the end of the 1930s it had an extraordinary mixture of different types and calibres. Lack of resources had prohibited the transition to British weapons in the 1920s. When the government eventually began modernising its armaments in the latter half of the 1930s, it was already too late.[6] For too long the country had tried to live on the stocks assembled in the victorious Independence War of 1918–1920.

Urmas Salo has researched Estonian defence planning in the 1930s. He emphasises the importance of the coup d'état of 1934. Assuring the army's support for the authoritarian regime, General Laidoner in return received a free hand to organize defences.[7] He immediately began a fight against pessimism toward the Estonian capability for defence, which had taken root during the economic depression, and began to nurture a new fighting spirit drawing on the experience of the Independence War.

Salo also shows that already in the first year of the authoritarian regime, Laidoner introduced new operational concepts, which however were never clearly systematized and codified, but voiced either orally or

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4 Toe Nõmm, "Eesti relvad Teise maailmasõja eel," *Tehnikamaailm* 8 (2008): 62–64; "Eesti relvad 1918–1940," *Tehnikamaailm* 6 (2008): 116–119.

5 Mika Raudvassar, "Õhukaitse Suurtükiväegrupp 1928–1940," *KVÜÕA Toimetised* 3 (2004): 208–234.

6 Nõmm, "Eesti relvad".

7 The British Foreign Office thought that the new constitution of 1938 confirmed the position of the army as a pillar of support for the regime, "Estonia. Annual Report, 1938," FO 371/22226, National Archives, United Kingdom (hereafter: NA).

in stray writings by Laidoner and his confidants. In 1934, battle tours were organized for senior officers to border regions close to Russia. These were the areas of operations of the 1st and the 2nd division, near Narva in the North-East and in the border districts of South-East Estonia, respectively. Laidoner referred to the smallness of the Estonian territory, to the advantageous geography at the borders, and emphasised that Estonia must not abandon even an inch of its land without a fight. Defence had to be active, because the enemy could be defeated only by offensive action.

In November 1936, Laidoner gave an order to stop practicing the tactics of withdrawal. In a directive issued on 14 September 1938, the C-in-C ordered that war operations were to be transferred to enemy territory immediately after the start of the war, just as had been done in the War of Independence nineteen years earlier.[8] Urmas Salo suggests that these plans were unrealistic. Because Estonia had no allies, it would have been impossible to deliver successful counterattacks or to push the line of defence into the territory of the Soviet Union. Salo concludes that Laidoner's ideas may have had a positive impact on morale, but they were impossible to implement in practice. The will to fight for the country's independence was probably strong, but in the final analysis was of little use in 1939.[9]

The critique of Urmas Salo is to the point. However, it is important to distinguish levels of war: it is one thing to deliver counter-attacks, another matter to push the enemy back to enemy territory by a general counter-offensive. The first is primarily in the realm of tactics, the other an operational and a strategic matter. From the tactical point of view, counter-attacks are perfectly reasonable and in case of enemy incursions even necessary.[10] For example, Finnish success in the Winter War could be partly explained by the ability to counter-attack an enemy's exposed

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[8] Laidoner's diary for 18 September 1938, cited by Urmas Salo, "Eesti kaitse üldised põhimõtted," – *Sõja ja rahu vahel*, 168–170.

[9] Salo, "Eesti kaitse üldised põhimõtted," 170.

[10] About executing counter-attacks, see the current Estonian manual, Enno Mõts, *Eesti kaitseväe maaväe lahingutegevuse alused: maaväe ohvitseride ja staabitöö väljaõppejuhend* (Tartu: Kaitseväe Ühendatud Õppeasutused, 2010), 108, 121.

flanks with small but mobile units. This allowed the Finnish army to encircle and destroy, by the so-called *motti*-tactics, much larger Red Army groupings.[11] At the same time, one should agree with Salo that a counter-offensive on the entire front would have been beyond the ability of the Estonian army.

Urmas Salo rightly notes that currently there are no studies about the mentality of the Estonian army in the 1930s.[12] Nevertheless, there are studies on officer education and training,[13] and a start has been made on researching Estonian theories of war.[14] Because of the lack of studies on mentality, war theory, and operational concepts, analysis of the Estonian defence capability have remained superficial. We may know the number of rifles and cannons, estimate *potential* firepower, but without knowing tactical methods and operational concepts it is impossible to assess military effectiveness in a meaningful way.

The objective of this article is not to speculate about the possibilities of defending Estonia in 1939–1940, or to present another scenario and likely outcome of the "autumn war" of 1939, which is now a popular topic in "alternative history" books.[15] Rather, this article will explore the role of historical experience in the visions of war of the Estonian high command, especially of General Laidoner. What were the effects of the Independence War on the mentality and the operational thinking of senior officers? The article will analyse the core ideas of Laidoner's doctrine of "active defence".

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[11] Pasi Tuunainen, *Finnish Military Effectiveness in the Winter War 1939–1940* (Basingstoke: Palgrave Macmillan 2016), 99–115.

[12] Urmas Salo, "Kaitseväe korralduse areng," *Sõja ja rahu vahel*, 179. The exception is Igor Kopõtin, "Reichswehri identiteedikriis: selle mõjud ja kajastamine Eestis aastatel 1919–1934 [The identity crisis in the Reichswehr: its influence on and reflection in the Estonian Army in 1919–1934]," *Ajalooline Ajakiri. The Estonian Historical Journal* 1 (2016): 103–132.

[13] Andres Seene, "Eesti sõjaväe ohvitseride ettevalmistamise süsteemi kujunemine ja areng 1919–1940" (Unpublished PhD Dissertation: University of Tartu, 2011); Taavi Urb, "Eesti merejõudude ohvitseride väljaõpe aastatel 1919–1940" (Unpublished MA Thesis: University of Tartu, 2015).

[14] For Estonian ideas on sea power, see Liivo Laanetu, "Eesti meresõjalise mõtte kullafond," ENDC Occasional Papers, 3 (2015): 9–95.

[15] Mart Laar, *Sügissõda 1939. 1. osa, Punane torm tõuseb* (Tallinn: Read, 2014); Mart Laar, *Sügissõda 1939. 2. osa, Käsi mõõgaga* (Tallinn: Read, 2016); Hanno Ojalo, *1939: kui me valinuks sõja* (Tallinn: Grenader, 2010).

The article will also study the exercises of the Estonian armed forces, focusing on two larger manoeuvers in 1937 and 1938. Those manoeuvers have been chosen for the reason that, by coincidence, summaries of reports by British military attaches on those exercises have been preserved in the National Archives of the United Kingdom. In addition, there is a survey and an analysis of the reports of Swedish military attaches by the Swedish military historian Fredrik Eriksson.[16] This way it is possible to compare the assessments of Estonian army commanders with the assessments of foreign observers, which will give a more objective ground from which to judge on the tactical and operational effectiveness of the Estonian army.

One should add that unavoidably these estimates will remain quite speculative, because the true test for military effectiveness always remains war itself, not exercises.[17] At the same time, one should not underestimate the importance of training. According to some theorists, the military effectiveness of the "West" has throughout history been based on professionalism based on rigorous and long drills. The Roman army remained unbeaten almost for a thousand years, and not because of superior technology, but primarily due to harsh training; the advances of the Wehrmacht in the initial stages of the Second World War were not the result of some technological edge but of realistic training.[18] Therefore, one may presume that also the Estonian army exercises reflected actual combat capabilities. But first one should look at the military culture in more general terms. Was Estonia, as a result of the victory in the Independence

[16] Fredrik Eriksson, "Coping with a New Security Situation – Swedish Military Attachés in the Baltic 1919–1939," *Baltic Security and Defence Review* 15:2 (2013): 33–69.

[17] Williamson Murray, *Military Adaptation in War: With fear of change* (Cambridge: Cambridge University Press, 2011), 1–36.

[18] About Western superiority, Geoffrey Parker, "The Western Way of War," – *The Cambridge Illustrated History of Warfare: The triumph of the West*, ed. Geoffrey Parker (Cambridge: Cambridge University Press, 1999), 2–9; and a more modest assessment: John France, *Perilous Glory, The rise of Western military power* (New Haven, London: Yale University Press, 2011). For the Roman army a useful overview is Murray, *Military Adaptation in War*, 38–45. About *Blitzkrieg*, Robert M. Citino, *The Path to Blitzkrieg: Doctrine and training in the German Army, 1920–1939* (Boulder; London: Lynne Rienner, 1999); and more precisely about training, James S. Corum, *The Roots of Blitzkrieg: Hans von Seeckt and German military reform* (Kansas: University Press of Kansas, 1992), 68–96.

War, affected by a mentality of satisfaction and conservativism characterising other victorious powers after the First World War?

Defence will and morale

There are many studies on the inability of Britain and France, the main victorious powers, to draw adequate conclusions from the experiences of the First World War, to make accurate predictions and adopt the right tactics and organization for new technological possibilities. Admittedly, some of the British and French mistakes can be explained by pacifism caused by the heavy losses in the war, but others were clearly the result of the confidence and conservativism grounded in victory.[19]

Was this a problem in Estonia? It is evident that the Independence War had much influence already for the fact that a large part of the officer corps developed and matured in that war. Estonian historian Liisi Esse has shown that the memory of the Independence War overshadowed memories of the First World War.[20] *Sõdur* (Soldier), the main military journal in Estonia, devoted considerable space to the Independence War, whereas the Great War was almost entirely forgotten.

At the same time it seems that because of Estonia's geography, feelings of insecurity and fear before the Soviet Union were great and this factor never allowed Estonia to rest on the laurels of victory. This is confirmed by a testimony from a British observer, lieutenant general Sir Francis Poitiers Nosworthy, who visited the Baltic region from 9 May to 2 June 1924. The British general stayed in the Estonian, Latvian and Lithuanian capitals for two days each. His impression was:

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[19] About the French military innovation, Robert A. Doughty, "The French Armed Forces, 1918–1940," – *Military Effectiveness. Volume II, The interwar period*, ed. Allan R. Millett and Williamson Murray (Boston: Allen & Unwin, 1988), 39–69; and British developments, Brian Bond and Williamson Murray, "The British Armed Forces, 1918–1940," – *Ibid.*, 98–130.

[20] Liisi Esse, "Suure sõja mäletamine: kirjad, päevikud ja mälestused eestlaste sõjakogemuse avajana," – *Sõdurite kirju, päevikuid ja mälestusi Esimesest maailmasõjast*, ed. Tõnu Tannberg (Tartu: Rahvusarhiiv, 2015), 21–29.

> ... in spite of the success which had so far attended their efforts to get their armed forces efficiently organized and trained and in spite of their present financial stability and apparently sound economic position, there was still a strong undercurrent of uneasiness concerning their ability to continue their state of independence indefinitely. They appear to live in perpetual fear of RUSSIA [here and elsewhere emphasis in original], and ... it seems certain that as soon as RUSSIA begins to settle down, we shall have to deal with constant alarms and appeals for aid from these states.[21]

It is somewhat surprising that the fear of Soviet Russia was already so great even before the communist attempt at coup d'état in December 1924.[22] The insecurity of the 1920s increased with the Great Depression and the impressive Soviet program of industrialisation and military modernisation in the early 1930s. According to Urmas Salo, the prognosis of the general staff of the Defence Forces in 1933 was pessimistic. It was thought that without strong resistance the newly established "moto-mechanized" units of the Red Army could advance as much as fifty to a hundred of kilometres a day. It was feared that even in case of strong defence, in the South-East the enemy would be able to capture Petseri in the first day, Võru in the second or third day, and Põlva (about fifty kilometres from the border) in the fourth day. In case of a surprise attack at the Narva front in the North East, Narva was expected to fall in the first day (some ten kilometres from the front line), Vaivara in the second. The enemy would reach the line of the Pühajõe River in Toila region in the fourth day, so some forty kilometres inside friendly territory.[23]

The domination of pessimistic estimates is confirmed by the reports of Swedish military attachés for the early 1930s. The Swedish representative captain Juhlin-Dannfelt met the Estonian chief of staff Major General Juhan Tõrvand in February 1933. Tõrvand did not place much hope in

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[21] "Visit to the Baltic states, 9 May – 2 June 1924," WO 106/1573, NA.

[22] Nosworthy's report from 1925 tells that the Bolshevik attempt at coup d'état had further increased feelings of insecurity, "Report on Tour of Baltic states and Scandinavia, July–August 1925," WO 106/1574, NA.

[23] Salo, "Eesti kaitseväe valmisolek sõjaks," 95.

Estonian officers on manoeuvres near the cemetery of Old Izborsk looking toward the Estonian-Russian border in the East. The village is now in Russia. Courtesy: Estonian Film Archive

the Estonian ability to resist if the Russians attacked, and he considered a Russian attack inevitable. The general tone of Tõrvand was characterised by hopelessness and even despair. According to the historian Fredrik Eriksson, Tõrvand thus confirmed the Swedish strategic perception that after a respite the USSR would solve the Baltic problem with a mathematic certainty.[24]

Because of the existential fears dominating in the region, it is difficult to believe that the Estonian army was complacent about the future. It is noteworthy that the journal *Sõdur* was zealous to observe the development of the military systems of other European countries and to learn from not only the first-class militaries of the great powers but also from the experience of smaller countries. *Sõdur*, which since 1924 was appearing once a week, had considerable impact on the mentality of officers and

[24] Eriksson, "Swedish Military Attachés," 36.

soldiers.[25] At the end of the 1920s and the beginning of the 1930s a lot of attention was paid to small nations like Switzerland and Belgium that had comparable defence systems. Constantly there appeared surveys and analyses of the doctrines, technologies, exercises and war theories of the military heavy weights, France, Britain, the USSR, Poland and others.[26]

From the point of view of military thought, Estonia was part of overall European trends. How effectively those ideas were implemented should be further researched, however. At this stage it suffices to say that Estonian officers were not ill-educated or unintelligent as inferred by Swedish attachés accredited to the Baltic states.[27] Perhaps the Swedish conservative officers considered all Baltic soldiers of peasant stock as *a priori* less educated than their European colleagues of a higher social class. Cultural prejudices were strong. For example, Swedish observers considered the Finnish army as better than the Estonian, Latvian and Lithuanian armies, primarily because the Finnish officer corps still included a high number of Swedish noblemen. It needs to be mentioned, though, that peasant origins could in some context also be regarded as a mark of quality. In general, the Poles, Lithuanians, Latvians, Estonians, and Finns were highly regarded as good soldiers for their strong physique and stamina unspoilt by an urban environment.[28]

Reports by Swedish attachés confirm that the morale of the Estonian army leadership was low in the beginning of the 1930s. Hopelessness and uncertainty are not the best grounds for successful resistance against a stronger enemy. In military history there are many examples about the importance of morale on the outcome of war. The Argentinian contingent on the island of East Falkland was defeated by a considerably smaller but

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[25] Kopõtin, "Rahvuslus ja lojaalsus Eesti sõjaväes," 109–110. It is likely that after the coup only those articles that the regime approved of could be published in *Sõdur*, as the journal was censored by the political police.

[26] J. Tõrvand, "Riigikaitse muredest" (1930), appeared in numbers 14–16, 19–20, 23–24, 25–26 and 50–52; A. Traksmann, "Riikliku julgeoleku küsimusi," *Sõdur* 1-2 (1930), 1–10 and *Sõdur* 3-4 (1930), 69–78. In some units, foreign military journals were available even in soldiers' libraries (Mika Raudvassar's information to the author).

[27] Eriksson, "Swedish Military Attachés," 41.

[28] Ibid., 58. It appears that contemporary concerns about the fragile physique of youngsters from urban environments are not so new.

motivated British expedition force in 1982. The Battle of Thermopylae of 480 BC belongs to the canon of military classics. In Estonian military history one could refer to the collapse of the Russian defence of Saaremaa in the German operation *Albion* in 1917, or the retreat of the Estonian army from Tartu before the invading Red Army in the Estonian Independence War in 1918.[29]

One can therefore agree with General Laidoner that low morale was a dangerous tendency and had to be purged from the army. In 1939, Laidoner presented a report about his activities in the past five years, emphasising that before assuming responsibility as the C-in-C, the "operational thinking of the responsible leadership of the army… had become unhealthy". According to Laidoner, resistance against the Red Army had been considered essentially hopeless, and two "peculiar psychoses" had paralyzed the armed forces, the "tank psychosis" and the "withdrawal psychosis". Due to the underrating of the possibility to fight at borders, the emphasis was placed on delaying defensive tactics and on trading space for time. It was assumed that the Soviet offensive would begin without pre-warning and that Soviet tank and moto-mechanised units would easily overrun the Estonian infantry. If Laidoner's description of the situation before 1934 was true – and we saw above that it was at least partly true – it was sensible to try to overcome the excessive pessimism.

One has to emphasize, however, that military morale does not rest as much on abstract ideas or values, factors that can collapse quickly under combat stress, but most importantly on professionalism, which is grounded in years of drill, and on the cohesion of units resulting from hard and realistic training as a group. The British military historian Hew Strachan notes that political or ideological indoctrination is important when the soldier is recruited, but it loses its importance at the front.

[29] Antonius CGM Robben, "Combat Motivation, Fear and Terror in Twentieth-Century Argentinian Warfare," *Journal of Contemporary History* 41:2 (2006): 357–377, here 369–370. France, *Perilous Glory*, 55. Apart from the favourable landscape, morale and discipline obviously played a key part in the Greek performance at Thermopylae. About operation Albion, Nikolai Reek, *Saaremaa kaitsmine ja vallutamine a. 1917* (La Défense et la conquête de l'île Saaremaa en 1917) (Tallinn, 1937), about the fall of Tartu, Reigo Rosenthal, *Laidoner – väejuht: Johan Laidoner kõrgema operatiivjuhi ja strateegia kujundajana Eesti Vabadussõjas* (Tallinn: Argo, 2008).

In extreme battle stress, involving fear and fatigue, training is far more important than ideological commitment, as it allows soldiers to fall back on drills and procedures instilled through years of training. The psychological readiness to kill is no less important.[30]

In a study on the motivation of Argentinian soldiers in the Falklands War, the Dutch cultural anthropologist Antonius C.G. Robben has reached conclusions similar to those of Strachan: one should separate battle motivation from reasons why men go to war. Robben cites an Argentinian conscript: "All the English soldiers had received at least three years' training. And however much patriotism you put in, you can't fight that." And an Argentinian special-forces combatant observed: "One only fights because one has confidence in one's own ability and that of one's comrades".[31] Applying these observations and experiences to the conditions in Estonia in the 1930s, one could argue that the Estonian defence will may have been high, but this does not by itself say much about the actual readiness to fight the enemy in combat.

To sum up, Estonia had existential fears before Soviet Russia and was not resting on the laurels of the victorious Independence War. The problem was that the rise of the military might of the USSR and its attack on the Baltic states seemed inevitable, and this seemed to paralyze the thinking of the Estonian military authorities. Laidoner's effort to instil self-confidence was reasonable. But the question is whether it was correct to draw on the experience of the Independence War to raise the morale and develop defence doctrines?

The legacy of the Independence War

There were several motives for nurturing the myth of the Independence War in the Estonian armed forces in the inter-war period. Facing an uncertain future people often seek comfort in memories of the glorious

[30] Hew Strachan, "Training, Morale and Modern War," *Journal of Contemporary History* 41:2 (2006): 211–227. The last problem beset Ukrainian soldiers in the beginning of the Ukrainian-Russian war in 2014.

[31] Robben, "Combat Motivation," 76–77.

past. There were also practical advantages in nourishing the experience of the Independence War. It had been fought on the Estonian territory against the enemy that was the expected adversary also in the next war, thus many tactical lessons could be drawn.

The problem was that the Independence War had not been particularly modern. Estonian officers were outraged when a professor of tactics at the Estonian War Academy, former general of the Russian imperial army Gleb Vannovski noted that this had been a "gypsies' war".[32] The context of the quip is unknown and therefore one can only speculate about its intent but probably this was a graphic way of saying that in comparison with the First World War the Independence War had not been a "real" war. Leaving aside the racist undertone, the general was probably right. For the nature of the tactics and operations, troop concentrations, and the technology used, the Independence War was far inferior to the First World War, particularly to operations on the Western front. It was not a modern conventional war but a mobile partisan war of the pre-First World War type (despite the use of some modern technologies, like aircraft; tanks never reached the front).

Toward the end of the 1930s, the leading revisionist powers Germany and the USSR developed new operational doctrines and made a qualitative leap in new technologies in mechanised forces, air forces and communications. As a result, it was questionable how much one could rely on the experience of the First World War. The pitfalls of sticking to obsolete tactical and operational models were clearly shown in the defeats of the French and the British forces by the Wehrmacht in 1940. In the same year, the Estonian general staff estimated that the Estonian regiment was too weak to fight a modern regiment, and that the standard equipment of an Estonian regiment was roughly equal to that of the First World War regiment of 1916.[33] Factoring in tactical and operational methods, the assessment could have been even more pessimistic.

Despite all this, the Estonian armed forces continued to cultivate the myth of the Independence War throughout the inter-war period. General

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[32] Vannovski's quote was from 1921, Nikolai Reek, "Võrdlevaid jooni Prantsuse sõjaväe kasvatusest," *Sõdur* 52 (1925), 1107–1109.

[33] Salo, "Eesti kaitseväe valmisolek sõjaks," 48.

Laidoner's right hand, the chief of staff General Nikolai Reek had always emphasised the importance of the Independence War in military education and war doctrines. In 1925 he intervened in polemics about the teaching techniques of the Russian emigres who had been used as military experts as long as Estonia lacked the necessary expertise. Former Russian officers were commissioned with the task of beginning higher military education in Estonia. Besides Vannovski, one of the notable professors was Lieutenant General Aleksey Baiov, who had taught several future Estonian senior officers at the Nikolai General Staff Academy in St. Petersburg before the war. Soon, however, the teaching practices introduced by the Russians were subjected to vigorous critique. Aleksey Baiov was forced to leave in 1926.[34] Many people had voiced the concern that their teaching methods did not meet modern standards. Reek cited patriotic education at the École Supérieure de Guerre (where Reek had studied from 1923 to 1925) in Paris as a model, and came out decisively against attempts to belittle the Independence War, which he said had been a "turning point" for the whole nation. "The education of our armed forces should first and foremost be the responsibility of people who have belief in the existence of our country, and whose burning patriotism enlivens all the subjects [taught in the academy]," Reek wrote.[35] In other words, Reek thought that ideology and indoctrination trumped military professionalism and competency.

In the journal *Sõdur* there were lively discussions about the importance of patriotic education. The general staff officer Aleksandr Jaakson thought, for example, that Estonia had to draw on the example of the Red Army and institute ideology as the basis of education, in which Communism would be replaced by the national ideal.[36] This was a dangerous tendency for the development of the Estonian army, even as the scepti-

[34] Kopõtin, "Rahvuslus ja lojaalsus Eesti sõjaväes," 226–230. One of the reasons for conflict was also the openly monarchistic and anti-Estonian views of Baiov.

[35] Reek, "Võrdlevaid jooni".

[36] Aleksandr Jaakson, "Rahvusline aade kui meie sõjaväe kasvatuse alus," Sõdur 51-52 (1924), 5–6, cited by Igor Kopõtin, "Rahvuslus ja lojaalsus Eesti sõjaväes aastatel 1918–1940 vähemusrahvuste näitel" (Manuscript of the Phd Thesis, University of Tallinn, 2017), 113 (I am grateful to Igor Kopõtin for permission to cite the manuscript of his dissertation).

cism about the Russian professor's teaching practices was probably well grounded.

Along with the emphasis on nationalism and patriotism, history was used for ideological purposes. This could be seen in *Sõdur*, in handbooks and regulations. In lectures on military pedagogics, Lieutenant Colonel August Kasekamp, the commander of the War Academy, emphasised that national consciousness should be at the core of the moral strength of Estonians as soldiers. The Independence War, he pointed out, was the most heroic period in the nation's history and especially "healing" for the sense of nationality. The war had to be taught to soldiers and officers. Moreover, in company reading rooms there had to be "corners for the War of Independence," modelled on Lenin's corners in the Red Army.[37]

Alfred Luts, editor in chief of *Sõdur* and a close comrade of Reek, was keen to create an image of the Estonian man as an archetypical and racially suitable soldier since the "freedom struggles" of the 13th century:

> The ancient troops and navies of the Estonians were able to organize themselves in battle so that they could *achieve miracles* [this and the next emphasis by author] despite their inferiority in numbers.... The superior military spirit, which developed already in the ancient times of freedom and which was hardened in the Independence War, is the *main basis* of our current army. This factor is the guarantee that the Estonian armed forces will be able to defend the independence of Estonia in the future and is prepared to fight for it until the last breath.[38]

In this writing, historical consciousness is regarded as the key component of military effectiveness. As noted earlier, however, "high spirits" or memory of earlier victories is hardly helpful in battle. One cannot hope for miracles – even as miraculous stories about Aleksandr Matrossov were promoted in the Soviet Union – and should emphasise training that allows one to keep a cool head even in close combat.

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[37] August Kasekamp, *Sõjapedagoogika. Loengukonspekt Sõjakooli kadettide vanemklassis 1930/31. a.* (KVÜÕA: Tallinn, 1931), 36–41, cited by Kopõtin, "Rahvuslus ja lojaalsus Eesti sõjaväes," 119–121, 189.

[38] Major Alfred Luts, "Eesti sõjavägi minevikus ja kaasajal," *Sõdur* 7-8 (1938), 180–186; Juhan Vasar, "Eestlaste ülivõim Baltimerel 12. sajandil," *Sõdur* 30-32 (1930), 952–55.

The importance of the Independence War also lied in the fact that it helped legitimize the rule of President Konstantin Päts and the C-in-C General Laidoner after the coup d'état of 1934. Both had been key actors in the Independence War, Laidoner as C-in-C and Päts as prime minister and minister of war. The Independence War was also the pillar propping up the authority of Nikolai Reek, who had distinguished himself as the chief of staff of the 3rd Division. Immediately after the coup d'état, the new leaders instituted the Victory Day as a national holiday, marking the victory over the Germans in the battle of Cecis in June 1919. Reek had served as the operational commander in that battle. After 1934, work on collecting recollections and compiling an official history of the war, as well as propaganda among the population at large, was intensified; monuments were erected all over the country. Soldiers had to complete tests on the history of the Independence War to prove their loyalty.[39]

However, let us return to the influence of the Independence War on tactical and operational thinking. There is little doubt that the war represented the "horizon of expectations"[40] from which Laidoner and his associates viewed the future. In a lecture at the graduation ceremony of the War Academy on 1 September 1938 General Laidoner said: "Everything develops so fast. Where should one look for the right principles. The only and the greatest source is the history of wars and history in general. Those we have to study."[41] Military history but especially the Independence War

[39] Karsten Brüggemann, "Võidupüha. Võnnu lahing kui Eesti rahvusliku ajaloo kulminatsioon," *Vikerkaar* 10:11 (2003): 131–142; Kopõtin, "Rahvuslus ja lojaalsus Eesti sõjaväes," 214, 220.

[40] The term originates from Reinhart Koselleck, *Futures Past: On the semantics of historical time*; translated and with an introduction by Keith Tribe (New York; Chichester: Columbia University Press, 2004), 259–75.

[41] Laidoner at the graduation ceremony of the War Academy, 1 September 1938, Diary of the Commander-in-Chief, 1 September 1938, Eesti Riigiarhiiv [Estonian State Archive, part of Estonian National Archives, Tallinn, hereafter: ERA].2553.1.2. In his five-year report of 1939 Laidoner underlined the including of history in the tests for entrance to War Academy, and the more thorough study of past wars at the courses of the Academy among his achievements. The C-in-C also noted that in order to support the spirit of the Independence War, more veterans had been accepted in the Academy than in previous years, "Report on National Defence 1934–1939," ERA.2553.1.12.

took centre stage in Laidoner's strategic and tactical thinking. For example in January 1937 Laidoner gave the following instructions to his subordinates:

> From the point of view of war doctr[in] we cannot withdraw, we must defend on the border. The 1st Div[ision] – defend River N[arva], which is a formidable barrier even in winter. Foch a[fter] the war: "Push the border to Rhein and I will guarant[ee] that not a single Ger[man] will come through". Despite this we will take care of posit[ions] also in the rear.
>
> The 2nd D[ivision] up front in the mountains; pos[itions] the same as in I[independence] War…. Also here – to protect every step. At Võru – our position in I[independence] War was the hardest. We need to know every hill. The position at Petseri is good. There is no position at Võhandu. We must carry the str[ategic] doctrine over to tactics. We must not retreat.[42]

In these cryptic notes Laidoner repeatedly referred to the experience of the Independence War and the First World War. Considering the catastrophic defeat of the French in 1940, taking the model of static defence was quite unfortunate, and comparing River Narva to Rheine was like comparing a rifle to a howitzer.

Interestingly, Laidoner wanted to use the same principle of "active defence on the border" in tactics as well as in strategy. Probably he did not distinguish the operational level of war, even as this had been defined in the USSR already in the mid-1920s and codified in the doctrine of deep operations.[43] The key idea in Laidoner's thinking was a stiff defence in forward positions. Attack was to be used in case of enemy incursions: "In case of an enemy breakthrough the neighbouring unit will have a new

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[42] Notes, 14 January 1937, Excerpts from documents about the work of subunits used to compile the diary of the C-in-C, ERA.2553.1.61, 2.

[43] The operational level of war was defined by Aleksandr Svechin at the Soviet General Staff Academy in the mid-1920s. His main treaties, which appeared in 1926, has been translated to English: Aleksandr A. Svechin, *Strategy;* edited by Kent D. Lee (Minneapolis, Minn.: East View Publications, 2004). Laidoner's ignorance about the operational level is strange, because journals and dissertations at the War Academy had discussed the development of the Soviet doctrine, e.g., Lt. Col. Johannes Vellerind, "Õhuoperatsioonid ja nende teostamine Nõukogude Vene ametliku doktriini ja sõjakirjanduse seisukohalt," ERA.495.12.825.

task – to cut off the unit that had penetr[ated]."[44] This was quite an optimistic plan, as it assumed that the Red Army would not engage and tie-up also the neighbouring units as was foreseen in the Soviet doctrine and would be seen in the Second World War practice.[45] According to Laidoner, after local blows on the tactical level, there had to be an overall counter-offensive on the strategic level carrying the war to enemy territory, as had happened in 1919.[46]

At other times Laidoner contradicts himself: "The state border [line] has no tactical or strategic importance. But it is politically very important".[47] Nor did Laidoner think that everything had been perfect in the Independence War. On a battle tour to the Latvian border in May 1938 the C-in-C said: "We must always nurture the mentality of enveloping the enemy, in order to avoid the mistake of the Independence War, where we tried to plug holes rather than to make a small raid in the enemy's rear."[48] He stressed envelopment also at the tactical games of the 3rd Division in March the same year.[49]

Defence in forward positions was dangerous, because in contrast to Finland, Estonia had no border fortifications to speak of. Following French examples, the Finns had begun constructing a 130-kilometre Mannerheim Line at the Karelian Isthmus already in the early 1920s. There were problems. Not all of the sections had been completed and not all of the firing positions were supporting each other. Tank obstacles were largely obsolete. The line could be compared to the French Weygand Line rather than to the famous Maginot' Line.[50]

Estonia did not have even this. Moreover, the Estonian landscape was much better suited for tanks. No reserve positions were planned and constructed, leaving Estonian units on the border in danger of being encircled.

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44 Notes, 14 January 1937, Excerpts, ERA.2553.1.61, 3.

45 *Polevoi Ustav RKKA (PU-39)* (Moskva, 1939); David M. Glantz, *The Soviet Conduct of Tactical Maneuver: Spearhead of the offensive* (London: Frank Cass, 1991), 80–94; "Vene punaväe uue välieeskirja ilmumise puhul," *Sõdur* 6-8 (1937), 187–8.

46 The Diary of the C-in-C, 18 September 1938, ERA.2553.1.2.

47 The Diary of the C-in-C, 29 May – 4 June 1938, ERA.2553.1.2.

48 Ibid.

49 The Diary of the C-in-C, 26 March 1938, ERA.2553.1.2.

50 Tuunainen, *Finnish Military Effectiveness*, 95

Estonians had not recognised the strengths of the Sinimäed position, which would be later used by the Germans in 1944. According to the analysis of the 1st Division, it was impossible to organise defence west of the River Narva and in case of a breakthrough, the enemy was supposed to be pushed back behind the river.[51] Again, we see that officers were overconfident in their ability to liquidate enemy breakthroughs, but it is also possible that they reported what the C-in-C chief expected them to write.

Considering the Soviet doctrine of deep battle and deep operations, Laidoner's instruction of 20 January 1939 to move the headquarters of the Võru-Petseri military district from Võru in the rear to Petseri on the border was highly dubious. Laidoner's reasoning was as follows: "The pushing up of our forces closer to the border is a significant part of the general plan of state defence, which demands strong and courageous active defence throughout the war as well as in the beginning."[52] The capturing of Petseri and the headquarters of the military district would have immediately jeopardized the mobilization of reservists from the border regions.

Even more dangerous was Laidoner's order from 1936 not to practice delay and withdrawal on tactical manoeuvers. Discussing deficiencies of the exercises of the 2nd Division with General Reek, Laidoner ordered: "Defence of each position is the duty to be carried out and the abandoning of that position is a crime. We speak about fighting until the last drop of our blood but in exercises we do just the opposite."[53] This was probably meant as another means to instil morale in the troops, but in war, the idea that one should accept one's encirclement rather than withdraw in time is suicidal. The same mentality allowed Hitler to encircle millions of Red Army troops, who had been ordered "Not a single step back!", but Hitler's own dilettantish leadership doomed the Sixth Army of General Paulus in 1942.[54]

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[51] "The operational and tactical assessment of the 1st Division of the (Narva) front. Syllabus," ERA.515.1.825, 5.

[52] "Notes about the official and diplomatic duties of General Laidoner," 20 January 1939, ERA.2553.1.62.

[53] The Diary of the C-in-C, 18 November 1936, ERA.2553.1.2, 137–38.

[54] A classical treatise is John Erickson, *Stalin's War with Germany. Vol.1, The road to Stalingrad* (London: Weidenfeld and Nicolson, 1975).

The tactics of the German Army Group *Nord* at the Narva front in 1944 showed that the River Narva was not as formidable a barrier as Laidoner imagined. At some places the geography even favoured the attacker, for example near Riigiküla, where the eastern bank dominated over the western bank of the river. It was in that section in February 1944 where the Red Army crossed the river virtually on the march.[55] The summer of 1939 was extraordinarily dry, so that marshlands carried foot soldiers. At certain places the River Narva was only 1.5 metres deep, thus it was passable without special equipment.[56] In winter time it was even easier to cross the river and operate in the large Krivasoo marshes next to it, as the winter of 1944 demonstrated. The German 1944 operations FLAMINGO and SEEADLER further showed how important it was to trade space for time. With those retrograde actions the German army group laid the basis for further successful defensive operations on the Tannenberg (Sinimäed) Line in July 1944.[57] There was at least one similarity with the Germans, however. Laidoner had recognised the importance of holding a bridgehead on the other side of the river, but this may have been the invention of the German army at the start of the Independence War, in November 1918.

To sum up this part one should say that the Estonian army had done well to train delay and withdrawal in the early 1930s. Laidoner forbade this in 1936. This is a speculation, but most probably many Estonian units would have faced encirclement by mobile Red Army units if war had started in 1939. It appears that Laidoner would have ordered them to defend rigidly their positions rather than delay, withdraw, reorganise and redeploy (which is of course not easy in practice).

Cultivating the legacy of the Independence War had negative consequences for Estonian military effectiveness. Patriotism and nationalism may influence attitudes in a positive way, but these aspects are of secondary importance in terms of military capability. Training and discipline

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[55] Andrew Michael Del Gaudio, "Operational Art and the Narva Front 1944, Sinimäed and Campaign Planning" (Unpublished PhD Thesis: University of Liverpool, 2012), 177.

[56] Salo, *"Eesti kaitseväe valmisolek sõjaks,"* 130.

[57] Del Gaudio, "Operational Art and the Narva Front 1944," 217. The German grouping in Narva and Jaanilinn was in danger of being encircled from the North and the South.

are more important. It was not correct to prohibit practicing withdrawal. It was positive that Laidoner favoured aggressive tactics even in defence, but carrying offensive tactics over to the strategic level was overly optimistic, and even reckless, considering the kind of enemy Estonia was facing. What the Estonian army really practiced in manoeuvres and what the exercises can tell us about its military effectiveness is the focus of the next chapter.

Manoeuvres

The purpose of exercises is to simulate combat situations, in order to train leaders, staffs and units for war time duties.[58] It seems that theoretically Estonian army leadership had understood that purpose. For example, the journal *Sõdur* emphasised that future war would present a lot of surprises and leaders should learn to orient quickly in ever changing circumstances.[59] However, in reality exercises rarely met those requirements. An issue of *Sõdur* of April 1937 ended with the blunt critique:

> If both sides in the manoeuvres time and again act according to prepresprescribed plans – today – approach, attack, seizure of enemy positions, exploitation, etc., and accordingly we send baggage trains to the respective points in advance, – tomorrow – defence and retreat and accordingly we load machine guns to sleighs already in the morning, so that later it would be easier and more comfortable to withdraw, then such manoeuvres hardly help develop resourcefulness and quick thinking and hardly give teams and leaders those lessons, which they really need.[60]

Despite such critical comments, nothing changed. In February 1940, the chief-of-staff Colonel August Kasekamp wrote a memo about organizing exercises:

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[58] *FM 25-4, How to Conduct Training Exercises* (Headquarters, Department of the Army, 1984).

[59] K.L., "Manöövrite korraldamisest," *Sõdur* 14-15 (1937), 346–353.

[60] Ibid., 353.

> Our manoeuvres and tactical exercises are always organized according to the same model and are dominated by bureaucratic paper work. The schemes, situations and other material on manoeuvres and tactical exercises are often expanded to files of several dozens of pages. The course and the actions in those manoeuvres are often prescribed to the tiniest detail... In some cases, situations have been pre-planned for the entire manoeuvre and for all days in advance. This manner of envisaging the course of actions makes the directing of manoeuvres much easier, but this has also the result that the commanders do not need to have initiative, manoeuvres become inflexible and uninteresting. In consequence, such predetermined manoeuvres do not give the necessary experiences and lessons for leaders...[61]

According to a US training manual, Estonian exercises were conducted according to controlled-play scenarios, in which leaders had to take specific actions in response to pre-determined events. Such scenarios give commanders less freedom of action than the so-called free-game scenarios.[62] This was not good for the Estonian military effectiveness. Let us now study in more detail the two Estonian exercises, the manoeuvre of the 2nd division in 1937 and the exercise of the 3rd division in 1938.

From 21 to 27 September 1937 the 2nd division organised a larger multiservice tactical exercise in the region between Tsirguliina and Võru in the South-East. The objective of the manoeuvre was to give the services the experience of cooperating in battle situations; leaders could acquire leadership experience, soldiers practical experience. Units could train fighting against armoured forces and air forces, and experiment operating with a "moto-mechanised" team.[63] According to the scenario, the Blues blocked the advance of the attacking Greens invading from the east at the general line of Hargla-Karula-Urvaste-Kanepi. The Blues were aware that the Greens had had many losses and were exhausted, and could not bring enforcements from other sections of the front as they were advancing

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61 Memorandum, chief of staff Col. A. Kasekamp, 15 February 1940, ERA.515.1.825.

62 *FM 25-4, How to Conduct Training*.

63 The plan of the tactical manoeuvre of the 2nd Division for September 1937, 3 September 1937, ERA.518.1.695.

The first division was responsible for the defence of the North-Eastern section of the front, while the second division defended in the South-East against the Soviet Union. Besides the 1st and the 2nd, there was also the 3rd division defending the western parts of the country. The formation of a fourth division was under way when Estonia was occupied by the USSR in 1940

toward Tartu and Valga. Taking advantage of the favourable situation, the Blues launched a general counter-offensive in the morning of 22 September. The scenario gave the Blues precise orders for seizing the districts of Võru, Väimela and Leevi.[64] The scenario can therefore be read as a confirmation of Laidoner's vision of the future: the enemy attacking from the east is successfully punched back. The Blues do not delay or withdraw. There is a meeting engagement and the Greens are pushed successfully toward the east.

The summary of the exercise, preserved in the archive, describes the actions of units in detail and assesses their performance.[65] One of the mistakes that were noted was the inflexibility of delivering operational orders. The drafting of orders took so much time that subunits had no time for reconnaissance in daylight. One can infer from this that orders were given for the next morning. As a solution to the problem it was recommended that tasks be delivered by oral fragmentary orders. "In conditions of manoeuvre warfare the delivering of fragmentary orders is unavoidable," noted lieutenant colonel Lukas.[66] This was very reasonable.

In the context of the need for faster leadership, the utility of radio communication was noted. However, this had been viewed with "some suspicion" by the commanders.[67] The Greens had four, the Blues five D-type radios. The Greens were able to set up communications, but the Blues had not trained to operate the equipment and could therefore not establish radio communication. The transport of the radios was also a problem, because radios transported by horses and foot soldiers tended to fall behind combat units. It should be noted that radio was a key part in the conception and methods of the German manoeuvre warfare in the 1920s and the 1930s.[68] Those developments were followed keenly by Soviet military theoreticians, who considered radio as a force multiplier that had given an edge to the German army in the campaign in

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64 The initial situation for the Blues, September 1937, ERA.518.1.695.

65 Summary of the tactical exercise of the 2nd Division, 21–27 September 1937, deputy chief of staff of the 2nd Division Lt. Col. J. Lukas, 17 December 1937, ERA.515.1.794.

66 Ibid., 269.

67 Ibid.

68 Corum, *The Roots of Blitzkrieg*, 107–8; Citino, *The Path to Blitzkrieg*, 116–118, 208–211, 206.

France.[69] At the same time one should note that Germany was clearly ahead of other countries: like Estonia, Britain went into war without a developed radio network.[70]

Next, lack of the mobility of the artillery was underlined. It was impossible to tow the 47-mm anti-tank gun by horses and foot soldiers and keep up with other units; the cavalry lacked integrated artillery entirely. Moreover, units were unable to engage the enemy inside defensive positions in attack or in defence. According to the Estonian doctrine, defensive efforts had to be concentrated at the forward edge of the main battle position: all fire had to be concentrated onto that line.[71] The exercise showed that units gave up the fight and the exercise was sometimes even adjourned when the enemy managed to penetrate the forward edge of the main defensive position. This was worrisome. It was rightly observed that the use of mechanised units by the enemy meant that penetrations of the defensive line had become unavoidable. Even so, there was no mention of the worst possible scenario for the defending Estonians – a break-through by enemy forces into the rear and the achievement of operational freedom.[72]

It was also noted that subunits were not following fire-and-movement principles: infantry advanced without the support of machine guns. As usual in Estonian exercises, cooperation with artillery left much to be desired. The experiment with the moto-mechanised grouping was a failure. Vehicles were used only for movement, in battle, soldiers left the vehicles behind and fought on foot. Leaders lacked experience in motorisation and because of slowness and hesitation in decision-making,

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[69] V. I. Usov, P. D. Kisliakov, "Upravlenie I sviaz' po opytu vtoroi imperialisticheskoi voiny," *Voennaia Mysl'* 11-12 (November-December 1940): 77–85, cited by Jacob W Kipp, "Barbarossa, Soviet Covering Forces and the Initial Period of War: Military history and AirLand battle," *The Journal of Soviet Military Studies* 1:2 (1988): 188–212.

[70] Chad G. Clark, "Radio to Free Europe: Armored force radio development, Great Britain and the United States 1919–1941" (Unpublished MA Thesis: Nebraska University Lincoln, 1999), 53.

[71] *Lahingueeskiri, Kaitsevägede staabi VI osakonna väljaanne* (Tallinn, 1932), 51, 56.

[72] Considering that an Estonian infantry platoon, which had to defend a front of 450–500 meters, was armed only with rifles and two light machine guns, penetration by the enemy was more than likely. About platoon's armaments, Salo, "Eesti kaitseväe valmisolek sõjaks," 54.

motorised units fell behind enemy units moving on foot. There was also a general "apathy" toward danger from the air.[73]

As we can see, the chief-of-staff of the division, who wrote that assessment relying on referees' reports and after-exercise discussions, was quite critical. Surprisingly, foreign military attachés were even more disapproving. The British attaché noted in his correspondence with the Foreign Office that the overall objective of the exercise seemed to be "confirming one's general opinion of the poor value of the Estonian army." Equipment was not modern and even if the Estonian army acquired some new systems, units needed time to get used to them. The attaché noted individual marksmanship as one of the strengths of the Estonian army. At the same time, the use of crew-served weapons and fighting against those weapon systems was neglected.[74]

The German attaché Colonel Rüssing reportedly agreed with the assessment of the British colleague, but the former predicted that due to recent procurements from Germany, Poland, and England the quality of the Estonian army would start improving fast. The German attaché agreed, however, that presently the Estonian army was much weaker than the Lithuanian army. The German attaché also noted that the purchases of armaments did not depend on the quality, or bilateral trade relations, but entirely on bribes, which everyone took, even President Päts, but not General Reek. The British representative, however, did not think Estonia was able to improve its military capability much in the future.[75]

A slightly more detailed British assessment has been preserved about the autumn manoeuvres of the 3rd division near Rapla on 6–10 October 1938.[76] This was the largest exercise of the 3rd division over the past several years. In the summary it was noted that the manoeuvre could be regarded as "entirely successful," as it had demonstrated the steady rise of the quality of the training of units compared to previous

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[73] Summary of the exercise of the 2nd Division from 21 to 27 September 1937, deputy chief of staff of the 2nd Division Lt. Col. J. Lukas, 17 December 1937, ERA.515.1.794. See also Salo, "Eesti kaitseväe valmisolek sõjaks," 64.

[74] "Estonian Army," Consul Gallienne in Tallinn to Secretary of State, 28 December 1937, FO 371/22226, NA.

[75] Ibid.

[76] For a short description see "3. diviisi sügismanööver," *Sõdur* 41-42 (1938), 1011–1015.

years.[77] There were also deficiencies: the staff of the task force had no telephone communication with the air force staff; the motorised company lacked the means of communication; radio was seldom used because the cipher was regarded as too complicated (even though a counter-intelligence unit decoded it in five minutes). Despite the relatively large number of radios, communication could be established only in very few cases. Units lacked their own baggage trains, so logistics support was provided by hired transport. Infantry performance was considered as good, but the coordination of the artillery and other arms was, again, weak. Commanders of indirect fire support batteries did not seek contact with infantry and did not send forward observers up front. Just like at the exercise of the 2nd division, motorised units performed "essentially as motor transport."

The assessment of the British representative was crushing. It was observed that this was an exercise in which the entire military district practiced mobilisation, and as usual defence and attack was learned. We can infer from this that Laidoner's orders were followed and there was no practice of withdrawal. The attaché considered the overall quality of troops as "very low;" the level of the training and capabilities of senior officers as "low." The quality of armaments was considered as "very bad." The problem was the disparity of weapons; in order to reach even a satisfactory level of standardisation, a lot of new armaments were needed. The British observer also noted the weak physique of conscripts born during the First World War, which left a mark on combat strengths. Despite the strong will to defend the country, the Estonian army "will not have any great fighting value," the attaché concluded drily.[78]

Although Estonian exercises should be studied more thoroughly in the future, one can already conclude on the basis of those two exercises that there were important deficiencies in Estonian tactics. This view was shared by foreign military observers. It was natural that Estonian own summaries were not excessively negative, trying to remain constructive and optimistic. The quality had certainly improved over the years. Nevertheless, exercises were surprisingly rigid and unimaginative, which

[77] Summary of the excercise, 3 December 1938, commander of the division Major General Herbert Brede, ERA.521.1.416.

[78] The British Attaché to the Foreign Secretary, 20 October 1938, FO 371/22226, NA.

was not the best way to practice manoeuvre warfare.[79] The problem was also that enemy qualities were presented unrealistically, which allowed the strengths of one's own troops (the Blues) to be seen in a more favourable light. It is impossible to say at this stage of research whether the reason for this was the wish to strengthen the morale, wrong analysis of Red Army capabilities, or the eagerness to comply with the wishes of the high command of the army.

Summary

This article was able to offer only a cursory perspective on the ideas of the Estonian army leadership on future war. Evidence showed that C-in-C Laidoner considered the experience of the Independence War as important and was keen to draw on that experience not only to instil confidence before an uncertain future, but also to find practical lessons for future war.

In this respect, it is illuminating to draw some parallels with the experience of another small country, Holland. Historians Frederic S. Pearson and R. E. Doerga have analysed the preparations of the Dutch army and reached the following conclusion:

Here was a case in which leaders perceiving threat were immobilized by a lack of perceived alternatives, by the existence of historical precedents that enabled them to engage in wishful thinking, and by an inability to comprehend fully the extent of the adversary's ambitions.[80]

The Dutch were in a similar situation to the Estonians. Whereas Estonia had won the last war, Holland had been able to stay neutral and keep its territory untouched. Similar to Estonia, the Dutch could not imagine that the adversary would act as unpredictably and vigorously as it did, in

[79] "Summary of the major deficiencies found in the performance of the leaders at the military game of the 1st Division (13–15 March 1940), commander of the 1st Division, 1 May 1940, ERA.515.1.825.

[80] Frederic S. Pearson, R.E. Doerga, "The Netherlands and the 1940 Nazi Invasion," – *Studies in Crisis Behavior*, ed. Michael Brecher (New Brunswick, New Jersey: The Hebrew University of Jerusalem, 1978), 25.

1940. Until the last moment the Dutch were engaging in wishful thinking, hoping that Germany would simply not attack. Like Estonia, the Dutch did not seriously consider foreign assistance.[81]

This article has not dwelled on the deliberations of the Estonian general staff in August and September 1939. But the analysis of Laidoner's ideas on tactics and strategy demonstrated that wishful thinking was the order of the day.[82] The roots of the naivety are not difficult to find. It was the myth of the Independence War cultivated vigorously by the Päts-Laidoner regime. The spirit of the Independence War was propagated not only at the political level to assure the public's support for the regime, but also in military strategy and tactics. On Laidoner's orders the army adopted the concept of "active defence" on the borders, which prescribed attack and offensive action as the chief methods on the tactical and the strategic levels. Even while aggressiveness could be justified at the tactical level, Estonia did not have the technical means and the ability to develop aggressive manoeuvre warfare on the operational level. The analysis of the two major exercises showed that the Estonian army had insufficient firepower, protection (air defence and anti-tank) and the mobility necessary to conduct large scale counter-attacks and counter-offensives.[83]

At this point it makes sense to draw on the assessment of foreign observers. According to Swedish military attachés, the common mistake of the Baltic states was their over optimism about their ability to beat the Russians. The Swedes thought that this misconception was based on incorrect analysis of the Baltic independence wars: in particular, Baltic officers did not understand the great difference between the well organised modern Red Army and the chaotic Bolshevik units who had fought at the fronts of the Civil War.[84]

The views of the Swedish attachés therefore confirm the findings of this study. It seems that the myth of the Independence War was often

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[81] Ibid., 40.

[82] Another example: "Vene punaväe uue välieeskirja ilmumise puhul," *Sõdur* 6-8 (1937), 187–188.

[83] For current doctrinal requirements for executing successful manoeuvers, see Mõts, *Maaväe lahingutegevuse alused*, 95.

[84] Eriksson, "Swedish Military Attachés," 42.

more important than military professionalism and competency. The spirit of the Independence War had to compensate for shortfalls in technology and training. But as August–September 1939 demonstrated, these misconceptions were not as deep as to persuade the Estonian high command to decide for mobilisation for war against the Soviet Union (of course, this also depended on the decisions of politicians). It is very likely, however, that Laidoner's concept of "active defence" would have caused great and unnecessary losses during the initial stages of the war and the Estonian army would have been forced to re-orient and adapt very quickly. However, time is a precious commodity in war.[85]

One can thus conclude that the Estonian army was weakened not only by the belated procurement of modern weapons and the small firepower of its units – factors that have been analysed in earlier studies – but also by incompetent leadership, which particularly hurt effectiveness on the operational level of war. The inter-war period can be seen as a warning lesson for present and future senior officers, whose task is to develop operational plans that meet realistic threat scenarios and match the capabilities of one's own units.

Because of limited space, the article could not study several important aspects that would throw additional light on the military mentality and operational concepts of the Estonian military. It focused on the ideas of General Laidoner, about which there are a few fragmentary pieces of evidence in the archives. Hopefully, future studies will help further elaborate Laidoner's ideas.[86] There are still no specialised studies on Estonian military exercises, or theories of war developed in Estonian military academies, staffs, and by the journals *Sõdur* and *Sõjateadlane* (Military Scientist).[87] Another interesting topic, which needs further research, is the influence of the military thought of other countries on Estonian

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[85] According to Carl von Clausewitz, it is the third law of war, Carl von Clausewitz, *On War*; edited and translated by Michael Howard and Peter Paret (Princeton (N.J.): Princeton University Press, 1989); see also Nikolai Reek, *Aja kaotus – on surm: sõjaväe juhtivkoosseisu ettevalmistusest* (Tallinn, 1921).

[86] Urmas Salo, *Kui Laidoner juhatas väge… Kindral Johan Laidoner Eesti sõjavägede ülemjuhatajana 1934–1940* (manuscript in author's possession).

[87] But see Laanetu, "Eesti meresõjalise mõtte kullafond".

doctrines. It would be interesting to know, for example, what was the impact of French ideas on the Estonian military, as several Estonian senior officers had been educated at schools in France.[88]

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[88] For some thoughts about this, Kaarel Piirimäe, "Sõjaväelised kirjutised samas reas ülejäänud Eesti mõttelooga," *Diplomaatia* 153 (2016).

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Werner Osenberg's Visions of the "Totaleinsatz" of the entire German Research Potential in Total War

Michael Jung

The article deals with an example of a scientist who developed a number of visions how one could exploit science for the Nazi war aims. Werner Osenberg was professor at technical university of Hannover since 1938. Since 1933 he was a member of the NSDAP, the SS, and worked for the SD (the Nazi spy apparatus). He had access to the highest party and government bodies. From the beginning of the Second World War he was involved in war research, from 1943 acting as head of the planning board in the *Reichsforschungsrat*. Osenberg's special attention was directed at scientific research designed to achieve the Nazi war aims. The development of weaponry especially for the Navy was one of his particular interests. In 1943 Osenberg addressed several memoranda to Hitler and other leaders of the Nazi state, in which he assessed the devastating German war situation. He deplored the insufficient utilization of available capacities of the German research potential. Following Hitler's maxim that "this war ... [is] not only a war of soldiers, but especially also of the technician," Osenberg developed a vision for the intensification of the German research program, in order to change the course of the war.

"A requirement of total war is the total deployment ["Totaleinsatz"] of our entire research potential," Werner Osenberg headlined an extensive memorandum at the end of July 1944.[1] In this text, he summarized on the one hand his ideas for the successful organization of technical and

[1] In German, "Ein Erfordernis des totalen Krieges ist der Totaleinsatz unseres gesamten Forschungspotentials," *Bundesarchiv*, Germany (hereafter: BArch) Berlin R 26 III, Nr. 49, sheet 127.

scientific war research, a topic that he had already addressed in previous memoranda to leading figures in the Nazi government and military apparatus. On the other hand, he refined his ideas regarding the changed war situation and wanted to make his contribution to the *Endsieg* (final victory) which he still believed was possible. Initially, brief glances at the research situation in Germany, his personality, and his background are necessary to understand Osenberg's intentions.[2]

Research

This section briefly surveys the social atmosphere in which scientific research had to be carried out in Nazi Germany. Science was not exactly one of the passions of the Nazis. This does not mean that the National Socialists did not make use of scientific research and development. The opposite was the case: considerable resources were spent on research and development, but the Nazi effort was not primarily about promoting science, but about promoting Nazi aims. It was an instrumentalisation of science by the NSDAP.[3]

The legends of the *Wunderwaffen* (wonder weapons) such as the "V-rockets" or the turbojet bomber Me 262, enjoyed a high priority in popular memory. But they cloud the view of the true situation of the research. The social environment of the Nazi period can be described as hostile towards science. Characteristically, for this is a statement from the leader of the *Deutsche Arbeitsfront* (German Labour Front, a Nazi trade union organization), Robert Ley, who said: "A professor may be sitting for many years in a laboratory to detect bacteria. However, I would prefer

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[2] The following section summarizes the chapter about research in Nazi-Germany in Michael Jung, "Voll Begeisterung schlagen unsere Herzen zum Führer," – *Die Technische Hochschule Hannover und ihre Professoren im Nationalsozialismus* (Norderstedt: BOD, 2013), esp. 271–281.

[3] For contrasting views of "hostility to science" and the "competitive situation" of science organization, see a recent publication: Sören Flachowsky, Rüdiger Hachtmann, Florian Schmaltz, "Wissenschaftspolitik, Forschungspraxis und Ressourcenmobilisierung im NS-Herrschaftssystem," – *Ressourcenmobilisierung. Wissenschaftspolitik und Forschungspraxis im NS-Herrschaftssystem*, ed. Sören Flachowsky, RüdigerHachtmann, Florian Schmaltz (Göttingen: Wallsteini, 2016), pp. 7-32.

every street sweeper. He takes his broom and sweeps with a single gesture thousands of bacteria into the gutter."[4]

Though there were certainly a range of attitudes towards the universities and the sciences, the technical universities enjoyed a greater appreciation of the Nazi leadership due to their range of subjects and as application-oriented institutions. Research and development were therefore instrumentalized in the preparation and execution of the war, and the general anti-scientific environment did not prevent the Nazis from putting large sums of money into projects which were useful to their aims. The Reich Ministry for Science, Education and Popular Culture (*Reichsministerium für Wissenschaft, Erziehung und Volksbildung* – REM) was in charge of research organization.

However, it was in a weak position in the Nazi leadership hierarchy, and in fact could not assume any leading function. In addition to the REM, the high commands of the branches of military service were heavily involved in the field, in which the *Reichsluftfahrtministerium* (Ministry of Aviation – RLM) under Göring had been particularly active, and the Ministries of Armaments and War Production (Speer), Economic Affairs, and Posts, the latter in particular in the field of war-important telecommunications. In addition, other influential actors such as the SS-institution *Ahnenerbe* (Ancestral Heritage) and the *Notgemeinschaft der deutschen Wissenschaft* (Emergency Association of German Science, NDW; later *Deutsche Forschungsgemeinschaft*, DFG) were at work.

A very special role was played by the Four-Year-Plan authority, which was established in 1936 by Hitler personally in a secret memorandum, which decreed:

1) "the German army ... [should] be ready in 4 years",
2) "the German economy ... [should] be ready for war in 4 years".[5]

This authority was headed by Göring as "plenipotentiary" and equipped with sufficient resources to stimulate the production of armaments for war preparation and management. In this context, the *Reichs-*

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[4] Quoted after Helmut Joachim Fischer, *Erinnerungen*. Teil I: Von der Wissenschaft zum Sicherheitsdienst (Ingolstadt: Zeitgeschichtliche Forschungsstelle, 1984), 178. Undated.

[5] *Ibid*., 273.

forschungsrat (Reich Research Council, RFR) was formed, which had to coordinate the scientific and technical research important for war. However, the RFR was unable to connect the above mentioned competing research institutions into a unified research network due to its organizational connection and infrastructure. A second RFR was set up in 1942, this time under the leadership of Göring, and, although there were gradual changes, the basic problem of the competitive situation was not resolved.

Werner Osenberg

Born in 1900 in Zeitz in the middle of Germany, Werner Osenberg participated in the last two months of the First World War as a navy cadet, after passing his *baccalaureate* (high school exams).[6] From 1919 he studied medicine for two semesters. After that, he graduated in mechanical engineering at the technical universities of Munich and Dresden. After a short period in an engineering office, he worked from 1927 to 1938 as research assistant at the department of technical science of management at the Technical University Dresden, an extraordinarily long time in this function. In 1929 he was awarded Dr.-Ing. (PhD), appointed in 1938 the Chair of Machine Tools at the Technical University Hannover (*Technische Hochschule Hannover*) and became the director of the institute with the same name.

This appointment was unusual. Osenberg was not on the actual appointments list, which carried three other peoples' names and which had been sent by the university to the responsible ministry. It is true he was mentioned there, but only as someone who might be a later option for such a position, after further probation in practice. An engineering professor from the Technical University Danzig was first appointed, who was considered an expert in his field. However, before he could start his new position, he died on the way to his new place of activity from, as

[6] "CV Osenberg," BArch Berlin R26 III, Nr. 43, sheet 33–35; about the appointment of Osenberg see Jung, "Voll Begeisterung schlagen," 188–194.

reported, a heart attack. That death, however, did not lead to the second or third-placed candidates to take over the chair. The appointment of Osenberg was decided in a very rapid arrangement between then rector of the *Technische Hochschule Hannover*, a well-known Nazi activist, and the leadership of the NSDAP in Munich.

Considerable doubts existed about his professional qualifications – as briefly mentioned – already at that time. Thus, his predecessor, the well-respected professor Friedrich Schwerd, resisted the appointment of Osenberg for this reason vigorously. Later, this view has been confirmed by a more or less "neutral" side: "His technical and scientific knowledge were well below par," as Samuel Goudsmit formulated shortly after the end of the Second World War.[7] Goudsmit had the opportunity as a member of the "Combined Intelligence Objectives Sub-Committee" (CIOS) of the Allied occupation powers to examine Osenberg in detail during his internment after the war and could therefore consider his person. The CIOS collected from 1945 onwards information on the scientific, technical and industrial capacity of Germany.

However, Osenberg was a member of the NSDAP and the SS since 1933. As of 1936 he was part of the SD (Security Service of the Reichsführer SS) and had access to influential party and government bodies. This seems to have been the true ticket to his professorial career.

"He was inspired by a mania for organization and a passion for card indexes," noticed Goudsmit in 1945.[8] He benefited from this mania in the organization of war research after the beginning of the war. After being active in research, particularly for the navy, since 1940, he acted as head of the *Planungsamt des Reichsforschungsrates*, the Planning Department of the Reich Research Council from 1943 onwards, and had a relatively large influence on the German research organizations.[9] The question,

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[7] Samuel A. Goudsmit, *Alsos. Vol. 1 The History of Modern Physics 1800–1950* (Los Angeles: Tomash Publishers, 1983), 187. First published in New York in 1947.

[8] *Ibid*.

[9] The *Planungsamt* was established at Osenberg's suggestion the same year. About Osenberg's activities in the *Planungsamt*: Ruth Federspiel, "Mobilisierung der Rüstungsforschung? Werner Osenberg und das Planungsamt im Reichsforschungsrat 1943–1945," – *Rüstungsforschung im Nationalsozialismus. Organisation, Mobilisierung und Entgrenzung der Technikwissenschaften*, ed. Helmut Maier (Göttingen: Wallstein, 2002), 72–105.

why at a first glance an ordinary professor from a rather smallish technical university could ascend to such a leadership position, Goudsmit disclosed shortly after the war: "The Security Service of the Elite Guard (SD der SS) […] also boasted of a 'cultural' department, Section IIIc, headed by a Wilhelm Spengler. Osenberg was Spengler's right-hand man for the sciences. The function of this section was to enforce the Nazi doctrine at educational and cultural institutions. This was done by means of squealers and investigators who reported directly to Osenberg. […] In addition, Osenberg collected data on their [the scientists'] attitude towards the Nazi doctrine."[10]

Memoranda

Shortly after the beginning of the Second World War Osenberg's institute was declared as "Wehrbetrieb," which meant that its work was completely converted to the needs of the war. A short time later, the installation of a "marine development department" and the conversion of the remaining part of the institute into a "Four-Year-Plan Institute for Manufacturing Process" followed.[11] Thus, the official acceptance of Osenberg's projects was given by the head of the Four-Year-Plan Authority *Reichsmarschall* and Reich Aviation Minister Göring. Osenberg stated, however, that the absolute mobilization of scientific capacity for the Nazi war aims in many university research institutions was not the rule and the existing possibilities were only fractionally used. This statement led him to the formulation of several memoranda addressed to the highest party and government bodies, in which he developed his ideas for the utilization of the entire technical and scientific research potential in Germany for achieving the aim of the *Endsieg*. Thus he remained in the tradition of the leaders of the technically educated elite, who were strongly influenced by the experience of the First World War. They repeatedly emphasized "the high importance of technology" for warfare, as they had concluded that

[10] Goudsmit, *Alsos*, 189.
[11] "CV Osenberg," l.c., sheet 34.

the defeat of 1918 had a lot to do with the insufficient use of the possibilities of technical sciences.[12]

Osenberg assessed the devastating German "war situation as a result of insufficient utilization of available capacities of the German research" in his third memorandum, written on December 28, 1943.[13] He considered in greater detail the – in his view – deficient situation of war research and those measures which in his opinion could solve the problems. This memorandum was submitted to the head of the Party Chancellery Martin Bormann, the Commander of the Air Force and the Ministry of Aviation Göring, and the Reichsführer-SS Heinrich Himmler in early January 1944, and later in the year to the Reich Minister for Armaments and War Production Albert Speer, and the head of the SS Leadership Main Office Hans Jüttner. Bormann was asked to submit the memorandum to Hitler.

The first, very detailed section deals with measures Osenberg had introduced previously in his functions in research management, in order to intensify the war research. Starting from the statement that "no influence on the research and its utilization for military equipment was exerted by the responsible authorities in the first two years of the war,"[14] he pointed out the necessity of activating the "even in the fifth year of the war still available capacities" as "inevitable for the war." The previous measures were inter alia: 1) an "organization chart to activate the entire research" prepared for the Navy, which was implemented; 2) the collection of "600 research centres of German universities" with their human and material resources in a central file; 3) the establishment of the Planning Department of the Reich Research Council for the "identification and summary of war important tasks of defence technology" and launching "the creation of a unit of 3,000–5,000 first-class research-

[12] For example the then rector of the TH Hannover in 1917, see: Königlich Technische Hochschule zu Hannover, *Die Übergabe des Rektorats am 30. Juni 1917* (Hannover: n.p. 1917), 3, located in Archiv der TIB/UniA Hannover, Hann. 146 A Acc. 62/81, Nr. 4. See also Stefan Willeke, "Die Technokratiebewegung zwischen den Weltkriegen und der 'Kulturfaktor Technik'," – *Technische Intelligenz und "Kulturfaktor Technik"*, ed. Burkhard Dietz, Michael Fessner, Helmut Maier (Münster, New York: Waxmann, 1996), 203–220.

[13] BArch Berlin R 26 III, Nr. 49, sheet 142.

[14] *Ibid*., sheet 143.

ers and professionals" as "scientific stormtroopers" (*wissenschaftlicher Stoßtrupp*).[15]

Obviously, however, these initiated measures were not as successful as Osenberg had imagined. That brings him to the statement in the second section of the memorandum that still around 41 percent of potentially useful research institutes of the universities were "not used for the war effort." Besides, he remarks that "according to the state of 7 December 1943 [...] 3721 of the 5000 considered scientists were still found in the army in functions not corresponding to their qualifications." Almost 80 percent of fully trained engineers were deployed in the army in lower ranks, for example – as Osenberg smugly mentions – a professor of thermodynamics as warden in a military prison, an engineer of high-pressure steam and gas turbines for high-speed boats as a cleaner, and a chemist (a specialist in the field of carbon compounds) as a worker doing simple office work.[16] He also mentions many examples, which in his view proved the "insufficient war effort [...] of the German research:" defects in radar engineering and torpedo development,[17] and uneconomic methods in production engineering. Defining science as a type of weapon, he emphasized: "What unspeakable misery could have been avoided if one had given the researcher and the engineer his basic tools in time, his gun [emphasis Osenberg], with which he had been used to deal for years."[18]

After a critical look at "the progress-inhibiting effects of misunderstood secrecy orders"[19] in the exchange of research results as well as other sections on "the research organizations of enemy states"[20] and regarding the "outlined problems in the research sector of the German arms build-up,"[21] Osenberg developed his ideas as "proposals to performance enhancement of our military research."[22] In order to use "science as a weapon", Osenberg regarded the following measures as essential:

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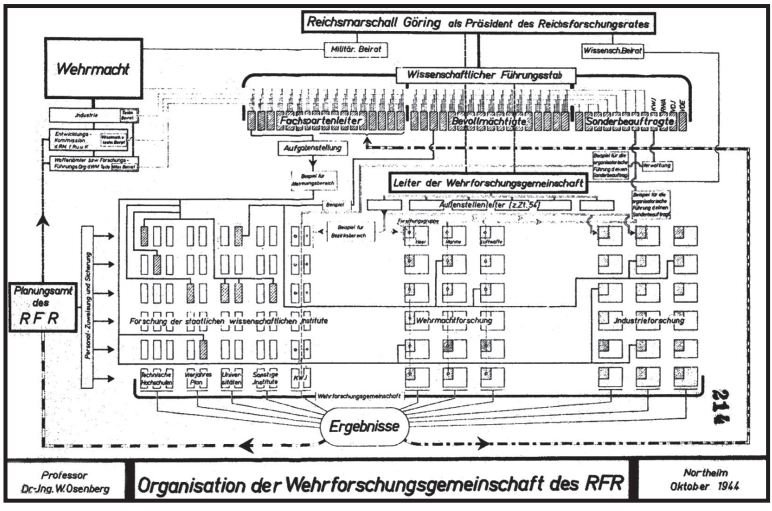
15 *Ibid*., sheet 154.
16 *Ibid*., sheet 152.
17 Goudsmit, *Alsos*, 187.
18 BArch Berlin R 26 III, Nr. 49, sheet 151.
19 *Ibid*., sheet 150.
20 *Ibid*., sheet 155 et seq.
21 *Ibid*., sheet 157 et seq.
22 *Ibid*., sheet 159 et seq.

1) Centralization of research organization in the Reich Research Council (RFR);
2) transfer of the personnel and financial responsibility of the main research institutes towards the RFR;
3) establishment of a "problem collection point" for military engineering, situated at Osenberg's Planning Department of the RFR, which executed the transmission of tasks to relevant research institutions for solving the problems;
4) communication of research results to competent bodies of the Reich Minister for Armaments and War Production and the affected parts of the army;
5) establishment of a "research survey" to control the utilization of research facilities and the exclusion of projects not important for the war;
6) establishment of a department for the identification of "modern" production processes and implementation and steering of the operation of "scientific stormtroopers," e.g. for production of new weapons.



Organizational chart of the "Wehrforschungsgemeinschaft". BArch Berlin R 26 III, Nr. 112, sheet 214

This third memorandum seems to have been hardly noticed, like the first two. Although the Planning Department of the RFR that he had proposed was established in 1943, the "repatriation" of under-qualified scientists employed by the army was initiated and although certain requirements of confidentiality were relaxed, the number of scientists which could restart their research activities were far from the requested 5000.[23] All other ideas remained unrealized until mid-1944.

This brought Osenberg to launch another attempt to intensify the war research. On 31 July 1944, at a time when Germany's military situation in view of the Allied invasion and the offensive of the Red Army in the east appeared hopeless to every rational thinking person, he wrote the initially mentioned headline with the significant title: "A requirement of total war is the total deployment of our entire research potential." Following the "decree of the Führer about the total war deployment" and Hitler's statement that "this war ... (is) not only a war of soldiers, but especially also the technician,"[24] Osenberg summarized his visions in the main points, stated more precisely and completed it "to change course of the war definitively."[25]

Like a guiding thread the emphasis is throughout the seven page document on the importance of science for the outcome of the war. In the present phase of the war, it was "undoubtedly a question of the survival of the German people, to concede to the engineer, but especially to the researcher the place he deserves next to the fighting soldiers." In summer 1944, Osenberg had the firm conviction that the war would have developed differently and more successfully for Nazi Germany, if a "total mobilization of under-used energies of German science at the beginning of the war" for the war research had taken place. He assumed that "a total activation of the German war research [...] is still possible" and that "it would have a decisive influence on the course of the war (air war, submarine war and the like)."

Substantially new were his proposals to establish a "scientific advisory board" consisting of three professors with the possibility of reporting to

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[23] According to Goudsmit there were 2500, according to Ruth Federspiel less than 4000, Federspiel, "Mobilisierung der Rüstungsforschung," 89.

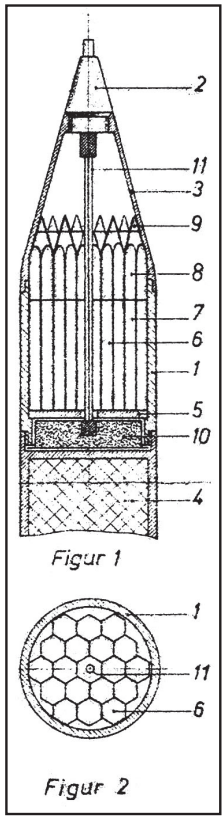
[24] Hitler in a statement on 6 July 1944, cited by BArch Berlin R 26 III, no. 43, sheet 127.

[25] *Ibid*.

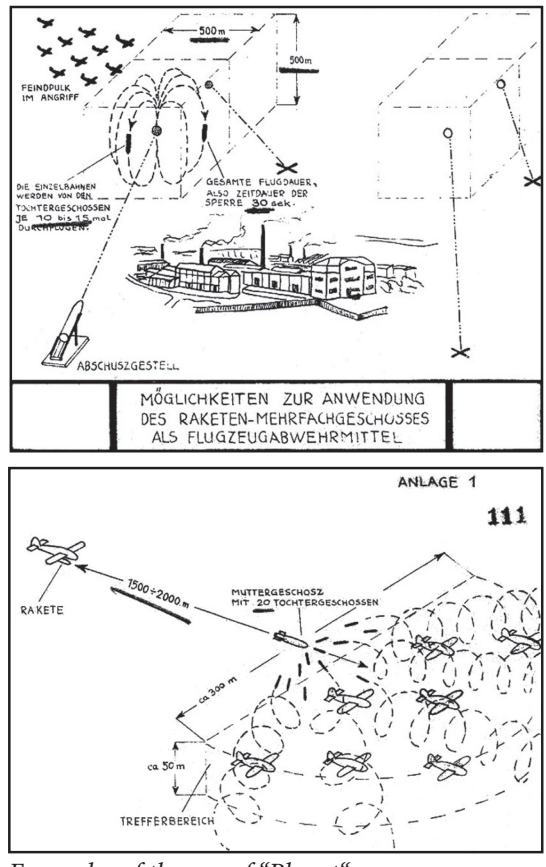
Hitler directly and participating "at important meetings at Hitler's headquarters and at the Ministry of Speer" as well as the establishment of the so-called *Wehrforschungsgemeinschaft* (Defence research community). While the first wish – to directly report to Hitler – remained unrealized, Osenberg's dream of the *Wehrforschungsgemeinschaft* became reality, at least on paper. On 24 August 1944, about three weeks after Osenberg published his last paper, Göring signed a decree ordering the establishment of the new organization headed by Osenberg.[26] Its stated aim was that all "in research engaged state and industrial institutes and laboratories [should be integrated] […] for the purpose of a uniform personal responsibility" and only those research projects be given the top priority, which were regarded as "decisive for the outcome of the war" by the RFR.[27] Osenberg created a beautiful and very detailed organizational chart, he printed well-formulated explanations, and up to the 15th of October, 1944, more than a thousand scientific institutions from universities, industry and the armed forces reportedly wished to participate in "Osenberg's bold plan of organization."[28] However, there is no proof of any effect the *Wehrforschungsgemeinschaft* might have had. Instead, it seems to be the last convulsion of a desperately struggling scientific community against the "bitter end."

At that time, Osenberg certainly saw the situation differently. Thus, he was still full of energy at the beginning of 1945. On the 21st of January 1945 he sent a proposal for the effective combating against enemy air formations to Hitler directly. For his project of an anti-aircraft missile named "Planet", he had three weeks earlier applied for a patent. Now, at the end of January 1945, and about three months before the final end of Nazi Germany, he had the opinion "that it is still possible to change the air war situation almost instantly by implementing appropriate measures."[29] For this purpose he had already received the approval of the "Reichsführer SS" Himmler, who gave him "all the support, especially from the manufacturing sector (concentration camps)" and to have "promised

[26] BArch Berlin R 26 III, Nr. 108, sheet 7.
[27] BArch Berlin R 26 III, Nr. 112, sheet 216.
[28] Karl-Heinz Ludwig, *Technik und Ingenieure im Dritten Reich* (Düsseldorf: Droste, 1979), 265.
[29] BArch Berlin R 26 III, Nr. 49, sheet 108.



Warhead "Planet". BArch Berlin R 26 III, Nr. 49, sheet 60



Examples of the use of "Planet". BArch Berlin R 26 III, Nr. 49, sheet 111.

later use of the projectiles by the Waffen-SS." This new "wonder weapon" should form a "greater area denial and attack system" that could finally stand up to the overwhelming air supremacy of the Allies. The "Planet" rocket consisted of a carrier rocket, transporting up to 24 individual missile units, to attack enemy bombers in screw-shaped formations, able to be launched from land, air and sea.[30]

[30] About Osenberg's further developments of weapons see also: Jung, "Voll Begeisterung," 296–304; Birgit Schlegel, "Waffenentwicklungen unter Professor Werner Osenberg in Hannover (1941–1943) und in Lindau a. H. (1943–1945)," *Northeimer Jahrbuch* (2007): 75–107.

Unlike many of his other proposals, this idea of Osenberg was met with great enthusiasm in the Nazi leadership – certainly in view of the miserable military situation. Thus it was insisted by the highest authority to develop this project as quickly as possible and the necessary investigations were started at *Technische Hochschule Hannover* and at the Aerodynamic Research Institute of the University of Göttingen in the shortest possible time. First results were available on 29 March. Apart from the rather dubious technical feasibility of the project, it was already too late to finalize the project. Several days later, Allied troops reached the location of Osenberg's institute and the Planning Department of the RFR near Hannover and arrested him. In this situation he handed his entire archive over, including the records and card indexes covering the entire German research sector.[31] This he had done due to his new vision: he thought he could use his knowledge to play a significant role in a new Germany.

Epilogue: after the war

This did not come true, but apart from a longer internment, Osenberg was hardly harmed by his commitment to the Nazi regime. Despite joining the SS and the SD, he was classified in the denazification proceedings as "disburdened" because he "did not belong to an organization declared as being criminal in the Nuremberg trials," as he himself remarked.[32] This demonstrably false classification was probably due to his cooperation with the allied departments in investigating the German research capacities.[33] He was, after a certain waiting period, again a professor at

[31] According to Lind Hunt the United States and Great Britain used Osenberg's list of 15,000 scientists of the Third Reich with a lot of fanatical Nazis "as a recruitment tool for decades," Linda Hunt, *Secret Agenda: the United States government, Nazi scientists, and project paperclip, 1945 to 1990* (New York: St. Martins Press, 1991), 32 et seq. See also: "Examination of Dr. Ing. W. Osenberg," NARA RG 331 UD 13D.

[32] Letter of Osenberg to the rector of TH Hannover (27 November 1947), Archiv des Hamburger Instituts für Sozialforschung, PA Osenberg, sheet 92.

[33] SS and SD were classified as criminal organizations at the Nuremberg Trial of the Major War Criminals. Inter alia, only members were excluded who were conscripted or exercised just simple activities like office work. This was not true for Osenberg.

the Technical University Hannover and taught there until his retirement in 1970. He died in 1974.

What people would prefer to remember in later years was not Osenberg's almost fanatical support for the Nazis, but what has been known as "Osenberg action", i.e. the retrieval of scientists from the armed forces to more secure places in institutes. His ideas of "science as a weapon" and the role of scientists as "scientific stormtroopers" were not spoken of after the war, and his actions have been reinterpreted as non-political efforts to secure the continuity of the German research establishment. In 1956 the publication for the 125th anniversary of the university stated that: "These [Osenberg's] measures have succeeded in that not only the human substance, but mostly also the values of the German scientific institutes for post-war tasks were preserved for the benefit of the German economy."[34] Nine years later the rector of the university formulated in a congratulatory letter on Osenberg's 65th birthday: "With this activity, you have done a beneficial work in saving the intellectual substance of Germany in the collapse."[35] And Osenberg is similarly honoured in the *Catalogus Professorum* of *Leibniz Universität* Hannover, without any indication of his political activities before 1945.[36]

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[34] *125 Jahre Technische Hochschule Hannover* (S.l.: s.a., 1956), 185.

[35] PA Osenberg, sheet 267. Osenberg was very proud about this statement. In his answer to the rector he formulated not without adulating himself: "I appreciated very much the fact that you commemorated also the personal protective action on this occasion I executed during the war to preserve the substance of the staff of German scientific institutions. I dare say, the TechnischeHochschule Hannover can be proud that this action precisely originated from the local university." PA Osenberg, sheet 268.

[36] Horst Gerken (ed.), *Catalogus Professorum 183–2006. Festschrift zum 175-jährigen Bestehen der Universität Hannover,* Band 2 (Hildesheim, Zürich, New York: Olms, 2006), 372.

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Imagining a Nuclear World War Two in Europe

Preparing US Troops for the Battlefield Use of Nuclear Weapons

Robert A. Jacobs

During the Cold War, it was widely acknowledged that the advent of nuclear weaponry had fundamentally altered the nature of war between nuclear armed nations. However, while strategic nuclear war planning was being carried out and implemented in deployed weaponry and personnel by the United States, parallel to this was the continued embrace of military strategies that had been elemental to the conduct and victory in Europe during World War Two. This article argues that at the same time while nuclear weapons dramatically altered the war planning of the United States during the Cold War, for Army battlefield commanders there was little departure from pre-existing doctrines regarding the defence of Central Europe. For these battlefield commanders, the manufacture of tactical nuclear weapons was largely overlaid upon existing strategies to repel an imagined Soviet incursion. Focusing on discussions of battlefield nuclear tactics by Army strategists, the paper demonstrates that such planning persisted and was even embedded into training throughout the first half of the Cold War, and far beyond the entry of thermonuclear weaponry into the U.S. arsenal. The paper specifically looks at the training and participation of ground forces in nuclear weapon testing to acclimate them to the "atomic battlefield." Through an examination of the indoctrination that these forces received about nuclear weapon effects, and specifically around the dangers posed by radiation, it becomes clear that the realities of nuclear weaponry had little effect on the preparation, training and strategies of American military leaders tasked with the military defence of Central Europe against Soviet incursion.

Immediately after the surrender of Japan in World War Two, the United States military conducted extensive studies of the impact of the two nuclear attacks on Japan that were carried out in the final weeks of the war. "[A]tomic weapons will not have eliminated the need for ground troops, for surface vessels, for air weapons, or for the full coordination among them, the supporting services and the civilian effort, but will have changed the context in which they are employed to such a degree that radically changed equipment, training and tactics will be required," declared the report.[1] But did it? To what degree, and how quickly did the advent of nuclear weapons alter the war planning and preparations of the United States from their military posture during World War Two?

In August of 1945 most Americans, including many political and military leaders, believed that nuclear weapons compelled the Japanese to surrender and ended World War Two. The initial discourse around nuclear weaponry presented to the American public stressed the revolutionary nature of the new weapon. President Harry Truman, in announcing the nuclear attack on Hiroshima and introducing the world to the atomic bomb described it in quasi-religious language, saying that it harnessed the "basic power of the universe" and was given to America by God, while banner headlines across the United States heralded the use of these atomic weapons as dealing a "knockout blow" to Japan, or of being a "super weapon" capable of undreamed of destruction, compelling an entrenched Japan to surrender.[2]

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[1] United States Strategic Bombing Survey, *Summary Report (The Pacific War)* (Washington DC: U.S. Government Printing Office, 1946): 30.

[2] "Text of Statements by Truman, Stimson on Development of Atomic Bombs," *New York Times*, 7 August 1945, 4. There is copious literature around the use of nuclear weapons in Japan, and on the subsequent development and deployment of nuclear weapons by the United States throughout the Cold War. Classic works on the use of the bomb in Japan include, Gar Alperovitz, *Atomic Diplomacy: Hiroshima and Potsdam* (New York: Simon and Schuster, 1965); Martin J. Sherwin, *A World Destroyed: The atomic bomb and the grand alliance* (New York: Random House, 1973); and more recently, Tsuyoshi Hasegawa, *Racing the Enemy: Stalin, Truman and the surrender of Japan* (Cambridge: Harvard University Press, 2005). On nuclear weapons as cultural signifiers in the United States see, Paul Boyer, *By the Bomb's Early Light: American thought and culture at the dawn of the atomic age* (New York: Pantheon Books, 1985); Ira Chernus, *Dr. Strangegod: On the symbolic meaning of nuclear weapons* (Columbia, SC: University of South Carolina Press, 1986); Robert Jacobs, *The Dragon's Tail: Americans face the*

Nuclear weapons were imagined to be a civilization altering technology. Renowned CBS war correspondent William L. Shirer was among those on the air reporting on the use of the bomb after the official announcement about Hiroshima on 6 August 1945. Shaken by the description of the power of the new weapon, and cognizant of the devastations of warfare, Shirer asked his nationwide radio audience, in a world with nuclear weapons: "Is there any hope for mankind?"[3] Military analyst Major George Fielding Eliot claimed in the *New York Herald Tribune* that "Mankind stands at the crossroads of destiny…The decisions which now confront the mind of man are the most important in his history. Upon these decisions hangs his continued existence on this planet."[4]

However, while this apocalyptic and transformational rhetoric typified representations of nuclear weapons in the American press, the integration of the new weapons into military doctrine lagged behind popular discourse. This trajectory was explicitly outlined in one of the first books to consider the impact of nuclear weapons on international relations and military strategy, *The Absolute Weapon* published in 1946. Writing in *The Absolute Weapon*, editor Bernard Brodie outlined the then common wisdom, "It is already known to us all that a war with atomic bombs would be immeasurably more destructive and horrible than any the world has yet known. That fact is portentous, and to many it is overwhelming. But as a datum for the formulation of policy it is in itself of strictly limited utility."[5] This statement would prove more prescient than Brodie himself intended. Even as the destructive capacity of nuclear weaponry and

atomic age (Amherst, MA: University of Massachusetts Press, 2010). As for the primacy of nuclear weapons in the Cold War see, Gregg Herken, *The Winning Weapon: The atomic bomb in the Cold War, 1945–1950* (New York: Random House, 1981); Campbell Craig and Fredrik Logevall, *America's Cold War: The politics of insecurity* (Cambridge, MA: Harvard University Press, 2012). Essential work is also being conducted by the National Security Archive at George Washington University.

3 William L. Shirer on CBS Radio, 6 Aug. 1945, quoted in Wilber M. Smith, *The Atomic Bomb and the Word of God* (Chicago: Moody Press, 1945), 8.

4 George Fielding Eliot, "Atomic Bomb Said to Overthrow Basic Tenets of Military Science," *New York Herald Tribune*, quoted in Donald Porter Geddes, ed., *The Atomic Age Opens* (New York: Pocket Books, 1945), 166.

5 Bernard Brodie (ed.), *The Absolute Weapon: Atomic power and world order* (New York: Harcourt, Brace and Company, 1946), 21.

the complexity of nuclear delivery systems progressed far beyond anything imagined in 1945, aspects of American military planning remained trapped in efforts to insert the new weapons into existing war fighting doctrines fixated on the battles of World War Two.

Brodie argued in 1946 that World War Two and the atomic bomb in particular had shown the primacy of strategic bombing. He argued against understanding nuclear weapons as inherently transformative, asserting that they could accomplish essentially the same goals as previously existing strategic bombing simply in a more condensed timeline. Nonetheless, military planners began in the late 1940s to prepare for a possible Soviet invasion of Western Europe, and a long drawn out land war in Germany. This imagined war mirrored the European theatre of World War Two, with nuclear weapons added, not as a radical or transformative component, but as simply a new weapon in the arsenal. A top secret memo prepared by the staff of the Net Evaluation Subcommittee of the National Security Council entitled "A Study of the Management and Termination of War with the Soviet Union," prepared in 1963, included a scenario titled "War in Europe." In this scenario, a communist move to take over the government of Italy results in a military confrontation between the Soviet Union and NATO. As the situation escalates the United States decides to use tactical nuclear weapons against Soviet forces in Eastern Europe. "The Presidential decision to authorize the use of tactical nuclear weapons resulted from the belief that not only would this action reverse the local military situation but would put serious pressure on the Soviets to close out the war."[6] The scenario did eventuate in the further use of limited numbers of nuclear weapons in the Soviet Union itself, this limited use ultimately compelled the Soviet Union to withdraw entirely from Eastern Europe and from operating in any manner in Western Europe.

Even as thermonuclear weapons and missiles came to dominate American nuclear strategizing, it took decades for the US to loosen its grip on the idea of Germany as a nuclear battlefield in a World War Three ground war. In 1956, the Chief of Staff of the Army Maxwell Taylor approved the

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[6] Net Evaluation Subcommittee, "A Study of the Management and Termination of War with the Soviet Union," (November 15, 1963): 23–24.

PENTANA concept as discussed in the 1955 report titled, "Doctrinal and Organizational Concepts for Atomic-Nonatomic Army During the Period 1960–1970". Taylor was seeking a means of organizationally formalizing the capacity to integrate tactical nuclear weapons into combat groups. Completed in December 1955, the Army War College study called for a completely air transportable 8,600-man division to replace infantry, airborne, and armoured divisions. The new division was to be built around five small, self-sufficient battle groups that would include their own artillery. The battle groups were to meet the tactical requirements for dispersion of forces, operations in depth, and increased flexibility and mobility on the atomic battlefield. Organic division artillery, although meagre, included the Honest John, a surface-to-surface rocket with a nuclear warhead.[7]

The "Flexible Response" doctrine adopted during the Kennedy administration moved the United States towards planning for a range of possible scenarios for the use of nuclear weapons beyond the Eisenhower administrations emphasis on massive retaliation. Speaking at the Tactical Nuclear Weapons Symposium convened by the United States' Atomic Energy Commission and Department of Defense at Los Alamos National Laboratory in 1969, Colonel Stanley D. Fair of the US Army Combat Developments Command told attendees, "The need for the tactical nuclear option was most obvious in those situations that portrayed such numerically superior enemy strength that US and Allied Forces were inadequate to achieve a favourable outcome. In addition, the scenarios suggest that a tactical nuclear capability is needed to terminate conventional aggression before the conflict can expand to involve other areas or other combatants and to avoid a prolonged nonnuclear war."[8]

After the initial use of nuclear weapons during World War Two, the United States not only put the model of nuclear weapon used in Nagasaki into mass production (the Hiroshima and Nagasaki weapons were of completely different design and used different nuclear material to generate the

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[7] John B. Wilson, *Maneuver and Firepower: The evolution of divisions and separate brigades* (Washington DC: United States Army Center of Military History, 1998), 271.

[8] Stanley D. Fair, "Tactical Concepts in Theater Operations," *Proceedings of the Tactical Nuclear Weapons Symposium* (Los Alamos Scientific Laboratory, 3–5 September 1969), LA-4350-LS: 30.

explosions, after the war the Nagasaki design was chosen as the variant to pursue in early post-war manufacturing), but also designed new nuclear weapons specifically intended for use on battlefields in support of ground operations. This was accomplished through miniaturizing the designs of larger yield weapons and designing delivery systems suited to various tactical uses such as backpacks for delivery to naval targets and the M65 atomic canon which was deployed to bases in Europe. Additionally, in the early 1950s the U.S. began a program of troop participation in nuclear testing at the Nevada Test Site that both acclimated troops to nuclear detonations, trained them in tactics imagined as essential on "nuclear battlefields," and gauged their physical and psychological capacity to follow orders and execute complex manoeuvres in the presence of nuclear devastation and nuclear radiation. Throughout the Cold War, even into the 1980s, a nuclear ground war fought against an imagined Soviet incursion into Germany remained a fixture of both the U.S. nuclear stance and NATO war gaming.

Nuclear World War Two

While grasping the importance of strategic bombing to war planning with the Soviet Union in a post-World War Two world, American military planners envisioned atomic bombs as accomplishing these goals with more force and quicker than previous ordnance. As the Iron Curtain came to define the borders of empire in the emerging Cold War, American strategists envisioned conflict with the Soviet Union as resulting from a Russian incursion into Western Europe. Initially nuclear policy understood atomic bombs to act as a deterrent to Soviet superiority in conventional military strength. In this scenario, nuclear weapons might be used to attack Soviet cities directly, but also would find a role in shaping outcomes on the battlefield such as in destroying armoured formations or bases. Later came deep-strike missions (e.g. from GLCMs and medium range bombers) and discussions about maritime use.

In a 1957 article in *Military Review: The Professional Journal of the U.S. Army*, Lieutenant Colonel Robert M. Walker of the U.S. Army Command and General Staff College wrote about how nuclear weapons would

be an effective counter to a favoured tactic of the Red Army in World War Two. "Of particular interest was the Russian use of the night attack. They crossed the Dnepr River at night without the use of bridge equipment, and in 1943 accomplished another major river crossing and decisive breakthrough of German lines with tanks at night…In the atomic situation an understanding of the conduct of night attacks will be of vital necessity to the frontline commander." Walker goes on to advise that, "there is a good case for the retention of the battle-tried tactics of World War Two, superimposing on them the different tactics required for a possible atomic conflict."[9]

This thinking persisted deep into the Cold War, even beyond the development of thermonuclear weapons, which would make a U.S.–Soviet encounter on the "battlefield" of Europe far less likely. "Even with the development of the thermonuclear bomb, which increases many times the power of the original atomic weapon, our problem is not solved," advised Army Captain Thomas M. Waitt, downplaying the fact that thermonuclear weapons are thousands of times more powerful than fission weapons and not simply several times more powerful. Waitt continued, "Our enemy will, perhaps, be holding the territory of our allies. We will have to fight ground battles to defeat him." He imagined that, "Coordinated land, sea and air forces will be required. Since we must fight our battles on the ground, we want to use atomic power to help accomplish our mission."[10]

Traditional military doctrine pervaded attempts at integrating nuclear weapons as radical additions to armaments of warfare. "The same over-all mission of the rifle squad on the atomic battlefield remains much the same as in the past, with few modifications to keep step with the faster tempo imposed by swifter means of transportation and greater destructive force," wrote Colonel George W. Dickerson.[11] Marine Colonel George C. Reinhardt emphasized the same continuity, arguing the

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[9] Robert M. Walker, "The Night Attack Blueprint for Atomic Victory," *Military Review* 37:7 (1957): 52–56.

[10] Thomas M. Waitt, "Deep Thrust with a One-Two Punch–that's the Atomic-Airborne Team," *Army* 7:5 (1957): 80–83.

[11] George W. Dickerson, "Squads in Atomic Battle: The Training of the Pentomic Squad," *Army* 8:4 (1957): 31.

changes necessitated on the atomic battlefield actually reinforced existing doctrines, "Increasing deadliness of weapons has for years required dispersion on the battlefield, but it never 'protected' any individual from a bullet. 'Extended order' replaced close lines so that a bullet aimed at one man would be less likely to hit his neighbour. It 'protected' the battalion from destruction by enemy machine guns, if you can use protection in that sense, but it never protected the individual soldier. Dispersion in atomic warfare does not alter that principle."[12] Lieutenant Colonel Robert B. Rigg advised commanders that, "Your men must recognize atomic tactical weapons as *supplementing* and not *supplanting* their role in the ground services."[13] Describing a NATO repulsion of a Soviet incursion into Germany and the use of nuclear weapons, Army Colonel T. C. Mataxis envisioned that the tactics employed by soldiers under atomic attack would follow traditional procedures, "In case of a large-scale enemy attack supported by atomic weapons, plans must provide for the possibility of an entire reserve's occupying blocking positions, relying on the next higher unit to execute the counterattack."[14]

To be sure, these were not the only views being expressed among American military commanders. Many of these ideas were being expressed by senior Army personnel who were feeling their funding and status being usurped by the new Air Force, and especially by the Strategic Air Command (SAC) that had the primary task of waging nuclear war against the Soviet Union. However, to understand the distance between the military planning of these battlefield commanders and SAC commanders at this very same time, it is useful to consider U.S. nuclear warfighting strategies as SAC had developed them, even before most of these articles were written. After attending a SAC briefing in March of 1954 Captain William B. Moore, Executive Assistant to the Director of the Atomic Energy Division of the U.S. Navy, wrote to his superiors that in the "optimum plan" of the Strategic Air Command for attacking the Soviet Union, "It was estimated that SAC could lay down an attack under these conditions

[12] George C. Reinhardt, "Tomorrow's Atomic Battlefield," *Marine Corp. Gazette* 38:3 (1954): 17.
[13] Robert B. Rigg, "Simulating Atomic Blast Effects," *Army Information Digest* 10: 9 (1955): 19.
[14] T. C. Mataxis, "Defense on the Atomic Battlefield," *Infantry School Quarterly* 46:3 (1956): 61.

of 600–750 bombs by approaching Russia from many directions so as to hit their early warning screen simultaneously. It would require about two hours from this moment until bombs had been dropped using a bomb-as-you-go system in which both BRAVO and DELTA targets would be hit as they reached them." Moore concluded, "The final impression was that virtually all of Russia would be nothing but a smoking, radiating ruin at the end of two hours."[15]

The Army's means of participating in the new nuclear potential was focused on tactical –battlefield – nuclear weapons. Speaking about the 280 mm atomic cannon, Sgt. Bernard Henry bragged that, "We can get her emplaced and into firing action a whale of a lot faster than we can any other artillery gun now in use."[16] Colonel Mataxis described these battlefield nuclear weapons as immensely practical, "In addition to air delivery of an atomic bomb by the Air Force, the Army has today the Corporal guided missile, the Honest John rocket and the 280mm gun. These weapons are in the hands of our troops in the field. Realizing this, let us first analyse the effects of the tactical employment of atomic weapons on our current organizations and doctrine of defense and then examine a situation showing the actual planning of a battlefield atomic strike." Mataxis then proceeds to war game the battlefield usage of tactical nuclear weapons, "in order to best illustrate the detailed planning and coordination necessary when using atomic weapons in support of a field army, visualize the following situation. Following the normal pattern of concentration for the routine spring maneuvers in eastern Europe, aggressor forces launch a surprise attack supported by heavy bombing raids with conventional weapons on all NATO airfields, communication and supply centers."[17] Mataxis then war games a battlefield nuclear confrontation between the Red Army and NATO troops in Germany. Mataxis' article is written a full two years after the SAC briefing described above.

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[15] Quoted in David Rosenberg, "A Smoking, Radiating Ruin at the End of Two Hours: Documents on American war plans for nuclear war with the Soviet Union, 1954–55," *International Security* 6:3 (Winter 1981/82): 25.

[16] Quoted in, Frank W. Penniman, "Atomic Cannoneers," *Life of the Soldier and Airman* 36:1 (1954), 11.

[17] Metaxis, "Defense on the Atomic Battlefield," 62.

War gaming with soldiers and real nuclear weapons

In response to the Soviet acquisition of nuclear weapons in 1949 and to prepare to fight a battlefield nuclear war with the Soviet Union, the US Army undertook a program of troop participation in nuclear weapon tests at the newly created Nevada Test Site in 1951. There were several reasons to begin to expose troops to nuclear weapons. The first was to give real world experience to battlefield commanders and troops in the new roles necessitated by the radiation effects of nuclear weapons. This included members of the Chemical Corps who were charged with surveying the radiological contamination of weapon use and determining threats to troop manoeuvres. Each commander was responsible for the training of his own survey personnel and participation in nuclear tests allowed those personnel to encounter and train with actual radiation. However, the lack of a centralized training regime left the quality of individual radiation monitors in various units inconsistent.[18]

Participation in nuclear tests also allowed battlefield commanders to gain experience in how the effects of nuclear weapons would both limit and enable battlefield manoeuvres. Beyond this, exposure to actual nuclear weapon detonations was seen as necessary to psychologically condition troops to perform in the presence of the new weapons. "Psychological condition of troops to permit exploitation in defense of atomic weapons is essential," wrote Brigade General R.W. Porter, Jr., "To achieve this, false notions as to radiation and other dangerous characteristics of atomic weapons must be dispelled."[19] This dismissal of the serious nature of the threat of radiation from tactical nuclear weapon use can be seen in the 1953 book, *Atomic Weapons in Land Combat*, which claimed that, "The duration of dust cloud (fall-out) contamination is usually short… radioactive decay (half-life span) is usually swift enough to permit early use of equipment without taking special measures."[20]

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[18] Stanley W. Fair, "Measuring Radiation," *Army* 9:8 (1958): 72.

[19] R.W. Porter, Jr., "Atomic Weapons in Land Combat, Review," *Armor* 62:6 (1953): 57.

[20] George C. Reinhardt and W.R. Kintner, *Atomic Weapons in Land Combat* (Harrisburg, PA: Military Service Publishing Company, 1953): 142.

At first, in 1952, troops were kept at a distance of ten miles from the detonation points, and simply observed the nuclear tests. However, within one year the troops were being stationed as close as three miles from the test epicentres. Test site personnel objected to troops being so close to the detonations, and responsibility for their wellbeing was transferred from test site personnel, many of whom were scientists, to military commanders. Eventually troops were placed in foxholes at what was judged to be the periphery of the weapon's effects, and following the detonation manoeuvres were carried out on the "atomic battlefield."

For many of the soldiers involved, the experience of participating in a nuclear test was a very existential experience. "I was sitting in a row of sandbags, facing away, my forearm covering my eyes even though they were closed," wrote Captain Harry Olmsted, "Just after the final tone squeezed through the sound system I was conscious of an unbelievable white, searing light. It was dark, but yet it was light. I felt isolated and alone because of the complete silence all around me. For a time that seemed like a full minute but was actually only a few seconds, I tried to close my eyes even tighter. A hurried voice told us to turn around slowly and open our eyes. This voice was joined by probably a hundred others, each a little louder and a little faster. Now I saw what was undoubtedly the most astounding sight I had eve(r) seen."[21] Many soldiers recount seeing their bones through their closed eyes as the flash and burst of gamma radiation and x-rays from the detonation enveloped them. Master Sergeant Roy Heinecke reports that a Marine Colonel he interviewed described how, "I instinctively closed my eyes as the blinding light hit, yet I could still see the pebbles and small rocks around my feet. Nothing could be done to get away from it."[22]

Following the detonation, the troops would frequently rise out of their foxholes and advance towards ground zero. Official reports of the manoeuvres of Desert Rock V, as described by MSgt. Heinecke above stated that: "For the tower shots the men remained kneeling in the trenches until the shock wave from the explosion had passed over the trenches. At this point they were allowed to rise from their trenches to

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[21] Harry E. Olmsted, "Test Shot Smokey," *Army Information Digest* 12:12 (1957): 17.

[22] Roy E. Heinecke, "Desert Rock V," *Leatherneck* 36:7 (1953): 35.

watch the atomic cloud. After the forward area had been monitored, they were ordered to advance in simulated attack toward ground zero. Upon reaching this forward area, they inspected the damage done to animals and equipment in the area, and then returned to camp by truck. Within 24 to 48 hours after a shot, most of the participants were on their way back to their home stations."[23]

In many of these manoeuvres, the following scenario was modelled. American and Soviet troops were opposed to each other on a traditional battlefield with a traditional front line. An American commander decides to use a nuclear weapon to breach the enemy's lines. American troops dig in to prepare for nuclear assault. When the nuclear detonation creates a devastating hole in the enemy's line, infantry and airborne troops advance through the hole. However, this scenario involved troops advancing directly into the epicentre of the nuclear detonation even as the mushroom cloud rises above it.

One internal assessment of the value of the participation on Marines in a nuclear test in Nevada in 1955, concluded that, "The experience of Brigade troops in participating with an actual nuclear detonation served to familiarize them with the phenomena incident to it, as well as its effects. In observing the effects thereof on the displayed demonstration material troops were familiarized with realistic means of the passive defense measures which serve to minimize or protect against the effects of atomic explosion. It served to remove apprehensions concerning the capability of the weapon. All hands gained a high degree of appreciation of its power as well as its limitations and its proper place in the family of weapons, both nuclear and conventional, available to the Marine Corps."[24]

A second scenario involved the use of both a low yield and then a high yield nuclear device, a tactic described by Lt. Col. George B. Pickett, Jr. as "squeeze 'em an' blast 'em."[25] This tactic involved the use of a

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[23] Benjamin W. White, *Desert Rock V: Reactions of troop participants and forward volunteer officer groups to atomic exercises*, Fort Ord, CA: Army Field Forces Human Research Unit No.2 (1953), 1.

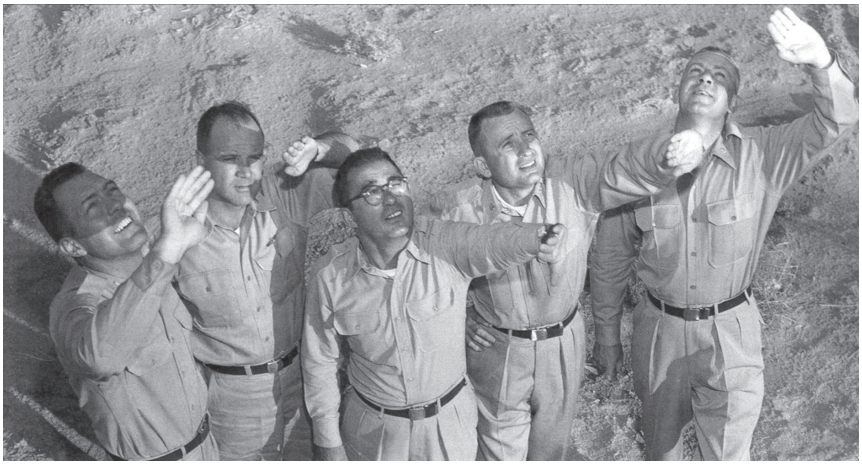
[24] United States Government, *Exercise Desert Rock VI: Marine Corps. Report* (March 1955): VII–1.

[25] George B. Pickett, Jr., "Squeeze 'Em an' Blast 'Em," *Military Review* 35:6 (1955): 58.

low yield nuclear weapon to force an enemy to withdraw front line personnel and equipment to a rear area that was also a command location. Once the enemy's forces had been "squeezed" into this rear area, which had now become a nuclear killing ground, a larger yield nuclear weapon would be used to destroy the enemies command and artillery units in a single blow.

In 1953, the United States conducted its only test of an artillery fired tactical nuclear weapon, the Grable Test at the Nevada Test Site, fired from an M65 280 mm atomic cannon and utilizing a Mark 9 nuclear weapon. While it was described as a tactical, battlefield weapon, its yield was 15 kt, or roughly the same size as the Hiroshima weapon. Nuclear artillery shells were later distributed to forward locations on NATO bases in Western Europe. The United States also built tactical nuclear weapons in the sub-kiloton range such as the bazooka fired Davy Crocket which fired an M388 nuclear weapon, and the SADM (Special Atomic Demolition Munition) which could be placed in a backpack and carried by infantrymen, or taken underwater by navy divers and attached to naval vessels.

During the course of American atmospheric nuclear weapon testing several hundred thousand military personnel took part in nuclear weapon tests in both Nevada and the original American test site in the Marshall Islands where the U.S. conducted tests from 1946 to 1957, including all of its tests of thermonuclear weapons. While the United States did not track the subsequent health progression of the troops it placed in close proximity to nuclear weapons, it did engage in extensive studies of the psychology of those soldiers, as will be discussed in the following section. Many of the soldiers who took part in nuclear weapon testing suffered illnesses related to exposures to radiation. Most of these illnesses were the result of internalized alpha-emitting and beta particles, whose resulting disease presentation typically unfolded over decades and involved ingestion cancers that cannot be causally attributed to their internalization of radionuclides. Proper understanding of the disease burden borne by these troops could only be demonstrated through long-term epidemiological studies involving most of the participating service personnel, similar to the studies conducted on the survivors of the nuclear attacks on Hiroshima and



Air force officers stand directly below ground zero for an atmospheric nuclear test, attempting to prove that these nuclear tests are safe. Las Vegas, Nevada, 18 July 1957. U.S. Government

Nagasaki. As the subsequent health care provider to most of these veterans, the U.S. government was uniquely positioned to conduct such follow up assessments, but neglected to pursue this, or to compensate most personnel for later illnesses.

The psychological indoctrination of atomic soldiers

While the battlefield usage of nuclear weapons followed closely behind strategies for smaller ordnance, the US military fixated on what it perceived to be the most unique aspect of the use of these weapons – what soldiers thought about them and how they were anticipated to react to the use of nuclear weapons near to their positions. Consequently, psychology came to play a key role in preparing U.S. servicemen to fight on the atomic battlefield and to adapt to nuclear weapons. In 1948, Colonel James P. Cooney, the chief of the Radiological Branch, Division of Military Application, of the nascent Atomic Energy Commission (AEC), told an audience of his conclusions after having participated in nuclear-

weapons testing: "I have observed the reactions of the military, who were not acquainted with the technical details on two missions, Bikini and Eniwetok, and the fear reaction of the uninitiated is appalling." The solution seemed obvious: "Psychological training for the military level of acceptable radiation hazard is possible and should be prosecuted, even if operational training is not."[26]

In 1951, the Pentagon contracted with researchers at two universities to design and analyse programs intended to educate and motivate soldiers in order to better prepare for nuclear war.[27] These programs and materials were to be tested on military personnel scheduled to take part in battlefield manoeuvres during upcoming atomic tests. The soldiers would then be tested for their responses to the materials, so that they might be refined and improved. In this way, the atomic soldiers were to become both physical *and* psychological guinea pigs.

The tests were designed to assess the effectiveness on the soldiers of various indoctrination techniques and to gauge their responses to the weapons' detonations. The psychological exercises and the briefings they reinforced also functioned to instruct the soldiers in how to feel about the bomb, encouraging them to see it as just another extension of the machinery of warfare and not an entirely different category.[28]

The two programs set out to measure two different sets of data. Psychologists from George Washington University in Washington, D.C., established the Human Resources Research Office (HumRRO), which focused on gauging the effectiveness of the education and indoctrination programs presented to troops who took part in atomic tests. HumRRO researchers administered questionnaires before and after soldiers participated in tests to determine if they had retained the information they had

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[26] James P. Cooney, "Psychological Factors in Atomic Weapons," Speech before the American Public Health Association, November 12, 1948, Federation of American Scientists papers, University of Chicago Library.

[27] Howard Rosenberg, *Atomic Soldiers: American victims of nuclear experiments* (Boston: Beacon Press, 1980), 40–41.

[28] Human Resources Research Office (HumRRO), *Desert Rock I: A psychological study of troop reactions to an atomic explosion,* Technical Report 1 (TR-1), Washington, DC, February 1953; Human Resources Research Office, *Desert Rock IV: Reactions of an armored infantry battalion to an atomic bomb maneuver,* Technical Report 2 (TR-2) Washington, DC, August 1953.

received during the briefings in Nevada and if the briefings had successfully alleviated their fear of the weapons.[29]

Human-behaviour specialists from the Johns Hopkins University Operations Research Office (ORO) set out to measure troops' levels of fear and anxiety during the actual weapons tests.[30] While HumRRO worked to gauge the effectiveness of indoctrination efforts aimed at the servicemen, ORO researchers sought to measure the anxiety and fear among participants in weapons tests through such somatic indicators as heart rate and perspiration rate before, during, and after the tests. ORO's physical measurements detected much higher levels of anxiety than HumRRO's assessments, which were largely based on voluntary responses to written questionnaires.[31]

"A major objective of this exercise," HumRRO's Technical Report No. 1 stated, "was to evaluate psychologically the troops' reactions to the maneuver, before indoctrination, after indoctrination, after the detonation, and after a lapse of about three weeks. Attitude research techniques as well as psychological measures were used to estimate (1) the effectiveness of the indoctrination procedures in increasing the troops' knowledge about atomic warfare and (2) the effects of the detonation, together with its accompanying consequences, on the troops' confidence in their ability to do well in A-bomb fighting."[32]

The HumRRO analysis of Desert Rock IV in 1953 concluded that there was evidence of "both the presence of fear ... and the absence of disruption of performance." However, the conclusion that the performance was not impaired should not be considered grounds for not funding a further, more nuanced study, since "less easily observed aspects of fear may be important in serving to prepare or energize men to react in an emergency situation."[33]

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[29] HumRRO, *Bibliography of Reports: As of 30 June 1958* (Washington, DC: George Washington University, 1958): 1.

[30] The Operations Research Office was established by the U.S. Army at Johns Hopkins University in 1948 and served as the Army's civilian "think tank," much as the RAND corporation did for the Air Force.

[31] Rosenberg, *Atomic Soldiers*, 46–48. ORO researchers would come to play a central role in designing Cold War psychological-warfare techniques.

[32] HumRRO, *Desert Rock I*, x.

[33] HumRRO, *Desert Rock IV*, 52–53.

The results of these studies were integrated into military planning for the atomic battlefield. Writing in the magazine *Army* in 1956, General John E. Dahlquist advised that "the way the survivor of an atomic blast reacts depends on how well his leaders have prepared him for this moment. If they have led him well he will, *at this supreme moment*, become his own leader."[34]

There were, however, voices of dissent within the military. Some of these critics thought that the preparation of soldiers to perform on the atomic battlefield should go beyond indoctrination and exposure to blasts from "safe" distances. In 1959, Major John T. Burke, an Army human-engineering specialist, advocated "shock training." He theorized that unless troops were exposed to the realistic horrors of nuclear war, lectures would be useless. Burke proposed a nuclear shock course, where "within appropriate radii of ground zero, every horror of the nuclear battlefield will be duplicated as realistically as possible. The area will be strewn with blood and plastic replicas of dismembered human bodies. Sickening stenches will emanate from carcasses and chemicals ... on every side he will be attacked by blinded comrades." Only through such training, he felt, could soldiers truly be expected to perform adequately in actual nuclear combat. "Eventually this procedure will engender both respect for nuclear effects and confidence through familiarity."[35] Burke clearly felt that the performance of soldiers on the atomic battlefield depended more strongly on their ability to deal with shock and horror than it did on their indoctrination, a perspective he termed *realism*.

Conclusion

By 1954 both the United States and the former Soviet Union had developed thermonuclear weapons with yields thousands of times larger than those used in the nuclear attacks on Hiroshima and Nagasaki. The March 1954 Bravo Test conducted by the United States in the Marshall Islands

[34] John E. Dahlquist, "We Will Survive if We Have Leadership," *Army* 6 (1956): 34–36, italics added.

[35] John T. Burke, "Mind against Nukes," *Army* vol. 10 (1959): 55.

resulted in a civilian casualty from radiation sickness of a fisherman located 100 km away from the epicentre of the detonation, far beyond any effects from the blast or heat of the weapon. Yet planning and training for a nuclear ground war to be fought in the defence of Western Europe persisted. Even after nuclear weapons had been placed onto missiles, and then MIRVed missiles (missiles with multiple, independently targetable warheads), there remained a separate target category in American nuclear targeting in support of ground troops engaged in combat in Central Europe. In the early days of nuclear missile targeting three classes of targets were designated. BRAVO targets were the sites of Soviet nuclear assets, a primary target in a direct nuclear confrontation between the two superpowers. DELTA targets were designed to degrade the enemy's industrial capacity, and were concentrated on Soviet urban and manufacturing areas. ROMEO targets were designated as supporting NATO troops in a ground war with the Soviet Union, presumably in Germany and other parts of Western Europe.[36] It is easy to imagine that nuclear weapons that were placed on intercontinental ballistic missiles were of a yield that their use in any battlefield scenario would devastate the friendly troops as well as the enemy combatants, and could quickly compel both sides up the escalation ladder to the point that both BRAVO and DELTA targets were also being attacked.[37] Thus, the use of nuclear weapons, either tactical or strategic, on an imaginary battlefield in Western Europe, could result in a direct and full-scale thermonuclear war between the superpowers against each other's military forces and urban populations.

The Army's reflexive insistence on the importance of tactical nuclear weapons for use by or in support of infantry soldiers reflects a number of important developments. First, after World War Two the previous Army Air Corps had been separated out into the U.S. Air Force. This reflected

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[36] Robert Jacobs, "The Bravo Test and the Death and Life of the Global Ecosystem in the Early Anthropocene," *The Asia-Pacific Journal* 13(29): 1 (20 July 2015).

[37] Use of nuclear weapons on the battlefield would be calibrated for blast and heat effects to impact enemy soldiers. For this to be the case the weapons would have to be detonated at a height that would allow the fireball to be close enough to ground level that the subsequent radioactive fallout would affect areas far from the detonation point. For a contemporary discussion of theories of escalation see, Herman Kahn, *On Escalation: Metaphors and scenarios* (New York: Frederick A. Praeger, Inc., 1965).

both the increasing importance of aerial bombardment, and that airplanes were the first and most essential delivery system for nuclear weapons, as had been the case in the nuclear attacks on Hiroshima and Nagasaki. This loss of an entire corps of the Army left it fighting for resources, now distributed between four service branches rather than the previous three, and asserting its relevance in the imagined nuclear wars of the future. Even as nuclear weapons surpassed the yield whereby they could be employed in any manner that guaranteed the safety of nearby friendly troops, the Army persisted in strategizing battlefield tactics in which infantrymen and nuclear weapons would share the same horizon. Beyond this, they persisted in training troops during actual nuclear weapon tests, subjecting them to risk in an effort to psychologically acclimate them to nuclear detonations.

The essential similarity of this imagined nuclear war, and ground engagements in Europe during World War Two embossed a strategic and tactical integration onto Army battlefield commanders that merely extended World War Two tactics to a battlefield that now included nuclear weapons. While the weapons that had actually been used during World War Two had not been used in Europe, or on a battlefield that had American troops nearby (or even in country), the Army's model remained a nuclear ground war fought with friendly troops in close proximity to the weapon's effects. This reflected the belief that the enemy in a nuclear war would be the Soviet Union, and that the likely scenario for this war would be a Soviet incursion into Western Europe that both reflected the Red Army's progression through Europe in World War Two, and also the experience and tactics required to fight against the Nazis in those very same locations. For these strategists and battlefield commanders, nuclear weapons were simply bigger bombs. The exposure of so many American soldiers to fallout radiation during their participation in nuclear weapon testing in Nevada reveals a dismissal of the importance of protecting American troops from fallout following the use of tactical nuclear weapons on the battlefields of a nuclear European theatre.

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The Doctrine of Total People's Defence – what Yugoslav armed forces learned from their past

Blaž Torkar

The article presents the development of the Yugoslav Military Doctrine and the Yugoslav Armed Forces from 1945 to the 1980s. The Socialist Federative Republic of Yugoslavia developed the concept of General People's Resistance and Social Self-Protection which was defending the freedom, national independence, sovereignity, and the self-managing socio-political system. The new doctrine also formed two defence components, the Yugoslav People's Army as the operational army, and the Territorial Defence as the highest organisational form of defence and armed combat under the authority of republics and regions. Despite the well-conceived concept of the General People's Defence and Social Self-Protection, the latter failed to find answers on how to defy the "internal enemy" and how to solve internal political, economic, and national problems, which amassed in Yugoslavia of the 1970s and the 1980s. Slovenian Territorial Defence was something positive, which derived from the Doctrine of Total People's Defence. Since its establishment in 1968, the Slovenian Territorial Defence developed differently from the other federal republics and was increasingly considered as the Slovenian armed forces.

Socialist Yugoslavia was formed after the end of the Second World War. Unlike the other communist regimes of Eastern Europe that came to power because of the Soviet military dominance, Tito's post-war communist regime in Yugoslavia came to power by and large through its own political and military efforts during the national liberation and civil war from 1941 to 1945. Despite its federal form, the new state was, in the initial post-war period, highly centralised both politically and economically. Tito's Communist Party held the reins of power and the constitution was

closely modelled on that of the Soviet Union. However, a succession of new constitutions, adopted in 1953, 1963 and 1974, contributed to the formation of a more federal and liberal country.[1]

Its armed forces, presented by the Yugoslav Army (YA)[2], had a very important role in the country. In the end of the 1960's and at the beginning of the 1970's, Yugoslavia adopted the concept and doctrine of Total People's Defence as the permanent form of defending the freedom, sovereignty, national independence, and the "self-managing" socio-political system. However, historical development of the new doctrine began much earlier, in the period of the Second World War and during the partisan guerrilla warfare, which was typical for the Yugoslav National Liberation Movement. After the Second World War, the experiences from the national liberation war were adapted and incorporated into the new military doctrine. Advancements in military technology, and anticipations of the development of international politics influenced the doctrine as well.[3]

The development of the Yugoslav armed forces and military doctrine from 1945 to 1969

The first period of the development of the armed forces (1945–1958) can be further divided into two subperiods, namely the 1945–1949 and the 1949–1958 periods. The era from the end of the Second World War and up to approximately 1949 may be referred to as the period of revolutionary etatism. In this period, post-war circumstances strongly influenced the establishment of the Yugoslav Armed Forces. The Partisan Army was reorganised into a peacetime structure, there were instances of demobilisation and first recruitments, the new army was formally regulated

[1] More about the history of the Socialist Federative Republic of Yugoslavia see: Dušan Bilandžić, *Historija Socialističke Federativne republike Jugoslavije. Glavni procesi 1918–1985* (Zagreb: Školska knjiga, 1985).

[2] On 22 December 1951 the Yugoslav Army (YA) was renamed the Yugoslav People's Army (YPA).

[3] More about the role of the Yugoslav Armed forces in the Yugoslav "self-managing" socio-political system see: Anton Bebler, *Marksizem in vojaštvo* (Ljubljana: Komunist, 1975).

and the establishment of the new military industry was just around the corner. The Yugoslav Army (YA) was the key element for the defence and stability of the state, and the society as a whole. The emphasis on the development of the YA was placed on the improvement of organisation, formation, education and training.[4]

Maintaining absolute political control in difficult wartime conditions became a major problem, as the National Liberation Army expanded in size and reached 800.000 troops by early 1945. At the same time, the Communist Party of Yugoslavia (CPY) amounted to no more than 140.000 members. The CPY leadership rightly feared the "militarization" of the Party. The reorganisation process of the Yugoslav Army was strongly influenced by the Soviet model since the army headquarters were manned by accredited Soviet instructors and YA personnel trained in the Soviet Union. In case of aggression, frontal operations were the cornerstone of military strategy. Those operations relied largely on the operational echelon.

The formation of partisan units had not been planned; the Corps of National Defence of Yugoslavia was the only military formation that retained its territorial character inside the republics. It was responsible for protecting the national border and a number of important buildings in the territory, and for the liquidation of military groups that had collaborated with the Axis Powers. The Yugoslav military doctrine abandoned the doctrine of the National Liberation Movement and copied the Soviet Military doctrine. After 1947, the Soviet Union started to train and educate reserve Yugoslav officers. The YA abandoned everything what was "partisan-like" and started to develop frontal-manoeuvre warfare. The Decree on the Establishment of the YA, dating back to March 1945, was an act by the federal government that among other things transformed the partisan detachments into a regular army. The transformation progressed at the same time as the country was being liberated by the National Liberation Army.

During the National Liberation War, in the territory of Yugoslavia, the operational echelon consisted of brigades, divisions, corps, and armies,

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[4] Zvezdan Marković, *Jugoslovanska ljudska armada (1945–1991)* (Ljubljana: Defensor, 2007), 31.

while the territorial component was made up of detachments, under city and territorial command.[5]

A typical characteristic of the post-war period (1949–1958) was the Yugoslav split with the Eastern Bloc and the Soviet Union (the so-called Informburo Conflict). The Eastern Block failed to ideologically and economically influence Yugoslavia using the Resolution of the Informburo. The Soviet Union had established Cominform, a weaker successor to Komintern, in 1947 to serve as a coordinating body for communist parties in the Soviet Union, Bulgaria, Hungary, Poland, Italy, France, Czechoslovakia, Romania, and Yugoslavia. The establishment of Cominform signaled that the Soviet Union was once again setting itself up as the official leader of the communist bloc nations. Yugoslavia was an original member, but Josip Broz-Tito proved to be reluctant in following the Soviet line. The cause for the Yugoslav–Soviet split was Stalin's rejection of Tito's plans to absorb Albania and Greece in cooperation with Bulgaria, thereby setting up a powerful Eastern European bloc outside Moscow's control. Stalin ordered Yugoslavia expelled from Cominform.[6]

Gathering Soviet divisions close to the Yugoslav borders (in Hungary, Romania, and Bulgaria) was a clear indication that the Soviet Union intended to invade Yugoslavia during the next phase of the political crisis. The Yugoslav Army and the state leaders made use of the lesson learned during the national liberation struggle and formed a Yugoslav Army's territorial-partisan component made up of partisan detachments.[7] However, the political crisis never developed into a hot war between Yugoslavia and the Soviet Union.

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[5] Ross A. Johnson, *The Role of the Military in Yugoslavia: An Historical Sketch* (Santa Monica: The Round Corporation, 1978), 3; Bojan B. Dimitrijević, *Jugoslovenska narodna armija 1945–1959* (Beograd: Institut za savremenu istoriju, 2014), 81–82; *Oružane snage Jugoslavije, 1941–1981* (Beograd: Vojnoizdavački zavod, 1982), 100; Zvezdan Marković, "Strategic Doctrine of the Yugoslav People's Army – The Strategy of All-People's Defence and Social Self-Protection," – *Strategic Planning for War*, ed. Tomaž Kladnik (Ljubljana: Defensor, 2008), 55–56.

[6] More about the Informburo Conflict and Yugoslavia's opening towards the West see: Dmitar Tasić and Ivan Laković, *The Tito–Stalin Split and Yugoslavia's Military Opening toward the West, 1950–1954* (Harward: Rowman & Littlefield, 2016).

[7] Marković, "Strategic Doctrine," 55–56.

A Unit of the Yugoslav People's Army standing with rifles. Courtesy Svetozar Busić, Archive of the Slovenian Museum of Contemporary History, Ljubljana

In 1952, a three-party military assistance for Yugoslavia, provided by the USA, Great Britain and France was initiated. Soon the USA remained as the sole military donor. Consequently, the Yugoslav People's Army (YPA) began to implement the military strategy in how to react in case of Soviet aggression and nuclear attack; specifically it established five-unit divisions with five-company regiments. At the peak of the build-up in 1952, 22 percent of the national income was devoted to defence. Yugoslavia received US military assistance worth three quarters of a billion dollars in the 1950's. But the improvement of Soviet–Yugoslav relations after 1955 led to a gradual de-emphasis of defence in Yugoslavia.[8]

At the beginning of the 1950's two theoretical documents had been prepared – document A and B. Document A defined the advantages of the aggressor, who was equipped with state-of-the-art technology, while document B defined the possible advantages of Yugoslavia. Document B underlined the importance of compensating for aggressors material and

[8] Marković, *Jugoslovanska ljudska armada*, 188–189.

technical advantages by organising people into a mass resistance. This was the YPA's tactic of responding to the possible aggression and applying the acquired lessons learned to new situations. The first milestone was the Military Service Act issued in 1951, which allowed for the possibility of forming a group of partisan detachments, a brigade, and a division under YPA command.[9]

The period from 1958 to 1969 was likewise divided into two sub-periods, namely the period stretching from 1958 to 1964 and the period between 1964 and 1968. It all began with the introduction of the Doctrine of Total People's Defence and ended with the search for the best solutions for the establishment of the Territorial Defence.

Originally the national defence and security system in Yugoslavia was called the General People's Resistance and Social Self-Protection (*Splošni ljudski odpor in družbena samozaščita*), which was later renamed the General People's Defence and Social Self-Protection (*Splošna ljudska obramba in družbena samozaščita*). The term Total People's Defence was used mostly in foreign papers and books describing the Yugoslav defence and security system.

It was assumed that Yugoslavia was endangered by aggression, the radical objective of which included the use of nuclear weapon. In 1958, the doctrine of total people's war was adopted. It provided for the formation of partisan units, special operations forces and territorial units, all part of the YPA. Further development of the operational army was motivated by an alleged possibility of aggression through the use of nuclear weapons, mass armoured units, and airborne units.

There were two major reorganisations of the YPA, the first one between 1959 and 1961, and the second one between 1963 and 1965. The two reorganisations aimed at balancing the operational and territorial components of the YPA. Based on the political and strategic estimation that the threat from the East no longer existed, a decision was made to reduce the size of the YPA. Accordingly, the disbandment of units located north from the Drava, Sava, and Danube rivers, and east from the Morava river was carried out. By 1968 less than six percent of national income was

[9] Marković, "Strategic Doctrine," 56.

Female soldiers of the Yugoslav People's Army. Courtesy Miško Kranjec, Archive of the Slovenian Museum of Contemporary History, Lubjana

spent on defence and the YPA had been reduced to nearly 200,000. The Non-Aligned Movement was reinforced and the international relations were influenced by general peace processes. This had a positive impact on the Yugoslav economy which in earlier times had been in a rather difficult situation.[10]

With the adoption of the People's Defence Act in February 1969, the period between 1969 and 1985 introduced a new phase in the development of the concepts of the General People's Defence (Splošna ljudska obramba) and the armed forces of the Socialist Federative Republic of Yugoslavia. The act laid down the unity and the composition of the armed forces, which comprised two parts, the Yugoslav People's Army and the Territorial Defence. Despite the dual nature of the armed forces, the Yugoslav People's Army presented the main, the most qualified, and the best equipped defence force. The general people's defence territorial defence

[10] *Oružane snage Jugoslavije,* 106; Marković, "Strategic Doctrine," 57; Ross A. Johnson, "Total National Defense in Yugoslavia" (Santa Monica: The RAND Corporation 1971), 2.

system provided defence capabilities in the entire territory of the state also during a temporary occupation of a part of the state. Based on the mid-term and long-term plans and material capabilities of the state, the modernisation of the YPA and the development of its organisation and formation structure continued. Special emphasis was put on the development of territorial defence.

In 1971, the YPA was affected by the movement called the Croatian Spring. The perception of the Croatian nation that they were being held in a disadvantageous and a subordinate position on their own territory was strongly refuted by Tito himself. All Party organisations of the YPA strongly opposed this "nationalist movement". This consequently led to the inspection of Yugoslav armed forces. In the course of the confrontation with the Croatian Spring movement, a number of Croatian senior officers and generals were forced to leave the army.

In parallel with the changes in the Yugoslav Defence Doctrine there were also the constitutional changes in Yugoslavia. The Yugoslav Constitution from 1974 was the fourth and final constitution of the Socialist Federative Republic of Yugoslavia. The changes in the Yugoslav Defence Doctrine were seen also in the Constitution which also added elaborate language protecting the self-management system from state interference and expanding representation of republics and provinces in all electoral and policy forums. The Constitution called the restructured Federal Assembly the highest expression of the self-management system. Accordingly, it prescribed a complex electoral procedure for that body, beginning with the local labor and political organisations. Those bodies were to elect commune-level assemblies, which then would elect assemblies at province and republic level; finally, the latter groups would elect the members of the two equal components of the Federal Assembly, the Federal Chamber and the Chamber of Republics and Provinces. The constitution also proclaimed Josip Broz Tito president for life.

After 1981, the armed forces of the Socialist Federative Republic of Yugoslavia were affected by the consequences of the death of their supreme commander Marshal Tito; the Presidency of the SFRY as a collective body did not have the same amount of influence and control over the entirely indoctrinated army as did its deceased supreme commander.

An YPA armoured fighting vehicle during excercises. Courtesy Svetozar Busić, Archive of the Slovenian Museum of Contemporary History, Ljubljana

Being a large independent system the YPA developed into a "state within a state" whose development was not in line with the changes in the internal political and geopolitical arena.[11]

The new Yugoslav defence doctrine

Everything changed in 1968, when the Warsaw Pact forces intervened in Czechoslovakia. The invasion of Czechoslovakia by the Warsaw Pact was viewed in Belgrade as evidence of a Soviet determination to throttle possible independent Communist countries and, as such, an "indirect attack" on Yugoslavia. It came as a great surprise for the state leaders and military supreme command. Yugoslavia appeared to be seriously threatened and the YPA had never in the entire post-war period been less prepared to protect it. Politicians and the military supreme command concluded that

[11] *Oružane snage Jugoslavije*, 110; Marković, *Jugoslovanska ljudska armada,* 188–189.

it was time to make use of the lessons learned from the National Liberation Movement in the Second World War. It was decided that according to the present circumstances, the territorial component, responsible for people's resistance, was to be established. This component was to operate alongside the YPA, but not within its structure. A completely new model of defence concept and the armed forces with a territorial component was developed.

The operational component would be the first in line to deter aggression. However, the territorial defence forces were planned to be the largest form of organising people into combat units, and were under the authority of the republics and regions. This was the first opportunity for the republics to develop their own defence units. The General Staff initiated the theoretical development of the General People's Resistance and Social-Self Protection doctrine in accordance with the political standpoints of the People's Federation Council. In 1971, Yugoslavia organised the *Svoboda*-71 (Freedom-71) manoeuvre. The manoeuvre demonstrated the progress that Yugoslavia has made since 1968 in organising for defence according to the conception of total national defence. The distinctiveness of the approach was apparent when compared with defence preparations in the early 1950's. Then, fearing a Soviet invasion, Yugoslavia carried out a massive conventional military build-up of almost a half-million men under arms, with a corresponding mobilisation capacity.[12]

During the presentation of the document "The Fundamentals of the War Doctrine" from 1970, the Yugoslav Armed Forces had been emancipated from the persistent influence of foreign doctrines. The Yugoslav Armed Forces were capable of resisting an aggressor, made use of Yugoslavia's lessons learned and refuted the defence thesis arguing that resistance was possible only in depth. In the document "Armed Forces of the SFRY" the Territorial Defence (*Teritorijalna odbrana*, TO)[13] had been given greater importance and TO's foundation had been reinforced. The TO was treated as the armed forces' strategic component, integrated into all spheres of the society and having various organisational forms. TO

[12] Marković, *Jugoslovanska ljudska armada*, 190; Johnson, "Total National Defense," 1–2.

[13] In the beginning the TO units were called partisan units.

YPA soldiers in trenches during military excercises. Courtesy Svetozar Busić, Archive of the Slovenian Museum of Contemporary History, Ljubljana

needed to stimulate people's ability to offer long-term resistance against the aggressor, thereby enhancing the army's operational echelon and ensuring more effective results than could be predicted considering likely force ratios.[14]

The Defence Act[15] of 1969 provided, further, that it was the right and duty of every citizen to participate in national defence and the right and duty of the local political authorities to organise total national defence and to command units in battle directly. In this scenario, the YPA itself would engage the enemy in frontal warfare and expel him from the country. The TO in the affected border region would selectively assist the YPA and would remain on alert in the event that the military threat increased.

Far more likely than the above scenario, according to Yugoslav military scholars, was the prospect of a massive attack led by the Soviet Union. In this case, the enemy would enjoy overwhelming military superiority in traditional terms. He can be expected to achieve general air superiority, to mount a massive armoured land invasion, and to attempt to quickly seize Belgrade, Zagreb, and other key cities by parachute troops and helicopter borne troops. In this scenario, the first task of the YPA was to employ frontal tactics and to avoid large losses, which would lead to the delay of the enemy's penetration. The YPA units, withdrawing from border areas, would wage an active defence in depth alongside the TO throughout the country. The expected consequence was a merging of the front and rear, the transformation of the entire country into a "hedgehog". YPA and TO units would fight on, utilising a mixture of combined and partisan tactics. On the "occupied" territory, both urban and rural, TO, and paramilitary forces would fight a guerrilla war. Only if the entire country would be occupied, however, would the YPA and TO units revert exclusively to partisan tactics, as in the Second World War.[16]

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[14] Marković, "Strategic Doctrine," 58.

[15] Zakon o narodni obrani. Ur. L. SFRJ 8/1969 (11 February 1969).

[16] Johnson, "Total National Defense," 3–4.

The role of territorial defence

TO was treated as the armed forces' strategic component which was to become the strongest military component, integrated into all spheres of society and having various organisational forms. The National Defence Act from 1969 conferred the use of legal sanctions to territorial defence units to stimulate people's ability to offer long-term resistance against the aggressor. Legally and doctrinally TO units were equal to and not subordinated to the YPA. After the creation, TO expanded to a force of nearly one million, with a goal of attaining a three-million-strong force in the next few years. When Yugoslavia started building TO units the main emphasis was put on company-sized units at the local level. These units were intended for defence within the boundaries of the commune. In addition, the creation of TO units depended on the production in some factories and other economic organisations. Each Yugoslav republic also formed some larger (battalion-sized) highly mobile TO units capable of defence throughout the republic. The desire to form larger units was voiced by Tito at the conclusion of the manoeuvre Freedom-71. TO units were subordinated to defence commands, staffed by reserve YPA officers at the communal and republican level. The communal commander was responsible both to the communal political authorities and to the higher, republican territorial defence command. The TO republican commands had considerable autonomy; they were subordinated to the federal Supreme Command and were not part of the YPA chain-of-command. Local TO units fell under YPA tactical command only when they were engaged in joint operations with the YPA units. Training for total national defence was carried out in communal training centres, where reserve YPA officers instructed TO units. TO units were primarily armed with light anti-tank and anti-personnel weapons of domestic Yugoslav production supplemented by heavier mobile anti-tank and anti-aircraft weapons for battalion-size TO units. Weapons were stored in mobilisation centres and YPA storage sites, while personal equipment was kept at home.[17]

[17] *Ibid*.; Marković, *Jugoslovanska ljudska armada*, 190.

After the new edition of the "Strategy of Armed Conflict" in 1983, TO was defined as the largest formation which during armed conflict also included working citizens (population) and particular self-protection activities, as well as the largest formation in charge of organising armed total people's resistance. In the command structure, the commander of the republic TO was still subordinate to the supreme commander of Yugoslavia and the Federal Presidency. With regard to deployment, functioning (operations) and preparations of units, the TO was subordinated to the republic's authorities as well.[18]

The role of civil defence and civil protection

The post-1968 attention to TO in Yugoslavia had resulted in a de-emphasis of civil defence as conceived in the early 1960's. TO also took over some activities, such as counter-intelligence and warning, which formerly were the responsibility of the civil defence. On the other hand, Yugoslav military doctrine envisaged an important role for civil defence forces, incorporating, in one form or another, the entire able-bodied population which was not included in the YPA or TO. The National Defence Act of 1969 stipulated that each commune had to form a civil defence organisation, subordinated to the communal defence command. The civil defence organisation was subdivided into engineering, sanitation, radiation-chemical-biological-defence and fire-fighting units, veterinary units, and evacuation and security units. The primary functions of the civil defence organisation were fire-fighting, public health, shelter, and limited evacuation (wounded, children, and the aged).[19]

In the SFRY, Civil Protection was the only one of the four elements inside the system of Total People's Defence (defence measures and civil protection, defence forces, people's defence affairs, authorities in charge of peoples defence requirements) in its wider sense, which had the form of a system. Civil protection was an important segment of the Total

[18] Marković, *Jugoslovanska ljudska armada*, 195.
[19] Johnson, "Total National Defense," 6.

People's Defence system as it was organised in all apartment buildings, settlements, companies, and other organisations. The field of Civil Protection activities encompassed protection of the population in the event of war as well as protection of the population from disasters and catastrophes. The main characteristic of civil protection was its mass presence in almost every social environment, both in terms of the territory and production activity, which in short means, it was present everywhere where people worked – from the dwellings to other premises, and all the way to companies, local communities, and municipalities[20]

The role of the Yugoslav People's Army

Acceptance of Total People's Defence in Yugoslavia signified a profound change in the role of the YPA. It was testimony to both the flexibility of outlook of the YPA senior officer corps and the YPA's institutional subordination to the League of Yugoslav Communists (LYC) and Tito personally, that the YPA apparently adapted to the new system of national defence without undue friction. The fundamental departure from earlier practice was the fact that the YPA was no longer the only Yugoslav military institution, but complemented by a larger TO which was doctrinally and legally co-equal with and not, even in wartime, subordinated to the YPA. On the other hand, the new Yugoslav military doctrine did not call for the transformation of the YPA into a professional training corps for a single army of citizen-soldiers. That meant that every Yugoslav citizen had to cooperate in the system of General People's Defence and Social Self-Protection. The YPA had to be able on its own both to resist a limited incursion to delay a massive attack so that the country could carry out

[20] More about Civil Protection in the Socialist Federative Republic of Yugoslavia: Božidar Javorović, *Suvremeni sustavi civilne obrane: pregledna studija* (Zagreb: Otvoreno sveučilište, 1992); Milan Vučinić, *Splošna ljudska obramba in družbena samozaščita SFRJ II: učbenik za višje šole in fakultete SFRJ* (Beograd: Zavod za udžbenike i nastavna sredstva, 1986); Miroslav Ulčar, *Obramba in zaščita: priročnik za mladino, ki ne obiskuje šol srednjega usmerjenega izobraževanja* (Ljubljana: Republiški sekretariat za ljudsko obrambo, 1985); Polde Štukelj, *Osnove civilne zaščite, peta izdaja* (Ljubljana: Partizanska knjiga, 1985).

total mobilisation. The YPA would wage active defence in depth throughout the country. It would transform itself into smaller units waging predominately partisan warfare alongside the TD only if combat by larger formations failed to dissuade the enemy from continuing his attempt to control the country.

That fundamental change in the YPA's role in national defence had given rise to specific changes in YPA organisation. The major goal of continued modernisation of the YPA was the development of a modern mobile infantry, well-armed with anti-tank and anti-aircraft weapons. At that time in the early 1970's political and military leaders insisted that it would be pointless for Yugoslavia to attempt to compete with the Great Powers with tanks, aircraft, or other heavy modern weaponry, and that modernization of the YPA should not delay the arming of the TO. Second, the build-up of the TO had meant a relative de-emphasis of YPA reserves. Around 80 percent of YPA conscripts were subsequently assigned to the TO; 20 percent to the active or reserve YPA. Third, the nature of military manoeuvres had changed markedly. In the early 1960's, YPA manoeuvres usually simulated the conventional defence of cities, including mass evacuation of non-combatants. In the 1970's manoeuvres had usually involved joint defence by YPA and TO units against large-scale armoured invasion. Fourth, the YPA had begun to transfer some support functions (medical care, food supply, some engineering services) to the TO or the civilian sector.[21]

The increasing militarisation of the LYC and the federal government, and the increasing power and influence of the YPA in Yugoslav politics and society that went with it, caused a fundamental shift in power in the Yugoslav political system after 1966. A process of increasing YPA power and influence that began in 1966 gathered momentum in 1974 and became even more pronounced after Tito's death in 1980. In the 1980's after Tito's death and crisis in Yugoslavia, the Federal Presidency as the collective leadership body, which was re-elected annually, could not either legally or practically perform operational functions of the Supreme Commander, especially on a daily basis. Its operational command func-

[21] Johnson, "Total National Defense," 7–8.

tions were, in fact only nominal. The YPA became the "backbone" of the country's political system and social order, with enough political power and influence to make the idea of YPA regime come true, but fortunately this did not happen. The critics of the existing defence security system in the 1980's were able to become more vocal. Demands regarding a stronger centralisation process were justified by growing frictions within the state communist leadership and economic problems.[22]

Conclusion

By adopting the concept of General People's Resistance and Social-Self Protection as the permanent form of defending the freedom, national independence, sovereignty and self-managing socio-political system, the Yugoslav socialist-oriented society developed the Total People's Defence. The new military and the development of its operational use on the basis of the strategy of armed conflict were introduced in Yugoslavia after the Warsaw Pact forces had invaded Czechoslovakia in 1968. However, historical development began much earlier; the concept was based on Yugoslavia's own strategic lessons learned from the past, especially from the period of the Second World War and the National Liberation Movement. It was modified according to the estimated geo-strategic and geo-political position of Yugoslavia at the time, and lessons learned from the wars after the Second World War, and developments in military technology. The System of Total People's Defence, which stressed its total nature, created the reality of the already mentioned concept of a "nation in arms" which attached great importance to soldiers and the art of soldiering in Yugoslavia. Despite the well thought out concept of the General People's Defence and Social Self-Protection, the latter failed to find answers on how to defy the "internal enemy" and how to solve internal political and economic national problems which amassed in Yugoslavia in the 1970s and the 1980s.

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[22] Marko Milivojević, *Bradford Studies on Yugoslavia,* 13*, The Yugoslav People's Army* (Bradford: University of Bradford, 1988) 10, 28.

After the dissolution of the Yugoslav federation in the 1990's, the Doctrine of Total People's Defence has been forgotten and characterised as an old doctrine which is outdated in the context of the contemporary security situation. Nevertheless, Slovenian Territorial Defence can also be seen as a positive phenomenon, which derived from the Doctrine of Total People's Defence. Since its establishment in 1968, Slovenian Territorial Defence developed differently from similar organisations in other federal republics. Many among its few professional servicemembers and, particularly, members of the large reserve component considered the creation of the Slovenian Territorial Defence a resuscitation of the idea of Slovenian own armed forces. Among TO members in Slovenia and among the Slovenian population, the TO was increasingly considered as Slovenian Armed Forces, and as such part of the Yugoslav Armed Forces. In the 1990s the Slovenian TO became the basis for developing Armed Forces of the Republic of Slovenia, even at the price of a military confrontation with the YPA.

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Imagining the Third World War

Discussions about NATO's conventional defence in the 1970s

Benedict von Bremen

During the 1970s, military planners east and west of the "Iron Curtain" continued to prepare for a potential "hot" conflict between the two opposing military alliances, the Warsaw Treaty Organization and the North Atlantic Treaty Organization. Then-divided Germany – called the Central Region by NATO – would have been the main battleground of such a conflict. But how would that Third World War, and especially its conventional side, be fought? In NATO's realm, this question not only occupied the thinking of military headquarters and national defence ministries, but also that of other military "experts." The resulting often international textual discourse ranged from military doctrine to newspaper articles to future histories, that mirrored not only the change of strategy from "massive retaliation" to "flexible response" but also intra-alliance issues such as equitable sharing of the military burden and the influence of latest weapons technology on strategy and tactics. And while World War III between the Warsaw Pact and the Atlantic Alliance never materialized, both sides spent billions on materiel and stationed millions of soldiers in preparations for a war that never happened and that continues to stimulate imaginations of war up to this day.

It is a sunny and quiet morning somewhere along the border between the Federal Republic of Germany and the German Democratic Republic. All of a sudden, delta-winged MiG-21 fighter jets thunder overhead from east to west. Then, a platoon of Soviet T-62 tanks rumbles through an opening in the East German border defences and enters West German territory, followed by BMP-1 infantry fighting vehicles. A few hundred metres into the federal state of Hesse, Federal Republic of Germany, the armored column passes through a narrow point between two hills. This

is the chance for a dug-in Bundeswehr anti-tank team: from their camouflaged position, the soldiers fire a HOT anti-tank guided missile at the leading Soviet T-62. World War III has begun.[1]

Third World War scenarios like this were common in 1970s western print media. But why? After all, the years between 1970 and 1979 are often seen as the period of détente or *Entspannungspolitik* between the North Atlantic Treaty Organization (NATO) and the Warsaw Pact. This rapprochement between "East" and "West" was symbolized by high-level talks between Washington and Moscow, the Federal Republic of Germany's *Ostpolitik*, and the final Helsinki Accords of the 1975 Conference on Security and Co-Operation in Europe.[2] But the Cold War in Europe was far from over.[3] To the contrary, military planners on both sides of the "Iron Curtain" continued to prepare for a potential "hot" conflict between NATO and the Warsaw Treaty Organization.[4] The main battleground, designated the Central Region in NATO parlance, would be (then-)divided Germany.[5] How, though, would that Third World War be fought? In NATO's realm, this question not only occupied military headquarters and national defence ministries, but also other experts, producing an international textual discourse that ranged from military doctrines to newspaper articles, to even future histories of World War III. These debates reflect a typical aspect of the Cold War, namely trying to

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[1] War begins only with the defence of the attacked, Carl von Clausewitz, *Vom Kriege* (München: Ullstein, 2002).

[2] Robert D. Schulzinger, "Détente in the Nixon-Ford Years, 1969–1976," *The Cambridge History of the Cold War,* Vol. II, *Crises and Détente*, ed. Melvyn P. Leffler and Odd Arne Westad (Cambridge et al.: Cambridge University Press, 2010), 373–394; Jussi M. Hanhimäki, "Détente in Europe, 1962–1976," ibid., 198–218.

[3] Dieter Krüger, *Am Abgrund? Das Zeitalter der Bündnisse: Nordatlantische Allianz und Warschauer Pakt 1947 bis 1991* (Fulda: Parzellers, 2013) for a recent history on the conflict between NATO and the Warsaw Pact.

[4] Dieter Krüger (ed.), *Schlachtfeld Fulda Gap: Strategien und Operationspläne der Bündnisse im Kalten Krieg* (Fulda: Parzellers, 2015), with articles on the preparations for war on both sides.

[5] The Central Region consisted of (West) Germany south of Schleswig-Holstein (which was part of the Northern Region) to the Bavarian–Austrian border. For recent contributions to the historiography of the NATO "flanks," see Bernd Lemke (ed.), *Periphery or Contact Zone? The NATO Flanks 1961 to 2013* (Freiburg im Breisgau et al.: Rombach, 2015) and Bernd Lemke, *Die Allied Mobile Force 1961 bis 2002* (Berlin: Walter de Gruyter, 2015).

guess the intentions of the potential adversary,[6] and they also show how the then-current state of the NATO alliance and its military capabilities were seen at the time in its member states.

Among Western European visions of World War III in the 1970s, especially those of three NATO generals were very prominent: Robert Close of Belgium, Johannes Steinhoff of West Germany, and Sir John Hackett of the United Kingdom.[7] They were the loudest voices in an international and public discourse about NATO's military capabilities in which outlooks on a potential war with the Warsaw Pact were informed by World War II, the peacetime experience of NATO as a defensive military alliance, and estimations on the future role and use of latest-generation weaponry.[8] To further narrow down my focus, I will, for the most

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6 E.g. Deputy Director of Central Intelligence, *Briefing "NATO–Warsaw Pact Balance*," 24 September 1975, *Freedom of Information Act Electronic Reading Room*, https://www.cia.gov/library/readingroom/, 20 September 2016, 1: "[…] the perceptions each has of the capabilities of its potential adversary and of the nature of the conflict that is envisaged."

7 E.g. C. L. Sulzberger, "No Farce the Second Time," *New York Times*, 5 June 1977, E17: "The "Swiss Review of World Affairs" prints an analysis based on books published last year by two retired NATO generals [...] "Europe Without Defense? 48 Hours That Could Change the Face of the World" [and] "Where is NATO headed" […]."; Drew Middleton, "NATO Forces: Criticism Gains New Urgency," *The New York Times*, 4 November 1979, 9: "[...] criticisms of [NATO's] military inadequacies, the present strategy or lack of it for defending Europe and the imbalance between the overall United States contribution and that of the European partners are growing in volume and severity. A sense of urgency has been introduced into the debate by Gen. Robert Close, a distinguished Belgian soldier, who on the basis of a mass of detailed information about both sides maintains that in 48 hours the Soviet Union and its allies could smash through the Rhine and seize the Ruhr industrial basin without recourse to nuclear arms." For West German visions of nuclear World War III in the 1950s, see Andy Hahnemann, "Keiner kommt davon. Der Dritte Weltkrieg in der deutschen Literatur der 50er Jahre," *Keiner Kommt davon. Zeitgeschichte in der Literatur nach 1945,* ed. Erhard Schütz and Wolfgang Hardtwig (Göttingen: Vandenhoeck & Ruprecht, 2008), 151–165. For Warsaw Pact visions, see Central Intelligence Agency National Foreign Assessment Center, *Warsaw Pact Commentary on NATO Concepts for War in Central Europe*, October 1977, *Freedom of Information Act Electronic Reading Room*, https://www.cia.gov/library/readingroom/, 20 September 2016, I. East German visions of World War III and the GDR press' point of view on NATO's state of defence are a desideratum of my research.

8 Siegfried Lautsch, "Die Entwicklung der militärischen Konzeption der Warschauer Vertragsorganisation in den letzten zwei Jahrzehnten des Ost–West-Konflikts," – *Schlachtfeld Fulda Gap*, 87–113, here 92f: "Beide Seiten stützten sich auf ihre Erfahrungen und Lehren des Zweiten Weltkrieges, auf Stellvertreterkriege der Nachkriegszeit und auf die Weiterentwicklung ihrer Streitkräfte entsprechend den operativ-strategischen Erkenntnissen im 20. Jahrhundert."

part, leave out nuclear warfare and concentrate on conventional defence, especially concerning land and air warfare in central Europe.[9]

The 1970s were a decade of profound changes in military affairs.[10] Already in 1967, concurrently with the so-called "Harmel Report" calling for a twin-pillar strategy of deterrence/defence and détente, NATO decided on the strategy of flexible response.[11] The new strategy was set down in document MC 14/3.[12] Flexibility of response superseded MC 48 of 1954 and its strategy of a "devastating counter-attack employing atomic weapons."[13] Instead, from the late 1960s, NATO wanted "to provide for the security of the North Atlantic Treaty area primarily by a credible deterrence, effected by confronting any possible, threatened or actual aggression, ranging from covert operations to all-out nuclear war […]."[14] The main goal of the Atlantic Alliance was to credibly deter any enemy (read: the Warsaw Pact) and show him that no attack would be worth the outcome of his aggression. Deterrence, or eventually defence in the case of war (in German, called the *Ernstfall*, "case of emergency," or *Verteidigungsfall*, "case of defence"), was based on the triad of conventional forces, tactical battlefield nuclear weapons, and strategic atomic arms. To achieve a credible deterrence or a successful defence along the lines of flexible response, it was especially NATO's conventional forces that needed to be modernized. In the 1950s and 1960s, they had mostly served the function of a trip-wire for massive nuclear retaliation. Now, in the 1970s, renewed emphasis was put on conventional

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[9] For nuclear options, see e.g. Kurt J. Lauk, *Die nuklearen Optionen der Bundesrepublik Deutschland* (Berlin: Duncker & Humblot, 1979); Christian Tuschhoff, *Deutschland, Kernwaffen und die NATO 1949–1967* (Baden-Baden: Nomos, 2002).

[10] E.g. Gordon S. Barrass, "The Renaissance in American Strategy and the Ending of the Great Cold War," *Military Review* 1 (2010): 101–110, here 103.

[11] North Atlantic Council, *The Future Tasks of the Alliance*, 14 December 1967, http://www.nato.int/cps/en/natohq/official_texts_26700.htm, March 14, 2017.

[12] North Atlantic Military Committee, *MC 14/3 (Final)*, 16 January 1968 – *NATO Strategy Documents 1949–1969*, ed. Dr. Gregory W. Pedlow, http://www.nato.int/docu/stratdoc/eng/a680116a.pdf, 18 September 2016.

[13] North Atlantic Military Committee, *M.C. 48 (Final)*, 22 November 1954 – *NATO Strategy Documents 1949–1969*, ed. Dr. Gregory W. Pedlow, http://www.nato.int/docu/stratdoc/eng/a541122a.pdf, 18 September 2016.

[14] *MC 14/3*.

warfare.[15] NATO needed to field, or was already fielding, new generations of conventional military materiel to back up the strategy of flexible response or to replace outdated materiel, especially guided anti-tank, anti-aircraft, and air-to-ground munitions, as well as airplanes and main battle tanks.

For nuclear warfare, NATO relied especially and mostly on the United States of America's arsenal. The U.S. had enjoyed a lead in atomic arms in the early years of the Cold War after 1945. By 1970, though, the Soviet Union had almost reached nuclear parity with the USA. In this state of near equilibrium, actual atomic war certainly meant "mutually assured destruction." This was another reason why conventional warfare received renewed emphasis through flexible response – a war below the level of nuclear escalation seemed to become more likely again.[16]

In terms of conventional forces, the Warsaw Pact and especially the Soviet Union enjoyed numerical superiority throughout the Cold War, at least in terms of combat units.[17] For example, according to some readings that included both active and reserve forces, about 43,000 Warsaw Pact tanks faced 14,000 NATO tanks in 1975, a ratio of 3 to 1; in terms of manpower, about 950,000 Warsaw Pact troops faced 790,000 NATO soldiers.[18]

Moreover, with American involvement in Southeast Asia in the 1960s and the early 1970s, U.S. soldiers were withdrawn from Western

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15 Consult the various articles in *Schlachtfeld Fulda Gap*.

16 *Ibid*.

17 E.g. *NATO–Warsaw Pact Balance*, 1.

18 Michael Poppe, "Zum militärischen Kräfteverhältnis zwischen Nordatlantischer Allianz und Warschauer Pakt," – *Schlachtfeld Fulda Gap*, 254–284. A Central Intelligence Agency Directorate of Intelligence July 1975 research paper called *Flexibility in Soviet Offensive Forces: The Roles of Armor and Other Ground Forces*, 5f, puts the tank numbers at about 25,100 for the Warsaw Pact and 6,000 for NATO. The balance of forces between NATO and the Warsaw Pact was and still is a complicated topic, see *NATO–Warsaw Pact Balance*; Wallace J. Thies, *The Atlantic Alliance, Nuclear Weapons & European Attitudes: Reexamining the Conventional Wisdom* (Berkeley: University of California Press, 1983), 15ff.; John S. Duffield, *Power Rules: The Evolution of NATO's Conventional Defense Posture* (Stanford: Stanford University Press, 1995); Frederick Zilian Jr., "The Shifting Military Balance in Central Europe," – *The United States and Germany in the Era of the Cold War, 1945–1990: A Handbook,* Vol. 2, *1968–1990*, ed. Detlef Junker (New York: Cambridge UP, 2004), 155–162.

Europe, much to the chagrin of the European allies who felt that the USA neglected the "real" centre of the Cold War. And on the other side of the Atlantic, already during the Vietnam War and especially after the loss of South Vietnam, voices in the United States Congress grew louder and louder that wanted a partial or even complete withdrawal of GIs from Europe, arguing that "the" West Europeans felt safe under the American nuclear umbrella and were not doing enough themselves in terms of military materiel and manpower. The question of fair burden-sharing of the common defence in the Atlantic Alliance was once again raised.[19]

In addition, the Soviet Union was modernizing its forces at a fast rate in the 1960s and 1970s.[20] NATO, which had always tried to even out its numerical disadvantage through technological superiority, saw this military build-up as a threat.[21] This added additional pressure on the alliance to modernise its non-nuclear war-fighting capabilities.

The contemporary conflict that seemed to predict the most how a potential Third World War would be fought was the October 1973 Middle East War. It pitted the latest generation of Soviet- and U.S.-produced weaponry against each other, such as S-75 "Dvina" (NATO designation SA-2 "Guideline") surface-to-air missiles against F-4 Phantom II fighter-bomber jets or 9M14 "Malyutka" (NATO designation AT-3 "Sagger") anti-tank guided missiles against M60 main battle tanks.[22] From the

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[19] See especially Wallace J. Thies, *Friendly Rivals: Bargaining and Burden-Shifting in NATO* (New York: M. E. Sharpe, 2003).

[20] E.g. Sherwood S. Cordier, *Calculus of Power: The Current Soviet–American Conventional Military Balance in Central Europe, Third Edition* (Washington, D.C.: University Press of America, 1980); David R. Stone, "The Military," – *The Oxford Handbook of the Cold War*, ed. Richard H. Immermann and Petra Goedde (Oxford et al.: Oxford University Press, 2013), 352.

[21] E.g. *NATO–Warsaw Pact Balance*, 1. For an overview of debates about the military balance, see David M. Walsh, *The Military Balance in the Cold War: U.S. Perceptions and Policy, 1976–85* (London & New York: Routledge, 2008).

[22] Ulrich de Maizière, *Verteidigung in Europa-Mitte* (München: J. F. Lehmanns, 1975), 35. Lemke, *Allied Mobile Force*, 36 claims that the 1973 October War confirmed Western military planners' ideas on the use of guided weapons. Consult also Saul Bronfeld, "Fighting Outnumbered: The Impact of the Yom Kippur War on the U.S. Army," *The Journal of Military History* 71:2 (April 2007): 465–498; Ingo Trauschweizer, "Learning with an Ally: The U.S. Army and the Bundeswehr in the Cold War," *The Journal of Military History* 72:2 (April 2008): 477–508, especially 498.

Vietnam War, military planners took the lessons of using helicopters for transportation and supporting ground troops as well as the need for close-air support by specialized jet planes.[23]

But how could flexible response and the modernization of NATO's conventional arsenal be implemented? This was a question of money as well as of interpretation. Western Europe faced the end of the post-World War II boom years.[24] Defence spending had to cope with higher inflation rates and more national debts as well as higher manpower and equipment costs.[25] In addition, debates raged among NATO members about how flexible response was to be interpreted and especially when the nuclear threshold would be crossed, and therefore when the point of time would arrive at which atomic weapons were to be used. The United States wanted to delay a nuclear confrontation as long as possible and therefore fight a prolonged conventional conflict. But some Europeans wanted a lower nuclear threshold as a more credible deterrent; they feared that conventional warfare would make an attack more attractive to the Soviet Union because of its seeming advantages in this field.[26] And last but not least, Europeans still remembered the destruction of their countries in World War II.

These discussions did not only take place in military staff rooms and government ministries in Brussels, London, Bonn, or Washington[27]; they were also hotly debated in publicly available print media. It is here that the names of the earlier mentioned Generals Robert Close, Johannes Steinhoff, and Sir John Hackett showed up. The three of them shared being long-serving career soldiers with military records spanning from World War II to high positions in NATO. All of them were weary of détente between East and West; all of them saw deficiencies in NATO that needed

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[23] Cordier, *Soviet–American Conventional Military Balance*; Ingo Trauschweizer, "Back to the Cold War: The U.S. Army after Vietnam," *U.S. Military History Review* 2:1 (December 2015): 18–37.

[24] *The Shock of the Global: The 1970s in Perspective*, ed. Niall Ferguson, Charles S. Maier, Erez Manela and Daniel J. Sargent (Cambridge, MA et al.: Belknap, 2010).

[25] See especially Thies, *Friendly Rivals*.

[26] See especially Robert de Wijk, *Flexibility in Response? Attempts to Construct a Plausible Strategy for NATO 1959–1989* (dissertation, Rijksuniversitet Leiden, 1989).

[27] See e.g. Bundeswehr General Ulrich de Maizière's *Verteidigung in Europa-Mitte.*

to be overcome; and all of them wanted to convince the national publics of their home countries (and also the NATO public in general) to invest more in the common defense of the Atlantic Alliance.

Belgian General Robert Close had been commander of a Belgian unit stationed in West Germany and was, in the mid-1970s, director of NATO's Defence College in Rome. In 1975, he published *L'europe sans défense?* ("Europe without Defence?"), later translated into other languages, including German.[28] In this book, Close described NATO as being unprepared for a conventional Warsaw Pact attack. He mistrusted the Soviets and feared that the USSR had secret plans running counter to détente. Especially the Soviet military buildup suggested more than just a defensive capability. Close thought that if the Soviets saw an opportunity for reaching certain political goals via limited military means, hawkish politicians and generals in Moscow would wage war against the Atlantic Alliance. In one chapter, he describes his vision of World War III: Warsaw Pact forces would be able to reach the Rhine in 48 hours while NATO's conventional forces were unprepared for repelling this attack. Close felt that especially the armed forces of the smaller allies, such as his native Belgium, were too weak, cutting both manpower numbers and defence spending. He blamed this on the false impression détente had allegedly created among Western European politicians and publics, making them believe that there would be no military conflict and therefore no need to prepare for a war with the Warsaw Pact anymore. Moreover, Robert Close had experienced Nazi Germany's Blitzkrieg in 1940 against his own country. He was haunted by the possibility of being caught off guard again. Close presented several improvements for NATO's conventional capabilities. One was a better dislocation of military forces: many NATO troops in the "layer cake" of forces from 7 countries were positioned too far away from the intra-German border.[29] Close also called for greater manpower reserves. Finally, he took a stand for more latest generation weapon technology as well as shared research, development, and procure-

[28] Robert Close, *Europa ohne Verteidigung? 48 Stunden, die das Gesicht der Welt verändern* (Bad Honnef et al.: Osang, 1977).

[29] Troops from the Federal Republic of Germany, the United States of America, the United Kingdom, Canada, Belgium, the Netherlands, and France.

ment of weapons systems among the allies to save money and streamline military logistics. This latter topic of rationalization, standardization, and interoperability (RSI) to improve NATO's capabilities was also one of the very hotly debated topics among the Atlantic Alliance's members in the 1970s (and beyond).[30] Other high-ranking active duty NATO officers were quick to state that the situation was not as bleak and Close had misrepresented it.[31]

German General Johannes Steinhoff had been a World War II fighter ace and was scarred for life in a 1945 jet plane crash. Influential in building up the West German *Luftwaffe* after rearmament, he was the Bundeswehr air force's commander-in-chief (*Inspekteur der Luftwaffe*) from 1966 to 1970. From 1971 to 1974, Steinhoff headed the NATO Military Committee – the highest position a military officer can gain in the alliance. He commanded a very conspicuous presence in West German media, from interviews and articles in newspapers and magazines, to forewords in publications on international security issues.[32] In 1976, two years after his resignation from the military, he published *Wohin treibt die NATO?* ("Where is NATO heading?").[33] Steinhoff came to conclusions about the state of the Atlantic Alliance similar to Close, but the German ex-general went into more detail in some respects, such as the question of the nuclear threshold and how reliable the United States would be in the eventuality of a Warsaw Pact attack. Steinhoff put special emphasis on the fact that NATO needed a strong European pillar to keep the Americans in, as well as make burden-sharing of the common defense more equal. He argued

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[30] See e.g. Benedict von Bremen, "Technology, Warfare, and Intra-Alliance Rivalry: The U.S.-West German Main Battle Tank Harmonization in the 1970s," – *The Means to Kill: Essays on the Interdependence of War and Technology from Ancient Rome to the Age of Drones*, ed. Gerrit Dworok and Frank Jacob (Jefferson, NC: McFarland, 2016), 210–227; Keith Hartley, *NATO Arms Co-Operation: A Study in Economics and Politics* (London et al.: George Allen & Unwin, 1983); Walsh, *The Military Balance*, 120; Lemke, *Allied Mobile Force*, 35.

[31] See e.g. Drew Middleton, "US. Army in Germany Confident It Is in Fighting Form," *The New York Times*, 15 May 1978, A2.

[32] E.g. "'Um Gottes willen, was für ein Kriegsbild' – General a.D. Johannes Steinhoff über den Zustand der Nato," *Der Spiegel*, 8 March 1976, 39–42.

[33] Johannes Steinhoff, *Wohin treibt die NATO? Probleme der Verteidigung Westeuropas* (Hamburg: Hoffmann und Campe, 1976).

that Europeans should throw off the singlemindedness of national interests and work more closely together.[34] Both Robert Close and Johannes Steinhoff felt that NATO was in a state of crisis. In their eyes, the alliance needed stronger decision-making institutions, making it less like a club of "the fifteen" where members have common interests but do not have binding rules. Like Close, Steinhoff heavily stressed that NATO's conventional arsenal needed improvement to either credibly deter or, should the need arise, successfully defend the Alliance against a possible Warsaw Pact attack. And like Close, Steinhoff did not completely trust the process of détente and questioned the sincerity of the Soviet Union's intentions.[35]

British General Sir John Hackett was also a World War II veteran, having fought in the failed 1944 Allied Operation Market Garden. He continued to serve Her Majesty in the post-World War II era and was commander of the British Army of the Rhine in West Germany in the mid-1960s. During this tenure, he won a NATO war game playing the military commander of the Warsaw Pact. This prompted Hackett to write an open letter to *The Times* London in which he criticized the state of the British armed forces.[36] After his retirement, Hackett was approached by a publisher and requested to write a fictional history of the Third World War. With the help of other military experts – some of them also recently retired and others remaining unknown due to their active service status – *The Third World War: August 1985. A Future History* was published in 1978 and subsequently translated into ten languages, selling three million copies worldwide, receiving an update with the 1982 *The Third World War: The Untold Story*, and allegedly being bedtime literature of U.S. presidents Jimmy Carter and Ronald Reagan.[37] In Hackett's

[34] A working example at the time was the Eurogroup, an informal meeting of the European NATO members (except for France, Iceland, and Portugal). The Eurogroup tried to show that the Europeans were actually doing more for the common defence by fostering intra-European defence cooperation and increased defence spending, see e.g. *The Eurogroup* (Brussels: NATO Information Service, 1976); Krüger, *Am Abgrund*, 135.

[35] For a summary of Steinhoff's oft-reiterated points, Lemke, *Allied Mobile Force*, 34f.

[36] "Defining the True Purpose of NATO: What Should Be Understood, from General Sir John Hackett, Commander, Northern Army Group," *The Times*, 6 February 1968, 9.

[37] Sir John Hackett and others, *The Third World War: August 1985. A Future History* (London: Sidgwick & Jackson, 1978). One of the translations was in German: *Der Dritte Weltkrieg.*

1978 scenario, a conflict over the succession to Yugoslav leader Josip Broz Tito evolves into World War III, with the Warsaw Pact attacking NATO. After two weeks of heavy conventional fighting in the Central Region, the Atlantic Ocean, proxy wars elsewhere around the globe, and combat even in space, NATO barely manages to turn the tide against the massive armored onslaught from the East. The Soviet Union then destroys Birmingham with one nuclear weapon, which is followed by a retaliatory Anglo-American atomic attack on Smolensk, resulting in the sudden disintegration of the Soviet Union. The moral of Hackett's story was that NATO countries needed to invest more in defence now – that is, the late 1970s – before it would be too late – that is, when the Warsaw Pact would possibly attack in the future.[38] Like Close and Steinhoff, Hackett mistrusted détente and wanted more defence spending, especially by the United Kingdom but also by the other NATO members. He also shared the same view that the already fragile conventional military balance in Europe was in danger. In comparison with actual NATO estimates and war plans of the time, this future history of World War III seems very close to what could have turned into the "real deal."[39] On the other hand,

Hauptschauplatz Deutschland (München: Bertelsmann, 1978). For sales numbers and the book's reception, see Tom Nicholson, "Souls and Salvos," *Newsweek*, 12 March 1979, 23; Sir John Hackett, "Why the General Is Refighting World War III," *The Times*, 19 June 1982, 10; Ronald Dugger, "The President's Favorite Book: 'The Third World War,'" *The Nation*, 27 October 1984.

38 See also a *National Security Information Memorandum* "*Warning of War in Europe*," 27 June 1984, *Freedom of Information Act Electronic Reading Room*, https://www.cia.gov/library/readingroom/, 20 September 2016, 6: "*We believe it highly unlikely that the Pact would attack NATO under present circumstances*. […] *We believe war in Europe would become likely only as a result of profound political, military, economic, or social changes—or a serious miscalculation—and would be preceded by a period of growing tension resulting in a crisis of great severity*." [Italics in original.]

39 Except that the Warsaw Pact planned, should the need arise, to use tactical nuclear weapons from the outset, *Schlachtfeld Fulda Gap*; *The Roles of Armor and Other Ground Forces; Warsaw Pact Commentary on NATO Concepts;* Director of Central Intelligence, *Warsaw Pact Forces Opposite NATO, National Intelligence Estimate Volume I—Summary Estimate*, 31 January 1979, *Freedom of Information Act Electronic Reading Room*, https://www.cia.gov/library/readingroom/, 20 September 2016; Michael Schmid, "Nukleares Skalpell oder Damoklesschwert? Strategiediskussionen und Militärkonzepte der NATO und der USA in Zeiten von 'Flexible Response', Doppelbeschluss und PD-59 (1968–1980)" http://opus.bibliothek.uni-augsburg.de/opus4/files/538/Schmid_Strategiediskussion_NATO_USA.pdf; Michael Schmid, "Transatlanti-

real world events in the years to follow quickly outdated some of Hackett's predictions (in *The Third World War*, Persia is one of the most important non-NATO allies – only months after the publication of the book, the Iranian Revolution took place and reversed that situation 180 degrees). Interestingly, West German weekly *Der Spiegel* listed *The Third World War* under non-fiction (and also published excerpts from the German translation[40]) while *The New York Times* put it on its fiction bestseller list.

The manifold contributors to Hackett's work mirror the various experts from the military, defense and state departments, news media, and defence industry that participated in the debates on NATO's military capabilities in the 1970s.[41] Their outlets ranged from newspapers to defence industry magazines.[42] German weekly newsmagazine *Der Spiegel* printed a title story asking if the West was strong enough.[43] Better defence cooperation among the NATO allies was a recurrent topic in newspapers and magazines such as *The New York Times*, *The Times* London, as well as scholarly publications.[44] There even was a 1978 West German TV mockumentary on the Third World War.[45] Combined, these

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sche und mittelöstliche Krisenbögen. Die US-Sicherheitspolitik im Zweiten Kalten Krieg zwischen NATO-Modernisierung und Carter-Doktrin – und ihre Einschätzung durch die östliche Spionage (1977–1985)" http://opus.bibliothek.uni-augsburg.de/opus4/files/587/Schmid_Carter-Doktrin_und_NATO.pdf. A more pessimistic assessment is Lemke, *Allied Mobile Force*, e.g. 84.

40 Serialized in the *Der Spiegel* issues 30 October 1978, 6 November 1978 and 13 November 1978.

41 See the blurb on the dustcover: "General Hackett has been assisted in writing this book by experts of the highest calibre (some anonymously), including top-ranking American and German generals. Contributors include: Air Chief Marshal […] Brigadier […] Vice-Admiral […] deputy editor of The Economist […] Major-General […] Ambassador […] and Permanent Representative on the NATO Council [...]"

42 For the former, see e.g. "'Das muß uns besorgt machen' – Nato-Oberbefehlshaber Haig über die sowjetische Militärmacht und die Stärke des Westens," *Der Spiegel*, 16 August 1976, 79–87; "Soviet Bloc's Forces Are More Mobile," *The Times*, 10 December 1974, 5; for the latter, e.g. Hans Rühle, "Mehr Sicherheit durch weniger Truppen?" *Wehr und Wirtschaft* 2 (1974): 79–80.

43 "Ist der Western stark genug?" *Der Spiegel*, 16 August 1976.

44 See e.g. "Wüstes Durcheinander," *Der Spiegel*, 9 June 1975, 36–38; C.L. Sulzberger, "A Smaller Bang for a Buck," *The New York Times*, 21 November 1976, 179, quoting Steinhoff: "As an alliance of sovereign countries competing with each other economically, NATO reflects the economic, industrial and political situation in each member country, and this in turn has repercussions in the great variety of projects and weapons."

45 Martin Schulze, *Frieden ist der Ernstfall*, ARD, 6 June 1977, 9:45 p.m.

texts formed a discourse about how the next war in Europe would be fought – or at least how NATO should effectively prepare for it.[46]

All these visions of World War III shared many similarities. Most experts expected the Soviet Union to take the opportunity to attack NATO during a time of political crisis, either in the Warsaw Pact or among NATO allies. Pact forces would either attack the Western Alliance from a "standing start," that is, suddenly from military maneuvers, or give up the moment of surprise by a longer-term buildup of troops. The offensive would develop as follows: helicopters would deploy paratroopers in order to conquer important infrastructure such as military headquarters, radar installations, airports, and bridges in the hinterland; other infrastructure would be attacked by ground support aircraft in order to stifle NATO's defence. Fighter jets would try to achieve air superiority. Under heavy artillery fire, armored and mechanized columns would drive deeply into Western German territory to reach the River Rhine – or even farther – as quickly as possible, most likely through the avenues of the Northern German Plain and the "Fulda Gap" in the state of Hesse in the heart of Germany. Soviet forces were depicted as a well-oiled but somewhat rigid war machine geared for fighting a reckless blitzkrieg.[47]

On the other side, NATO's forces were usually seen as a mixed bag. Especially smaller allies with few troops in Western Germany, such as the Netherlands and Belgium, were considered weak parts in the Central Region's "layer cake." In contrast, the Bundeswehr, the U.S. Armed Forces, and, to a lesser extent, British troops were deemed well-trained and equipped (especially West German and American troops were undergoing extensive materiel modernization and troop reorganization at the time and well into the 1980s).[48] NATO forces were expected to

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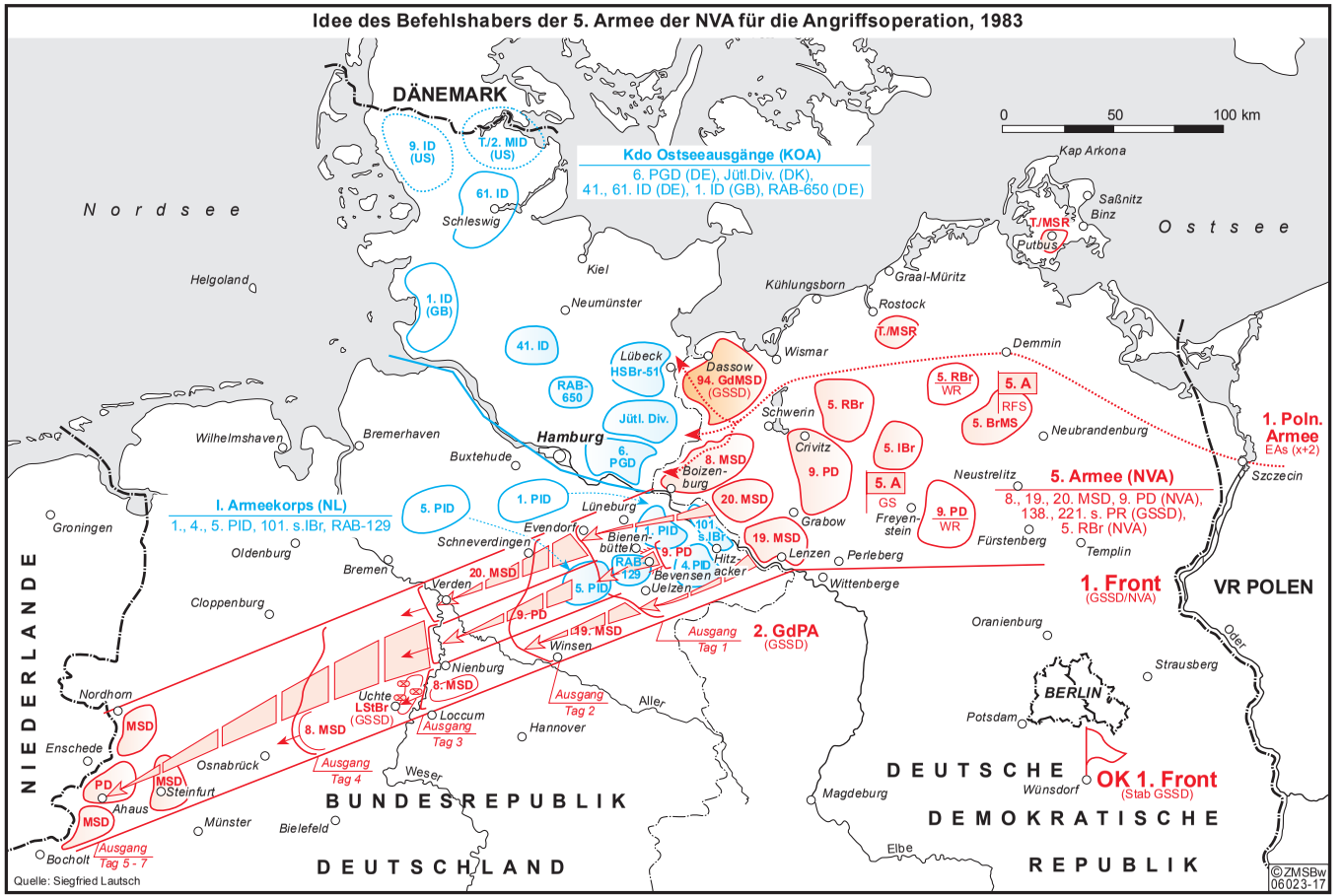
[46] There were also criticisms of Hackett, Steinhoff, Close, and other NATO officers as warmongers, e.g. Gerhard Kade, *Die Bedrohungslüge: Zur Legende von der "Gefahr aus dem Osten"* (Köln: Pahl-Rugenstein, 1981); in Gerhard Kade, *Generale für den Frieden* (Köln: Pahl-Rugenstein, 1981), the interviewed former NATO generals doubted that war was imminent at the time and took an opposite position to Close et al.

[47] For a study of some actual plans from both sides, see *Schlachtfeld Fulda Gap*, and Lemke, *Allied Mobile Force*.

[48] See Walsh, *The Military Balance*, 122; Trauschweizer, "Learning with an Ally"; Trauschweizer, "Back to the Cold War." For the Bundeswehr up to 1970, consult Helmut R. Hamme-



Idea of the commander of the 5. Army of the People's Army of the German Democratic Republic (NVA) for defensive and offensive operations in 1983 as part of the 1st front along with the Group of Soviet Forces in Germany (GSSD). Courtesy: Zentrum für Militärgeschichte und Sozialwissenschaften der Bundeswehr

repel the Warsaw Pact attack by a forward defence close to the intra-German border, using highly mobile armored forces and well-prepared dug-in infantry anti-tank defences as well as close air support and keeping air superiority. Still, most experts concurred that the North Atlantic Treaty Organization would need to be better prepared to achieve success. In the worst case scenarios, the Atlantic Alliance is caught off guard, with the Warsaw Pact attacking during the summer holidays and on a Sunday morning when many Western soldiers would be on home leave. It was feared that NATO's forces were equipped with outdated weapons and not supplied with enough reserves, both manpower and war stocks. According to Generals Close, Steinhoff, and Hackett as well as other experts, only investing more now – that is, in the 1970s – in the common defence of NATO, would help in the event of a future Warsaw Pact attack. Especially the Atlantic Alliance's conventional forces should be modernized in terms of materiel. Troop levels should be at least kept at then-present levels or, even better, raised. The same went for defence spending: defence ministries' budgets should not be reduced, instead being more efficiently spent or increased. This all would, in the eyes of the experts, either deter a war or aid defence in a "hot" conflict. The means to achieve this were seen in better defence cooperation through improved communications, joint training, and multinational defence production, as well as training more reservists and building up war stocks.

The Third World War between NATO and the Warsaw Pact, though, never materialized. After the stationing of new Soviet medium-range ballistic missiles and the 1979 NATO "double-track decision," nuclear warfare took the spotlight again.[49] Despite this, NATO's conventional capabilities were strengthened throughout the 1980s, reflecting the debates of the previous decade with their called-for improvements which were often implemented, although not always perfectly:[50] new tanks such as

rich et al., *Das Heer 1950 bis 1970: Konzeption, Organisation, Aufstellung* (München: R. Oldenbourg, 2006).

[49] See e.g. Lemke, *Allied Mobile Force*, 110.

[50] Some short-lived initiatives were those like the 1977/78 NATO Long-Term Defense Program. See especially Thies, *The Atlantic Alliance*; Cordier, *Calculus of Power; Schlachtfeld Fulda Gap*; Walsh, *The Military Balance*, 123.

the West German Leopard II and the American M-1 Abrams, attack helicopters like the Bundeswehr's PAH-1 and the U.S. Army's AH-64 Apache, close air support aircraft such as the U.S. Air Force A-10 Warthog II, new jet fighters like the F-15 Eagle and the F-16 Fighting Falcon, ground attack air planes like the West German-British-Italian Multi-Role Combat Aircraft "Tornado," more widespread introduction of multiple-rocket missile artillery, and the NATO-wide employed E-3 AWACS (Airborne Warning and Control System).[51] In addition, more military stockpiles were gathered, more reservists enlisted, and more multinational training for increased interoperability conducted. Last but not least, continually adapted and modernized strategy and tactics like the United States 1982 AirLand Battle concept also helped to improve NATO's conventional capabilities[52] – and cost a lot of Deutschmarks, Pounds Sterling, and U.S. Dollars, all for a war that never happened in reality.

But this is what the military does in peacetime: it prepares for war by equipping and training its forces. Like military exercises, one could see the visions of World War III in the 1970s as simulations. But the World War III visions of Close, Steinhoff, Hackett, and others were also especially meant as wake-up calls for more defence spending in order to strengthen NATO's conventional forces in order to make flexible response more credible in the face of a threatening Soviet military buildup. These visions of a Third World War thereby not only shed light on how modern (conventional) warfare was envisioned during the 1970s, but they also reflect upon the debates that raged over NATO's (conventional) state of military affairs – a state of affairs that was seen in dire need of being strengthened, despite (or even because) of détente. This was in tune with NATO's roadmap in the guise of the 1967 "Harmel Report:" here, deterrence/defence and détente were not seen as mutually exclusive but as

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[51] See e.g. Robert R. Tomes, *US Defense Strategy from Vietnam to Operation Iraqi Freedom: Military Innovation and the New American Way of War, 1973–2003* (London & New York: Routledge, 2007), 73.

[52] See especially Tomes, *US Defense Strategy* on the development of the AirLand Battle doctrine; Diego A. Ruiz Palmer, "The NATO–Warsaw Pact Competition in the 1970s and 1980s: A Revolution in Military Affairs in the Making or the End of a Strategic Age?" *Cold War History* vol. 14 no. 4 (2014): 533–573; Krüger, *Am Abgrund*, 167ff.

going hand in hand. With the oncoming of a "Second Cold War" in the late 1970s – Soviet Third World activity, the stationing of RSD-10 Pioneer (NATO designation SS-20 Saber) medium range ballistic missiles, and the year 1979 (Iranian Revolution, invasion of Afghanistan), the confrontation between NATO and the Warsaw Pact grew again, making scenarios like those of Close, Steinhoff, and Hackett more viable – and the need to prepare for them more urgent.[53]

Of these visions, Hackett's "what if" scenario perhaps had the most lasting effect. It spawned spin-offs, such as U.S. author Harold Doyle's *Team Yankee*, a 1987 novel about an American tank platoon situated in Hackett's vision of World War III.[54] Three years later, when the Cold War was already coming to an end, *Team Yankee* the video game was published; earlier years had seen both tabletop board games such as *Fulda Gap: The First Battle of the Next War* (1977) and other video games like the 1983 *Germany 1985*. And since the 2000s, several further computer games, such as the 2001 *Operation Flashpoint: Cold War Crisis* or the 2012 *Wargame: European Escalation* have used World War III as the background for their scenarios. The visions of World War III between the North Atlantic Treaty Organization and the Warsaw Pact continue.

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[53] On the deterioration of détente, see Walter S. Poole, *The Decline of Détente: Elliot Richardson, James Schlesinger, and Donald Rumsfeld 1973–1977* (Historical Office: Office of the Secretary of Defense, September 2015).

[54] Harold Doyle, *Team Yankee: A Novel of World War III* (New York: Presidio, 1987).

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The Vocabulary of the Vietnam War

South African invocations of an analogy and its associated lessons

Gary Baines

This paper examines the use of the Vietnam analogy by protagonists involved in conflicts in the African sub-continent during the 1970s–1980s, known variously as the Apartheid Wars, the Angolan-Namibian War or the Border War. It also analyses the attendant but typically specious lessons that military and political leaders are inclined to draw from the Vietnam analogy. It suggests that politicians and military professionals do not actually learn from the past: history provides a rhetorical device rather than an analytical tool and serves a political rather than a pedagogical purpose.

In 1973, the historian Ernest R. May published *"Lessons" of the Past: The Use and Misuse of History in American Foreign Policy*. He advocated that foreign policy framers adopt a more considered and informed approach to what history supposedly teaches. The book propounded three theses: that foreign policymakers are often influenced by what they perceive to the "lessons" of history; that they ordinarily use history badly; and that they could use history more accurately with help from professional historians. In order to make his argument that statesmen sometimes perceive problems in terms of analogies from the past and historical parallels that provide portends for the future, May offered case studies of the ways in which such thinking influenced American decision making in respect of World War II, the Cold War, Korea, and Vietnam. Writing before the US withdrawal from Vietnam, he adduces evidence to show that both the Kennedy and Johnson administrations drew inferences from a range of historical events. May reckons that much of the reasoning was flawed and superficial. He claims that advisers invoked analogies from previous

conflicts "with utter disregard for expertise or even the inherent logic of their assertions." But possibly even more telling is that they had little knowledge of and ignored Vietnamese history.[1] While this was still the case with subsequent administrations, they were to become well versed in the vocabulary of the Vietnam War.

More recent research has confirmed that May was correct to insist that the citation of historical analogies is commonplace among American military and political leaders who seek to draw lessons from the past and apply these to the making of policy decisions. Indeed, the arsenal of analogies at their disposal has grown exponentially. Recurring analogies include warnings to heed the lessons gleaned from 1930s-style appeasement of warmongers, the avoidance of repeating mistakes that contributed to the "loss" of China, and so on.[2] But the Vietnam experience is the weapon of choice in the arsenal; it has been invoked with respect to the Gulf War, the "War on Terror," and virtually every other military action involving the deployment of troops on the ground since the 1970s. More often than not, it is regarded as a mistake not to be repeated or as providing a predictor of an outcome to be averted.[3] So for US President George H.W. Bush (snr) the lesson of Vietnam was that soldiers should not be asked to "fight with one hand behind their back" and be given all the support needed to win the war. Following the expulsion of Iraqi forces from Kuwait, Bush proclaimed that the US had kicked the Vietnam syndrome once and for all.[4] He turned the narrative on its head. As Marilyn Young notes:

> Initially the Vietnam syndrome referred to the reluctance of the public to engage in war. Now it is the government of the country that is caught

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1 Ernest R. May, *"Lessons" of the Past: The Use and Misuse of History in American Foreign Policy* (London: Oxford University Press, 1973), 119–121.

2 David Hoogland Noon, "Operation Enduring Analogy: World War II, the War on Terror, and the Uses of Historical Memory," *Rhetoric & Public Affairs* 7:3 (2004): 339–366.

3 James H. Willbanks, "The Legacy of the Vietnam War for the US Army," – *America and the Vietnam War: Re-examining the Culture and History of a Generation*, eds. Andrew Wiest, Mary Kathryn Barbier and Glenn Robins (New York: Routledge, 2010), 271–288.

4 Molly Andrews, *Shaping History: Narratives of Political Change* (Cambridge: Cambridge University Press, 2007), 101–103.

> in its grip, convinced that the only cure for that long-ago defeat is yet more war.[5]

It is precisely because its lessons are not necessarily self-evident that the Vietnam analogy can be utilised to suit any political agenda or course of action.

May was the first but not the only proponent of the notion that the lessons that policy makers derive from historical events exert a considerable and often crucial impact upon the framing and implementation of policy. For such scholars analogies serve as frameworks or schemas that inform decision-making.[6] However, certain scholars are sceptical of the assumption that policymakers invoke analogies to make decisions. They doubt whether it is necessary to resort to cognitive structures like historical analogies to explain the choices of policymakers. Instead, they suggest that analogies are used to explain a conclusion already reached on the basis of ideology and political positioning. In other words, an analogy provides a post-hoc justification for arriving at a decision rather than a schema shaping it.[7] It seems safe to say that analogies may be employed before and after the fact but that "lessons" derived therefrom are obviously determined retrospectively.

This paper examines the use of the Vietnam analogy by certain protagonists involved in conflicts in the African sub-continent during the 1970s–80s, known variously as the Apartheid Wars, the Angolan-Namibian War or the Border War.[8] I approach the task well aware that this

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[5] Marilyn Young, "Still Stuck in the Big Muddy," – *Cold War Triumphalism: The Misuse of History after the Fall of Communism*, ed. Ellen Schrecker (New York: The New Press, 2004), 270.

[6] David Houghton, "The Role of Analogical Reasoning in Novel Foreign-Policy Situations," *British Journal of Political Science* 26:4 (1996): 524.

[7] See Yuen Foong Khong, *Analogies at War: Korea, Munich, Dien Bien Phu and the Vietnam Decisions of 1965* (Princeton: Princeton University Press, 1992), 8–9; A.J. Taylor and J.T. Tourke, "Historical Analogies in the Congressional Foreign Policy Process," *The Journal of Politics* 52:2 (1995): 460–468.

[8] The nomenclature is a not so much a matter of dispute as one of perspective. Whereas the white electorate called the conflict in Angola-Namibia the "Border War," or sometimes the "bush war," those fighting against the apartheid regime preferred other terms. For SWAPO it was the War of National Liberation, otherwise known as the Namibian War of Independence. Namibia and South Africa were arguably theatres of the same conflict and liberation move-

exercise might serve to reify the Vietnam analogy. Hence I am not so much concerned with the merits of the comparisons as I am with why and to what purpose they have been appropriated. I will then examine the attendant but typically specious lessons that military and political leaders are inclined to draw from the Vietnam analogy. Rather than seek to validate May's proposition that such leaders can be better educated about the past and actually learn from it, I think we need to acknowledge that for them history serves a political rather than a pedagogical purpose. While professional historians should not countenance nor become party to such tendencies and are bound to question the uses and abuses of history,[9] we do not own the past. As practitioners we would do well to recognise that much more is invested in memory politics than simply representing the past accurately. Public memory arguably eclipses the importance of academic history insofar as it represents a body of beliefs and ideas that enable a society to understand its past, present and future. As such, it reflects the structure and dynamics of power in society.

The symbolic power of language: analogies and metaphors

The meaning of a war is (re)produced within a linguistic field that is redolent with material and symbolic relations of power.[10] Thus figures of speech such as analogies, metaphors and tropes constitute a form of knowledge about the past that has rhetorical resonance and assumes a kind of "symbolic power" that may be marshalled in much the same way as material power. Political and cultural elites have recourse to such symbols of knowledge so that they become the stock in trade of opinion

ments in the latter referred to their fight against the South African security forces as the armed and/or liberation struggle. Recently, scholars have taken to speaking of the "Apartheid Wars" or even the "Thirty Years War." See, for instance, Colin Leys and John S. Saul, *Namibia's Liberation Struggle: The Double-Edged Sword* (London: James Currey, 1995).

9 Jeremy Black, *Using History* (London: Hodder Arnold, 2005); Margaret MacMillan, *The Uses and Abuses of History* (London: Exmouth Books, 2008).

10 Noon, "Operation Enduring Analogy," 347.

shapers and decision makers. This is not to deny that power is contested in a world of ideological difference and finds expression in different cultural understandings of the world and one's own society.[11] Nor is it to deny that both within the corridors of power and the public sphere at large there may be differences of opinion over the meaning of the past (and particular events that are thought to have a bearing on the present). But negotiating these power dynamics requires the construction and/or appropriation of a narrative that becomes operative as a framework for self-understanding.[12]

Within this linguistic (mine?)field, figures of speech serve a predicative function that allows the user to relate two or more different entities by establishing a similitude of some kind between them.[13] Thus analogies suggest that the present bears a striking resemblance to the past and generate expectations that the future, too, might do so.[14] They posit a perceived likeness between two entities, whereas a metaphor communicates that likeness.

Allow me to elaborate. An analogy allows us to compare what is known about one domain, realm of experience or set of events with something similar.[15] In the words of Elliott, analogies "[...] serve as a cognitive filter that transforms the unfamiliar into something recognizable and reduces complexity to manageable proportions."[16] Whereas analogies allow us to compare like things, metaphors compare unrelated things that are drawn from distinctly different realms of experience. Analogies might be useful

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[11] Jan-Werner Muller, "Introduction: The power of memory, the memory of power and the power over memory," – *Memory and Power in Post-War Europe*, ed. Jan-Werner Muller (Cambridge: Cambridge University Press, 2002), 24–25.

[12] David Glassberg, "Public History and the Study of Memory," *The Public Historian* 18:2 (1996): 1.

[13] David Panagia, "The Predicative Function in Ideology: On the Political Uses of Analogical Reasoning in Contemporary Political Thought," *Journal of Political Ideologies* 6 (2001): 57.

[14] Noon, "Operation Enduring Analogy," 342 citing Panagia, "The Predicative Function in Ideology."

[15] Keith L. Shimko, "Metaphors and Foreign Policy Decision Making," *Political Psychology* 15:4 (1994): 658–659.

[16] David Elliott, "Parallel Wars? Can 'Lessons of Vietnam' be applied to Iraq?," – *Iraq and the Lessons of Vietnam*, ed. Lloyd C. Gardner and Marilyn B. Young (New York: New Press, 2007), 18.

for finding historical precedents for new situations, but metaphors "provide an underlying intellectual construct for framing the situation, for viewing the world, an outlook which creates some degree of order and expectations."[17] In other words, metaphors offer a comparative frame of reference that helps understand something outside one's previous range of experience or field of knowledge; they help to make sense of novel situations. This is especially the case when we do not have the necessary cognitive and linguistic tools to create new categories of meaning.[18] A metaphor can provide a mental picture of something familiar that is referenced to make sense of something that is unfamiliar. The process involves making comparisons based on perceived resemblances (induction) and then inferring additional similarities (deduction). Metaphorical reasoning allows for the crossing of categorical boundaries so as to translate the literal world of one's experience into an imaginary world resembling that of another. It offers a cognitive shortcut so as to make sense of complex issues.[19]

I have already noted that Americans have access to an arsenal of analogies in order to make or justify policy decisions. The vocabulary of the Vietnam War finds ready purchase among advisers, speechwriters, lobbyists, and so on. But the US political and military authorities also employ metaphors such as "quagmire" or "slippery slope" drawn from the experience of having become entangled in Vietnam. This illustrates the German philosopher Friedrich Nietzsche's point that they have license to pick and choose whatever they think suits the occasion – that we can speak of a mobile army of metaphors.[20] Each in its own way seeks to provide common frames of reference or a good fit between one situation and another. But analogies and metaphors only facilitate the understanding a given conflict situation when one is able to relate it to pre-existing experience and knowledge. But even a lack of reliable intelligence can create an infor-

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17 Shimko, "Metaphors and Foreign Policy Decision Making," 685.

18 David N. Livingstone & Richard T. Harrison, "Meaning through Metaphor: Analogy as Epistemology," *Annals of the Association of American Geographers* 71:1 (1981): 96.

19 Khong, *Analogies at War*.

20 Friedrich Nietzsche, *Friedrich Nietzsche on Rhetoric and Language*. Transl. Sander L. Gilman, et al. (New York: Oxford University Press, 1989), 250 cited in Noon, "Operation Enduring Analogy," 343.

mation vacuum in which the appearance of knowledge has power. Whatever the case, this requires the imaginative (re)construction of past wars even when these were waged far apart in space and time. The capacity to imagine one war as another suggests the enduring power of analogies and metaphors, and the pervasive influence of symbolic forms of knowledge.

Imagining one war as another

The Border War waged by the apartheid state sought to perpetuate the fiction that the troops of the South African Defence Force (SADF) were protecting South Africa's border and not actually fighting on foreign soil.[21] Indeed, the phrase Border War encodes white South African understanding of the nature of the conflict in Angola/Namibia in the same way as the term Vietnam War represents an American perspective on the conflict in which they were involved in south-east Asia. In this section of the paper, I will construct a narrative that suggests that the conflicts in south-east Asia and southern Africa resembled one another, that they were partly analogous.

Following the departure of the Portuguese forces from Angola and Mozambique and the resultant collapse of part of South Africa's cordon sanitaire, southern Africa became a "hot spot" in the Cold War. The stakes were reckoned to be as high as in south-east Asia. The 27 February 1976 edition of *The Guardian* newspaper commented that: "If the watershed of history was Vietnam, the fatal blow to imperialism and Western capital at home itself could very well be in South Africa."[22] And many pundits, especially area experts based in Washington and Moscow, expressed the view that southern Africa would succeed Vietnam as the epicentre of the Cold War.[23] The South African government adopted an ideology

[21] David Williams, *On the Border: The White South African Military Experience 1965–1990* (Cape Town: Tafelberg, 2008), 117.

[22] Cited in Magnus Malan, *My Life with the SA Defence Force* (Pretoria: Protea Book House, 2006), 80.

[23] Odd Arne Westad, *The Global Cold War: Third World Interventions and the Making of our Times* (Cambridge: Cambridge University Press, 2005), 207; James Sanders, *South Africa and the International Media: A Struggle for Representation* (London: Frank Cass, 2000), 152.

similar to that of the USA, one that essentially justified the conflicts as necessary to contain the spread of international communism and uphold Western civilisation. The rhetoric was different: American cold warriors invoked the domino theory that held forth the spectre of the collapse of Vietnam's neighbours to communism following the US defeat whereas apartheid's defenders spoke of the need to erect "buffer states" to combat the "total onslaught." Both these discourses were shaped by political cultures suffused with strident anti-communism, a paranoid fear of the Soviet Union, and an obsession with security. Hallin notes that "The ideology of the Cold War was ideally suited to the reduction of this complexity [of the nature of the conflict]: it related every crisis to a single, familiar axis of conflict."[24] The Cold War paradigm allowed South Africa to justify its interventions in Angola and its occupation of Namibia by claiming that it had positioned itself on the side of the West against Communism. The West, for its part, often applied double standards when it refused to condemn the apartheid regime's repression of and discrimination against black subjects for fear of alienating the strongest state in the African sub-continent. Sanders shows that American and British media were generally prepared to accept a different set of conditions for the country's black population because South Africa managed to convince itself and the West that it was an indispensable ally in the war against communism.[25]

Soon after US forces completed their withdrawal from Saigon in 1975, SADF troops invaded Angola ostensibly to prevent SWAPO (South West Africa People's Organisation) from establishing bases in the southern part of the country from where it might infiltrate Namibia, which was illegally occupied by the SADF. A pretext was provided by the need to secure the Ruacana hydro-electric facility on the Angolan-Namibian border. It was a "false flag" operation analogous to the trumped-up Gulf of Tonkin incident that was used to convince the Johnson administration to step up its commitment to Saigon against Hanoi. The seizure of these

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[24] Daniel Hallin, *The Uncensored War: The Media and Vietnam* (Berkeley, Ca.: University of California Press, 1986), 50.

[25] Sanders, *South Africa and the International Media*, 8.

border sites provided a convenient cover story for the SADF's intervention after the fact.[26] It afforded a plausible deniability.

South Africa's subsequent intervention in Angola's civil war was an attempt to prevent the MPLA (Popular Movement for the Liberation of Angola) from gaining control of the country's capital, Luanda. Pretoria lent support to its allies, the FNLA (National Front for the Liberation of Angola) and UNITA (National Union for the Total Independence of Angola). According to some sources, the SADF served as a proxy for the USA, who was reluctant to commit combat troops to Angola after the loss of Vietnam.[27] However, others dismiss the contention that the US encouraged South African intervention and hold that it based its decision on strategic calculations derived from threat perceptions.[28] In any event, the SADF did not achieve its objectives following the arrival of Cubans after Castro unilaterally became determined to show solidarity with the MPLA government and support its armed forces in the face of the aggression by the racist apartheid regime.[29] The South African decision was also informed by worldwide condemnation of Pretoria's adventurism and its violation of Angola's territorial integrity. In the event, the SADF aborted Operation Savannah and withdrew its forces from Angola. Additionally, the Vietnam analogy preyed upon the minds of the SADF leadership. The "hawkish" Minister of Defence, P.W. Botha, apparently shared his unease with his generals about becoming bogged down in Angola.[30] In similar vein, General Magnus Malan, then Chief of the SADF, notes that the decision to invade Angola in 1975 was not taken lightly as he was concerned that South Africa might create its own Vietnam if it did so.[31] Malan was possibly acquainted with the slippery slope and quagmire metaphors that

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[26] James Miller, "Yes, Minister: Reassessing South Africa's Intervention in Angola, 1975," *Journal of Cold War Studies* 15:3 (2013): 21–22.

[27] Matthew Graham, "Covert Collusion? American and South African Relations in the Angolan Civil War, 1975–76," *African Historical Review* 43:1 (2011): 35.

[28] Miller, "Yes, Minister," 41.

[29] Piero Gleijeses, *Conflicting Missions: Havana, Washington, Pretoria* (Alberton: Galago, 1999).

[30] Geldenhuys, *Die Wat Wen*, 177 cited in Leopold Scholtz, *The SADF in the Border War 1966–1989* (Cape Town: Tafelberg, 2013), 334.

[31] Malan, *My Life in the SADF*, 117.

were common in American discourse of the Vietnam War. Such metaphors suggested that it was difficult to extricate armed forces that were committed to prop up a regime that did not have popular support. The provision of advisers, troops and *matériel* had to make up for the inability of a client (or puppet) regime to fight its own battles. In fact, the Saigon regime and UNITA were equally dependent on their sponsors for their very survival. But withdrawal by their backers would amount to the loss of face and damage to the reputation of the sponsor state.

Cuba, under Castro's leadership, provided Luanda with significant support troops, as well as copious amounts of sophisticated military hardware to bolster the capacity of the People's Armed Forces of Liberation of Angola (FAPLA). Although the Cubans generally avoided direct engagement with the SADF, the armies were involved in a number of skirmishes in the in the early years of the war and full-blown battles in 1987–1988 culminating in the siege of Cuito Cuanavale. For its part, the Soviet Union supported the MPLA government with arms and advisors but was seldom drawn into the fighting.[32] It became commonplace for the SADF to display captured Soviet or Eastern Bloc manufactured weapons as well as the occasional Cuban or Russian prisoner-of-war (POW) as proof the communist threat to the security of the white redoubt in the region. Such exercises were staged as propaganda coups but a gullible public seldom bothered to consider that whatever the origin of arms and ammunition, they have no ideology and no purpose other than to kill. Although the Soviet Union and the Eastern Bloc countries backed southern Africa's Marxist governments and national liberation movements ideologically, diplomatically, strategically and militarily, Soviet apologists insist that they never posed a threat to South Africa.[33] This did not prevent P.W. Botha, who held the defence portfolio as Prime Minister and then appointed Magnus Malan, in the portfolio when he became president, from ratcheting up the alarmist "total onslaught" discourse. Botha side-lined the "doves" in his

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[32] Vladimir Shubin, *The Hot "Cold War:" the USSR in Southern Africa* (London: Pluto Press, 2008).

[33] Vladimir Shubin and Marina Traikova, "There is no threat from the Eastern Bloc," South African Democracy Education Trust (SADET), *The Road to Democracy in South Africa,* Volume 3, *International Solidarity* (Pretoria: Unisa Press, 2008), 985–1067.

cabinet and articulated threat perceptions that turned into a self-fulfilling prophecy.[34] So his fear of an Angolan quagmire was realised.

In South Africa and Namibia, the black majority's "freedom fighter" was the white minority's "terrorist." Initially units of the South African Police (SAP) with counter-insurgency (COIN) training were tasked with combating "terrorism" but as the struggle intensified the SADF assumed increasing responsibility for security matters. The armed wing of the African National Congress (ANC), Umkhonto we Sizwe (MK), was effectively neutralised until the late 1970s when it resorted to acts of armed propaganda. MK staged some spectacular sabotage operations against mainly military and industrial targets during the 1980s but never managed to operate openly above ground. PLAN (the Peoples' Liberation Army of Namibia) established a base temporarily at Omgulumbashe in the 1960s but was unable to replicate guerrilla tactics practiced in Cuba or Vietnam where liberated zones were the rule and not the exception – unlike the case of Namibia after the SADF assumed charge of COIN operations.[35] Initially, PLAN's lines of communication and infiltration were lengthy as it operated from its Dar-es-Salaam (Tanzania) headquarters, but it was able to relocate to bases in Angola with the sanction of the MPLA government. Namibia's sub-tropical climate, combined with the flat, sandy landscape dotted with thick mopani savannah did not offer much cover to guerrillas infiltrating the country. The wet season (usually December to March) improved their chances of avoiding detection as the dense foliage provided a measure of concealment and rain erased tracks and provided drinking water. The ability of PLAN combatants to escape pursuing patrols while on foot in the semi-arid conditions won them the begrudging admiration of SADF soldiers. This was not unlike the respect that American GIs developed for National Liberation Front (NLF) or Viet Cong guerrillas who seemed at one with Vietnam's terrain of jungles, elephant grass, and rice paddies. The enervating climate sapped the energies of the US forces much more so than the NLF guerrillas. And their will to win a protracted conflict did not match the endurance of the Vietnamese

[34] Miller, "Yes, Minister," 31.

[35] Dale, "A Comparative Reconsideration of the Namibian Bush War," 205.

peasants who provided for them and were prepared to defend hamlet and homestead interminably. In short, the US forces were simply concerned with survival in a distant land in a war not of their own making or choosing. Whilst some SADF soldiers could not understand the purpose of fighting and dying for a "strip of desert," the proximity of Namibia to South Africa gave some credibility to the argument that it was preferable to fight the "enemy" in a neighbour's backyard than in one's own. Moreover, the SADF was also dedicated to defending the small population of white "Suidwesters" who were regarded as South African citizens. There was no comparable American expatriate community in Vietnam.

Both the South African and American forces evinced a total disregard for the countries that they were occupying, as well as scant concern for its peoples. The US policy of "pacification" implemented in the countryside was an endeavour to place the peasant population under the protection of the US and South Vietnamese armies in order to prevent their villages from falling to the NLF. This frequently involved the forcible relocation of communities from their traditional lands into a more easily defensible compound in which they were dependent not on their own resources but US largesse for survival – as was the case with Operation Phoenix. This was exceptionally disruptive to the social fabric of Vietnamese society. The US forces and the South Vietnamese army made extensive use of defoliants such as Agent Orange and incendiary devices such as napalm to clear and destroy large areas of the natural habitat so as to prevent the NLF from hiding in areas where there was dense undergrowth. These acts did long-term damage to the environment, including the polluting of valuable water supplies. The US Air Force also carried out a systematic and prolonged campaign of area/carpet bombing that destroyed vast tracts of land and infrastructure and left tens of thousands of Vietnamese homeless. In fact, the US dropped more ordnance on Indochinese targets from the mid-1960s to the mid-1970s than on European and Japanese cities during the Second World War and killed more people in the process.[36] The SADF

[36] Marilyn Young, "Bombing Civilians from the Twentieth to the Twenty-First Centuries," – *Bombing Civilians: A Twentieth-Century History*, ed. Yuki Tanaka and Marilyn B. Young (New York: The New Press, 2009), 157.

did kill a large (but unknown) number of inhabitants of the "frontline states" in the name of safeguarding white security as its "destabilisation" policies caused considerable physical destruction, social dislocation, and psychological trauma throughout the region. The South African Air Force (SAAF) used cluster bombs but made sparing use of napalm and chemical weapons.[37] It had a small nuclear arsenal of only six bombs that it developed for deterrent purposes but never utilised.[38] If weapons of mass destruction were discounted by South Africa and the US as unnecessary to win their respective wars in southern Africa and south-east Asia, then this could be deemed a saving grace for the regions. But the deleterious legacy of these wars is still felt as a result of the thousands of undetected mines that were laid during these conflicts and which continue to kill and maim people.

For the most part, the Great Powers remained on the side-lines of the conflict in Angola/Namibia. The US government adopted a delicate balancing act supporting South Africa without appearing to endorse apartheid. Successive US administrations aided and abetted the survival of the country's minority white regime that became something of a pariah state in the community of nations. The US deflected pressure brought to bear against the apartheid state on the economic, cultural and diplomatic fronts but rendered little military aid and chose not to bypass United Nations boycotts. Relations between the US and South Africa became strained when the former withdrew its clandestine support of the SADF's invasion of Angola in 1975 and subsequently passed the Clark Amendment barring military aid. Because South Africa sought validation for its actions by way of American approval it nursed a strong resentment when this was withdrawn. Whilst South Africa's relations with the US improved as result of the Reagan administration's policy of "constructive engage-

[37] I have documented at least two occasions on which SAAF planes dropped napalm during aerial assaults on SWAPO bases in neighbouring states in the 1980s. And the Angolan authorities made unsubstantiated allegations that the SADF and/or UNITA deployed chemical gas during the battle of the Lomba River in 1987. See Gary Baines, "Review Article: From Uniformed Technocrat to Securocrat: Magnus Malan's Memoir," *Historia* 54:1 (2009): 321–322.

[38] Anna-Mart Van Wyk, "The USA and apartheid South Africa's nuclear aspirations, 1949–1980," – Onslow, *Southern Africa in the Cold War*," 55–83.

ment," the US could not be seen to be endorsing the former's oppressive racist policies.[39] Still, the US condoned the apartheid regime's obduracy in finding a political solution to the impasse in Namibia when it failed to implement the United Nations Security Council Resolution 435 and turned a blind eye to the apartheid regime's destabilization of its neighbours. US support was arguably at least partly responsible for offsetting some of the effects of disinvestment and sanctions, but nonetheless South Africa's economic and manpower resources were stretched to the limit by the Border War. In fact, the proportion of GDP spent on the defence budget increased about sixteenfold between 1974–75 and 1988–89.[40] Given the arms embargo and financial constraints, and notwithstanding the development of the local arms industry, the SADF leadership frequently bemoaned its lack of resources. Their American counterparts did likewise, although the USA armed forces were in a league of their own when it came to state-of-the-art weaponry.

Although US defence spending increased incrementally during the Vietnam War, there can be little doubt that South African society was far more thoroughly militarised during the 1970s and 1980s than was the US in the Vietnam War era. Still, American society has been infused with – even dominated by – military culture, values and goals and might be termed a "garrison state" on account of the influence of the military-industrial complex.[41] This is not the place to detail the specificities of the situation and the workings of the security establishment of what has been called South Africa's "garrison state" under P.W. Botha's leadership.[42] Suffice it to say, the articulation of Botha's "total strategy" gave the securocrats who controlled the National Security Management System that sanctioned the illegal activities of the SAP, SADF, and other agencies of the

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[39] J.E. Davies, *Constructive Engagement? Chester Crocker & American Policy in South Africa, Namibia & Angola* (Oxford: James Currey, 2007).

[40] Ian van der Waag, *A Military History of Modern South Africa* (Johannesburg: Jonathan Ball, 2015), 270.

[41] Richell Bernazolli and Colin Flint, "Embodying the garrison state? Everyday geographies of militarization in American society," *Political Geography* 29 (2010): 157–166.

[42] Bernard Magubane, "From Détente to the Rise of the Garrison State in South African Education Democracy Trust," – *The Road to Democracy in South Africa, Volume 2 [1970–1980]* (Pretoria: Unisa Press 2006), 37–97.

state the means to subvert the legislature and seize control of the executive.[43] Simultaneously, socialisation in the homes, churches, and schools bred conformity that caused white males and their families to accept national service as a rite of passage and regard ongoing military duties (such as camps) as a necessary price to pay for upholding white power and privilege. In the US a disproportionate burden of bearing arms in Vietnam was the lot of minority groups who did not have the same stake in the system as South Africa's white ruling elite. South Africa apparently suffered more casualties as a proportion of the white population than the rate sustained by the US as a proportion of its total population.[44] Both the South African and American governments were wary that high casualty rates would become politically unsustainable. Neither the US nor South Africa were willing sacrifice their men in uniform to the extent that their respective enemies were prepared to do.[45] Fighting such a limited war was never going to guarantee victory at any price for either country.

In South Africa opposition to conscription gained some momentum from the mid-1980s as the demands made by the state on the cohort of young white males increased exponentially. Foremost amongst the groups that articulated opposition to the compulsory call-up was the End Conscription Campaign (ECC). The ECC made extensive use of artwork to counter the propaganda of the apartheid state. The Vietnam analogy was employed in the following poster.

The SADF soldier's hands appear to be inflicting damage upon Namibia. Yet, the image also seems to suggest that the occupying forces faced the spectre of defeat; that they would have to withdraw from Namibia as had been the case with American soldiers in Vietnam. The poster's design would have resonated with SADF soldiers who referred to Namibia/South West Africa as "Nam." These soldiers also referred to

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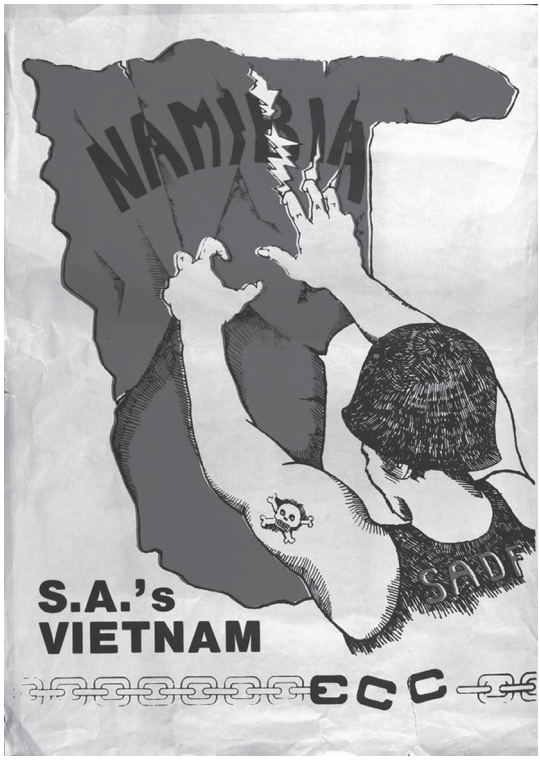
43 Dylan Craig, "Total Justification: Ideological Manipulation and South Africa's Border War," – Baines and Vale, *Beyond the Border War*, 56–74.

44 According to Professor R. Green, the official death rate of white troops killed on the border, expressed as a proportion of all white South Africans, was three times that of the US forces in Vietnam. See *The Cape Times*, 4 Jan. 1985, cited in Catholic Institute of International Relations, *Out of Step: War Resistance in South Africa* (London: CIIR, 1989), 31.

45 Rudham, "Lost Soldiers from Lost Wars," 36.



(ECC Archives, University of the Witwatersrand)

South Africa or home as "the States." Their jargon suggests that they associated their presence in Namibia with being occupiers of a foreign land. But it was the deployment of troops in the townships to crush insurrection, thereby implying that ordinary black people were the "enemy," that catalysed opposition to conscription and increased the numbers of citizen force members who ignored call-ups for camps. Although its relatively small size meant that the ECC remained a peripheral pressure group, attempts to suppress it suggest that the government feared the disruption of the national service system.[46] By comparison, American anti-war movements were able to mobilise growing numbers against the draft, and these included many veterans who joined organisations such as Vietnam

[46] Merran Phillips, "The End Conscription Campaign 1983–1988: A Study of White Extra-Parliamentary Opposition to Apartheid" (MA thesis, University of South Africa, 2002).

Veterans Against the War (VVAW). The Vietnam War became increasingly unpopular after the media exposure of the Tet offensive revealed that a US victory was neither imminent nor inevitable.[47] Indeed, opposition to the war coalesced across many sectors of society once it became apparent that US government and military spokespersons were deliberately manipulating and falsifying official news releases. The credibility gap became a yearning one. But contrary to Rudham,[48] I do not believe that the Border War ever became as unpopular as the Vietnam War.

The outcome of the Vietnam War meant that the US suffered a setback to its standing in the international community and its status as a super power. This created the so-called Vietnam syndrome that translated into reluctance by the US to interfere in the domestic affairs of other countries where the administration reckoned that its national interests were threatened. However, there was no accompanying domestic political crisis although the US had undoubtedly suffered a defeat in Vietnam. Nixon was brought down by Watergate and not Vietnam. The "fall" of South Vietnam also revealed the fallacy of the domino theory, for neighbouring south-east Asian states did not collapse to communism like a deck of cards (to mix my metaphors). In the southern African sub-continent the withdrawal of the SADF from Angola/Namibia and the implementation of UN Security Council Resolution 435 was no less dramatic, especially as it occurred in tandem with the end of the Cold War and set in motion a sequence of events that culminated in South Africa's transition to majority rule. The Namibian settlement was followed by a "ceasefire" in South Africa and a relatively peaceful political transition. Still, Botha's successor, President Frederik Willem de Klerk, was regarded by right-wingers as having betrayed the Afrikaner and/or white "nation" especially after he purged the SADF for its apparent involvement in "third force" activities.[49] But the majority of the white electorate embraced – albeit with some trepidation – the dismantling of the apartheid edifice. Still, the South African government could claim – with some justification – that its military

[47] Hallin, *The Uncensored War*.
[48] Rudham, "Lost Soldiers from Lost Wars."
[49] Hilton Hamann, *Days of the Generals* (Cape Town: Zebra Press, 2001).

forces were withdrawn from Angola and Namibia as part of a negotiated settlement. It could also claim that the SADF never really engaged with MK in battle as the latter was never able to wage anything more than a low-key war of insurgency. It insisted that any victory claimed by the liberation movements was mere politicking as the SADF had effected a tactical withdrawal for the sake of promoting a peaceful transition.

Retired SADF generals did not take kindly to attempts by the ANC government to hold them accountable for death squads that carried out assassinations, bizarre experiments with chemical weapons, and other nefarious activities that occurred under their watch. A clique of former generals obstructed the work of the Truth & Reconciliation Commission (TRC) in investigating gross violations of human rights by the military. They denied, for instance, that the Cassinga massacre was a war crime and defended the attack on this SWAPO camp in Angola as a military operation in which some refugees were caught in the crossfire.[50] The SADF followed the lead of the US military that invented the euphemism "collateral damage" to justify the killing of innocent civilians.[51] The immunity of non-combatants in modern warfare is a myth perpetrated by the US military that exhibits a culpable lack of concern for victims" lives and property.[52] Thus the indiscriminate slaughter of non-combatants in the infamous My Lai massacre was treated as an aberration rather than a consequence of the strategies pursued by US forces in Vietnam.[53] In this instance, a junior officer became the "fall guy" for his superiors. Although the SADF did charge a few of its personnel for heinous crimes such as murder and rape, in other instances reprehensible acts went unpunished because the President granted perpetrators immunity from prosecution for acts supposedly committed in good faith in the

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[50] Gary Baines, "A Battle for Perceptions: Revisiting the Cassinga Controversy in Southern Africa," – *Theatres of Violence: The Massacre, Mass Killing and Atrocity in History*, ed. Philip Dwyer and Lyndall Ryan (New York: Berghahn, 2011), 226–241.

[51] Stephen J. Rockell and Rick Halpern (eds.), *Inventing Collateral Damage: Civilian Casualties, War, and Empire* (Toronto: Between the Lines, 2009).

[52] Sahr Conway-Lanz, *Collateral Damage: Americans, Noncombatant Immunity and Atrocities after World War II* (New York: Routledge, 2006).

[53] Kendrick Oliver, *The My Lai Massacre in American History and Memory* (Manchester: Manchester University Press, 2006).

line of duty.[54] The SADF held that it observed the rules of engagement despite not officially being at war with SWAPO and that the SADF's code of conduct was strictly enforced in the ranks. However, South Africa did not ratify the 1977 amendment to the Geneva Protocol that accorded captured "freedom fighters" the status of POWs. It was believed that granting POW status to PLAN or MK cadres would have legitimated the insurgency. Instead, captured ANC and SWAPO cadres were treated as "terrorists" and subjected to abuse and torture. Some were "turned" and became *askaris* (collaborators). The use of torture, ostensibly for gathering intelligence, became an integral part of American and South African operating procedures.[55] Wartime violence contributed to the brutalisation of both Vietnamese and South African society.

Although stories of the maltreatment of enemy soldiers have emerged in published accounts of the Border War, there has been a reluctance on the part of SADF veterans to accept responsibility for such acts. Whereas at least 100 US veterans confessed to having committed or witnessed atrocities in Vietnam during the Winter Soldier hearings of 1971,[56] there was no comparative admission of culpability by SADF generals or their foot soldiers before the Truth and Reconciliation Commission (TRC).[57] Moreover, the SADF assumed no responsibility for the conduct of its proxies such as the paramilitary units Koevoet and Battalion 32, both of which had deservedly unsavoury reputations for their tactics, which included impersonating PLAN cadres and committing atrocities so as to discredit SWAPO. Subsequently, South Africa was able to secure immunity for any alleged atrocities its security forces may have committed, thereby protecting security forces personnel from extradition to Namibia. And the Namibian authorities declined to hold TRC-type hearings concerning allegations of misconduct by SADF members stationed in the country prior to independence probably because SWAPO wished to prevent revelations of the torture and detention of its own people by members of

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[54] Dale, "A Comparative Reconsideration of the Namibian Bush War," 201.

[55] *Ibid*., 200.

[56] John Fitzgerald, "The Winter Soldier Hearings," *Radical History Review* 97 (2007): 118–122.

[57] Don Foster et al., *The Theatre of Violence: Narratives of Protagonists in the South African Conflict* (Cape Town: Institute for Justice and Reconciliation, 2005).

the organisation in Angolan camps. The exposure of the "wall of silence" has not reduced the clamour for restitution of reputations and reparations by victims and their families.[58] If anything, the failure to make full disclosures has seen the issue become a festering wound in the Namibian body politic. Whereas Vietnam has left a scar that apparently binds US society,[59] southern African society's wounds are still in need of suturing.

As with the aftermath of the Vietnam War, there has been something of a "silence" or selective amnesia with respect to the Border War. I have argued elsewhere that the absence of discourse on the Border War in the public sphere can be partly ascribed to the desire to construct a consensual past and new national identity – to the displacement of the divisions of apartheid by a preoccupation with making the "miracle" of the negotiated settlement work.[60] However, this silence is gradually being eroded, and former SADF conscripts are finding their voices, although they obviously do not speak as one. This much was evident in the controversy that followed the trustees of Freedom Park's decision to omit the names of SADF veterans from the site's Wall of Names.[61] This "crisis of commemoration" echoes the tensions that followed the erection of the Vietnam Veterans Memorial in Washington, D.C. in 1982. Whilst the American Memorial Wall has arguably done much to heal the wounds of the Vietnam War by affording veterans and the families and loved ones of those killed in the war a site at which to mourn their losses,[62] in South Africa the commemoration of the Border War remains a fraught and unresolved issue. The loss of political power by the white minority meant that a wall of remembrance erected on Fort Klapperkop by the SADF to honour those killed serving their country has been divested of its symbolic power. It has been effectively eclipsed by a privately funded wall erected in the precinct

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58 Justine Hunter, "No Man's Land of Time: Reflections on the Politics of Memory and Forgetting in Namibia," – Baines and Vale, *Beyond the Border War*, 302–321.

59 Keith Beattie, *The Scar that Binds: American Culture and the Vietnam War* (New York: New York University Press, 1998).

60 Baines, "Introduction," – Baines and Vale, *Beyond the Border War*.

61 Gary Baines, "Site of Struggle: the Freedom Park Fracas and the Divisive Legacy of South Africa's Border War/Liberation Struggle," *Social Dynamics* 35:2 (2009): 330–344.

62 Kristin Ann Hass, *Carried to the Wall: American Memory and the Vietnam Veterans Memorial* (Berkeley, LA: University of California Press, 1998).

of the Voortrekker Monument. Certain SADF veterans reckon that they deserve public recognition for the sacrifices they made to build the "new" South Africa. If their quest for validation and sense of victimisation is not addressed, there is a possibility that contested memories about the part played by the SADF in the country's past might revive sectionalisms and threaten the social cohesion and stability of South Africa's fragile democracy.

The extant literature on the demobilisation and reintegration of ex-combatants – especially from the ranks of liberation movements who are called non-statutory forces – into post-apartheid South African society shows that they are seen by the public in terms of poor, stereotypical images.[63] Their reputation for being prone to violence and using military skills and weapons in criminal activities is as a result of publicity given to a few high-profile cases involving ex-combatants. But such demonization is underserved. Similarly, US Vietnam veterans were portrayed by the media as dysfunctional "outcasts" and "psychopaths." They returned home to find that their nation, and even their own families, had disowned their responsibility for the war and were blaming them instead. The scapegoating of the veteran absolved the American public of complicity in the "bad" war as it did not challenge the myth of the US military as a force for moral good.[64] In many instances, veterans were obliged to repress rather than come to terms with traumatic memories. Vietnam veterans' trauma was only belatedly recognised when post-traumatic stress disorder became a diagnostic category in 1980.[65] Acknowledgment of the work of the mental health profession and a changing political climate contributed to the rehabilitation of the Vietnam veteran. By contrast, little professional counselling has been available to ex-combatants from the ranks of both the statutory and non-statutory forces in post-apartheid South Africa. The TRC recognized the need for this but neither it nor veterans'

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[63] Sasha Gear, *Wishing Us Away: Challenges Facing Ex-Combatants in the New South Africa*, Centre for the Study of Violence & Reconciliation, Violence & Transition Series No. 8 (Braamfontein: CSVR, 2002).

[64] Marita Sturken, *Tangled Memories: the Vietnam War, the AIDS Epidemic, and the Politics of Remembering* (Berkeley, Ca.: University of California Press, 1997), 66.

[65] Nigel C. Hunt, *Memory, War and Trauma* (Cambridge: Cambridge University Press, 2010).

associations have the resources to provide such services. Some ex-combatants have found spaces to tell their stories on internet sites and others have shared their stories with mental health practitioners and journalists. Indeed, the destigmatisation of PTSD in recent years has fuelled SADF veterans' claims of victimhood that has, in turn, allowed them to voice their disaffection with the ANC government that is perceived to favour veterans of non-statutory forces with respect to the award of military pensions. Such setbacks to healing and reconciliation are likely to undermine any strategy designed to promote the nation-building project.

From imagination to instruction

Although the USA had suffered an ignominious defeat in Vietnam, and the conflict (as we have seen) was only partly analogous with the situation in southern Africa, the vocabulary of the Vietnam War became ubiquitous in the discourse of South Africa's armed formations. It also insinuated itself into the public consciousness. This can be ascribed to the close contemporaneity of the conflicts, as well as the saturation coverage thereof in popular media. Elsewhere, I have explained why the American experience of Vietnam resonated with white conscripts seeking to make sense of their experience of the Border War.[66] This section will reveal how the lessons of Vietnam were appropriated by protagonists in the conflict.

The SADF's counterinsurgency strategies in Namibia were modelled on the lessons derived from a range of revolutionary wars. Over the years, SADF personnel were sent for training at institutions in the UK, France, USA, and Israel. Malan, for instance, attended courses at Fort Leavensworth in 1962.[67] At this juncture, US forces had had little experience of counter-insurgency as they were only commencing with deployments in Vietnam and the Korean War had been an altogether different kind of undertaking. So the most successful models of counter-

[66] Gary Baines, "South Africa's Vietnam? Literary History and Cultural Memory of the Border War," *South African Historical Journal* 49 (2003): 172–192.

[67] Malan, *My Life in the SADF*, 42.

insurgency wars were deemed to be the British campaigns in Malaya and Kenya, and that of Ramon Magsaysay in the Philippines.[68] The French record of mounting counter-insurgency campaigns in Indo-China and Algeria was poor when measured simply in terms of outcomes but the resemblances between the situation in the North African colony with its well-entrenched settler minority and South Africa were striking. Closer to home, the SADF could draw upon the experience of having supported the Portuguese army in Angola during the last phase of that war, and knowledge gleaned from units such as the paratroopers deployed against guerrillas in Rhodesia. The SADF was also intent on testing its strategies against PLAN and adapting these and applying them against the armed wings (or guerrillas) of the South African liberation movements.

Notwithstanding the desultory record of the French army, the SADF brains trust were enamoured with their COIN doctrine which was drawn from their experience in Indochina and Algeria.[69] Lt. Gen. C.F. "Pops" Fraser, then Chief of the Army, was the doyen of SADF military thinkers on the subject of counterinsurgency and P.W. Botha's "favourite military theorist."[70] He introduced the writings of French COIN specialist André Beaufre, then Director of the French Institute for Security Studies, to the SADF. Beaufre's classic text *An Introduction to Strategy* (1963) was the primary inspiration for Fraser's manual entitled *Lessons Drawn from Past Revolutionary Wars* (1966). It was translated into Afrikaans and became prescribed reading for the SADF officer corps. Lessons gleaned from Beaufre, as well as the American military strategist John McCuen's *The Art of Counter-Revolutionary Warfare: The Strategy of Counter-Insurgency* (1966), were set out in the course materials of the officer corps developed at the Saldanha Military Academy and training manuals produced for the troops.[71]

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[68] Michael Burleigh, *Small Wars, Faraway Places: The Genesis of the Modern World. 1945–65* (London: Macmillan, 2013).

[69] See John Daniel, "Racism, the Cold War and South Africa's regional security" – *Cold War in Southern Africa: White Power, Black Liberation*, ed. Sue Onslow (London: Routledge, 2009), 38.

[70] Stephen Ellis, *External Mission: The ANC in Exile* (Johannesburg: Jonathan Ball, 2001), 278.

[71] Leopold Scholtz, *The SADF and the Border War 1966–1989* (Cape Town: Tafelberg, 2013), 36.

Although SADF COIN thinking adapted these lessons to suit regional conditions, it is doubtful whether the SADF intelligentsia developed and refined a thoroughly novel COIN doctrine.[72] The SADF maxim was that the war was 20% military and 80% political, and so soldiers were deployed in civic action programmes (or psychological operations) designed to win the "hearts and minds" (WHAM) of Namibians.[73] In tandem with WHAM, the SADF conducted counterinsurgency operations that involved free fire zones, search and destroy missions, cross-border hot pursuit operations, and raids, and gauged success in terms of the body count. As with the US forces that adopted a policy of "Vietnamisation" so as to restrict the escalation of its own troop levels, the SADF resorted to the "Namibianisation" of the war to limit casualties amongst white conscripts. This involved introducing conscription to Namibia in 1980 and the establishment of the South West African Territorial Force (SWATF) whose members were 70 percent black.[74] Thus both the US and SA forces sought to hand over increased responsibility for fighting to their allies amongst the local and/or indigenous population in their respective theatres of war. The SADF preferred not to deploy large numbers of its troops and equipment at any one time by avoiding large-scale engagements with the Angolan and Cuban forces. It also "outsourced" much of its fighting to surrogates such as UNITA. And it adopted a form of warfare that combined a motorised infantry with superior firepower that performed well in the vast spaces of the Angolan-Namibian bush. This tradition of mobile warfare dates back to the commando system and might well be called the "South African way of war."[75] It was developed with the terrain and the low-density population of the sub-continent in mind and resembled American strategy in Vietnam that saw no benefit in holding ground for its own sake. This practice was inexplicably abandoned during the (set-piece) battle of Cuito Cuanavale where attrition became the order of the day.

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[72] Richard Dale, "A Comparative Reconsideration of the Namibian Bush War, 1966–89," *Small Wars and Insurgencies* 18:2 (2007): 201.

[73] Dale, "A Comparative Reconsideration," 202.

[74] *Ibid*.

[75] Ian van der Waag, *A Military History of Modern South Africa* (Johannesburg: Jonathan Ball, 2015), 3, 261.

SADF generals insisted that they had learnt from the mistakes of the Americans in Vietnam and to have adapted their tactics accordingly. The SADF recognised the necessity of maintaining continuity in operations and opted for a system whereby troops were deployed in their units in the "operational area" for periods ranging from 3 to 12 months – depending whether they were national servicemen or citizen force members. In other words, the SADF soldiers generally served for shorter periods, but care was taken to ensure continuity between those departing and those being deployed. This helped circumvent the problem of the loss of institutional knowledge that the US forces in Vietnam faced as a result of the constant rotation of individuals who completed their 365 days' tours of duty. There was also a greater age differential amongst the SADF troops as both national service and citizen force units were deployed.[76] SADF apologists also claimed that their troops were tougher and more disciplined than the US forces in Vietnam, even asserting that there was no "drug problem" in the SADF.[77] Anecdotal evidence contradicts these unfounded claims made to impress upon the West that the SADF was not only capable of producing the finest armed force on the African continent but that it was even capable of teaching the Americans a thing or two about waging a counterinsurgency war.

Unlike the Vietnam War, media coverage of the Angolan/Namibian War was censored. For instance, the South African news "blackout" of the Angolan invasion of 1975–1976 was exposed by foreign journalists. And when the story broke, an attempt was made by the government to cajole newspaper editors to agree not to publish disclosures that did not emanate from official sources.[78] Invoking national security, the state restricted access to information, while disinformation and propaganda was fed to an undiscerning public. The SADF had its own mouthpiece in

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[76] Gretchen Rudham, "Lost Soldiers from Lost Wars: A Comparative Study of the Collective Experience of Soldiers of the Vietnam War and the Angolan/Namibian Border War" (MA thesis, University of Cape Town, 2003), 24.

[77] Sheila Roberts, "The Invisible Enemy: South African Border War Narratives" – *Readings in the Post-Colonial Literatures in English*, ed. R. Grangvist (Amsterdam: Rodopi, 1993), 97–98.

[78] Graeme Addison, "Censorship of the press in South Africa during the Angolan War: A Case Study of News Manipulation and Suppression" (MA thesis, Rhodes University, 1980).

the magazine *Paratus*, but the government also used slush funds to establish front organisations that published newspapers such as *The Citizen* and periodicals like *To the Point* to propagate its agenda. The mainstream media – the Afrikaans and English press, as well as the South African Broadcasting Corporation (SABC) that monopolised radio and television broadcasts (the latter from 1976) – lent their unqualified support to the SADF as the provider of security and stability in the country but prevaricated when it came to recognizing the legitimacy of its operations in Angola/Namibia. Otherwise, the SADF attempted to win over independent local media by inviting carefully vetted (photo)journalists and military correspondents to visit SADF units in the operational area. These journalists were more like their "embedded" counterparts in the Gulf Wars than those who operated outside of military strictures in Vietnam. The mistaken lesson learned by the apartheid regime from the Vietnam War was that unrestricted media coverage of war could undermine public support for the war effort. The media might have created greater awareness of the situation, even contributed to the growth of opposition to the war, but it alone was not responsible for the decline of political will to see the war through. The Vietnam War was actually lost on the battlefield and the messenger became a convenient scapegoat. In fact, South African censorship fuelled rumour mongering and undermined civilian morale and was counter-productive as far as sustaining support for the fighting in Angola/Namibia.[79] While the majority of the white electorate was inclined to accept official news releases at face value, the black populace treated them with increasing credulity. Although the liberation movements could not compete with the apartheid state in terms of resources, the ANC still managed to recruit cadres to undergo military training abroad through its Radio Freedom broadcasts.

From the vantage point of exile, the ANC leadership drew rather different lessons from Vietnam than the SADF hierarchy. The organisation became convinced that they were capable of humbling a militarily powerful adversary like the apartheid state by adopting the strategy of a people's war – the mobilisation of the bulk of the population in the war

[79] Baines, "Introduction," 10.

effort.[80] The organisation's delegation that visited Vietnam in 1978 came away with the distinct impression that too much emphasis had been placed on the armed struggle at the expense of political mobilisation. The primacy of political imperatives in the armed struggle, an approach in keeping with Maoist approach to guerrilla war, was given due recognition in *The Green Book: Lessons from Vietnam*, which was published in 1979 with the imprimatur of the ANC's national executive committee.[81] This blueprint for waging a protracted people's war advocated, inter alia, restructuring MK and forging a network of armed units that would ultimately constitute a people's revolutionary army, improving MK's military training programmes so as to enable it to mount attacks against security targets and the establishment, and stepping up propaganda and agitation. Such a strategic review would compensate for ANC weakness vis-à-vis the apartheid security forces. It offered a way of defeating Pretoria politically without having to engage in a military confrontation that MK had no hope of winning. According to Jeffery, it mattered very little to the ANC that the situation in Vietnam was very different from that pertaining in South Africa.[82] In other words, "the objective conditions for a people's war in the Vietnamese sense did not exist."[83] If the was the case, then Vietnam did not serve so much as a model to be emulated but a morale booster – as affirmation that victory could be secured irrespective of the odds.

It has been charged that the ANC never sought to defeat the South African security forces on the battlefield but gave priority to eliminating its political rivals, the other liberation movements.[84] Similar claims have been made with respect to Vietnam. This line of arguments holds that the

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[80] Stephen Ellis, *External Mission: The ANC in Exile* (Johannesburg: Jonathan Ball, 2011), 123; Anthea Jeffery, *People's War: New Light on the Struggle for South Africa* (Johannesburg & Cape Town: Jonathan Ball, 2009), 26.

[81] Ellis, *External Mission*, 123; Jeffery, *People's War*, 41.

[82] Jeffery, *People's War*, xxxiv, 39. She holds that parallels between the two situations were remarkable but chooses to enumerate differences instead.

[83] Padraig O'Malley, *Shades of Difference: Mac Maharaj and the Struggle for South Africa* (New York: Viking, 2007), 208 cited in Ellis, *External Mission*, 282.

[84] Jeffery, *People's War*: xxxiii–iv. This charge has been contemptuously dismissed by MK veteran Mac Maharaj in his review of Jeffery's book. See "History 101, Anyone?," *Sunday Times*, 13 September 2009.

Vietcong (or National Liberation Front, NLF) the guerrilla army based in South Vietnam, was purposefully targeted for elimination by the North Vietnamese during the 1968 Tet offensive. It is reckoned that the NLF was deliberately sent into battle inadequately trained and equipped to withstand American firepower, while the more formidable regular North Vietnamese Army (NVA) units were held in reserve. It is suggested that this tactic was pursued because the North Vietnamese feared that the Vietcong would not join the communist alliance but form an opposition grouping when the country was re-united. This argument has a number of flaws. If the Vietcong was virtually eliminated, it begs the question as to why Operation Phoenix that identified and removed VC cadres from the field was necessary. It also ignores the substantial evidence that the VC played a significant role in the liberation of South Vietnam after the withdrawal of US forces. As Peter Brush concludes, not only is there irrefutable evidence that the Vietcong were not eliminated in 1968, they were an important component of communist strategy to the very end of the war."[85] The same can be said of the "comrades" who formed themselves into armed militias and emulated ANC strategy as far as they understood it. While not part of the ANC's command structure, they armed and constituted themselves as members of township street committees that rendered the country "ungovernable."[86] They might not have been instrumental in overthrowing the apartheid state, but the "comrades" contributed to its demise.

Realistic assessments of the prospects of the triumph of the armed struggle tempered hopes that tanks would trundle into the streets of Pretoria as had been the case when the NVA overran Saigon. Yet, the Vietnam analogy was an inspiration to the ANC leadership in exile as well as those operatives who infiltrated the country. When reflecting upon the significance of the visit by the ANC delegation to Vietnam nearly three decades earlier, President Thabo Mbeki called Ho Chi Minh and General Vo Nguyen Giap inspirational leaders and strategists.[87] And former MK

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[85] Peter Brush, "The Significance of Local Communist Forces in Post-Tet Vietnam," https://msuweb.montclair.edu/~furrg/Vietnam/pbsignif.html (accessed 4 April 2017).

[86] Janet Cherry, *Umkhonto weSizwe* (Auckland Park: Jacana, 2011), 90–91.

[87] Cited in Anthea Jeffery, *People's War: New Light on the Struggle for South Africa* (Johannesburg & Cape Town: Jonathan Ball, 2009), xxxiii.

combatant Joseph Kobo recalls entering South Africa via routes through Botswana, Rhodesia, and other frontline states dubbed the Ho Chi Minh trail.[88] Whether these names or even the story of the anti-colonial struggle in Vietnam was familiar to the ANC's rank and file is a moot point. But there was a mystique to the name Vietnam.

As far as the generals of the SADF were concerned, the lessons to be gleaned from the Vietnam analogy were salutary. In tandem with their own experience and that derived from studying the literature on other counterinsurgency wars, the lessons of Vietnam could provide a winning formula. They believed that if these were applied then victory might be assured.[89] So from the perspective of the SADF combating the military wings of the ANC and SWAPO, Vietnam offered a negative model. Conversely, the ANC regarded it as providing positive pointers for successfully defeating the apartheid state. These diametrically opposed lessons serve to underscore the argument that the lessons to be derived from analogies might be instructive but by no means definitive.

Conclusion

It seems fair to conclude that the Vietnam analogy does not amount to a valid historical comparison between the conflicts in south-east Asia and southern Africa. It is simply a figure of speech with rhetorical valence. It might be good for purposes of instruction, but is bad for a nuanced appreciation of history. However, the vocabulary of Vietnam undeniably evokes collective memory and contributes to a sense of shared experience.[90] This is precisely why it appears to have so much purchase in the public domain, especially for those with limited knowledge of the events

[88] Joseph Kobo, *Waiting in the Wings: The Electrifying Story of a Bishop Who Was once in the Military Wing of the ANC* (Milton Keynes: Nelson Word, 1994).

[89] Jannie Geldenhuys, *At the Front: A General's Account of South Africa's Border War* (Johannesburg & Cape Town: Jonathan Ball, 2009).

[90] Brian Balogh, "From metaphor to quagmire: the domestic legacy of the Vietnam War," – *After Vietnam: Legacies of a Lost War*, ed. Charles E. Neu (Baltimore, MD: Johns Hopkins University, 2000), 52.

being compared. This applies equally to military and political leaders who are inclined to treat history as nothing more than a series of lessons that can be applied to find solutions to present predicaments. For them history has utilitarian value but little else. Obviously such an approach to history should not be condoned, let alone validated. I have made a concerted effort to avoid doing so in this paper.

My narrative has proffered a string of resemblances between conflicts in southern Africa and south-east Asia. I have attempted to provide a multi-layered account of these conflicts. It might be argued that my comparisons are too neat and tidy – that my exposition is skewed towards highlighting the similarities rather than the differences between these wars. Moreover, my approach might be said to hinder rather than assist our understanding of the complexities of these respective conflicts. This is no doubt true. On the other hand, I have resisted the reductionism characteristic of comparative diplomatic and political thinking – even of much military history. Instead, I have viewed the Vietnam War as an historical event and not simply as a lesson. So I have not sought to plumb the past for easy lessons. In fact, I am not persuaded that military and political leaders actually learn from the past. For them history provides a rhetorical device rather than an analytical tool and serves a political rather than a pedagogical purpose.

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Human Visions of Future Non-Human War?

How advances in digital and robotic military systems are creating a new future non-human notion of perpetual conflict

Tobias J. Burgers

This article discusses the rise and increasing use of unmanned military systems. It describes how over the course of the last fifteen years they have increasingly become weapons of importance in modern-day conflicts. These new weapons have altered the nature of conflict, its shape, focus, and its political notion. Yet the largest risk comes not from the current changes, but from those in the near future. These foreseen changes could give rise to a scenario in which the notion and conduct of conflict could be further transformed, leading to an entire new concept of conflict. This is going to be an unmanned, non-human notion of conflict, in which the political cost of conflict will be radically different. This new notion, and its limited political costs, could subsequently create a perpetual state of conflict.

Over the course of the last two decades the world has rapidly become acquainted with digital and robotic systems.[1] When these systems first became visible to the larger public, they were often viewed as novel, sci-fi systems: Systems from the future, looking as if they came straight from a Star Wars film. Now two decades later Star Wars films are still full of innovations, Harrison Ford is still around, most recently starring in its VII episode, but the initial novelty and amazement that surrounded the introduction of digital and robotic systems has somewhat disappeared. Indeed, a quick look at the current state of technology illustrates just how

[1] Peter W. Singer, "The Proliferation of Drones. Changes in size, intelligence reframe questions of use" (Report, Washington: Heinrich Böll Stiftung, September 2013).

fast these futuristic digital and robotic systems have become part of everyday life. Unmanned aerial vehicles, more popularly known as drones, are the most visible element of this technological revolution, and the cornerstone of a contemporary revolution in military affairs (RMA). They have become a common sight in recent years, with scores of hobbyists flying them to make beautiful images and videos with attached GoPros, occasionally causing a delay in flight services when a drone flies too close to commercially manned aviation. They have become so established (and desired) that they now top the annual Christmas wish lists of kids (and adults).[2]

At the same time robotic unmanned cars, as currently being developed by all major car companies, such as BMW and Nissan, and likewise under development by, or in cooperation with technology giants such as Google and Apple, seem to be on the brink of arriving at our roads, waiting to drive us home and to work, all without any direct human involvement, leaving the human with not more than the role of passive driver at best, hopefully leaving the era of drunk driving soon behind.[3] At the same time a wide array of digital technologies has been eagerly embraced and accepted by society in the recent decades. We cannot imagine our lives anymore without our smartphones, tablets, laptops, and smartwatches that do so much more than simply showing the time and giving an hourly bleep. Recent innovations in digital technology even seem on the brink of crossing the boundaries between our body and the physical: a new generation of chips, with built in internet connection capabilities, are now present on the market that can be directly inserted into the human body. These digital developments and subsequent digital love affairs by large majorities of our societies have been topics of avid discussion, among academics, politicians, technologists, and even at family birthday parties – albeit probably to a lesser extent. Likewise, plenty has been written on how our generation(s) have become addicted to digital technology and indeed to the generations born in the 1990s and

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[2] Alex Renton, "Christmas Gift: Attack of the drones," *The Guardian*, 23 November 2014.

[3] Todd A. Litman, "Autonomous Vehicle Implementation Predictions Implications for Transport Planning" (Report, Victoria Transport Policy Institute, 2015).

later, digital (and robotic) technology seems as much a common good as bread and rice.[4]

As such it seems that increasingly non-human systems are taking up a larger and more visible role in human societies and that humanity seems to have become accustomed to and comfortable with these technologies. We are still far from Stanisław Ulam's concept of singularity, and Ray Kurzweil's and Vernor Vinge's predictions about reaching this stage, in 2030 and 2045 respectively, for the moment still seem more fantasy – or horror for the matter – than fact, but we can without doubt state that our societies have become highly digitalized, and that machines – digital and robotic – have taken up larger roles in our world.[5] In order for modern day societies to function well, it is by now largely dependent on not only well functioning humans – that is order, security, and health – but likewise the well-functioning of digital and robotic systems.

Despite this growing dependence and wholehearted embracement of these technologies, societies are only now gradually starting to comprehend the broader implications of these digital and robotic revolutions, and how it will impact the future development of our societies.[6] The debate for example about the coming age of robotisation on the work floor, and the subsequent demise, and possibly even disappearance of the blue-collar worker, for example has only recently emerged. Despite this, the robotic takeover of the work floor has been an ongoing process for well over a decade, and the concept of blue collar workers, one next to each other on the assembly line, is still increasingly common in low income countries, where the costs are low enough to still sustain human assembly lines. Assembly lines, in nations where the hourly wage of a blue worker have been substantially higher, such as in Germany, have been a

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4 Manuel Castells, "The Impact of the Internet on Society: A global perspective," *MIT Technology Review* (September 2014).

5 Ray Kurzweil, *The Singularity is Near* (New York: Penguin Group, 2005); Stanislaw Ulam, "Tribute to John von Neumann," *Bulletin of the American Mathematical Society* 64:3 (1958); Vernor Vinge, "The Coming Technological Singularity: How to Survive in the Post-Human Era" (Vision-21 Symposium, March 1993).

6 Castells, "The Impact of the Internet on Society"; "Digital Media and Society Implications in a Hyperconnected Era" (Report, World Economic Forum, January 2016).

mixture of workers and robots, working hand-in (robotic) hand already for some time.

Likewise, a similar tendency seems to develop regarding the introduction of robotic systems into social settings: in Japan, for example, the introduction of Pepper – a robot capable of sophisticated emotional (vocal) interaction and able to read a human's emotional state – has been largely one of wonder and amazement, without much of a debate emerging about what happens when robotic machines start to substitute human friends. The introduction of driverless cars seems to suffer from a similar fate: the ethical considerations about what a car, and their robotic drivers, should do in case it would see a deadly crash incoming, has been largely conducted on the sidelines, and has only barely influenced the rapid introduction of such cars. A few years ago, driverless cars were science fiction for the larger public, possibly a year ago a novelty, whereas by now they are already commercially operating in various United States' cities, seemingly accepted into civil life. Yet few ethical and moral discussions ensued on how exactly such cars should act when a collision is imminent. Should the driverless car decide to hit the other car, hoping for the best survival chances of its passengers, or should it sacrifice itself, as his car has only one passenger, whereas the opposing car is "driven" by the next-door-soccer-mum, with three kids on board?

In general, there seems to be a broader tendency that the technological speed of development, and the introduction of new systems into society, outpaces any possible debate about the utility and ethical and juridical implications that could change or newly develop as a result of the introduction of such systems. This has also been the case with digital innovations: Concepts such as the Internet of Things (Iot) and web 2.0,[7] have been largely embraced, without society willing to understand

[7] The Oxford Dictionary defines the Internet of Things as "The interconnection via the Internet of computing devices embedded in everyday objects, enabling them to send and receive data." With everyday objects here in the broadest sense. From your fridge, to your TV, your car, possibly your pacemaker, your watch to your hairbrush. All connected via the Internet into a giant (personal) network. Web 2.0 is not a new technology, but is rather simply a new way in which the Internet, and its webpages react with its users: from a static webpage (Internet 1.0) to more dynamic, interactive webpages. Famous examples are Facebook and YouTube.

the implications. Society at times does wonder about the possibility of what could occur if this mass of (big) data would be breached, hacked, altered, or misused, but the idea (and pleasure) of having your refrigerator always full with fresh food, the light on when one returns home, and the house comfortably warm – as enabled by IoT technology – seems to prevail within our societies. In this, mankind has ironically progressed little since mankind left its caves: The comfort of having (enough) food, light, and heat are still considered, to some degree at least, more important than critical thought. While these priorities might have altered only a little throughout the centuries, the world in which we live in has changed dramatically in the last decades. Human and non-human interaction was something found in sci-fi books during the last century, by now one can buy a robotic companion and friend for life. This whole technological development, at such rash speeds, seems to leave civilian societies in the middle of Terra incognita, wondering how a future of human and non-human interaction will look like, and which direction and road, we as societies, will take in this unknown world.

This unfamiliar terrain of (future) human and non-human interaction, and their respective roles is also the case in the military world, where the introduction and advancement of digital and robotic technology occurred earlier and has progressed further than in the civil world.[8] Much like in the civil world here too significant changes took place. Indeed, a look at recent conflicts illustrate how over the course of the last fifteen years, digital and robotic systems have taken up a role of importance in military conflict and affairs. The so-called drone wars – the US airstrike campaign, with Unmanned Combat Aerial Vehicles (UCAVs) against terrorists, led by the Central Intelligence Agency (CIA) – are probably the best known and most visible example of this.[9] This campaign started well over a decade ago in 2002, has invoked much discussion, and has become the most prominent weapon of choice for American presi-

[8] Singer, "The Proliferation of Drones," – P. W. Singer and Allan Friedman, *Cybersecurity and Cyberwar: What everyone needs to know* (Oxford: Oxford University Press, 2014), 2–4.

[9] Steve Coll, "The Unblinking Stare," *The New Yorker Magazine*, 24 November 2015; C. Christine Fair, "Drone Wars," *Foreign Policy*, 28 May 2010; Pir Zubair Shah, "My Drone War," *Foreign Policy*, 27 February 2012.

dents in their counter terrorism efforts. And it seems it will remain so in the near future: Donald Trump, the new president (and by the way also Hillary Clinton, his opponent in the elections), has firmly declared his support for drone strikes, something which is reflected in the high number of strikes his administration authorized in the first forty five days of his presidency, which at its current pace is a ratio of three times more intensive than under President Barack Obama.[10] Further indications of the growing importance of robotic systems is that the club of drone striking nations, which for a long time solely consisted of the US, the UK, and Israel, has seen a recent enlargement with a number of nations, with much more limited military capabilities and budgets, joining the group: Pakistan – in the Federally Administered Tribal Areas (FATA), Iraq – against ISIS targets in Northern Iraq, Nigeria – against Boko Haram terrorists, and Myanmar – against insurgents in the border area with China, have in the last two years all conducted drone strikes.[11] In addition, non-state armed groups, such as Hezbollah, ISIS and other actors in the Syrian civil wars are widely using robotic systems, for intelligence, surveillance, reconnaissance, and even limited bombing purposes.[12] In this, the long held western dominance on robotic military technologies seems to be slowly disappearing, with now military robotic systems available to an ever increasing numbers of actors, for a wide range of purposes and possibilities, contributing to a changing face of conflict.[13]

Yet while these technologies, and drone wars, are now becoming a global military affair and are changing the nature of conflict, militaries, politicians, and governments do not (yet) understand the full implica-

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[10] Micah Zenko, "The not so peaceful transition of power: Trump's drone strike outpace Obama," *Council on Foreign Relations*, 2 March 2017.

[11] Tobias J. Burgers, "An Unmanned South-China-Sea? Understanding the risks and implications of the arrival of the digital and robotic revolution in military affairs in the South-China-Sea," – *Power Politics in Asia's Contested Waters: Territorial Disputes in the South China Sea*, ed. E. Fels and Truong-Minh Vu (Cham: Springer, 2016), 77–94; Scott N. Romaniuk and Tobias J. Burgers, "China Could Dominate the Global Armed Drone Market," *China Policy Institute Analysis*, University of Nottingham (20 February 2017).

[12] Scott N. Romaniuk and Tobias J. Burgers, "Entering the Era of Unmanned Terrorism," *Jamestown Terrorism Monitor* 15:1 (2017): 5–7.

[13] World of Drones, New America Foundation website.

tions these technologies will have upon the future notion of conflict. Indeed, much of the introduction of military robotic systems has been a process in which not much thought has been given about future political implications and which can be better summarized under the motto "we will see where it goes".[14]

As one US colonel adequately pointed out, "we are building the bridge to the future while standing on it".[15] Such limited considerations about our future, and the future of conflict, and how it will be influenced by the rise of robotics, raises numerous questions that should be answered. At the centre of this discussion should be the question of what a future vision of conflict will be like? It is without doubt a good thing that the military is building a bridge to future: It at least provides a basis on which a future can be built, nevertheless the direction of this bridge and what happens once militaries exit the bridge is poorly understood. In this regard, we could nearly go as far as to state that the military establishment, and the political establishment for that matter too, seems to be partially blind to the (political) implications of technological revolutions of its own making. Ironically so, as robotic systems are often hailed within military establishments as increasing situational awareness, thereby decreasing the infamous Clausewitzian 'fog of war', a new fog of war seems to be rising. That fog could muddle the categories of conflict and of war altogether, with unforeseen and possibly tragic consequences.

A future notion of war, in which humans have an increasingly limited role, raises fundamental questions about the future political nature of war. Throughout the history of warfare, the human factor and cost have been important, if not decisive factors, in questions on the political necessity, utility and benefit of starting, continuing, and ending wars. However, future unmanned, nonhuman wars would only to a limited degree face questions about their political, social and economic cost from the larger public, exactly due the direct absence and role of humans in waging war. This raises the question what will happen with the notion and conduct of

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[14] David Kilcullen and Andrew M. Exum, "Death From Above, Outrage Down Below," *New York Times*, 17 May 2009.

[15] Quoted in Peter W. Singer, *Wired for War* (New York: Penguin Press, 2009), 16.

war, if it becomes such a "low cost" affair? Could we in the future possibly conduct wars on the "political cheap"? And if wars become so easy to conduct – due to their limited economic, political and social costs – will the world find it easier to start more wars, to continue them, and possibly to never end them? Could we be moving into a continuous state of war? Wars far away from the public's interest, experience, and vision?

Theoretically speaking, such a state of affairs and endless wars could lead to a reversion of Kant's peace theory, which has been the basis of peace and conflict studies, and has influenced generations of policy makers, politicians, military leaders, and citizens. Should we imagine a future, in which the world is embroiled in a perpetual state of war, made possibly by digital and robotic machines? In which universities will solely have departments and research institutes for conflict and war studies, rather than peace and conflict resolution, as peace, and the concept of it could have by then become something of the past, gathering academic dust. An ancient, romantic concept, cherished by historians, but not of importance to those who will study contemporary political and military affairs.

This paper seeks to understand these future visions, answer the questions posed above, and aims to predict to which extent future visions of war will be digital and robotic, and what this will mean for the political notion of conflict and war. It seeks to analyse this by answering two main questions. First, how likely is the above described scenario of digital and robotic conflict? Secondly, what would be the political implications of such a state of conflict?

Current visions of war: the emerging non-human in war

As the famed physicist and Nobel laureate Niels Bohr said "Prediction is very difficult, especially if it's about the future". Now, Bohr was without doubt right, and predicting and understanding the future is a difficult, and in the case of military affairs, indeed often a thankless task. Furthermore, questions like how far can you look, and how accurate will it be,

are always of importance. History is littered with beautiful cases of futurists who predicted the most fantastic, or horrendous futures, only to be proven wrong by time. As Conrad Crane, the former director of the U.S. Army Military History Institute, rightfully noted that when it comes to understanding future visons of conflict and predicting how war might develop in the years beyond the horizon the effective range is up to 20 years. Any predictions after this timeframe would be difficult and would run the risk that future visions might be filled with mistakes, or even horribly off.[16] Crane quotes from T. X. Hammes, a Distinguished Research Fellow at the U.S. National Defense University, who makes the point quite beautifully: "There is a fine line between a vision and a hallucination."[17] Fortunately, predicting and understanding a future vision of robotic conflict does not need to be as difficult as Bohr made it sound – and hopefully not as thankless – and with a bit of luck hallucinations should not occur. This is foremost the result because when it comes to predicting a robotic, partly non-human future of conflict, the first contours of such future robotic conflict are already visible. The prior mentioned US drone strike campaign is the prime example of how the future is already here, but the use of robotics in conflict has a long history.

It is history which gives us the first indications of how future robotic conflict just might look. In this, the famed strategist and philosopher Machiavelli was right when he said that "Whoever wishes to foresee the future must consult the past."[18] The roots of the digital and robotic revolution in military affairs (DRRMA) can be traced back to the late 1970s. It was Marshal Nikolai Ogarkov, Chief of the General Staff of the USSR, who was seeking new ways to close the ever increasing capabilities gap between Warsaw pact forces and NATO. He sought to initiate a military-technical revolution that would allow the USSR to (re)gain the upper

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[16] Conrad Crane, "Note to Futurists: The maximum effective range of a prediction is 20 years," Warontherocks (website, 3 October 2016).

[17] Ibid.

[18] Niccolo Machiavelli, *The Historical, Political, and Diplomatic Writings of Niccolo Machiavelli* (Boston: Osgood, 1882). The original quote can be found in the first sentence of chapter XLIII (43), "Natives of the Same Country Preserve for all Time the same Characteristics," found in the Third Book of his 1513 work *Discourses on the First Ten Books of Titus Livius*.

hand in a possible military conflict with NATO.[19] The United States, afraid of losing its technological advantage over Russia, sought to counter this technological revolution and started its own revolution in military affairs, which ironically caused the capabilities gap to grow even larger. In the following years, this RMA, which is often called the second offset strategy, enabled the emergence of an array of new military concepts and doctrines, such as network centric warfare, and information warfare. At the same time, it created or contributed to technological innovations such as stealth technology, the global satellite positing system (GPS), and most famously ARPANET, which we now know better as the internet.[20]

This second offset strategy also created the initial framework for the research and development into digital and robotic military technologies, which eventually developed into the DRRMA.[21] Much of the initial rise of robotics remained hidden to the larger public, and it was not until the first Gulf War that we saw the first glimpses of how exactly a future of robotic conflict would look: It was during this conflict that we saw the operational introduction of the most visible part and well known element of the DRRMA, namely the Unmanned Aerial Vehicle (UAV).[22] Encour-

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[19] Götz Neuneck and Christian Alwardt, "The Revolution in Military Affairs, its Driving Forces, Elements and Complexity," IFSH Working paper no. 13 (May 2008).

[20] Steven Metz and James Kievit, *Strategy and the Revolution in Military Affairs: From theory to policy* (Strategic Studies Institute, US Army War College, 1995); Singer, *Wired for War*; Andrew Turner, "The Impact of RMA on Peacekeeping" (Paper presented at the Third Annual Graduate Student Symposium of the Conference of Defense Associations Institute, 3–4 November 2000). The first offset strategy centered around atomic weapons. For further information on the 1st, 2nd and current offset strategies see: http://warontherocks.com/beyond-offset/ (accessed 1 April 2016).

[21] Metz and Kievit, *Strategy and the Revolution in Military Affairs*. Initially the two elements of the DRRMA developed separately, but in recent decades the crossover and interdependence between both RMAs have been significant, with both enforcing each other. As the digital sophistication of robotic systems further increases and with robotics moving into digital conflict we can expect that the interrelation between both RMAs will further grow. See for further information on the interaction between both technologies, Robert O. Work and Shawn Brimley, "20YY Preparing for War in the Robotic Age" (Report, Center for New American Security, January 2014), 23.

[22] These UAVs even managed to capture (limited) headlines when for the first time in conflict history soldiers surrendered to an unmanned system: On two occasions, Iraqi soldiers surrendered to RQ-2 Pioneers UAV flying above them. See for further details: "Iraqi soldiers surrender to AAI's drones," *The Baltimore Sun*, 2 March 1991.

aged by its initial success, the United States armed forces conducted further research and development into a new generation of robotic systems. This resulted in the development of the now iconic MQ-1 Predator, which was actively used in the Balkan conflicts.[23] Despite its initial success, the DRRMA progressed relatively slowly, and it was not until the outbreak of what later became known as the Global War on Terror (GWOT) that the development of DRRMA fully took off, and further signs and visions of an emerging robotic notion of conflict arose. It was during the initial two years of the GWOT that the world was introduced to armed UAVs (UCAVs) – or killer drones as they more popularly became known – and a further wide variety of unmanned systems, operating on land, sailing the seas, operating in space, and foremost flying in the air. During this decade, the development, procurement and use of unmanned systems became widespread: The United States armed forces alone increased their UAV and UCAV capacity forty-fold. European, South-Korean, and Japanese armed forces acquired their first unmanned systems, and China and Russia developed their own unmanned systems. A study by the New America Foundation found that in 2015 seventy-eight nations and non-state actors had unmanned capabilities, and that twenty two actors possessed armed unmanned capabilities.[24]

As such, the first notion of future robotic conflict has already started, and that in this regard the future is now, or even already behind us. As the numbers illustrate – military robotics, and the DRRMA – became a global military affair, with increasingly military nations seeking to shift the burden of conducting military conflict to non-human robotic systems, rather than solely humans. Nevertheless, it should be noted that conflicts in which robotic systems are actively involved remain to date limited. As noted earlier, the group of drone-striking-nations has increased rapidly in recent years, but still remains limited, particularly when compared with other conflicts around the globe, in which conventional weapon systems and human soldiers are without any doubt still the most important force.

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[23] Houston R. Cantwell, *RADM Thomas J. Cassidy's MQ-1 Predator: The USAF's first UAV success story* (BiblioScholar, 2012).

[24] New American Foundation (2015), World of Drones website, available at http://drones.newamerica.org/ (15 March 2016).

In this respect, the era of the famed or feared, infamous – depending on whom you ask – Kalashnikov is certainly not over. To date much of the military robotic integration remains primarily an affair of conventional military actors. As the number of conventional conflicts, in which such systems could and would be used, is declining, the era and the notion of all-out robotic warfare being the standard notion and conduct of war remains farfetched and, to quote T.X. Hammers once more, would be "a hallucination".

Toward an increasing non-human and robotic notion of conflict?

Even though robotic conflict will not be the most dominant modus of warfare in the coming decades, it is without doubt that the frequency of robotic warfare will only increase further. Therefore, the question of whether such conflicts could take place, and what they would look like, seems just and necessary. As noted above, (recent) history might be able to show some initial insights into future robotic conflict. The CIA drone wars, and the subsequent drone strikes by other nations illustrate a conduct of war in which the soldier is not actively in the combat zone, but remains nevertheless heavily engaged in the conflict itself. Thus being to the extent that UAV operators suffer from higher psychological burdens of conflicts, such as PTSD, than their colleagues actually physically present in (human) combat zones.[25] In addition, current military robotic systems generally require a high degree of supervision and support. An estimated 120 personnel are needed to operate a single US MC-9 Reaper UAV and its operations. As such, despite all the talk about unmanned wars, current robotic conflict with unmanned systems remains still very much, and quite paradoxically, a human intensive, and even costly, affair.

[25] Wayne Chappelle et al., "An Analysis of Post-Traumatic Stress Symptoms in United States Air Force Drone Operators," *Journal of Anxiety Disorders* 28:5 (2013): 480–487; Alex Edney-Browne, "Embodiment and Affect in a Digital Age: Understanding mental illness in military drone operations," *Krisis* 1 (2017): 19–33.

The question however arises to which extent this initial notion of robotic conflict is likely to resemble the future of robotic conflict? In this regard, the initial notion of robotic conflict was and is one of a rather "simple" robotic conflict. Indeed, much of what we currently have seen of robotic warfare has taken place in asymmetrical scenarios, in which those at the receiving end of robotic strikes have had limited, or no means, to defend themselves against unmanned systems, meaning that nations using unmanned systems could and can use relatively unsophisticated systems, who have only limited (robotic) capabilities. A brief look at the systems currently in use – from the American Predators and Reapers to the Chinese Ch-4s – illustrate that the large majority of unmanned systems in use have by no means the capability to survive in a hostile environment, and as such do not pose a threat to actors with significant military capabilities. For example, the American Predator UAV that tried to take on an Iraqi MiG-25 – an aircraft which has been around for over 40 years. In the words of David Axe it "sucked at it": It failed to hit the opposing aircraft and was quickly turned into a heap of burning metal and plastic, spiralling towards the desert.[26]

We should view the recent history of robotic conflict as a starting point in the larger technological revolution of the DRRMA. Much like the T-Ford, it was a technological highlight during its times, yet at the same time it was the start of a long development cycle, spanning over a century already, with significant changes along the way. This is bound to happen as well with the development of military robotic systems, and as such we can likewise expect major changes to the configuration and capabilities of unmanned systems. In order to understand in which direction the DRRMA will evolve, and what those major changes would be, we should first understand how military actors perceive the "general" future of military affairs. In this regard, and despite the GWOT and all other affiliated abbreviated anti-terrorism wars, the common understanding is still that nation states, who have military capabilities well beyond any insurgent and terrorist army, see other nation states as the primary military and

[26] David Axe, "Predator drones once shot back at jets… but sucked at it," blog post at *Wired* (11 September 2012).

security threat. Indeed, in East-Europe, Al-Qaeda, or ISIS, or any other terrorist organization is not seen as the primary threat, rather it is one that has been for long perceived as the foremost threat: Russia.[27]

In China, the Communist Party and the People's Liberation Army do not view Islamic terrorism as their primary threat, it is the United States, its Asian Pivot and its regional allies (e.g. Japan and India) that are on top of their threat list. At the same time, the other regional actors in South-East and East-Asia view China as their primary threat, even if in some active terrorist insurgencies do take place.[28] Even the initiator of the GWOT, and the nation spending most military resources in the fight against global Islamic terrorism, the United States, does not view global terrorism as the most existential and primary threat. In a statement last year, the now chairman of the joint chiefs of staff, Marine Corps General Joseph Dunford, stated he sees Russia as the primary threat, followed by China and North-Korea respectively, with ISIS only in fourth place.[29] Despite all the recent focus on "new wars", hybrid wars or any other euphuism, classical conventional, symmetrical threats and conflicts are still dominating future threat and conflict scenarios. It therefore comes as no surprise that the directional development of robotic military systems has over the course of the last years steered towards systems that are aimed at such future threat scenarios.

The design of the current generation of unmanned systems under development seems to depart from the initial "simplicity" and puts an increasingly large emphasis on automation and autonomous capabilities, which should allow for survivability in the highest spectrum of military violence. Examples such as the X47B, an UAV capable of starting and landing on an aircraft carrier, the RQ-170, 180 UAVs, and the Chinese "Divine Eagle" are prime examples of next-generation automated and autonomous unmanned, stealth systems, which are capable of conducting the majority of their tasks without any human interference or guidance,

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[27] Margriet Drent et al., *New Threats, New EU and NATO Responses* (The Hague: Clingendael Institute, 2015).

[28] Burgers, "An Unmanned South-China-Sea?" – *The China Threat: Perceptions, myths and reality*, ed. Ian Storey and Herbert Yee (London: RoutledgeCurzon, 2002).

[29] For a summary and a report of Dunford's statement see *The Wall Street Journal*, 9 July 2015.

An X-47B Unmanned Combat Air System demonstrator flies near the aircraft carrier USS George H.W. Bush. Official U.S. Navy photo by Erik Hildebrandt

and which should be capable of operating in the highest violence spectrum. This drive for automation and autonomous capabilities, and survivability is likewise witnessed in the development of the new generations of UGVs and UUVs. The US Navy self-guided unmanned patrol boats are a prime example. These boats are entirely operating autonomously, including the capability to communicate with each other and operate in swarm tactics.[30]

Likewise, in the field of Unmanned Undersea Vehicle (UUV) development the direction is heading towards more robotic capabilities, and lesser human involvement. The U.S. Navy, in their Unmanned Undersea Vehicle Master Plan, indicate too that it seeks to build systems that can operate for long periods of time, with very limited human involvement.[31] The anti-submarine warfare continuous trail unmanned vessel,

[30] Dan Gettinger, "What You Need to Know About Drone Swarms" (Blog post, Center for the Study of the Drone at Bard College, November 2014).

[31] James Holmes, "The U.S. Navy's Next Super Weapon? Here Come Unmanned Underwater Vehicles," *National Interest* (January 2015); United States Navy, *The Navy Unmanned Undersea Vehicle (UUV) Master Plan* (published online, 2004).

or ACTUV, is the prime example of this vision of next generation UUVs, capable of operating independently for months at a time, covering thousands of sea miles.[32] The desire for more robotics and less humans is not solely an American one: Samsung developed an almost entirely autonomous stationary robot, the SGR-A1, which is able to autonomously identify and destroy targets.[33] Likewise, in Europe (e.g. Taranis and the nEUROn) and China (Dark Sword and Sharp Sword) further unmanned systems are under development which focus on medium to high combat zones, and which are largely autonomous and automated.[34] In this, the current generation of unmanned systems under development seems to be pushing the boundaries of human involvement and control in unmanned systems: The role of a human operator will become increasingly limited and will primarily focus on target selection and the decision to engage a target, leaving all other roles and tasks to robotic systems itself. This human decision to engage a target would then become the sole boundary left before we can truly speak of robotic conflict. Indeed, in the discussion on future robotic conflict, and if this will occur, the human-in-the-loop argument has been used as the main argument that full robotic conflict will not take place (in the near future).

This discussion, however, when the full boundary of robotic conflict is reached is somewhat flawed. The main argument in this discussion has been so far that there has always been, and will be a human in the loop. In the case of the current (CIA) drone strike campaign such has been indeed the case, as the threat environment is minimal, allowing the (human)

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[32] For more information, see Cheryl Pellerin, "Deputy Defense Secretary to Help DARPA Christen New Class of Sea Vessel," *U.S. Department of Defense* (online, April 2016).

[33] Alexander Velez-Green, "The South Korean Sentry – A "killer robot" to prevent war," *Lawfare* (blog post, 1 March 2015). The SGR-A1 in its current operational use is still controlled by humans. Samsung itself argues that there is still very much a human in the loop. However, the system has the capability to go fully autonomous, and even in its current configuration the only decision made by a human operator is the decision to engage a target. As such, rather than speaking of a human in the loop, it would be better to rename a human on the loop, given the limited interaction and involvement of humans in the entire process.

[34] David Axe, "China's First Stealthy Killer Drone Takes Flight," blog post at Warisboring (November 2013); Michael S. Chase et al., "Emerging Trends in China's Development of Unmanned Systems," *Rand National Defense Research Inst.* (Santa Monica, CA., January 2015). For more information about the systems, see the websites of Dassault Aviation and UK Defence Journal.

operator sufficient time – at times even weeks – to decide to strike at a target or not.[35] However, in a high paced, conventional military conflict such is not the case. Here the decision to engage would be one of minutes, if not seconds. Seconds in which a decision must be made, based on information provided by machines and digital technology. In such a scenario, it can be expected that the operator will follow up on the digital input and advice. As such we could argue that in such situations the human-in-the-loop concept is rather limited, or even non-existent. A perfect example of this is the Iron Dome system, used by the Israeli Defence Force to defend against rocket attacks from the Gaza strip. According to the IDF a human operator always has the final decision to engage or not, and it argues that as such there is indeed a human in the loop. However, this loop is limited to 3 seconds, making it debatable if a human is really in the loop. Therefore, the author believes that, even when a human is in the loop in the near future, we can actually speak of robotic conflict. And given the frenzy with which major military nations and arms manufactures are researching and developing next generation autonomous and automated, high-end systems, it seems increasingly likely that future conflicts will occur which will be truly robotic in nature. Thus, it is not a question if, but rather when, robotic conflict takes place. When this occurs, it would create an entire new paradigm in conflict: It would mark the first time in the entire history of mankind that conflict would be fought without any direct human involvement.

Political implications: an invisible peace or a perpetual state of war?

As this new paradigm of conflict arrives on the horizon, it raises questions about the political implications of this new notion of conflict. Throughout history, the conduct of violent and military conflict and wars have been limited due to its social, economic, political and human cost. Foremost

[35] Jason Wei, "The Case for Drone Warfare," *Dartmouth College Debates in International Politics* (November 2016).

the human factor has influenced whether conflicts would start, continue, and end: Societies have boundaries of just how much destruction and death they are willing to bear. Particularly in recent decades, in developed nations, the willingness of the larger public to engage in conflict, and foremost to sustain casualties, has been very limited. Indeed, numbers show that violent conflicts and related casualties over the course of the last decades have slowly decreased.[36] However, robotic systems have the potential to reverse this course, which could possibly lead to an increase in conflict again: The use of unmanned machines, the absence of human casualties, and the low visibility of such conflicts, could create a scenario in which political leaders would seek the appliance of violence once more to pursue political goals and to solve political conflicts, rather than first trying to solve a political conflict via diplomatic means. This would constitute a major change and reversion of the progress made over the course of the last decades. It would be a reversion of the Kantian goal of a perpetual state of peace. Rather, it could be replaced by a perpetual state of conflict: An invisible, ever continuing state of violence fought by robotic machines. We therefore should seek to better understand the implications of the rising use of robotic systems in military affairs before we enter a world in which the violent appliance of robotic systems becomes the norm to solve (political) conflicts, and in which perpetual peace remains an invisible dream. As the US colonel stated earlier on in the paper: "We are building a bridge to the future, while standing on it".[37] Well, it seems time we should start to consider better in which direction this bridge is going, and how future conflict will look once we cross over the bridge.

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[36] Human Security Centre. *Human Security Report 2005: War and peace in the 21st century* (Oxford University Press, 2005).

[37] Singer, *Wired for War*, 16.

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