DISTRIBUTION A. Approved for public release: distribution unlimited.

APOSTLES OF ATTRITION:

SIR DOUGLAS HAIG, SIR ARTHUR HARRIS, AND GENERALSHIP IN THE STRATEGY THAT DARE NOT SPEAK ITS NAME

BY

LIEUTENANT COLONEL JEFFREY D. SCHNAKENBERG

A THESIS PRESENTED TO THE FACULTY OF THE SCHOOL OF ADVANCED AIR AND SPACE STUDIES FOR COMPLETION OF GRADUATION REQUIREMENTS

SCHOOL OF ADVANCED AIR AND SPACE STUDIES AIR UNIVERSITY MAXWELL AIR FORCE BASE, ALABAMA

MAY 2014

Report Documentation Page					Form Approved OMB No. 0704-0188		
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.							
1. REPORT DATE MAY 2014		2. REPORT TYPE		3. DATES COVE 00-00-2014	RED I to 00-00-2014		
4. TITLE AND SUBTITLE		5a. CONTRACT	NUMBER				
Apostles of Attrition: Sir Douglas Haig, Sir Authur Harris				5b. GRANT NUMBER			
Generalship in The Stratgy That Dare Not Speak Its Name				5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S)				5d. PROJECT NU	JMBER		
				5e. TASK NUMBER			
				5f. WORK UNIT NUMBER			
7. PERFORMING ORGANI School of Advance Force Base,,AL	,,Maxwell Air	8. PERFORMING ORGANIZATION REPORT NUMBER					
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/M	ONITOR'S ACRONYM(S)		
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)			
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited							
13. SUPPLEMENTARY NO	DTES						
14. ABSTRACT This thesis examines generalship in the strategy of attrition by evaluating the performance of Sir Douglas Haig and Sir Arthur Harris. It seeks to answer the question: How proficient were Douglas Haig and Arthur Harris as practitioners of attrition? By rigorously examining these men's experiences through their personal correspondence and papers, contemporary strategists should gain useful insights into the link between generalship and proficiency in waging wars of attrition. To analyze how well Haig and Harris employed attrition in support of British national strategy this study subjectively evaluates each general's proficiency using six complementary criteria. They are 1) translating policy objectives into coherent strategy and operations; 2) balancing doctrinal adherence with flexible adaptation; 3) nurturing relationships with higher civil and military authorities; 4) nurturing relationships with subordinate commanders and warriors; 5) optimizing operational design and tactical technique; and 6) fostering intelligence and technological and doctrinal innovation. Each general's proficiency is evaluated under the individual criteria and receives a composite ranking.							
15. SUBJECT TERMS			1	I	1		
16. SECURITY CLASSIFICATION OF:		17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON			
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified	Same as Report (SAR)	140			

Standard Form 298 (Rev. 8-98) Prescribed by ANSI Std Z39-18

APPROVAL

The undersigned certify that this thesis meets master's-level standards of research, argumentation, and expression.

HAROLD R. WINTON, PhD (Date)



DISCLAIMER

The conclusions and opinions expressed in this document are those of the author. They do not reflect the official position of the US Government, Department of Defense, the United States Air Force, or Air University.



ABOUT THE AUTHOR

Lieutenant Colonel Jeffrey D. Schnakenberg is an Intelligence Officer in the United States Air Force. He was commissioned in 1999 upon graduation from the U.S. Air Force Officer Training School. Prior to earning his commission Lt Col Schnakenberg spent 11 years in the Army as a tank crewman, infantryman and Psychological Operations NCO. He holds a Bachelor of Arts degree in History from the University of Massachusetts, a Master of Arts degree in History from Temple University, and a Master of Science degree in Strategic Intelligence from the National Intelligence University. He has supported A-10s and F-16CJs with two fighter wings, served on the USAFCENT staff and is a graduate of the U.S. Air Force Weapons School. Lt Col Schnakenberg has multiple deployments in support of Operations JOINT ENDEAVOR (Vlasenica, Bosnia), SOUTHERN WATCH (Al Jaber, Kuwait), ENDURING FREEDOM (Bagram, Afghanistan), IRAQI FREEDOM (Balad, Iraq) and the Global War on Terror (Al Udeid, Qatar). His most recent assignment was as the Deputy Chief of Intelligence, Surveillance and Reconnaissance Force Management, Deputy Chief of Staff for ISR, Headquarters U.S. Air Force, Washington D.C. Following graduation from the School of Advanced Air and Space Studies, Lt Col Schnakenberg will be the Chief, Theater Strategy Branch, Headquarters United States Air Forces Europe, Ramstein Air Base, Germany.

ACKNOWLEDGEMENTS

I would first like to thank the faculty of the School of Advanced Air and Space Studies for indulging my peculiar historical interest in the strategy of attrition during both World Wars. Dr Harold Winton served as my thesis chair, mentor, and Pathfinder. Without his skill in illuminating the target, my thesis would still be "lost in the dark, the haze, and the searchlight glare." I'll never again split an infinitive without thinking of him. I'd also like to thank my reader, Dr James Kiras, for his good humor, advice, and encouragement.

I reserve my greatest thanks for my loving and very patient family. My wife kept the home fires burning while I spent many a weekend and late night patrolling thesis No Man's Land. Although our son probably won't remember it, I'll never forget reading a pop-up book on World War I to him, or the sound of his voice saying "daddy, another book came for you in the mail today!" It takes a special family to live in a "high definition" world yet love a man who dreams in sepia tones.

Finally, I dedicate this thesis to the men and women who served under Sir Douglas Haig and Sir Arthur Harris, especially those who sacrificed all their tomorrows that we might live in freedom and peace.

They shall grow not old, as we that are left grow old: Age shall not weary them, nor the years condemn. At the going down of the sun and in the morning, We will remember them.

Laurence Binyon "For the Fallen"

ABSTRACT

This thesis examines generalship in the strategy of attrition by evaluating the performance of Sir Douglas Haig and Sir Arthur Harris. It seeks to answer the question: How proficient were Douglas Haig and Arthur Harris as practitioners of attrition? By rigorously examining these men's experiences through their personal correspondence and papers, contemporary strategists should gain useful insights into the link between generalship and proficiency in waging wars of attrition.

To analyze how well Haig and Harris employed attrition in support of British national strategy this study subjectively evaluates each general's proficiency using six complementary criteria. They are 1) translating policy objectives into coherent strategy and operations; 2) balancing doctrinal adherence with flexible adaptation; 3) nurturing relationships with higher civil and military authorities; 4) nurturing relationships with subordinate commanders and warriors; 5) optimizing operational design and tactical technique; and 6) fostering intelligence and technological and doctrinal innovation. Each general's proficiency is evaluated under the individual criteria and receives a composite ranking.

The evidence demonstrates that Haig and Harris both proved proficient practitioners of attrition. Both men were adept at translating policy objectives into a coherent strategy executed through optimized operational design and tactical techniques. Their strategic vision and determination could, however, be both a virtue and a vice. Where Haig's obstinacy inhibited him from nurturing relationships with his superiors, Harris's obstinacy clouded his judgment regarding intelligence and innovation. In the end, that Britain won both wars is due significantly to Haig's and Harris's proficiency as practitioners of the strategy of attrition.

In summary, this thesis finds that proficiency in conducting a strategy of attrition begins with recognizing the type of war one is fighting. Once a general decides upon pursuing a strategy of attrition, he must project a clear, consistent strategic vision to superiors and subordinates alike, and have the patience, confidence, and determination to see it through. Finally, he must foment an institutional climate that balances doctrinal adherence with flexible adaptation and innovation. Attrition stubbornly persists into the twenty-first century as a viable strategy, and it must be studied as such. If a contemporary strategist wants to learn about both the positive and negative aspects of the strategy of attrition, there are few better exemplars than those archattrition practitioners, Sir Douglas Haig and Sir Arthur Harris.

CONTENTS

Chapter		Page
	ADVISOR AND READER APPROVAL	ii
	DISCLAIMER	iii
	ABOUT THE AUTHOR	iv
	ACKNOWLEDGEMENTS	v
	ABSTRACT	vi
1	INTRODUCTION	1
2	GENERALSHIP AND THE STRATEGY OF ATTRITION	19
3	SIR DOUGLAS HAIG AND ATTRITION	48
4	SIR ARTHUR HARRIS AND ATTRITION	81
5	CONCLUSIONS AND IMPLICATIONS.	114
	BIBLIOGRAPHY	124
	Illustrations	
Table	<u>,</u>	Page

Тг	blePage
1	The Key Factors of Successful Generalship and Attrition
2	Six Criteria for Evaluating Generalship46
3	Summary of the Proficiency of Sir Douglas Haig
4	Summary of the Proficiency of Sir Arthur Harris
5	Comparison of the Proficiency of Haig and Harris 115

Chapter 1

Introduction

The strategist has to be aware of the potential benefits and costs associated with each type of strategy considered. He should never discard a strategic approach simply because it has a bad name.

J. Boone Bartholomees, Jr

We owe it to ourselves to escape from the bad habit of viewing this cataclysmic event, and its leading actors, through a mist of myths and half-truths.

Gary Sheffield

Field Marshal Sir Douglas Haig, commander of the British Expeditionary Force (BEF) during WWI, and Air Chief Marshal Sir Arthur Harris, commander of Royal Air Force (RAF) Bomber Command during WWII, are so closely associated with the strategy of attrition as to be virtually synonymous with it. Today, no twenty-first century politician or commander will confess to pursuing an attrition strategy. Yet attrition stubbornly persists as a strategic reality. For example, absent an enemy capital awaiting triumphant capture or even an enemy head of state with whom to negotiate, America's current counter-terrorism strategy certainly looks like one of attrition, whether we admit it or not.¹ By failing to study attrition seriously, strategists risk violating Clausewitz's admonition that "the first, the supreme, the most far-reaching act of judgment that the statesman and commander have to make is to establish by that test the kind of war on which they are embarking; neither mistaking it for, nor trying to turn it into, something that is alien to its nature."2

¹ J. Boone Bartholomees, Jr., "The Issue of Attrition," *Parameters* 40, no. 1 (Spring 2010): 15-17.

² Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret. Rev ed. (Princeton, NJ: Princeton University Press, 1989), 88.

In a war of attrition, one side exchanges blows with the other in the expectation that it will break the enemy's will before its own collapses. Critics argue that attrition wars tend to be long, expensive, and brutal. They are—but attrition is, nonetheless, at times necessary. Particularly in an industrial war between equally equipped and determined foes, there are no short-cuts; wars may devolve into attrition despite one's best intentions to the contrary. Few knew this better than two of attrition's most notorious practitioners, Sir Douglas Haig and Sir Arthur Harris.

The Research Question and Its Significance

This thesis seeks to answer the question: "How proficient were Douglas Haig and Arthur Harris as practitioners of attrition?" The intent is not to refight their campaigns or comb over well-trodden historiographical ground, nor is it to advocate for strategies of attrition as a class. Rather, this thesis is about leadership performance in the specific and difficult conditions of attrition warfare. While leadership is important for any military endeavor, attrition places great demands on certain attributes, such as long-term planning ability and the willingness to experiment and adapt. Counter-intuitively, attrition may also convert other traits, such as obstinacy or overoptimism, from leadership vices into virtues. By rigorously examining Haig and Harris's experiences, contemporary strategists should gain useful insights into the link between leadership and proficiency in waging wars of attrition.

Methodology

This thesis uses a qualitative methodology of comparative historical examples. Douglas Haig and Arthur Harris are compelling subjects for their many similarities. Both were senior British officers who won their wars on the battlefield but have largely lost them in the minds of posterity. According to Sebastian Cox, "there are few more controversial figures in modern British military history than Sir Arthur Harris, architect of the RAF's bomber offensive against Germany. In the

2

Twentieth Century perhaps only Sir Douglas Haig has attracted so much vilification and public hostility."³ The historiography of both is rich, with the raging debates approaching a publishing cottage industry. More importantly for this thesis, both men left copious amounts of personal and professional correspondence in which they forcefully, if not always elegantly, defended the strategy of attrition. This thesis utilizes the secondary literature to frame the discussion, but allows these men to speak on their own behalf by mining the writing of their own hands. Taken together, these sources will provide readers with sufficient historical evidence from which to form their own judgments.

The fact that both Haig and Harris won their wars is too superficial to be a valid measure of proficiency. Equally simplistic is declaring a general to be "good" or "bad" without qualification or elaboration. For instance, while history concedes that Erwin Rommel was a "good" general, the label itself does not tell us anything about the criteria for "goodness." The question should not be "if" Rommel was a good general, but "why." To evaluate generalship properly, it is necessary to answer several specific questions. What are the implications of the nature of war on generalship? Are their specific factors that correlate with successful generalship? Are their specific factors that correlate with successful attrition? In other words, what is the relationship between the nature of war, generalship, and the strategy of attrition?

Chapter 2 examines these questions and synthesizes the answers to form the methodology used in the historical examples. I will analyze how well Haig and Harris employed attrition in support of British national strategy by subjectively evaluating each general's proficiency using six complementary criteria. They are 1) translating policy objectives into coherent strategy and operations; 2) balancing doctrinal

³ Arthur Harris, *Despatch on War Operations: 23rd February, 1942 to 8th May,* 1945. Ed. Sebastian Cox (London: Frank Cass, 1995), ix.

adherence with flexible adaptation; 3) nurturing relationships with higher civil and military authorities; 4) nurturing relationships with subordinate commanders and warriors; 5) optimizing operational design and tactical technique; and 6) fostering intelligence and technological and doctrinal innovation.

Deconstructing attrition and subjecting its components to rigorous analysis will provide the basis for valid, comparative analysis of Haig and Harris as attrition practitioners. The ultimate goal is to use this analysis to provide lessons regarding attrition for contemporary strategists.

Literature Review

The Strategy of Attrition

In spite of attrition being a strategy as old as warfare itself, strategists and historians alike have invested surprisingly little effort in studying it. Both Carl von Clausewitz (*On War*) and Hans Delbrück (*The Dawn of Modern Warfare*) wrote about attrition from a theoretical perspective, but difficulties in translation and interpretation pose multiple challenges for English speakers. For instance, scholars have translated the Clausewitzian term "*verzehrender krieg*" as "war of attrition," but "war of consumption" may be more accurate. ⁴ Similarly, Delbrück's "*Ermattungsstrategie*" can be translated as "strategy of attrition" though Gordon Craig argued persuasively for its being rendered as "strategy of exhaustion."⁵

Subsequent scholars have compounded the confusion over the meaning of attrition by frequently invoking the word, but rarely defining it. For instance, the word attrition is used throughout *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*, yet the concept is only

⁴ James D. Kiras, *Special Operations and Strategy: From World War II to the War on Terrorism* (New York: Routledge, 2006), 59-60.

⁵ Gordon A. Craig, "Delbruck: The Military Historian," in *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*, ed. Peter Paret (Princeton, NJ: Princeton University Press, 1986), 341-344.

defined in context of what Clausewitz and Delbrück meant by it. In general, few authors bother to define attrition, passively trusting that the reader will correctly infer the word to be a pejorative catch-all for military operations that are bloody, indecisive, and otherwise unimaginatively conceived and incompetently executed.⁶

Carter Malkasian's *A History of Modern Wars of Attrition* is the noteworthy exception, standing as the only major work dedicated to examining attrition as both strategy and theoretical concept. Yet old paradigms can be remarkably resilient. Although Malkasian dedicates a chapter to attrition during World War I, his conclusions reflect the historiographical biases found in his choice of sources, particularly regarding the British army.

Field Marshal Sir Douglas Haig and the BEF

The starting point for any serious study of Sir Douglas Haig and the British army during World War I is the 29-volume *History of the Great War Based on Official Documents*. Edited by Brigadier General Sir James Edmonds and generally referred to as the British Official History, it provides a rich, albeit sometimes tedious, source for information related to Haig and British strategy. An historiographical subject in its own right, the Official History suffers from the selective editing inevitable in the production of such an inherently political product. Critics accuse Edmonds of being a Haig confidant who deliberately edited the series to show Haig and BEF General Headquarters (GHQ) in the best possible light. The fact that it took 33 years to complete—the final volume was not published until 1949—also exposes Edmonds to the charge that he deliberately used the official histories as a platform from which to counter Haig's post-war critics, specifically the critiques made by David

⁶ Robert Pois and Philip Langer, *Command Failure in War: Psychology and Leadership* (Bloomington, IN: Indiana University Press, 2004), 153-155. Notable authors that invoke this theme include J.F.C. Fuller (*The Foundations of the Science of War*), Norman Dixon (*On the Psychology of Military Incompetence*), and Martin Van Creveld (*Command in War*).

Lloyd George in his 1936 memoirs.⁷ A recent defender, however, has pointed out that "by almost every standard by which the Official Military Histories of the Great War might be judged, one must conclude that the works were of substantial historical, military and literary value...Even those who have accused Edmonds of bias have had to acknowledge that his assessments and conclusions are correct."⁸

Equally important to the study of WWI British strategy in general, and indispensable for Sir Douglas Haig in particular, are Haig's war diaries and personal correspondence. Acutely, though not always humbly, aware of his pivotal role in one of history's most important events, Haig assiduously maintained his diary for posterity and preserved copies of his extensive correspondence. Importantly, there are two sets of Haig diaries, the first a hand-written, contemporary manuscript; the other a typed version he polished after the war. These diaries shed a remarkable light on Haig's thought process and evolving strategic vision, but are as controversial as the man himself. Haig's critics condemn his diaries as being, at best, selectively edited and selfserving and, at worst, an outright fraud sinisterly crafted to fool the official historians and "pollute the public record of the war."9 Professor Gary Sheffield, a Haig biographer and co-editor of the Haig diaries, makes a compelling case for their authenticity, concluding that "the diary does not construct (or reconstruct) the war according to an agenda designed to make Haig look good. If such an agenda existed it was surely laid down in his *Final Dispatch* of 21 March 1919.^{"10} Although retrospective and clearly crafted to paint the BEF, as well as its

⁷ Tim Travers, *The Killing Ground: The British Army, The Western Front & The Emergence of Modern War 1900-1918* (Barnsley, UK: Pen & Sword, 2003), 214-217.

⁸ Andrew Green, Writing the Great War: Sir James Edmonds and the Official Histories, 1915-1948 (London: Frank Cass, 2003), 207.

⁹ Gary Sheffield and John Bourne, eds., *Douglas Haig: War Diaries and Letters 1914-1918* (Chatham, UK: Weidendfeld & Nicolson, 2005), ix-3.

¹⁰ Sheffield and Bourne, *Douglas Haig: War Diaries*, 9-10.

commander, in the best possible light, his *Final Dispatch* nonetheless serves as the most cogent expression of Haig's strategy of attrition.¹¹

The historiography of the British army during World War I is dominated by two broad schools that are largely divided by their views of Haig. In fact, many scholars consider how one views Haig to be a kind of litmus test, a succinct indicator of how that individual interprets the BEF and Britain's strategy in World War I as a whole.¹²

The historical community popularly calls the first school of thought "Lions Led By Donkeys," characterized by eulogizing the stolid resolve of the rank and file while castigating leadership that is viewed, at best, as stupid, corpulent, unimaginative, indifferent and, at worst, as directly responsible for the murder of a generation of young Britons. The sentiment is frequently reduced to a single, "almost certainly apocryphal," story of Sir Douglas Haig's Chief of Staff, Lieutenant General Sir Launcelot Kiggell, breaking out into tears upon seeing the muddy desolation of Passchendaele and exclaiming, "Good God! Did we really send men to fight in *that*?"¹³

The phrase "lions led by donkeys" was popularized in Alan Clark's 1961 book *The Donkeys* and refers to a purported conversation between the German generals Erich Ludendorff and Max Hoffmann:

Ludendorff: "The English soldiers fight like lions."

Hoffmann: "True. But don't we know that they are lions led by donkeys."

¹¹ Sheffield and Bourne, *Douglas Haig: War Diaries*, 517-523.

¹² Peter Hart (Imperial War Museum Oral Historian), in discussion with author, 23 January 2014.

¹³ Dan Todman, *The Great War: Myth and Memory* (London: Hambledon and London, 2005), 81. For further refutation of the Kiggell anecdote, see Brian Bond,
"Passchendaele: Verdicts, Past and Present," in *Passchendaele In Perspective: The Third Battle of Ypres*, ed. Brian Bond (London: Leo Cooper, 1997), 482-482; and Gary Sheffield, *The Chief: Douglas Haig and the British Army* (London: Arum Press, 2011), 233-234.

Although this exchange has never been verified and is controversial in its own right, it nonetheless reflects the popular revulsion that emerged in the 1930s, and continues to this day, over the way British generals conducted the war. The major themes are that the BEF's generals, especially Douglas Haig, were callous to the suffering they inflicted upon their men; ensconced comfortably in their chateaus and never went to the front lines; unintelligent and unprepared for modern war; compounded this incompetence with reactionary fervormuch is made of Haig's being a cavalry officer; and utterly resistant to change or innovation. In short, the British generals represented everything that was wrong with the ruling class of Edwardian Britain. In addition to Clark, other key proponents of this school of scholarship include Sir Basil Henry Liddell Hart (The Real War 1914-1918), J.F.C. Fuller (Generalship: Its Diseases and Their Cure: A Study of the Personal Factor in Command), Denis Winter (Haig's Command: A Reassessment), and John Laffin (British Butchers and Bunglers of World War One). This line of thinking is also evident in popular cultural icons such as the war poets, the play and movie "Oh, What a Lovely War!" and the comedy television series "Blackadder Goes Forth."14

This line of interpretation is contested by what is known as the "Learning Curve" school. Pioneered by John Terraine (*Douglas Haig: The Educated Soldier*), invigorated by Shelford Bidwell and Dominick Graham (*Fire-Power: British Army Weapons and Theories of War 1904-1945*), and continued by later historians such as Paddy Griffith (*Battle Tactics of the Western Front: The British Army's Art of Attack 1916-18*), Gary Sheffield (*Forgotten Victory: The First World War Myths and Realities*), and Robin Prior and Trevor Wilson (*Command on the Western Front: The Military Career of Sir Henry Rawlinson 1914-1918*), this revisionist school stresses the successful evolution of the BEF's operational art of war. The

¹⁴ Sheffield, *The Chief*, 3-5.

revisionists give credit where it is due to the BEF for overcoming many enormous challenges and view its leaders as determined, intelligent, and well-trained men who in four years transformed what the Kaiser famously derided as "that contemptible little army" into, arguably, the primary instrument of his defeat.¹⁵

While the revisionists certainly do not always arrive at the same conclusions, they nonetheless push one another to expand the depth and breadth of BEF scholarship. By the first decade of the twenty-first century the revisionists have arrived at a rough consensus "that the army eventually adapted well to the new conditions of warfare on the Western Front, and by 1918 it had emerged as a highly effective force. There is no such consensus about Haig."¹⁶

At one extreme is John Terraine's seminal *Douglas Haig: The Educated Soldier*, which asserted that Haig was every bit as great a Great Captain as Marlborough or Wellington. On the other is Tim Travers (*The Killing Ground* and *How the War Was Won: Command and Technology in the British Army on the Western Front 1917-1918*) who essentially postulates that the BEF succeeded in spite, not because, of Haig's generalship.¹⁷ In between one finds a range of balanced and welldocumented assessments in recent biographical works by Gary Sheffield (*The Chief: Douglas Haig and the British Army*), J.P. Harris (*Douglas Haig*

¹⁵ Other prominent revisionists include Simon Robins (*British Generalship on the Western Front 1914-1918*), Jonathan Bailey ("The First World War and the birth of modern warfare," in *The Dynamics of Military Revolution, 1300-2025*, edited by MacGregor Knox and Williamson Murray), Martin Samuels (*Command or Control? Command, Training and Tactics in the British and German Armies, 1888-1918*), Andy Simpson (*Directing Operations: British Corps Command on the Western Front 1914-1918*), William Philpott (*Three Armies on the Somme: The First Battle of the Twentieth Century*), and Jonathan Boff (*Winning and Losing on the Western Front: The British Third Army and the Defeat of Germany in 1918*)

¹⁶ Sheffield, *The Chief*, 4-5.

¹⁷ J.M. Bourne, "Haig and the Historians," in *Haig: A Reappraisal 70 Years on*, eds. Brian Bond and Nigel Cave (Barnsley, UK: Leo Cooper, 1999), 6-8.

and the First World War), and the anthology edited by Brian Bond and Nigel Cave (Haig: A Reappraisal 70 Years On).

The historiography of higher British strategy is similarly bifurcated. Historians such as Keith Grieves (*The Politics of Manpower*, 1914-18) largely agree that David Lloyd George and the politicians were correct in distrusting Haig, as "the control of military manpower was too important a matter to be left to the generals."¹⁸ Others, such as William Philpott (*Anglo-French Relations and Strategy on the Western Front*, 1914-18) and David French (*British Strategy & War Aims*, 1914-1916 and *The Strategy of the Lloyd George Coalition*, 1916-1918) give Haig credit for successfully executing a strategy dictated to him by the politicians under extraordinary conditions, rendered even more challenging by fighting as the junior partner of a coalition.

The Douglas Haig historiographical controversy shows no signs of abating and will surely intensify with the centenary of World War I. The public's appetite for debating Arthur Harris's legacy has proved equally insatiable.

Air Chief Marshal Sir Arthur Harris and RAF Bomber Command

As with Haig and the BEF, Sir Arthur Harris has become inextricably linked to the formation he commanded and the strategy he prosecuted. In essence, the history of Harris *is* the history of Bomber Command; and the history of both is the strategy of relentless attrition through the area bombing of German cities.

Unlike Haig, Harris never had a "honeymoon" period of public acclaim and respect.¹⁹ To the contrary, both Harris and his strategy became increasingly controversial and politically unpalatable as the war in Europe wound down. Winston Churchill's conspicuous omission of

¹⁸ Keith Grieves, *The Politics of Manpower, 1914-18* (Manchester, UK: Manchester University Press, 1988), 210.

¹⁹ Sheffield, *The Chief*, 1-3.

Bomber Command in his VE Day speech to the nation symbolized Great Britain's discomfort in reconciling winning the war with the strategy employed to win it.²⁰

Acutely image conscious, Arthur Harris actually fired the first shots in the historiographical battle over his and Bomber Command's legacies. In the fall of 1945 Harris submitted his Despatch on War Operations to the Air Ministry. Intended for a professional, internal audience, it included (then) classified information, to include much technical and Operational Research data. Although there is some debate about how much of it he, as opposed to his staff, wrote, it clearly reflected the unvarnished, uncensored version of the war-Arthur Harris's war, according to Arthur Harris.²¹ As Sebastian Cox observes, "the *Despatch* scarcely bothers to conceal the sense of exasperation with those who wished to use the power of the strategic bombing force in ways which the C-in-C regarded as foolish or wasteful, and it pulls no punches in leveling criticisms at those he considered to have fallen short of his own high standards."22 Perhaps unsurprisingly, the Air Staff delayed circulation of this controversial document within the RAF and denied it to the public for years, ostensibly for security reasons.

Frustrated at not being able to state his case publicly, Harris followed up his *Despatch* with his memoirs, *Bomber Offensive*, in 1947. Written for a general audience, Harris replaced the *Despatch's* classified information and terse technical discussions with engaging narrative that drummed two primary themes. "The first was to describe the progress of the offensive: the problems with which it had been faced, and the steps by which these were overcome. The second was to make clear, in justice to his crews much more than to himself, the final magnitude of Bomber

²⁰ Henry Probert, Bomber Harris: His Life and Times (London: Greenhill, 2001) 344-345.

²¹ Probert, Bomber Harris, 354-354.

²² Harris, Despatch on War Operations, xi.

Command's achievement."²³ Together, Harris's *Despatch* and *Bomber Command* played a similar role to that of Haig's *Final Dispatch* in establishing the original master narrative. In sum, the first—but not final—word on Harris and RAF Bomber Command was that attrition through area bombing of German cities was horrible; but it was also necessary, justified, effective, and would have been singularly decisive if the Allies had only devoted more resources to it.

While Harris was working on his Despatch and memoirs, the American and British post-war bombing survey teams were sowing the historiographical seeds that would undermine his carefully crafted master narrative. Both the United States Strategic Bombing Survey (USSBS) and British Bombing Survey Unit (BBSU) returned ambivalent conclusions as to the effectiveness of the strategic bombing of Germany. The USSBS found that "bombing had been important in collapsing the German war effort, but only late in the day and in combination with other effects."24 The BBSU arrived at the same assessment but expressed it in even stronger terms, concluding that "in so far as the offensive against German towns were designed to break the morale of the German civilian population, it clearly failed. Far from lowering essential war production, it also failed to stem a remarkable increase in the output of armaments." Even more damning was the authors' assertion that "area attacks against German cities could not have been responsible for more than a small part of the fall which actually had occurred in German production by the Spring of 1945."²⁵ However, like the *Despatch*, the BBSU report was originally classified, which allowed the Harris master

²³ Arthur Harris, Bomber Offensive (London: Greenhill Books, 1990), vi.

²⁴ Tami Davis Biddle, *Rhetoric and Reality in Air Warfare: The Evolution of British and American Ideas about Strategic Bombing, 1914-1945* (Princeton, NJ: Princeton University Press, 2002), 274-275.

²⁵ Biddle, *Rhetoric and Reality*, 280-281.

narrative to predominate until 1961, when it was challenged from a very unexpected quarter—the British official history.

Historians generally consider Sir Charles Webster and Noble Frankland's magisterial *The Strategic Air Offensive Against Germany* to be one of the best-written, most influential, and most controversial official histories ever produced.²⁶ "Those who have made use of this excellent work know that it remains not only the best narrative account of the British bomber offensive, but is also brutally honest in its assessment of the efficacy of all the bombing operations and why the British offensive was less effective than it might have been. No punches are pulled."²⁷

With ready access to classified and limited-distribution documents, Webster and Frankland skillfully blended compelling narrative with meticulous research and analysis. In addition to the aforementioned bombing survey reports, unit diaries, and technical reports, the authors also had access to internal correspondence and memoranda. Particularly illuminating, and therefore particularly controversial, was the "demi-official" correspondence between Harris and the Chief of Air Staff, Sir Charles Portal. Their heated exchanges over strategy in late 1944 and 1945 form the cornerstone of much of the subsequent historiography. Surely aware that the exchange did not bring much credit to themselves or the RAF, Harris, Portal, and the Air Ministry worked aggressively to suppress publication of this correspondence, as well as other particular passages from the official history.²⁸

²⁶ Sebastian Cox, "Setting the Historical Agenda: Webster and Frankland and the Debate over the Strategic Bombing Offensive against Germany, 1939-1945," in *The Last Word? Essays on Official History in the United States and British Commonwealth*, ed. Jeffrey Grey (Westport, CT: Praeger, 2003), 147.

²⁷ Christina J.M. Goulter, "British Official Histories of the Air War," in *The Last Word? Essays on Official History in the United States and British Commonwealth*, ed. Jeffrey Grey (Westport, CT: Praeger, 2003), 140.

²⁸ Goulter, "British Official Histories of the Air War," in *The Last Word?*, 141-142.

Although Webster and Frankland largely succeeded in protecting the academic integrity of their work, the Air Ministry's concerns proved justified. According to Sebastian Cox, "The press coverage that followed publication was extreme, distorted, sensationalized, and biased, with headlines using phrases, such as 'costly failure,' that had never appeared in the work...and there is no doubt that the book has subsequently been used selectively and often unjustly over a long period to mount attacks on the service."²⁹ *The Strategic Air Offensive Against Germany* frequently credits Harris and Bomber Command, but by widely promoting a conclusion similar to that of the BBSU, it established a counter-narrative and ignited a controversy, smoldering since 1945, that shows no signs of burning out any time soon.³⁰

Taken together, Harris's *Despatch* and *Bomber Command*, the bomb surveys, and *The Strategic Air Offensive Against Germany* have largely framed the debate for virtually all subsequent historiography. Harris's effluent candor and literary style provide a seemingly inexhaustible supply of quotes that historians continue to use either to excoriate or exonerate him and his strategy. As Sebastian Cox succinctly observes in his introduction to *Despatch on War Operations*, "the critics may broadly be divided into three groups: those who consider the entire concept of bombing civilians to be immoral, those who consider it military ineffective or unwise or both, and those who believe that it was justified in the early part of the war, but that 'precision' bombing should have been adopted as a feasible alternative, probably at some point during 1944. Some critics belong to more than one group simultaneously, and protagonists of all three positions have been known

²⁹ Cox, "Setting the Historical Agenda," in *The Last Word?*, 158-159.

³⁰ Most recently, Richard Overy *The Bombing War: Europe 1939-1945*. London: Allen Lane, 2013.

to use arguments borrowed from the other two to bolster specific aspects of their case."³¹

For the moral objectionists, utilitarian calculations of the effectiveness or efficiency of attrition through the area bombing of German cities are irrelevant. The ends, no matter how noble, simply cannot justify the means, with some authors such as Jorge Friedrich (*The Fire: The Bombing of Germany, 1940-1945*) unequivocally calling Arthur Harris a war criminal. Other prominent moral objectionists include David Irving (*The Destruction of Dresden*), A.C. Grayling (*Among the Dead Cities*), and the novelist Kurt Vonnegut (*Slaughterhouse-Five*).

In contrast, the majority of historians view the bombing of German cities through utilitarian lenses. For them, there was a war to be won and what mattered was finding the most effective, efficient means to that end. Popular historians such as Anthony Verrier (*The Bomber Offensive*) and Max Hastings (*Bomber Command*) followed the path trod by the BBSU and Webster and Frankland to argue that Harris's strategy was ultimately not worth the investment in lives and resources. Other historians, such as Robin Neillands (*The Bomber War*), Charles Messenger ('*Bomber' Harris and the Strategic Bombing Offensive, 1939-1945*), and Richard Overy (*Bomber Command 1939-1945* and *The Bombing War: Europe 1939-1945*), have taken the more expansive view that, although strategic bombing did not live up to its pre-war promise, it nonetheless was instrumental in defeating Nazi Germany.

Authors who bridge the moral objectionist and utilitarian points of view include Michael Walzer (*Just and Unjust Wars*) and Keith Lowe (*Inferno: The Fiery Destruction of Hamburg*). Perhaps the most prominent contemporary theorist on morality in war, Walzer is clearly conflicted over the bombing of German cities. On one hand, he acknowledges that the probability of a Nazi victory may have constituted the "supreme

³¹ Harris, Despatch on War Operations, xi.

emergency" that would justify the attacks. On the other, the evidence leads him to the uncomfortable conclusion that the Allies only had the capability to inflict heavy damage on German civilians in 1942, *after* the supreme emergency had passed.³² Lowe takes a similar tack, arguing that the British area bombing of Germany cities was only justified when there was no other alternative and should have been abandoned as soon as more precise bombing was feasible. Intent is crucial for Lowe, who posits that "the only thing that saves this policy [area bombing] from the charge of total immorality is the fact that it was born from the very best of intentions. Those who advocated bombing civilians sincerely believed that they were trying to save lives rather than take them."³³

The final category is the biographies of Harris and works specifically on RAF leadership. There are surprisingly few biographies of Harris, probably because he was adamant that no authorized biography would be published during his lifetime. This explains why Dudley Saward wrote *Bomber Harris: The Story of Marshal of the Royal Air Force, Sir Arthur Harris* in the early 1970s but did not publish it until after Harris's death in 1984.³⁴ Although heavily reliant upon secondary sources and Harris's hindsight, Saward's work was the best Harris biography until 2001, when Henry Probert published *Bomber Harris: His Life and Times*. Covering the entire span of Harris's life and grounded in archival research, Probert's work is honest, balanced, and remains Harris's definitive biography. The very best work on RAF senior leadership regarding the strategic bomber offensive is Peter Gray's *The Leadership, Direction and Legitimacy of the RAF Bomber Offensive from Inception to 1945*. Tami Davis Biddle (*Rhetoric and Reality in Air Warfare*)

³² Michael Walzer, *Just and Unjust Wars: A Moral Argument with Historical Illustrations* 4th ed. (New York: Basic Books, 2006), 251-263.

³³ Keith Lowe, *Inferno: The Fiery Destruction of Hamburg, 1943* (New York: Scribner, 2007), 307-309.

³⁴ Probert, *Bomber Harris*, 403-404.

and John Terraine (*A Time For Courage*) are both similarly useful for placing Harris and RAF Comber Command within a broader doctrinal, institutional, and strategic context.

Road Map of the Argument

This thesis examines the proficiency of Sir Douglas Haig and Sir Arthur Harris in planning and prosecuting a strategy of attrition. Chapter 2 examines how one evaluates generalship in wars of attrition and describes the analytic model used in the historical examples. Chapters 3 (Haig) and 4 (Harris) present the historical evidence that forms the bedrock of the analysis. Chapter 5 draws conclusions based upon a comparative analysis of historical evidence and presents implications for contemporary strategists.

This thesis covers wars that are remote in time and space, and the modern strategist must be careful to distinguish temporal lessons from the perpetual. As the novelist L.P. Hartley wrote, "the past is a foreign country: they do things differently there."³⁵ However, there is more to attrition than sending 100,000 soldiers "over the top" on the Somme or directing 1,000 bombers to Hamburg. This is why context is a recurring theme throughout this thesis. The objective is not to make the reader an expert on attrition, Haig, Harris, or their campaigns. This thesis will be a success if, after reading it, a future strategist contemplates the strategy of attrition in a way that stimulates his imagination to practice it proficiently when he will or when he must.

³⁵ L.P. Hartley, *The Go Between* (London: Penguin, 1953), 7.

Chapter 2

Generalship and the Strategy of Attrition

Successful generals, especially in the First World War, were men with ruthless determination to impose their will on the enemy, who could bear the human cost of their decisions and shoulder a crushing burden of responsibility.

Gary Sheffield

Thus, we again are confronted with the unpalatable possibility that under certain circumstances, most particularly attritional ones, psychological dysfunctionalism may play a crucial "positive" role in determining victory will go to the side most able to endure heavy losses over time.

Robert Pois and Philip Langer

War is chaos, and command is the relentless pursuit of imposing order on chaos. As Martin Van Creveld argues in *Command in War*, "from Plato to NATO, the history of command in war consists essentially of an endless quest for certainty—certainty about the state and intentions of the enemy's forces; certainty about the manifold factors that together constitute the environment in which the war is fought, from the weather and the terrain to radioactivity and the presence of chemical warfare agents; and last but definitely not least, certainly about the state, intentions, and activities of one's own forces."³⁶ This paradox, trying to control the uncontrollable, applies to war in all its forms, but perhaps manifests itself most powerfully during wars of attrition due to their duration, intensity, and ferocity.

This chapter seeks to determine how to evaluate generalship in wars of attrition. Using a building-block approach, it first examines the nature of war as described by two noteworthy military theorists. It next

³⁶ Martin Van Creveld, *Command in War*, (Cambridge, MA: Harvard University Press, 1988), 264.

investigates the nature of war's implications for generalship, particularly as performed at the highest level, synthesizing diverse perspectives to identify key criteria against which to evaluate generalship. There follows a brief overview of the theory and history of attrition. The final step is to investigate the nexus of attrition warfare and generalship, concluding by introducing the analytic model which will be used in the historical examples to assess Douglas Haig's and Arthur Harris's proficiency as attrition practitioners.

The Nature of War

Few theorists have captured the nature of war as succinctly and evocatively as Carl von Clausewitz and J.F.C. Fuller. Both eschewed categorical statements about war that they found temporal, superficial, and pedantic. Instead, they sought to distinguish between the essence of war, those elements that do not change, from the temporal aspects of war, those elements that do change. Although separated by time, space, language, and theoretical inspiration, both men fundamentally arrived at a similar conclusion while employing three-part descriptive models.

For Clausewitz, war could metaphysically be reduced to the three distinct, yet interrelated, tendencies that formed his *wunderliche Dreifaltigkeit*, or "paradoxical trinity."³⁷ In his famous words, "war is more than a true chameleon that slightly adapts its characteristics to the given case. As a total phenomenon its dominant tendencies always make war a paradoxical trinity—composed of primordial violence, hatred, and enmity, which are to be regarded as a blind natural force; of the play of chance and probability within which the creative spirit is free to roam;

³⁷ Debate persists over the most appropriate translation of *wunderliche*. While Michael Howard and Peter Paret use paradoxical, others prefer remarkable, marvelous, or fascinating. See Edward Villacres and Christopher Bassford, "Reclaiming the Clausewitzian Trinity," *Parameters*, Autumn 1995, 9-19.

and of its element of subordination, as a instrument of policy, which makes it subject to reason alone."³⁸

Clausewitz elaborated upon this trinity by investing specific components of society with each tendency. "The first of these three aspects mainly concerns the people; the second the commander and his army; the third the government. The passions that are to be kindled in war must already be inherent in the people; the scope which the play of courage and talent will enjoy in the realm of probability and chance depends on the particular character of the commander and the army; but the political aims are the business of government alone."³⁹

Whether one views Clausewitz's trinity as being violence-chancereason or people-military-government is less important than recognizing that each tendency is in a state of perpetual, dynamic tension with the others. By example, Clausewitz suggested suspending a metallic object between three magnets. As anyone who has tried will attest, each time one releases the suspended object it follows an erratic, seemingly chaotic, path that defies replication. The frustration one experiences trying to control the experimental conditions enough to replicate the suspended object's motion serves as a simple, but powerful, metaphor for the paradox between uncertainty and command.⁴⁰

In contrast to Clausewitz, who sought the nature of war through the idealist philosophy characteristic of early nineteenth-century Germany, Fuller sought wisdom through the scientific rationalism of early twentieth-century England. Although Fuller dismissed Clausewitz as 'a military philosopher, [who] never completed his great work, which is

³⁸ Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret. Rev ed. (Princeton, NJ: Princeton University Press, 1989), 89.

³⁹ Clausewitz, On War, 89.

⁴⁰ Clausewitz, On War, 89.

little more than a mass of notes, a cloud of flame and smoke," their views on the nature of war actually complement each other.⁴¹

Fuller was obsessed with establishing a scientifically based universal theory, and not just for war. "I can establish a foundation so universal that it may be considered axiomatic to knowledge in all its forms, then, not only shall I be able to work from a solid base, but I shall be able to bring the study of war into the closest relationship with the study of all other subjects."⁴² For Fuller, "the threefold order" formed this solid base for scientific rationality. As he saw it, his trinity—a system of trinities is more accurate—was scientifically revealed. "We live in a three-dimensional world, and our knowledge is based on a threefold order." Moreover, "this threefold order surrounds us at every turn. Not only do we live in a three-dimensional world, but we think threedimensionally and our thoughts reflect a three-fold order."⁴³

Although Fuller described many interlocking trinities throughout *The Foundations of the Science of War*, the keystone was his concept of the three spheres of force, which, echoing Clausewitz, "are a trinity and, consequently, can never be separated." For Fuller, the three spheres of force were Mental, Moral, and Physical. "In the mental sphere a sensation takes the form of thought, which is a reflection of the object sensed. In the moral sphere it is the quality of each sensation which endures, and not its form." Moreover, he continued, "a mental decision leads to a physical action, actions being the concrete and tangible manifestations of our thoughts."⁴⁴

Fuller elaborated upon his master trinity. Under the mental sphere, Fuller identified the elements of reason, imagination, and will.

⁴¹ J.F.C Fuller, *The Foundations of the Science of War* (London: Hutchinson & Co., 1926), 20.

⁴² Fuller, *The Foundations of the Science of War*, 48.

⁴³ Fuller, *The Foundations of the Science of War*, 51.

⁴⁴ Fuller, *The Foundations of the Science of War*, 58.

These represent the purview of generalship, the source of strategy, and the sublime tinder for military genius.⁴⁵ He broke the moral sphere into the elements of fear, courage, and *moral.*⁴⁶ Although the moral elements also relate to generalship, they manifest most profoundly in the linkage between leader and led. They are the sinews that bind an army to its commander, constituting the difference between a crowd of frightened individuals and a resolute, cohesive military instrument. "So we find that, as the heterogeneous crowd is swayed by the voice of instinct, a well-ordered army—that is, a homogenous and psychological crowd—is swayed by the voice of training, uniformity of environment having created within it a uniformity of character and spirit."⁴⁷ Finally, Fuller divided the physical sphere into the component elements of protection, offensive action, and movement. Together they provide for military organization, strategy, tactics, and the operational art of creatively employing all three for purpose.⁴⁸

If less elegant than Clausewitz's, Fuller's approach is more useful for explicitly establishing the links between war and command. The Clausewitzian trinity is largely descriptive, with its author observing that "these three tendencies are like three different codes of law, deep-rooted in their subject and yet variable in their relationship to one another."⁴⁹ Fuller's trinity, in contrast, is prescriptive. "Mental force does not win a war; moral force does not win a war; physical force does not win a war, but what *does* win a war is the highest combination of these three forces acting as *one* force."⁵⁰

⁴⁵ Fuller, *The Foundations of the Science of War*, 93-113.

⁴⁶ Following the common English practice of his day, Fuller italicized *moral* when representing concepts which today we associate with the term "morale."

⁴⁷ Fuller, *The Foundations of the Science of War*, 114-143.

⁴⁸ Fuller, The Foundations of the Science of War, 144-174

⁴⁹ Clausewitz, On War, 89.

⁵⁰ Fuller, *The Foundations of the Science of War*, 146.

One can synthesize from Clausewitz and Fuller a different, but perhaps useful, description of the nature of war. Returning to the metaphor of the magnet, three primordial forces influence war through their perpetual tension. The first force is rational, governed by human cognition, and represented by policy. The second is irrational, governed by human emotions, and represented by morale. The third is natural, ungoverned by human agency, and represented by uncertainty. These distinct forces combine to create a dynamic, uncertain environment into which an invisible hand propels the suspended object which represents military organization, strategy, and tactics. The invisible hand represents generalship.

Implications for Generalship

Modern generalship is a product of corporate function and individual inclination, subject to war's uncertain nature. It is important to put generalship in its proper context by defining the functions and responsibilities of military leadership. If Clausewitz is correct that "the political object is the goal, war is the means of reaching it, and means can never be considered in isolation from their purpose," then the same can be said of generalship. The means should never be considered in isolation from their purpose, and the purpose of generalship is to employ military power in support of national policy.⁵¹

Peter Gray observes that "there are many definitions of leadership, to the point that almost every author has his or her own."⁵² For both brevity and coherence with the historical examples, this thesis accepts the modern British military's "Officer's Trinity," theoretically divided into the three interrelated functions of leadership, command, and

⁵¹ Clausewitz, On War, 87.

⁵² Peter Gray, *The Leadership, Direction and Legitimacy of the RAF Bomber Offensive from Inception to 1945*, (London: Continuum Books, 2012), 2.

management. Although often used interchangeably, each term represents subtle distinctions in form and function.⁵³

Leadership involves the art of organizational motivation and direction. Its currency is intangible. Good leaders inspire confidence, engender trust, and provide their subordinates with vision and purpose.⁵⁴ Although typically described in terms of battlefield heroism, leadership reflects the courage of conviction as well as body. Lord Moran described military leadership brilliantly and succinctly: "Leadership in this sense is the capacity to frame plans which will succeed and the faculty of persuading others to carry them out in the face of death."⁵⁵

Command, in contrast, is tied to authority, responsibility, process, and organization. It establishes the legal "right to command and to induce compliance" and includes "the process by which a commander makes decisions, impressed his will upon, and transmits [i.e., tells] his intention to his subordinates." Command also represents the military organizational structure. While commanders rarely possess the ability to create the command structure, they can heavily influence how their organization functions through their personality and command style.⁵⁶

Management is a function created largely in response to the rise of mass organizations in the twentieth century. Management is "the allocation and control of resources [human, material and financial] to achieve the goals and objectives of the organization and the measure of good management is the ability to achieve the right balance: neither an

⁵³ Brian Howieson and Howard Kahn, "Leadership, Management and Command: The Officer's Trinity," in *Air Power Leadership: Theory and Practice*, eds. Peter Gray and Sebastian Cox (London: The Stationary Office, 2002), 15-16.

⁵⁴ Howieson and Kahn, "Leadership, Management and Command," 26-27.

⁵⁵ Lord Moran, *The Anatomy of Courage* (London: Chiswick Press, 1945), 192.

⁵⁶ Howieson and Kahn, "Leadership, Management and Command," 17-22.

over-abundance nor a shortage of resources, either of which would undermine the concentration of effort on the main objective."⁵⁷

One must keep in mind, however, that the above reflects leadership theory as viewed from the twenty-first century. While generals throughout modern history certainly performed the functions described in the Officer's Trinity, they were not necessarily conscious of the distinctions, as their writings reflect. Just as Fuller employed the term "moral" to convey multiple meetings, so one finds Clausewitz blending the modern concepts of leadership, command, and management into his discussion of "military genius."⁵⁸

Over the ages many have attempted to distill the traits of good generalship, either from history or through theory. One can usually trace their various conclusions back to the observer's views on whether generalship is more or less art than science. From earlier theorists, like Clausewitz, one finds more references to sublime, even romantic, concepts such as *coup d'oeil*, inner light, and genius. In contrast, contemporary theorists, such as Peter Feaver, downplay or dismiss the idea of military genius in preference for the rationalism of modern social science and organizational theory. In the middle are pragmatists, like General Sir Archibald Wavell, who provide observations based upon personal experience and what they consider to be common sense. The remainder of this section explores and synthesizes their different perspectives into three key factors for successful generalship, from which are drawn six criteria for evaluating a general's proficiency.

Befitting his early nineteenth century German background and philosophical proclivities, Clausewitz was fascinated with the concept of genius, "the very highly developed mental aptitude for a particular occupation." Remaining consistent to the principles he established with

⁵⁷ Howieson and Kahn, "Leadership, Management and Command," 23-25.

⁵⁸ Clausewitz, On War, 100-112.

his trinity, Clausewitz described specific leadership traits but stressed that "genius consists *in a harmonious combination of elements*, in which one or the other ability may predominate but none may be in conflict with the rest."⁵⁹ Clausewitz found genius, not in raw intellect or physical courage, but in the sublime ability to pierce the fog of war, to identify quickly the correct course of action, and the resolute determination to take it. "If the mind is to emerge unscathed from this relentless struggle with the unforeseen, two qualities are indispensable: *first, an intellect that, even in the darkest hour, retains some glimmerings of the inner light which leads to truth; and second, the courage to follow this faint light wherever it may lead. The first of these qualities is described by the French term <i>coup d'oeil*; the second is *determination*."⁶⁰

Determination clearly intrigued Clausewitz, as he returned to it repeatedly through related language such as "strength of will," "staunchness," "endurance," strength of mind," and "strength of character."⁶¹ In his view, determination was critical because it provided a general with the wherewithal to withstand the crushing pressures of command and uncertainty of war.

Only those general principles and attitudes that result from clear and deep understanding can provide a *comprehensive* guide to action. It is to these that opinions on specific problems should be anchored. The difficulty is to hold fast to these results of contemplation in the torrent of events and new opinions. Often there is a gap between principles and actual events that cannot always be bridged by a succession of logical deductions. Then a measure of self-confidence is needed, and a degree of skepticism is also salutary. Frequently nothing short of an imperative principle will suffice, which is not part of the immediate thought-process, but dominates it: that principle is in all cases to stick to one's first opinion and to refuse to change unless forced to do so by a clear conviction. A strong faith in the overriding truth of

⁵⁹ Clausewitz, On War, 100.

⁶⁰ Clausewitz, On War, 102.

⁶¹ Clausewitz, On War, 104-108.

tested principles is needed; the *vividness* of transient impressions must not make us forget that such truth as they contain is of a lesser stamp. By giving precedence, in case of doubt, to our earlier convictions, by holding to them stubbornly, out actions acquire that quality of steadiness and consistency which is termed strength of character.⁶²

On the other hand, Clausewitz drew the logical conclusion that there is a fine line separating determination and obstinacy. He considered obstinacy to be a defect of character because "stubbornness and intolerance of contradiction result from a special kind of *egotism*, which elevates above everything else *the pleasure of its autonomous intellect, to which others must bow.*" In a passage that eerily presaged the historiographical debates over Douglas Haig and Arthur Harris, Clausewitz argued "that strength of character turns into obstinacy as soon as a man resists another point of view not from a superior insight or attachment to some higher principle, but because he *objects instinctively.* Admittedly, this definition may not be of much practical use; but it will nevertheless help us avoid the interpretation that obstinacy is simply a more intense form of strong character."⁶³

In contrast to Clausewitz's exploration of military genius, political scientist Peter Feaver looks beyond the temperament of any individual general. Drawing from agency theory, he focuses on the functional relationship between principal and agent. "The principal-agent framework is designed to explore problems of agency, how political or economic actors in superior position (principals) control the behavior of political or economic actors in a subordinate position (agent)."⁶⁴ Policy makers and generals are players in a "game of strategic interaction" based upon a conflict of rational self-interest. As the principal, the policy

⁶² Clausewitz, On War, 108.

⁶³ Clausewitz, On War, 108-109.

⁶⁴ Peter Feaver, Armed Servants: Agency, Oversight, and Civil-Military Relations, (Cambridge, MA: Harvard University Press, 2003), 12.

maker expects his agent, the general, to "work" as he directs. The general, on the other hand, has the option of either doing exactly what he was told, or doing something less, of "shirking" as a way to circumvent the principal.⁶⁵ According to Feaver:

The agent is said to work perfectly when it does what it has contracted with the principal to do, how the principal has asked it to, with due diligence and skill, and in such a way as to reinforce the principal's superior role in making the decisions and drawing the lines of any delegation. The military agent is said to shirk when, whether through laziness, insolence, or preventable incompetence, it deviates from its agreement with the civilians in order to pursue different preferences, for instance, by not doing what the civilians have requested, or not in the way the civilians wanted, or in such a way as to undermine the ability of the civilians to make future decisions.⁶⁶

While Feaver restricted his theory to civil-military relations, the principal-agent framework can also apply to the hierarchy *within* the military, "where one person has delegated authority to someone else to act on his behalf."⁶⁷ The implications for generalship are profound, as any general in high command is thus simultaneously a principal *and* an agent, with the inherent organizational tensions exacerbated by the nature of war. Furthermore, some leadership traits, such as Clausewitz's strength of character, may be beneficial in one role but toxic in another.

General Wavell represents a middle ground between Clausewitz and Feaver. Wavell's approach to generalship was pragmatic rather than romantic, practical rather than theoretical. While Wavell echoed Clausewitz's assertions on the need for generals to be physically and morally robust, he argued that the most important mental quality is "common sense, knowledge of what is and what is not possible. It must

⁶⁵ Feaver, Armed Servants, 58-68.

⁶⁶ Feaver, Armed Servants, 68.

⁶⁷ Feaver, Armed Servants, 55.
be based on a really sound knowledge of the 'mechanism of war,' i.e., topography, movement, and supply. These are the real foundations of military knowledge, not strategy and tactics and most people think."⁶⁸ If Wavell bothered to envision genius, he probably pictured a general in an office chair directing his staff, not astride a horse leading his men. High command "begins with the matter of administration, which is the real crux of generalship, to my mind; and places tactics, the handling of troops in battle, at the end of his qualifications instead of at the beginning, where most people place it."⁶⁹

Similarly to Feaver, Wavell emphasized civil-military relations, but instead of an abstract framework, Wavell stressed the importance of interpersonal relationships up and down the military hierarchy. Toward his subordinate commanders the good general must know their characteristics, particularly whether or not they can be trusted with independent command.⁷⁰ Toward the rank and file, a general must mix strict discipline with praise when appropriate. While personal appearances and ceremony are important, a general should never confuse affection for confidence. "Without placing himself at the head of his troops in battle a modern commander can still exercise a very real influence over the morale of his men." Furthermore, a general "must certainly never court popularity. If he has their appreciation and respect it is sufficient."71 Competence is what counts, for without it, mutual trust between leader and led is impossible. Lord Moran echoed this sentiment: "I have divided leadership in an arbitrary fashion into the quality that enables a man to think out what he wants to do and his ability to persuade others to do it. Success is the bridge between; once

⁶⁸ Archibald Wavell. Generals and Generalship (New York: MacMillan, 1941), 8-10.

⁶⁹ Wavell. Generals and Generalship, 2.

⁷⁰ Wavell. Generals and Generalship, 15-17.

⁷¹ Wavell. Generals and Generalship, 18-22.

men are satisfied that their leader has it in him to build for victory they no more question his will but gladly commit their lives to his keeping."⁷²

Taken together, the different, yet overlapping, perspectives that Clausewitz, Feaver, and Wavell offer provide a mosaic of effective generalship. This mosaic suggests three broad conclusions as to what generals must know, be, and do in order to be successful. Since means should never be divorced from purpose, we derive from each two specific functions to serve as criteria for evaluating generalship proficiency.

Vision and Determination. Being tactically and technically proficient in *training*, knowing what to do in a given *hypothetical* situation, is not the same as effectively executing command responsibilities under the uncertainty and stress of war. "What this task requires in the way of higher intellectual gifts is a sense of unity and a power of judgment raised to a marvelous pitch of vision, which easily grasps and dismisses a thousand remote possibilities which an ordinary mind would labor to identify and wear itself out in so doing."⁷³ Generals reveal vision and evidence determination through the following criteria:

- Translating policy objectives into coherent strategy and operations
- Balancing doctrinal adherence with flexible adaptation

Mutual Trust between Principal and Agent. Any general in high command has the responsibility to follow as well as lead. He is the ultimate middle-man, for he does not produce anything himself, but instead turns policy into strategy, and then delegates strategy to subordinates who convert it into operations and, ultimately, tactics. He may have more than one superior, particularly in systems with both military and civilian chains of command, and will certainly be the principal to many agents. Ideally, but rarely, he will serve his principal with the fidelity he demands from his own agents. Ultimately the

⁷² Moran, The Anatomy of Courage, 207.

⁷³ Clausewitz, On War, 112.

principal-agent relationship comes down to mutual trust. As Wavell observed in regard to Abraham Lincoln and U.S. Grant: "It was Ulysses Grant whom he eventually selected as his commander-in-chief; and then he trusted him through thick and thin, though he, Grant, suffered many reverses and had often very heavy casualties."⁷⁴ The following criteria reflect the duality of the principal-agent relationship for generals:

- Nurturing relationships with higher civil and military authorities
- Nurturing relationships with subordinate commanders and warriors

Common Sense and Mastery of the Mechanics of War. There is no intelligence so innate, will so strong, or loyalty so pure, that can substitute for professional competence in higher military command. Modern warfare requires a professionalism that normally only years of sustained training, education, and experience can provide.⁷⁵ "It is knowledge of the mechanics of war, not the principles of strategy, that distinguish a good leader from a bad."⁷⁶ Generals require this competence when passing judgment on conflicting intelligence as well as competing strategies, doctrines, and technologies. Each decision involves an opportunity cost, of a doctrine not followed or technology not developed; and nobody wins on every bet placed. The same RAF leaders that sagely chose the Supermarine Spitfire and Avro Lancaster also championed the Fairey Battle. Few areas test a war-time general's professional competence more than the following criteria:

- Optimizing operational design and tactical technique
- Utilizing intelligence and fomenting technological and doctrinal innovation

⁷⁴ Wavell. Generals and Generalship, 31.

⁷⁵ Dennis Drew, "The Three Pillars of Professional Competence: Imperatives for Airpower Leaders," in *Air Power Leadership: Theory and Practice*, eds. Peter Gray and Sebastian Cox (London: The Stationary Office, 2002), 59-66.

⁷⁶ Wavell. Generals and Generalship, 34.

While these three conclusions and six criteria apply to generalship in any form of modern warfare, their relative significance is heavily dependent on context. For instance, during a war of short duration there will probably not be time for technological and doctrinal innovation, regardless of how receptive and creative the general. On the other hand, a long, bloody war featuring military reverses will significantly test a general's commitment to his doctrinal principles. Perhaps no variable is more important for generalship than strategy, with one historian going so far as to assert that different strategies require different kinds of a "great captain."⁷⁷ Before investigating this assertion's validity, the next section will examine how attrition fits within the broader spectrum of strategy.

The Strategy of Attrition in Theory and History

Attrition in practice predates attrition in theory. The Second Punic and Napoleonic Wars both constitute operative examples, but it took the nineteenth century German theorists Carl von Clausewitz and Hans Delbrück to ground attrition in theory and give it its name. Unfortunately, competing translations and interpretations have led attrition in theory to be, in James Kiras's view, "one of the most misunderstood strategic concepts of the twentieth century."⁷⁸ Moreover, these semantic debates, while of historiographic interest, unnecessarily complicate the strategic discourse.⁷⁹ What follows is a succinct description of the strategy of attrition and its place in modern warfare.

⁷⁷ Carter Malkasian, A History of Modern Wars of Attrition (Westport, CT: Praeger, 2002), 220.

⁷⁸ James D. Kiras, *Special Operations and Strategy: From World War II to the War on Terrorism* (New York: Routledge, 2006), 59.

⁷⁹ For those interested in the semantics of attrition, see, in addition to Kiras, *Special Operations and Strategy*, 58-82; Gordon A. Craig, "Delbrück: The Military Historian," in *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*, ed. Peter Paret (Princeton, NJ: Princeton University Press, 1986), 326-333; J. Boone Bartholomees, Jr., "The Issue of Attrition," *Parameters* 40, no. 1 (Spring 2010), 5-19; Carter Malkasian, *A History of Modern Wars of Attrition* (Westport, CT: Praeger, 2002), 1-11; and Antulio Echevarria, *After Clausewitz: German Military Thinkers Before the Great War* (Lawrence, KS: University of Kansas Press, 2000), 185-190.

Attrition is one of the three predominant strategies of modern warfare. Positioned between exhaustion and annihilation, attrition resides on a scale where boundaries from one strategy frequently blur into another. The distinctions largely come down to objectives (whether the aims are positive or negative), relative strengths (in numbers, method, and will), and the enemy's degree of agency in conflict termination, i.e., conditional or unconditional surrender.

In a strategy of exhaustion, the aim is what Clausewitz considered to be negative. The negative aim is inherently defensive and usually seeks to preserve the status quo. It involves resistance, but not passivity, for "resistance is a form of action, aimed at destroying enough of the enemy's power to force him to renounce his intentions. Every single act of our resistance is directed to that act alone, and that is what makes our policy negative."⁸⁰ This is why force preservation figures prominently in strategies of exhaustion. "Preserving our own forces has a negative purpose; it frustrates the enemy's intentions—that is, it amounts to pure resistance, whose ultimate aim can only be to prolong the war until the enemy is exhausted."⁸¹

Almost invariably, a nation pursuing an exhaustion strategy exhibits relative inferiority to its enemy in numbers (human and material), method (technology and doctrine), or will (policy makers, military, and the populace). Strategic sagacity and will frequently prove decisive in strategies of exhaustion, for in a conflict over limited objectives, the odds favor either the side making the most effective use of its resources or the side willing to sacrifice more to achieve what it wants. While in practice nations do not always make their strategic calculations rationally, in theory "the value of the object must determine the sacrifices to be made for it in *magnitude* and also in *duration*. Once

⁸⁰ Clausewitz, On War, 92.

⁸¹ Clausewitz, On War, 98.

the expenditure of effort exceeds the value of the political object, the object must be renounced and peace must follow."⁸²

Finally, the belligerent prosecuting a war of exhaustion tacitly concedes to the enemy the final decision to terminate the conflict. Instead of trying to impose unconditional defeat, in an exhaustion strategy the object "is to convince an adversary that the political objective he is pursuing is either not attainable or not worth the apparent cost." As Antulio Echevarria observes, "a strategy of exhaustion tends to work best in pursuit of defensive aims, for it allows the attacker to abandon his intentions without necessarily submitting to the defender's will."⁸³

The strategy of annihilation stands in nearly complete contrast to exhaustion. Its aims are positive, as its practitioners use offensive means to change the status quo, sometimes radically. Clausewitz considered annihilation to be war's logical and theoretical extremity. "The worst of all conditions in which a belligerent can find himself is to be utterly defenseless. Consequently, if you are to force the enemy, by making war on him, to do your bidding, you must either make him literally defenseless or at least put him in a position that makes this danger probable. It follows, then, that to overcome the enemy, or disarm him—call it what you will—must always be the aim of warfare."⁸⁴

To achieve such a positive aim requires going on the offensive; and successful offensives require demonstrable superiority of numbers, method, or will in combination. While the strategy of exhaustion places a premium on national will, annihilation tends to favor method. An army superior in method (such as leadership, training, doctrine, or technology) will frequently overcome in a single, decisive battle an opponent superior

⁸² Clausewitz, On War, 93.

⁸³ Echevarria, After Clausewitz, 185-186.

⁸⁴ Clausewitz, On War, 77.

in numbers and will. Carthage against Rome at Cannae and the British Empire against the Mahdis at Omdurman are just two exemplars.

In contrast to exhaustion, in annihilation the objective is to deprive the enemy of options beyond surrender or assured destruction. The surest way to render an enemy powerless is to strike the sword from his hand. As Clausewitz enjoined, "the fighting forces must be *destroyed*: that is, they must be *put in such a condition that they can no longer carry on the fight*. Whenever we use the phrase 'destruction of the enemy's forces' this alone is what we mean."⁸⁵ Although very few armies have ever carried a strategy of annihilation to its theoretical extreme (such as the Romans visited upon Carthage or the Athenians upon Melos), this is largely due to the rational calculation of the victor, not the loser. The loser in a war of annihilation has little say as to how, when, or if it ends. The strong do what they will and the weak suffer what they must.⁸⁶

The strategy of attrition lies between exhaustion and annihilation, and may be viewed as a hybrid strategy largely brought about by the strategic context of the modern, especially industrial, age. Attrition can support positive or negative aims, be offensive or defensive, leverage any relative strength, and end with or without conditions. It can even be an adjunct to a strategy of annihilation, either the horrendous byproduct of failure or the prelude to success. Echevarria described the strategy of attrition succinctly. "A strategy of attrition is merely a slow form of annihilation. One simply grinds one's opponent down, accepting a similar erosion of one's own army, but presumably at a slower rate." Attrition involves "a proportional wearing away of the enemy's psychological and physical strength to reinforce the idea of cost without gain."⁸⁷ A successful strategy of attrition presents the enemy with the

⁸⁵ Clausewitz, On War, 90.

⁸⁶ Thucydides., *History of the Peloponnesian War* (London: Penguin Books, 1972), 402.

⁸⁷ Echevarria, After Clausewitz, 185-186.

poor options of either accepting the victor's terms now or risk the *probability* of worse terms, under worse conditions, at a later date.⁸⁸

Wars are not, however, fought in theory. The strategy of attrition has evolved over time, heavily influenced by the technology, organization, and mobilization of the modern industrialized state. What follows is a brief overview of the history of attrition in modern warfare.

The first deliberate strategies of attrition took place during the Napoleonic Wars. The Duke of Wellington in the Peninsula proved to be the era's finest practitioner, skillfully waging a campaign of exhaustion within a broader Allied strategy of attrition. As Carter Malkasian describes, "Wellington adapted to an adverse strategic context by devising a new method of warfare that effectively countered the French strategy of annihilation. His in-depth defense, scorched-earth tactics, and defensive battles in conjunction with guerrilla warfare maintained the British cause in the Peninsula and diverted troops from Napoleon's more vital concerns in central Europe. Moreover, Wellington's ability to resume decisive operations in 1812 demonstrated the effectiveness of attrition as a preliminary to a strategy of annihilation."

In 1812 the Russians conducted a strategy of attrition that was more decisive, if less elegant, than Wellington's in the Peninsula. The Russians advantageously exploited the strategic context. "The advent of total war influenced the Russian concept of attrition. The Russian people were willing to absorb great losses to defend their homeland. The Russian in-depth retreat caused enormous attrition through extending French supply lines and eventually exposing the Grande Armée to the severe Russian winter. In a campaign without a decisive battle, the French lost a far greater proportion of their manpower than they had ever inflicted on their opponents in a decisive battle." It is not a

⁸⁸ Clausewitz, On War, 90-99.

coincidence that attrition's first theorist, Clausewitz, participated in the 1812 campaign in Russian service.⁸⁹

The American Civil War revealed the Industrial Revolution's impact on the character of war as well as the emergence of the modern strategy of attrition. After the battles of 1861 dispelled any illusions of quick victory, both sides deliberately pursued strategies of attrition. The Confederacy pursued a negative aim, the preservation of its independence, by exploiting superiority in method to raise the Union's costs to a politically untenable level. The Confederate invasions of the North in 1862 and 1863 corresponded closely with Clausewitz's methods of increasing the enemy's expenditure of effort, specifically "*invasion*, that *is the seizure of enemy territory; not with the object of retaining it* but in order to exact financial contributions, or even to lay it waste. The immediate object here is neither to conquer the enemy country nor to destroy its army, but simply to *cause general damage*."⁹⁰

The Union, in contrast, adopted a hybrid strategy of gradual annihilation through attrition. The Union's aims were positive, the subjugation of the Southern states through offensive action, relying upon crushing numerical superiority to overcome both the Confederacy's national will and its military capability. According to Malkasian, the Union "made attrition a key part of annihilating the Confederate military capability. In particular, General William T. Sherman used attrition to serve the aim of total victory: compelling the people of the Confederacy to surrender by taking the painful costs of war onto their doorstep. Sherman's use of attrition had few modern historical precedents. His

⁸⁹ Malkasian, A History of Modern Wars of Attrition, 17-19.

⁹⁰ Clausewitz, *On War*, 93; for a thorough analysis of Confederate strategy, see Richard Beringer, Herman Hattaway, Archer Jones, and William Still, *Why the South Lost the Civil War* (Athens, GA: The University of Georgia Press, 1986).

use of utter destruction in pursuit of a total aim was the final development in the adaptation of attrition to total war."⁹¹

The strategy of attrition would reach its zenith during the two World Wars. While the chapters on Haig and Harris will go into specific detail on the British experience, a few general points warrant emphasis.

First, the fully mobilized, modern, industrialized state proved as resilient as it was destructive. A strategy of attrition requires mutual consent; a war of attrition only merits the name if the belligerents *both* demonstrate the *capability* and *willingness* to exchange blows with one another over a protracted period. If one side capitulates swiftly, as Romania did in the First World War and Poland did in the Second, the war will not last long enough to require attrition. As Dan Todman observes in his book *The Great War: Myth and Memory*:

Examining the whole of the First and Second World Wars, rather than just Britain's part in each, a fundamental of modern total war between industrialized great powers becomes apparent: they are not normally won swiftly by brilliant maneuvers but by the grinding destruction of the enemy's material and morale. Sustaining such total wars required huge emotional as well as physical resources. If either side, in either war, had been less committed to the causes they espoused, conflict would have ended sooner: the casualty rates would have been too much to bear. As it was, their morale and material were both sufficient to sustain long periods of terrible warfare.⁹²

Second, strategy as it unfolded for the participants was invariably far less unitary, cohesive, and consistent than it appears in distant hindsight. As Clausewitz observed, "the original political objects can greatly alter during the course of the war and may finally change entirely

⁹¹ Malkasian, *A History of Modern Wars of Attrition*, 22-23; for an equally thorough analysis of Union strategy, see Herman Hattaway and Archer Jones, *How the North Won: A Military History of the Civil War* (Chicago: The University of Illinois Press, 1991).

⁹² Dan Todman, *The Great War: Myth and Memory* (London: Hambledon and London, 2005), 77-78.

since they are influenced by events and their probable consequences."⁹³ For instance, the British went to war in 1939 ostensibly to preserve Polish sovereignty but negotiated it away to the Soviets in 1945. Even a term as seemingly unambiguous as "victory" can prove highly variable and dependent upon time, place, and observer. Like defeat, victory is a concept that is both socially constructed and socially contested. This is why Brock Millman cautions taking historical statements of "policy at face value; to accept what was written, without considering what was implied, or how definitions had changed over the course of the war." This is particularly true for memoirs and retrospectives. "The significant thing was not that a particular figure said that they continued to believe in ultimate victory (whatever doubts and reservations he might privately confide) but the nature of the endstate envisioned as 'victory.'"⁹⁴

Third, the meaning and implications of the strategy of attrition also varied by time and context. Neither the European powers that marched to war in 1914 nor the Germans into Russia in 1941 deliberately sought attrition; but they found it as the byproduct of failed strategies of annihilation.⁹⁵ At Verdun, and to a lesser extent at Stalingrad, the Germans adopted an attrition strategy in perhaps its purest form, luring their enemy into a symbolically irresistible abattoir to be bled white.⁹⁶ Strategic bombing and submarine warfare in WWII represent yet another aspect of the strategy of attrition, because unlike the great land battles, the attrition of these campaigns was not reciprocal. The exchange rate for a lost bomber was not measured in enemy bombers shot down, but

⁹³ Clausewitz, On War, 92.

⁹⁴ Brock Millman, Pessimism and British War Policy 1916-1918 (London: Frank Cass, 2001), 8.

⁹⁵ Jehuda L. Wallach, The Dogma of the Battle of Annihilation: The Theories of Clausewitz and Schlieffen and Their Impact on the German Conduct of Two World Wars (Westport, CT: Greenwood Press, 1986), 164-165.

⁹⁶ Wallach, The Dogma of the Battle of Annihilation, 172.

urban hectares incinerated or petroleum inventory destroyed. Finally, the Allies in both World Wars ultimately settled for attrition through gradual annihilation, though always with the hope that attrition would be the prelude to a culminating battle of annihilation.

From this review of the theory and history of the strategy of attrition one can draw three conclusions regarding the factors that are most consistent with a successful strategy of attrition.

Attrition favors strategic adaptation and persistence. In contrast to exhaustion, attrition is rarely a strategy of choice—it is, rather, compelled by circumstances. The Russians in 1812, the Union in 1861, and the Allies in both 1914 and 1939 would all have preferred a quick victory; but the strategic context—especially a skilled and determined enemy—dictated otherwise. Advantages accrue to the nation that first recognizes its strategy of annihilation has failed and makes the military, political, financial, and social adjustments necessary to *sustain* a strategy of attrition requiring years of hard fighting to deliver victory.

Attrition is best suited for objectives with a positive aim. The social, political, and financial costs of waging a protracted war of attrition demand a suitably grand purpose. Moreover, the value of the expected results increases as the sacrifices mount. This is why wars of attrition prove so difficult to terminate through negotiation.

Attrition requires either number, method, or will superiority. Winning a war of attrition necessitates a sustained superiority in number, method, or will, and usually a complex combination of all three. Strategic context drives their relative importance, and if the resulting product could be calculated mathematically, it would require an algorithm, not an algebraic equation. If forced to rank order, national will is perhaps the most important. While nations, such as Japan in WWII, with superiority of will have lost wars of attrition, it was inevitably due to suffering from a crushing inferiority in numbers and method.

40

But what are the implications of the strategy of attrition for generalship? Does attrition really require a "different kind" of general?

Evaluating Generalship in Wars of Attrition

Although early theorists such as Wavell and Fuller identified the changing role of generalship in modern warfare, they did not explicitly refer to the strategy of attrition. One can infer, however, the implications of attrition in passages such as "now the mind of the general in war is buried, not merely for 48 hours but for days and weeks, in the mud and sand of unreliable information and uncertain factors"⁹⁷ or "the modern system of command has in fact guillotined leadership, hence modern battles have degenerated into saurian writhings between headless monsters."⁹⁸ It would remain for twenty-first-century academics, not twentieth-century soldiers, to connect generalship directly to the strategy of attrition.

In *A History of Modern Wars of Attrition*, Carter Malkasian furthers the study of attrition by focusing on leadership. Unlike Clausewitz, or Delbrück, Malkasian asserts human agency over structure in the conceptual development of attrition. "The history of attrition is the compartmentalized progression of various individuals' ideas rather than the unbroken evolution of a coherent strategic doctrine. The uniqueness of each individual's ideas means that a definitive postulation of how wars of attrition are fought cannot be formed."⁹⁹

Malkasian's analysis leads him to state categorically that "attrition required a different kind of general from what we typically conceive of as a 'great captain.'" He contends that leadership is central to the strategy of attrition and examines some personality traits that correlate with successful attrition generalship. He emphasizes flexibility, the

⁹⁷ Wavell. Generals and Generalship, 4.

⁹⁸ J.F.C. Fuller, *Generalship: Its Diseases and Their Cure: A Study of the Personal Factor in Command*, (London: Faber and Faber, 1933), 21-22.

⁹⁹ Malkasian, A History of Modern Wars of Attrition, 2-3.

willingness to innovate "and think beyond accepted doctrine. Failing to adapt to difficult circumstances by applying an operational strategy developed for a different context was extremely ineffective." Similarly, "a successful commander in a war of attrition needed to be able to constrain his boldness, recklessness and ambition. Otherwise, he was never able to reconcile himself to the indecisive nature of attrition. In a war of attrition, the dedication to decisive victory often leads to defeat."¹⁰⁰

Other scholars have agreed that attrition requires a different kind of general, but disagree with Malkasian's derision of inflexibility and obstinacy. *In Command and Failure in War*, Robert Pois and Philip Langer come to, for them, the disquieting conclusion that psychological traits that would normally prove dysfunctional are invaluable in a war of attrition. In a paragraph that explicitly links attrition on the Western Front to WWII strategic bombing, they posit:

In considering the British approach to war in World War I, we will confront a situation in which the attritional nature of modern military campaigns, particularly those conducted on the western front, allowed that gross inflexibility, rooted in a basic acceptance of a long outdated system, was perhaps *responsible* for ultimate victory, even though at a hideous cost. Inflexible Allied bombing strategies concerning Germany, also intensely attritional, possibly were successful because of the protracted nature of a campaign in which what ultimately mattered was overwhelming material supremacy.¹⁰¹

The authors proceed in two chapters to attribute a litany of psychological disorders to Haig and Harris, to include cognitive dissonance, system adherence, mental inflexibility, and learning through trial and error instead of true problem solving. Ironically demonstrating a cognitive dissonance of their own, Pois and Langer repeatedly return to their disconcerting conclusions about attrition:

¹⁰⁰ Malkasian, A History of Modern Wars of Attrition, 220.

¹⁰¹ Robert Pois and Philip Langer, *Command Failure in War: Psychology and Leadership* (Bloomington, IN: Indiana University Press, 2004), 3.

We must perhaps draw the extremely disturbing conclusion that pathologically inflexible adherence to a system grounded in seemingly archaic prewar concepts, a system responsible for mounded corpses in exchange for limited gains, was at least as important an ingredient in the ultimate victory as any other factor attaching to the conflict. Perhaps all modern wars are attritional. In all events, World War I was particularly so and thus, while emotionally absorbing, the question of 'breakthrough' versus 'wearing down' campaigns was not of real significance...In the final analysis, we must perhaps come to the conclusion that the Somme and Flanders (if not earlier British military adventures) were successes in a variety of conflict in which remorseless adherence to inflexible plans was a key to victory.¹⁰²

Examining Harris makes the authors equally uncomfortable. "In summary, Harris's inflexible insistence on area bombing stemmed from his doctrinal determined solution to a problem. In retrospect, perhaps trial and error was the only solution method available." Instead of questioning their own theories or understanding of Haig, Harris, military campaigns, or attrition, the authors conclude with a rhetorical shrug "thus, we again are confronted with the unpalatable possibility that under certain circumstances, most particularly attritional ones, psychological dysfunctionalism may play a crucial 'positive' role in determining that victory will go to the side most able to endure heavy losses over time. The question is a disturbingly ambiguous one."¹⁰³

The question need not be disturbing or ambiguous. In war, doctrine, tactics, and technology must all be fit for purpose, so why not generalship? Although the three key factors for successful generalship apply in all forms of wars, they combine with the three key factors for successful attrition to suggest a recipe, a prototype, for a successful attrition practitioner. The sets of key factors are summarized in Table 1. **Table 1: The Key Factors of Successful Generalship and Attrition**

¹⁰² Pois and Langer, Command Failure in War, 153.

¹⁰³ Pois and Langer, Command Failure in War, 172.

Three Key Factors for Successful Generalship

- Determination and vision
- · Mutual trust between principal and agent
- · Common sense and mastery of the mechanics of war

Three Key Factors for Successful Attrition

- Strategic adaptation and persistence
- Strategic objectives with a positive aim
- · Superiority in the combination of numbers, method, and will

Source: Author's Original Work

Based upon this analysis, we should expect a successful attrition practitioner to be firmly grounded in doctrine and theory, but capable of adapting them to an evolving strategic context. He will demonstrate the wisdom to identify the components of a proper long-term strategy and the patience and moral courage to see it through to victory. He need not be charismatic; but he must be capable of projecting confidence, resolve, and patience, both to his superiors and his subordinates. Determined but not obstinate, he embodies Wavell's admonition that "'no battle was ever lost until the leader thought it so': and this is the first and true function of the leader, never to think the battle or the cause lost."¹⁰⁴

The successful attrition practitioner will interact with his superiors and subordinates with utmost fidelity, thereby cultivating mutual trust. He will seek to understand that his superiors are responsible for the broader strategic picture, just as he remembers that his subordinates may chaff under his orders due to their more narrow concerns and horizons. He will tailor his strategy to best achieve national policy objectives, cognizant that the latter may change under the demands of a long conflict. He will vigorously advocate on behalf of his command and

¹⁰⁴ Wavell. Generals and Generalship, 36.

strategy, but will never forget his place as an instrument, not the source, of national policy.

Finally, the successful attrition practitioner will exhibit mastery over the innumerable operational, technical, and administrative details that constitute a modern military waging a long war of attrition. His impact may be delayed, because his critical decisions will frequently be managerial and administrative as he creates a force fit for its strategic purpose. He must remember, however, that although his enterprise may rival the largest corporation in complexity, he is no CEO. "Officers invest time, energy, and emotion in creating their organizations. Unlike all other leaders and managers, however, they have to be willing to destroy what they have created in an instant if circumstances demand it." ¹⁰⁵ His purpose is to turn the strategy of attrition into victory, and doing so requires ordering men to their deaths.

But hypothetical generals do not fight actual wars of attrition. In order to evaluate the proficiency of Douglas Haig and Arthur Harris this thesis will use the six criteria identified earlier. See Table 2. They also serve as an organizational framework for the historical case examples.

Table 2: Six Criteria for Evaluating Generalship

Six Criteria for Evaluating Generalship Proficiency in Strategies of Attrition

- Translating policy objectives into coherent strategy and operations
- Balancing doctrinal adherence with flexible adaptation
- Nurturing relationships with higher civil and military authorities
- Nurturing relationships with subordinate commanders and warriors
- Optimizing operational design and tactical technique
- Fostering intelligence and technological and doctrinal innovation

Source: Author's Original Work

Each historical case example evaluates the general's proficiency across the analytic criteria by a subjective assessment of how effectively

¹⁰⁵ Todman, *The Great War: Myth and Memory*, 83.

the performance contributed to furthering Britain's national strategy and policy objectives. Inspired by a similar model created by Meir Finkel to evaluate an army's performance recovering from surprise, it is direct, intuitive, and explicitly connects means to purpose.¹⁰⁶

Highly effective—contributed significantly to national strategy Slightly effective—contributed to national strategy Competent—neither contributed nor hindered national strategy Slightly ineffective—hindered national strategy Highly ineffective—significantly hindered national strategy

Chapters 3 and 4 will employ this analytic model to examine and evaluate Sir Douglas Haig and Sir Arthur Harris's proficiency as practitioners of the strategy of attrition. Chapter 5 will compare the results, draw conclusions, and deduce lessons for future strategists.



¹⁰⁶ Meir Finkel, On Flexibility: Recovery from Technological and Doctrinal Surprise on the Battlefield (Stanford, CA: Stanford University Press, 2011), 8-16.



Chapter 3

"Boche killing is the only way to win": Sir Douglas Haig and Attrition

The aim for which the war is being waged is the destruction of German militarism. Three years of war and the loss of one-tenth of the manhood of the nation is not too great a price to pay in so great a cause.

Sir Douglas Haig

Attrition was the key: Wearing down the enemy's army by destroying its manpower and breaking its morale. Haig never deviated from that basic understanding.

Gary Sheffield

Sir Douglas Haig was once a British national hero. He commanded the largest army Great Britain has ever fielded and led that army, which in April 1918 stood tottering, "with our backs to the wall," to a victory in November that seemed to many observers at the time to be nothing short of miraculous. But Haig never saw the reversal of fortune as a miracle.¹⁰⁷ Quite to the contrary, for Haig the war followed a logical, structured path through a series of strategic stages culminating in the German defeat. As he explained in his *Final Dispatch* in 1919, "if the whole operations of the present war are regarded in correct perspective, the victories of the summer and autumn of 1918 will be seen to be as directly dependent upon the two years of stubborn fighting that preceded them." For Haig, those two years represented the attritional "wearing out struggle, [where] losses will necessarily be heavy on both sides, for in it the price of victory is paid." ¹⁰⁸ This chapter analyzes and evaluates

¹⁰⁷ Gary Sheffield, *The Chief: Douglas Haig and the British Army* (London: Arum Press, 2011), 1-3.

¹⁰⁸ War Department, "Field Marshal Sir Douglas Haig's Final Dispatch on the 'Features of the War'" (Washington, D.C.: GPO, 1919), 2-4. Hereafter referred as "Haig's Final Dispatch."

Douglas Haig's conception and execution of the strategy of attrition, the one that posterity now largely condemns him for following.

The Strategic Context

Haig fought his war within a strategic context dominated by three interrelated factors. The first was the tactical environment that affected all armies and virtually predestined the Western Front to operational stalemate. Second, Great Britain fought as a junior partner within a multi-national coalition whose overarching strategic objective was the liberation of French soil at the soonest possible date. Finally, because he did not assume command of the British Expeditionary Force (BEF) until December 1915, Haig inherited a national and operational strategy that he could influence but not fundamentally change. Although usually overlooked by Haig's subsequent critics, this strategic context shaped and largely dictated what was, and was not, strategically feasible on the Western Front.

All World War I armies struggled with the tactical reality that the state of weapons technology had dramatically tilted the tactical advantage in favor of the defender. This was particularly the case on the Western Front, where troop density; robust road and rail networks; and terrain, improved by military engineering, all accrued advantages to the defender. Artillery and small arms, particularly the machine gun, were twentieth-century state-of-the-art, while maneuver, command and control, and logistics remained firmly in the nineteenth century. As long as maneuver and logistics relied upon human and animal muscle-power, there was little chance for a decisive breakthrough.¹⁰⁹

Massive firepower seemed to promise a solution, the philosophy encompassed in the phrase "artillery conquers and infantry occupies." The proposition that, if the armies could just concentrate enough firepower, they could literally blast a way forward for their infantry

¹⁰⁹ Sheffield, *The Chief*, 101.

proved illusionary and generated two key problems. The first, weight of firepower, was purely mathematical and tied directly to industrial production. Every country underwent a gun and shell crisis, and after each disappointing offensive the post-mortem analysis would inevitably conclude that with just a little more firepower the next offensive would succeed where the previous one had failed. When industrial mobilization eventually provided the requisite shells a second problem, a true tactical conundrum, revealed itself.¹¹⁰

Attacking on a narrow frontage permitted an astonishing concentration of firepower. Stephen Biddle punctuates this concept with a staggering modern comparison: "German trenches in 1917 suffered obliterating artillery barrages of literally atomic magnitudes: the ten-day Allied bombardment before Messines in July 1917 dropped about 1,200 tons of explosives—in nuclear parlance, more than a kiloton, or more explosive power than a U.S. W48 tactical nuclear warhead—on every mile of German defensive frontage." Concentrating on such a narrow frontage, however, left enemy positions on the flanks unsuppressed and capable of pouring deadly cross-fire into the attackers. Attacking on a wide front, by contrast, might suppress the flanking fire but reduced the shell concentration available for pulverizing the enemy's trenches, cutting his barbed wire, and employing counter-battery fire. Additionally, an artillery barrage of nuclear proportions that blasted a path for the infantry also left a cratered moonscape, rendering the movement of reinforcements and supplies extremely difficult.¹¹¹

The defense effectively adapted to the crushing weight of modern firepower. Because strongly garrisoning frontline trenches simply provided more targets for the enemy's artillery, from mid-1917 on

¹¹⁰ Hubert Johnson, *Breakthrough! Tactics, Technology and the Search for Victory on the Western Front in World War I* (Novato, CA: Presidio Press, 1994), 87-93.

¹¹¹ Stephen Biddle, *Military Power: Explaining Victory and Defeat in Modern Battle* (Princeton, NJ: Princeton University Press, 2004), 30.

defenders sought security through defense in depth, flexible reserves, and local counterattacks. A properly planned offensive could reliably break-in to any trench system, but the breakthrough remained as elusive as ever.¹¹²

Confronted with the same fundamental problem, each major power eventually arrived at a similar solution that combined precision artillery engagement with decentralized small-unit tactics into a carefully choreographed battle, over a large area, and in three dimensions. In contrast to a popular conception that fixates on German *sturmtruppen* and Allied tanks, Jonathan Bailey argues persuasively that it was the indirect fire revolution that restored battlefield maneuver and created what he calls the "Modern Style of Warfare."¹¹³ As Biddle adds, "this convergent evolution suggests that the pattern of force employment embodied in the modern system is not merely idiosyncratic or happenstantial but instead represents a fundamental property of modern warfare."¹¹⁴

Although by 1918 the Modern Style of Warfare could restore maneuver to the battlefield, it could not reduce the butcher's bill. For instance, obscured by the gaudy initial successes of the German 1918 offensives are the tremendous casualties they endured, particularly among their irreplaceable spearhead *sturmtruppen* units. During Operation MICHAEL alone, the Germans inflicted 254,000 Allied casualties yet suffered 239,800 of their own.¹¹⁵ Heavy artillery, poison gas, machine guns, airplanes, trench mortars, hand grenades, flamethrowers, and the other products of four years of technological and

¹¹² Biddle, *Military Power: Explaining Victory and Defeat in Modern*, 32.

¹¹³ Jonathan Bailey, "The First World War and Birth of Modern Warfare," in *The Dynamics of Military Revolution, 1300-2025*, eds. MacGregor Knox and Williamson Murray (New York: Cambridge University Press, 2001), 132-153.

¹¹⁴ Biddle, Military Power: Explaining Victory and Defeat in Modern Battle, 31.

¹¹⁵ David Zabiecki, *The German 1918 Offensives: A Case Study in the Operational Level of War* (London: Routledge, 2006), 160-164.

doctrinal innovation could not prevent the common soldier from dying; they just varied the means. Ultimately, winning meant sustained, heavy fighting, with the accompanying high casualties.

As Haig, himself, succinctly concluded in his Final Dispatch:

The huge numbers of men engaged on either side, whereby a continuous battle front was rapidly established from Switzerland to the sea, outflanking was made impossible and maneuver very difficult, necessitated the delivery of frontal attacks. This factor, combined with the strength of the defensive under modern conditions, rendered a protracted wearing out battle unavoidable before the enemy's power of resistance could be overcome. So long as the opposing forces are at the outset approximately equal in numbers and morale and there are no flanks to turn, a long struggle for supremacy is inevitable.¹¹⁶

Haig acknowledged that "these efforts were wasteful of men, but in the circumstances they could not be avoided. The only alternative was to do nothing and see our French Allies overwhelmed by the enemy's superior numbers." Haig clearly felt no need to remind his audience that, for Great Britain, French defeat was simply not a strategic option.¹¹⁷

The magnitude of the Central-Power threat dispelled any lingering remnants of the "splendid isolation" Britain may have enjoyed during the nineteenth century. Britain's enduring vital strategic interests included preventing a continental hegemon as well as a hostile power from occupying the Channel ports, and the German invasion of France and Belgium represented a clear and present danger of both.¹¹⁸ "What was at stake for the British people were 'their very lives and Imperial existence'. A German dominated middle-European empire was intolerable, for it would present a mortal threat to the security of Britain and its empire."¹¹⁹

¹¹⁶ War Department, "Haig's Final Dispatch," 6.

¹¹⁷ War Department, "Haig's Final Dispatch," 7.

¹¹⁸ William Philpott, Anglo-French Relations and Strategy on the Western Front, 1914-18 (London: Macmillan Press, 1996), 1.

¹¹⁹ David French, *The Strategy of the Lloyd George Coalition, 1916-1918* (New York: Oxford University Press, 1995), 295.

That Britain would support France was, thus, a given; but the nature that support would take, independence or alliance, formed a strategic paradox that British policy makers never fully resolved. An independent strategy aligned with the traditional British strategy of relying upon the power of the Royal Navy and British banking to support continental allies who would bear the brunt of the fighting. The dispatch of a small, independent expeditionary force to the continent was as symbolic as it was a safeguard for British interests on the Channel coast. An alliance strategy, in contrast, involved a potentially unlimited involvement on the Continent and close integration with the French army, to include operating under French command. In August 1914 Britain initially lurched toward the alliance strategy, but the events of September as well as inter-allied personality conflicts led Britain tacitly to reconsider. As William Philpott observes, "when this strategic gamble failed Britain found herself in an awkward strategic and ethical position which persisted throughout the war. British interests were threatened, but alliance obligations had to be met" and "Britain's military resources were inadequate for both." ¹²⁰

This strategic paradox, in which Britain sought independence within an alliance, was exacerbated by the British army's relative weakness, compared to the French, at least until the summer of 1917. As the junior coalition partner, the French set the agenda. As long as Germany held French territory, the French attacked and the British attacked with them.¹²¹ Moreover, events in other theaters, particularly Russia, could have significant influence on the Western Front. Haig was aware of these facts well before he assumed command of the BEF in December 1915. While First Army commander, Haig recorded in his diary a visit from Lord Kitchener, the Secretary of State for War:

¹²⁰ Philpott, Anglo-French Relations and Strategy, 162-164.

¹²¹ Sheffield, *The Chief*, 164.

After washing his hands Lord Kitchener came into my writing room upstairs saying he had been anxious to have a few minutes talk with me. The Russians, he said, had been severely handled and it was doubtful how much longer their armies would withstand the German blows. Up to the present he had favored a policy of an active defense in France until such time as all our forces our ready to strike. The situation which had arisen in Russia had caused him to modify these views. He now felt that the Allies must act vigorously in order to take some of the pressure off Russia if possible. He had heard, when with the French, that Sir J. French [the Field Marshal then commanding the BEF] did not mean to co-operate to the utmost of his power when the French attacked in September. He (Lord Kitchener) had noticed that the French were anxiously watching the British on their left and he had decided that we 'must act with all our energy, and do our utmost to help the French, even though, by doing so, we suffered very heavy losses indeed'.¹²²

This passage is also noteworthy for alluding to the third key component of the strategic context, the mixture of continuity and discontinuity in British national strategy during World War I.

The British fought World War I for two reasons. As David French notes "their publicly proclaimed objective was to preserve their country's independence and status as a great power by preventing Britain and its empire from being subjugated by the Central Powers. But their second purpose, one sometimes obscured by their public rhetoric but made plain in their private deliberations, was to secure a peace settlement which would enhance the security of Britain and its empire against not just its enemies, but also against its allies."¹²³ To achieve both objectives while overcoming the aforementioned strategic paradox, Britain pursued a strategy of attrition that developed over time from one that resembled exhaustion to one of gradual annihilation; i.e., classic attrition.

¹²² Douglas Haig Manuscript Diary (DHMsD), 19 Aug 1915, in *Douglas Haig: War Diaries and Letters 1914-1918*. eds. Gary Sheffield and John Bourne (Chatham, UK: Weidendfeld & Nicolson, 2005) 137.

¹²³ French, The Strategy of the Lloyd George Coalition, 1916-1918, 3.

The initial British national strategy rested upon four pillars. First, Great Britain would assume its customary role as the paymaster of the Entente. Second, the Royal Navy would enforce a blockade while assuring freedom of the Entente's sea lines of communication. Third, in return for its financial and maritime help, France and Russia would bear the brunt of the fighting on land. Fourth, Britain would create and carefully husband its New Armies, waiting for her allies as well as enemies to exhaust themselves.¹²⁴ Not until that culminating moment, predicted by Kitchener and the Asquith government to be sometime in 1917, would the British decisively commit its army. "After the British army had inflicted a final and crushing defeat upon the Central Powers, British statesmen would be able to grasp the lion's share of the spoils, and dictate terms not just to their enemies but also to their allies."¹²⁵

It was Lord Kitchener who first used the term "attrition" to describe his strategy of letting the French and Russians wear down the Central Powers while Britain built the New Armies. Kitchener, however, was a notoriously reticent man, which together with his untimely death at sea in June 1916, means we do not know the theoretical foundations, if any, of his strategy. As French explains, "attrition was an elusive concept. It meant different things to different people at different times. Asquith and Kitchener adopted it in January 1915 as a way of conserving British manpower and throwing the weight of any major offensive operations in 1915-16 onto the French and Russians. They only began slowly and reluctantly to reassess the realism of this in the summer of 1915 when it became apparent that the Germans would not oblige the allies by attacking their line in the west and the French and Russians were not prepared to bear the burden of the land war alone."¹²⁶

¹²⁴ French, The Strategy of the Lloyd George Coalition, 1916-1918, 286.

¹²⁵ French, The Strategy of the Lloyd George Coalition, 1916-1918, 4.

¹²⁶ David French, "The Meaning of Attrition, 1914-1916," *The English Historical Review* 103, no. 407 (April 1988): 403-404.

The problem was timing. This patient strategy of "attrition" through exhaustion of enemies and allies alike was predicated on Russia and France unwittingly cooperating by staying fully committed to the war until the New Armies were ready. Unfortunately for British strategic calculation, their scheme to transfer payment for the price of victory to their allies began to unravel. As French and Russian casualties mounted, they quite reasonably demanded that the British assume a more prominent role. Throughout 1915 the British felt compelled to mount costly offensives, such as those at Neuve Chappelle, Festubert, Aubers Ridge, and Loos, in support of their allies to demonstrate Britain's visible commitment and to forestall defeatism in Paris or Petrograd. And as Lord Kitchener predicted in Haig's writing room, the BEF "suffered very heavy losses indeed." ¹²⁷

Moreover, as the BEF gained in experience and confidence, its senior leaders came to champ at the bit fitted by Kitchener and his concept of attrition. Impatient with what Winston Churchill described as "nibbling and gnawing," the BEF sought victory through its own actions, not by default. Furthermore, BEF leaders-particularly Haig-came increasingly to see that the victorious breakthrough would only occur after a "wearing out" phase of indeterminate duration. After the Chantilly Conference of December 1915 set the British army on the road to the Somme, Kitchener tried to reassure the War Cabinet that the planned allied offensive would obligate the BEF to little more than "an intensified policy of attrition." But Haig, the new BEF Commander-in-Chief, worked with General Sir William Robertson, the Chief of the Imperial General Staff, to blur the meaning of attrition in the minds of the War Cabinet. In sum, "the British adopted attrition in 1915 as a way of conserving their military manpower. But when it was applied on the Somme in 1916 it cost them more dearly than the enemy. In the

¹²⁷ French, The Strategy of the Lloyd George Coalition, 1916-1918, 3-5.

intervening months attrition had changed its meaning." And Haig was the man most responsible for this change.¹²⁸

It is important to keep this strategic context in mind when analyzing Haig's generalship. He did not create the Western Front's tactical conditions, the *Entente Cordiale*, or British national policy, yet was forced to operate bounded by their constraints. Moreover, unlike his future critics, Haig was actually responsible for his army and his strategy, making momentous decisions based upon an uncertain future, not hindsight. The remainder of this chapter will deconstruct, examine, and evaluate Haig's proficiency as an attrition practitioner using the six criteria outlined in Chapter 2.

Translating Policy Objectives into Coherent Strategy and Operations

When Haig took command of the BEF on 19 December 1915, he had a clear vision of what his government expected from him. "Haig's strategic aim was simple, although difficult to achieve: to take the offensive and inflict a crushing defeat on the German army, to force Germany to accept the victors' terms, and to deter it from military adventures for the foreseeable future."¹²⁹

Haig's war diary indicates that from his first days as C-in-C, he possessed a crystal-clear strategic vision of how he was going to achieve these policy objectives. On 8 January he met with his army commanders and "outlined the general principles and directed each Army to work out schemes for (a) preliminary operations to wear out the Enemy and exhaust his reserves and (b) for a decisive attack made with the object of piercing the Enemy's line of defense."¹³⁰ Although he left ambiguous what was to follow after breaking though the enemy's line, Haig never

¹²⁸ French, "The Meaning of Attrition, 1914-1916," 403-405.

¹²⁹ Sheffield, The Chief: Douglas Haig and the British Army, 157.

¹³⁰ DHMsD, 8 Jan 1915, in *Douglas Haig: War Diaries and Letters*, 178.

once wavered from this vision of the wearing-out battle as a prelude to breakthrough and ultimate victory.

While reading this extended section of his *Final Dispatch* one can almost sense Haig's smug satisfaction over how events—in his mind vindicated his vision. Haig described his strategic vision so succinctly it is worth quoting at length. This *was* Haig's strategy for winning WWI.

If the operations of the past four and a half years are regarded as a single continuous campaign, there can be recognized in them the same general features and the same necessary stages which between forces of approximately equal strength have marked all the conclusive battles of history. There is in the first instance the preliminary stage of the campaign in which the opposing forces seek to deploy and maneuver for position, endeavoring while doing so to gain some early advantage which might be pushed home to quick decision. This phase came to an end in the present war with the creation of continuous trench lines from the Swiss frontier to the sea.

Battle having been joined, there follows the period of real struggle in which the main forces of the two belligerent armies are pitted against each other in close and costly combat. Each commander seeks to wear down the power of resistance of his opponent and to pin him to his position, while preserving or accumulating in his own hands a powerful reserve force with which he can maneuver, and when signs, of the enemy becoming morally and physically weakened are observed, deliver the decisive attack. The greatest possible pressure against the enemy's whole front must be maintained, especially when the crisis of the battle approaches. Then every man, horse, and gun is required to cooperate, so as to complete the enemy's overthrow and exploit success.

In the stage of the wearing out struggle, losses will necessarily be heavy on both sides, for in it the price of victory is paid. If the opposing forces are approximately equal in numbers, in courage, in morale, and in equipment, there is no way of avoiding payment of the price or of eliminating this phase of the struggle.

In former battles this stage of the conflict has rarely lasted more than a few days, and has often been completed in a few hours. When armies of millions are engaged, with the. resources of great Empires behind them, it will inevitably be long. It will include violent crises of fighting which, when viewed separately and apart from the general perspective, will appear individually as great indecisive battles. To this stage belong the great engagements of 1916 and 1917 which wore down the strength of the German armies.

Finally, whether from the superior fighting ability and leadership of one of the belligerents, as the result of greater resources or tenacity, or by reason of higher morale, or from a combination of all these causes, the time will come when the other side will begin to weaken and the climax of the battle is reached. Then the commander of the weaker side must choose whether he will break off the engagement, if he can, while there is yet time, or stake on a supreme effort what reserves remain to him. The launching and destruction of Napoleon's last reserves at Waterloo was a matter of minutes. In this World War the great sortie of the beleaguered German armies commenced on March 21, 1918, and lasted for four months, yet it represents a corresponding stage in a single colossal battle.¹³¹

Haig's *Final Dispatch*, however, tints the war's strategic progression as linear, even inexorable. The reality was that if Haig's strategic vision was fixed and consistent, the policy aims it served were not. As noted earlier, the possibility of French and Russian collapse forced Britain to diverge from its original, limited risk concept of attrition to one of total commitment. Initially David Lloyd George's ascension to the Prime Ministership in 1916 boded well for Britain's strategic harmony. His governmental reforms, in particular, conscription, placed the British war effort on a footing that better provided Haig with the resources necessary to achieve British policy objectives through his strategy. But in the wake of the staggering casualties of the Somme, Arras, and Passchendaele, Lloyd George lost heart in both Haig and their agreed-upon strategy.

According to Brock Millman, as the war progressed Lloyd George and his policy elite succumbed to strategic pessimism. While publicly professing their resolute commitment to victory, amongst themselves

¹³¹ War Department, "Haig's Final Dispatch," 2-3.

they insidiously modified their concept of victory. Rather than imposing terms on a crushed Germany, victory devolved to a policy that sought "to continue the fighting until a less intolerable, contingent peace might be negotiated." Such pessimism was responsible for London's strategic revision in late 1917 and 1918 that emphasized peripheral theaters and husbanded manpower for a war Britain's leaders anticipated would last through 1919 and beyond. When victory did emerge in 1918, it truly was a surprise for Lloyd George, his War Cabinet, and pretty much every other person involved with British strategy not named Douglas Haig.¹³² Millman concludes that,

If a 'hero' in this context can be defined as a strategist who saw the future most clearly, and therefore produced the strategy of greatest utility, then perhaps Sir Douglas Haig might be considered as heroic. He was almost the only Briton, after all,...who continued to believe that victory in the western theatres in 1918 was attainable and who, therefore, steadily pursued a local strategy he knew to be correct, even though was out-of-step with the greater vision prevailing in London. If the pessimists cannot be blamed for their doubts, then equally Haig must not be denied praise for his unfailing belief in ultimate victory—a confidence, it need be said, that was not the smallest component in the sudden and shocking German collapse two years before official policy decreed anything like it probable, or even possible.¹³³

Applying the evaluative criteria, Haig rates as being Highly Effective in his ability to translate policy objectives into coherent strategy and operations in support of Britain's national strategy. From taking command to the Armistice, Haig never wavered from his strategic vision, which events validated. The BEF *did* wear out the German army, *did* break its lines, and did provide British statesmen with the *opportunity* to dictate terms for a better peace to their allies as well as their enemies.

¹³² Brock Millman, *Pessimism and British War Policy 1916-1918* (London: Frank Cass, 2001), 10-14.

¹³³ Millman, Pessimism and British War Policy 1916-1918, 15.

That they were unable to do so was neither the fault of Haig nor his strategy of attrition.

Balancing Doctrinal Adherence with Flexible Adaptation

Haig's derived his faith in his strategic vision from pre-war doctrinal principles he, himself, helped formulate. During a series of senior staff positions Haig influenced the British army's training and organization. He also supervised publication of its first doctrinal manuals, in particular the Field Service Regulations (FSR) in 1909. His efforts laid the institutional foundation for Britain's wartime army, to include its approach to command responsibility and the conduct of operations.¹³⁴

The Edwardian army's concept of doctrine differed from that of today, to the point that some historians doubt that the FSR really qualified as doctrine at all. Rather than being prescriptive, the British army's doctrine reflected general principles intended to guide the commander's independent judgment. Among the more notable principles were the importance of offensive operations and the structured battle that progressed through three stages. Haig faithfully adhered to both, using them as guides for implementing his strategy of attrition.¹³⁵

Haig was an offensively minded general well suited to pursuing strategic objectives with a positive aim. He embraced the maxims he helped set forth in the FSR, such as "decisive success in battle can be gained only by a vigorous offensive." The FSR also placed a premium on the commander's personal determination. "Half-hearted measures never attain success in war, and lack of determination is the most fruitful source of defeat. A commander, who has once decided either to give or to

¹³⁴ Sheffield, *The Chief: Douglas Haig and the British Army*, 58-62.

¹³⁵ Timothy Bowman and Mark Connelly, *The Edwardian Army: Recruiting, Training, and Deploying the British Army, 1902-1914* (Oxford: Oxford University Press, 2012), 72-77.

accept battle, must act with energy, perseverance, and resolution."¹³⁶ These sentiments from 1909 are virtually indistinguishable from those Haig expressed in his *Final Dispatch* of 1919.

Moreover, the object of all war is victory, and a purely defensive attitude can never bring about a successful decision, either in a battle or in a campaign. The idea that a war can be won by standing on the defensive and waiting for the enemy to attack is a dangerous fallacy, which owes its inception to the desire to evade the price of victory. It is an axiom that decisive success in battle can be gained only by a vigorous offensive. The principle here stated has long been recognized as being fundamental and is based on the universal teaching of military history in all ages. The course of the present war has proved it to be correct.¹³⁷

The primacy of the offensive carried over into Haig's strategic conception of battles, campaigns, and wars following a logical progression through stages. According to the FSR and articulated by Haig in his strategic vision, all battles would be composed of three necessary and sequential stages:¹³⁸

- 1. The wearing-out fight
- 2. The decisive blow
- 3. Exploitation to final victory

The first stage, the wearing-out fight, was the one in which the majority of hard fighting would take place and served as the *necessary precondition* for the decisive action that would win the war. Haig demonstrated remarkable doctrinal adherence, as evidenced by his repeatedly returning to this theme in his writings and actions. For example, in January 1916 he discussed with his senior staff the principles the BEF would follow:

¹³⁶ Great Britain, General Staff, War Office, *Field Service Regulations Part I Operations* (London: His Majesty's Stationary Office, 1909), 126.

¹³⁷ War Department, "Haig's Final Dispatch," 9.

¹³⁸ General Staff, *Field Service Regulations Part I*, 133-140.

(1) Employ sufficient force to wear down the Enemy and cause him to use up his reserves.

(2) Then, and not till then, throw in a mass of troops (at some point where the Enemy has shown himself to be weak) to break through and win victory.¹³⁹

Similarly, in May 1917 Haig stated in the memo he sent to the War

Cabinet on present and future planning:

The guiding principles are those which have proved successful in war from time immemorial, viz. that the first step must always be to wear down the Enemy's power of resistance [and to continue to do so] until he is so weakened that he will be unable to withstand a decisive blow: then [with all one's forces] to deliver the decisive blow: and finally to reap the fruits of victory.

The Enemy has already been weakened appreciably but time is required to wear down his great numbers of troops. The situation is not yet ripe for the decisive blow. We must therefore continue to wear down the Enemy until his power of resistance has been further reduced.¹⁴⁰

In this second diary entry, Haig hit upon the critical question that was most subject to war's uncertainty—when was the wearing-out fight over?

There being no way of getting around the wearing-out stage, the commander's responsibility was to persevere and always be prepared to deliver "the decisive blow" when the campaign reached its climax. Timing was everything, as such opportunities might be fleeting. Haig always maintained that the Germans threw away decisive victory by prematurely suspending their 1914 Flanders offensive.¹⁴¹ Haig's fear of making the same mistake contributed to his perpetually optimistic conduct of operations that continues to blemish his reputation to this day. Certain that the Germans were always down to their last moral and physical reserves, he prolonged the Somme and Passchendaele offensives

¹³⁹ DHMsD, 18 Jan 1915, in Douglas Haig: War Diaries and Letters, 178-179.

¹⁴⁰ DHMsD, 1 May 1917, in *Douglas Haig: War Diaries and Letters*, 288-289.

¹⁴¹ John Hussey, "Portrait of a Commander-in-Chief," in *Haig: A Reappraisal 70 Years On*, eds. Brian Bond and Nigel Cave (Barnsley, UK: Leo Cooper, 1999), 25.

beyond their culminating points.¹⁴² In both battles Haig certainly toed, if not crossed, Clausewitz's fine line between determination and obstinacy.¹⁴³

One must add, however, that hindsight brightly illuminates for posterity events that were dark and murky for the participants. It is easy to dismiss Haig's insistence on planning for the possibility of breakthrough, to have the cavalry ready, as being an anachronistic fantasy masking as doctrinal fidelity. But as C-in-C, it was Haig's duty to prepare for all contingencies, to include success. As Haig noted in his diary, "in my opinion it is better to prepare to advance beyond the Enemy's last line of trenches, because we are then in a position to take advantage of any breakdown in the Enemy's defense. Whereas if there is a stubborn resistance put up, the matter settles itself! On the other hand if no preparations for an advance are made till next morning, we might lose a golden opportunity."¹⁴⁴

Taken as a whole, Haig rates as being Slightly Effective for his ability to balance doctrinal adherence with flexible adaptation in support of Britain's national strategy. Whether a true doctrine or not, the FSR's emphasis on the offensive and the wearing-out battle were optimal for a strategy of attrition. They provided Haig with a doctrinal compass that guided him through the war. But like a compass, the FSR could provide only a strategic azimuth, but not a specific position along that azimuth. Haig's faith in the FSR encouraged the exercise of his confirmation bias, by which he repeatedly found the evidence of the German army's cracking that he optimistically expected to find. Haig ultimately reached his predicted destination. But by adhering to a doctrinal straight line, he

¹⁴² Ian F.W. Beckettt, "Haig and French," in *Haig: A Reappraisal 70 Years On*, eds. Brian Bond and Nigel Cave (Barnsley, UK: Leo Cooper, 1999), 57; and Zabiecki, *The German 1918 Offensives*, 32.

¹⁴³ Clausewitz, On War, 108-109.

¹⁴⁴ DHMsD, 27 June 1916, in *Douglas Haig: War Diaries and Letters*, 192-193.
may have missed opportunities to make the journey less costly by varying the line of thrust.

Nurturing Relationships with Higher Civil and Military Authorities

Haig's unwavering confidence in his strategic vision came with a political price. He little tolerated those, in uniform or out, who did not accord with his strategic vision. As long as London's views conformed to his own, the relationship was amicable. But when the two diverged, Haig began to exhibit Feaver's shirking behavior and sowed distrust that was counter-productive to his strategy of attrition.

Sir William Robertson, Chief of the Imperial General Staff (CIGS), was Haig's most important partner in London. They agreed on the fundamental strategy that the war could only be won on the Western Front by gradually annihilating the Germans through attrition. Thus they both believed that the only logical policy was for the government to send all available forces to France and to let the BEF get on with winning the war. They viewed alternative visions as misguided and pusillanimous.¹⁴⁵ As Robertson confided to Haig in March 1916,

I am more convinced than ever that it is we who will have to finish this war, and therefore it is we who will have to take the load or at any rate refuse to be led against our own judgment. I am preaching this here every day to all the powers that be. I hope I am getting a little more manliness and courage into some of those higher places."¹⁴⁶

This candid comment reflects a fundamental lack of respect and empathy between soldier and statesman, and one that would only grow as the politicians asserted their rightful control over the conduct of the war. Haig's diary records a meeting that typifies his exasperation with those he considered amateurs interfering with *his* strategy.

The members of the War Cabinet asked me numerous questions all tending to show that each of them was more pessimistic than the other! The PM [Prime Minister Lloyd

¹⁴⁵ Millman, Pessimism and British War Policy 1916-1918, 20-28.

¹⁴⁶ Millman, Pessimism and British War Policy 1916-1918, 22-23.

George] seemed to believe that the decisive moment of the war would be 1918. Until then we ought to husband our forces and do little or nothing, except in support of Italy with guns and gunners (300 batteries were indicated). I strongly asserted that Germany was nearer her end than they seemed to think, that now was the favorable moment for pressing her and that everything possible should be done to take advantage of it by concentrating on the Western Front *all* available resources. I stated that Germany was within 6 months of the total exhaustion of her available manpower, *if the fighting continues at its present intensity.* To do this, more men and guns are necessary.¹⁴⁷

Among Haig's problems relating with higher authorities was his

inability, or unwillingness, to consider their broader perspectives. As

Gary Sheffield observes, Haig's strategic vision had distinct limitations.

Kitchener and Robertson shared Haig's belief in the need for a decisive victory in the field, but, unlike them, and the government, Haig had the luxury of concentrating solely on the Western Front. Haig's constant demands for every man and gun to be sent to France were unrealistic. His disillusionment with Robertson during 1917 was bound up with his view that the CIGS was too ready to divert resources away from France. This was utterly unfair. Britain was fighting a global war, and defense of the Middle East and India were critical to survival as a great Imperial power.¹⁴⁸

Moreover, Haig compounded the difficulties of working with his higher authorities by shirking. He used his many personal contacts in government, to include King George V, to influence policy. Savvy in the ways of the media, he cultivated relations with British newspapers to convey his message to the British public for the explicit purpose of applying pressure on the War Cabinet. He was also not averse to obfuscating, if necessary, to secure London's endorsement for his plans. The politicians are not, however, guiltless. Lloyd George claimed that when seeking approval for Passchendaele "Haig made reference to a phased attack that would grind down the enemy and would avoid a

¹⁴⁷ DHMsD, 19 June 1917, in *Douglas Haig: War Diaries and Letters*, 300.

¹⁴⁸ Sheffield, The Chief: Douglas Haig and the British Army, 158.

'tremendous offensive involving heavy losses'." Given what had transpired over the past three years of war, it strains credibility that London "gave Haig the go-ahead for the offensive, but ordered that 'on no account' should the battle go the way of the Somme with 'protracted, costly and indecisive operations'." While Haig may be guilty of putting on a masquerade, the politicians were as much accomplices as dupes.¹⁴⁹

In no area was the lack of congruence between Haig and his civil and military superiors more profound than in manpower utilization. Haig never seemed to connect his demands for more resources—more munitions, more tanks, more aircraft, more poison gas, et al;—with the human opportunity cost associated with their production. It is fair to say that Haig's inability to comprehend the government's challenges in balancing the competing manpower demands from the military, civilian industry, munitions, shipbuilding, and agriculture was no less amateurish than that of the "frocks" he decried for meddling in military affairs. In a short war, such misunderstandings can be detrimental to strategy; but in a war of attrition in which manpower is "the most important aspect of strategic policy," it can be fatal.¹⁵⁰

Manpower caused the Asquith government to fall in 1916, brought on the pessimism that gripped the War Cabinet from 1917 to the end of the war, and the Lloyd George government to assert belatedly its central authority over all manpower in 1918. Civil-military mutual trust, which is critical to the principal-agent relationship, so deteriorated that in 1918 Lloyd George felt compelled to husband Britain's manpower by withholding replacements from the BEF, while Haig kept details of his campaign plan secret from London.¹⁵¹

¹⁴⁹ Sheffield, *The Chief: Douglas Haig and the British Army*, 227-232.

¹⁵⁰ Keith Grieves, *The Politics of Manpower, 1914-18* (Manchester. UK: Manchester University Press, 1988), 1-5.

¹⁵¹ Grieves, The Politics of Manpower, 202-210.

Although David Lloyd George certainly shares some responsibility for the discord, Haig rates no better than Slightly Ineffective for his ability to nurture relationships with higher civil and military authorities in support of Britain's national strategy. A general and the statesmen he serves need not be friends, but they must trust each another—by 1918 Haig and Lloyd George clearly did not. Furthermore, Haig's shirking at times approached outright lying and insubordination.¹⁵² On multiple occasions, Lloyd George would have fired Haig if he had had the political capital and a suitable replacement.¹⁵³ The mutual distrust between Haig and Lloyd George could have completely undermined Haig's strategy of attrition, as it rested on the assumption that the British government would always send more soldiers. That it did not was due to the war's sudden ending, not to a resolution of the civil-military divide.

Nurturing Relationships with Subordinate Commanders and Warriors

Ironically but perhaps appropriately, Douglas Haig suffered subordinates who followed his example by shirking from the principal's authority. Haig's strategy of attrition was the root cause of this shirking, but the motivation for it differed depending upon the shirker's position within the BEF hierarchy. Subordinate commanders tended to shirk due to confusion, not disagreement, over Haig's strategy. At the sharp end, however, soldiers tended to shirk as a quite reasonable reaction to their role within an attrition strategy. As principal, Haig devoted a great deal

¹⁵² Sheffield, *The Chief: Douglas Haig and the British Army*, 294-295. Sheffield notes that Haig kept planning for the Amiens offensive secret from his own government for fear that "it would interfere, on the principle of 'no more Passchendaeles.'"

¹⁵³ Keith Grieves, "Haig and the Government, 1916-1918" in *Haig: A Reappraisal 70 Years On*, eds. Brian Bond and Nigel Cave (Barnsley, UK: Leo Cooper, 1999), 110-120. Grieves details Lloyd George's schemes to remove Haig, most notably at the Calais Conference in February 1917 where the Prime Minister sought to subordinate Haig to French General Nivelle. Haig actually offered to resign in protest, but was secure in his knowledge that the King would never allow it.

of effort, with varying degrees of success, trying to monitor his agents to maximize their working and mitigate their shirking.¹⁵⁴

Haig's problems monitoring his subordinate senior commanders stemmed from British doctrine and concepts of command. The British army's organizational culture placed a premium on pushing decision making down to the lowest command level, to the man on the spot.¹⁵⁵ At the same time, the senior commander was also responsible for supervising his subordinates. In guidance to General Henry Rawlinson, Fourth Army commander, in August 1916 Haig demonstrated this ambivalence, which bordered on paradox. This guidance stated that in "actual execution of plans, when control by higher commanders is impossible, subordinates on the spot must act on their own initiative, and they must be trained to do so." But in the same letter he seemed to reverse himself by adding "close supervision by higher Commanders is not only possible but is their duty, to such extent as they find necessary to ensure that everything is done that can be done to ensure success. This close supervision is especially necessary in the case of a comparatively new army. It is not 'interference' but a legitimate and necessary exercise of the functions of a Commander on whom the ultimate responsibility for success or failure lies."156

In practice, Haig tended toward a hands-off approach to his Army commanders, providing suggestions rather than clear commander's intent. But he would also meddle in details beneath his command level. This practice became dysfunctional when Haig gave ambiguous guidance for the planning of major offensives. Combined with his conflicting comments about whether the goal was attrition through "bite and hold"

¹⁵⁴ For a discussion of the monitoring mechanism within the principal-agent relationship, see Peter Feaver, *Armed Servants: Agency, Oversight, and Civil-Military Relations*, (Cambridge, MA: Harvard University Press, 2003), 72-87.

¹⁵⁵ Bowman and Connelly, *The Edwardian Army*, 74.

¹⁵⁶ Peter Simkins, "Haig and the Army Commanders," in *Haig: A Reappraisal 70 Years On*, eds. Brian Bond and Nigel Cave (Barnsley, UK: Leo Cooper, 1999), 94.

tactics or breakthrough, his subordinates had ample opportunity to be confused or to shirk. Sheffield describes the problem that General Sir Henry Rawlinson, the Fourth Army commander, had in planning the Somme campaign under Haig.

Rawlinson's plan aimed for limited advances to capture the high ground followed by a pause to break up the inevitable German counterattacks. He rightly suspected that Haig would disapprove of his scheme, but seems to have misunderstood what Haig the C-in-C wanted to achieve, writing that 'It is clear that D.H. would like us to do the whole thing in one rush.' The eventual plan that emerged was an unhappy compromise between two fundamentally different concepts of operations. The men also wrangled over the length of the preliminary bombardment, with Haig eventually deciding on a prolonged period. Evidently Rawlinson had little faith in Haig's plan and paid lip service to the C-in-C's concept while working quietly to subvert it.¹⁵⁷

Haig demonstrated this was not an isolated case the following year when he ordered General Hubert Gough, Fifth Army commander, to plan and execute the initial stages of the Passchendaele offensive. When Gough did not fight the battle Haig envisioned, Haig placed the remainder of the campaign in the hands of General Herbert Plumer, Second Army commander. It appears that Gough was not shirking, but that he genuinely did not understand what Haig wanted. But "instead of 'gripping' Gough, giving him his intent and leaving Fifth Army to fill in the details, Haig made suggestions and gave advice but did not give an unambiguous directive."¹⁵⁸ A letter from Haig's Chief of Staff to Gough in August 1917 illustrates this point. "Boche killing is the only way to win. To effect that we want (a) to force the Boche to fight and (b) to force the fight under conditions most favorable to us and least favorable to him."

¹⁵⁷ Sheffield, The Chief: Douglas Haig and the British Army, 167.

¹⁵⁸ Sheffield, The Chief: Douglas Haig and the British Army, 227.

Although the letter neatly summarized Haig's strategic vision, it was next to worthless as a guide for operational planning.¹⁵⁹

Haig had a very different relationship with his men than he did with his Army commanders. As the BEF C-in-C, Haig was the principal for the largest assembly of agents, almost 2,700,000 at its zenith, Great Britain ever fielded.¹⁶⁰ With an army this size it was impossible for Haig to cultivate an intimate relationship with his soldiers as Montgomery did during WWII. Moreover, according to Sheffield, "Haig would have regarded Monty's style as vulgar, and the common soldiers would have been bemused by it. In a deferential age, they expected their officers to behave as aloof gentlemen. Haig's means of imposing his personality on the army was mostly limited to parades and published orders, although, as an ADC notes, Haig 'talks to any odd man in the road: all being a means to an end, to keep in touch with the spirit of his troops'."¹⁶¹

Yet Haig was acutely aware that his men were the key to implementing his strategy of attrition. As the French discovered during the mutinies of 1917, an offensive is only relentless if a general can count on his men to attack when ordered. As early as the spontaneous Christmas Truce of 1914, Haig glimpsed the potential ramifications of the army's offensive spirit wavering. To inhibit or hopefully prevent such an eventuality, Haig applied administrative, training, and operational monitoring procedures to foment individual and collective aggressiveness. He supported the creation of new valor medals for enlisted soldiers, while also enforcing capital punishment for cowardice. He directed that units rotating out of the line received mandatory bayonet training—not because experience showed it was a useful weapon, but because he believed it cultivated aggressiveness and the

¹⁵⁹ French, The Strategy of the Lloyd George Coalition, 1916-1918, 127-128.

¹⁶⁰ War Department, "Haig's Final Dispatch," 20.

¹⁶¹ Sheffield, The Chief: Douglas Haig and the British Army, 141.

offensive spirit. Perhaps most significantly, Haig took proactive steps to prevent his soldiers from forming tacit truces and local "live and let live" arrangements.¹⁶²

Conspiring with the enemy for mutual preservation is a particularly insidious form of soldierly shirking, because it undermines the point of being at war, even if it technically falls short of desertion or mutiny. Soldiers on both sides took advantage of the static nature of trench warfare to implement live and let live systems, operating on the "tit for tat" principle of game theory in which one side tacitly signals to the other that it will respond only in kind. To counter this shirking, Haig ordered his units to patrol No Man's Land aggressively, raid the enemy's trenches, and conduct random artillery and gas attacks. These techniques served his strategy both by attriting the enemy, albeit it in tiny increments, and by preserving the BEF's offensive spirit. According to Ashworth, "such a situation inhibited the re-emergence of peace; for where mutual distrust had replaced trust, the cycle of aggression and escalated counter-aggression was likely to recommence at any time."¹⁶³

Supporting Wavell's contention that trust is more important than charisma, Haig rates as being Competent for his ability to nurture relationships with his subordinate commanders and warriors. Although his hands-off command style risked confusion and shirking from his subordinate commanders, it undercut efficiency but not his overall strategy. Similarly, although some of his soldiers may have shirked in an effort to make their lives more bearable, they—unlike every other European army—never mutinied, and never failed to attack when ordered. In the end, Haig and his subordinates maintained sufficient mutual trust to sustain his strategy of attrition, to keep the army "Boche killing" until final victory.

¹⁶² Tony Ashworth, *Trench Warfare 1914-1918: The Live and Let Live System* (New York: Holmes & Meier Publishers, Inc., 1980), 176-185.

¹⁶³ Ashworth, Trench Warfare 1914-1918: The Live and Let Live System, 191-203.

Optimizing Operational Design and Tactical Technique

For his strategy to succeed, Haig had to develop his army's ability to kill the Boche, kill them quickly, and kill them efficiently. Against an army as large, skilled, and determined as the Germans, there was simply no way to simultaneously meet all three goals; at best, he might achieve two. With the strategic imperative of liberating France, Haig sacrificed efficiency for lethality and speed. Trusting that London would provide the numbers and the British nation the will, at least equal to the enemy's, Haig focused his efforts on forging an army with a superior method of attrition.

Haig's pursuit of methodological superiority through operational design and tactical technique was grounded in pre-war doctrine. According to the FSR, "superior numbers on the battlefield are an undoubted advantage, but skill, better organization, and training, and above all a firmer determination in all ranks to conquer at any cost are the chief factors of success."¹⁶⁴ As C-in-C, Haig was responsible for building an army better-skilled, better-organized, and better-trained than Germany's, but without the luxury of time. "Ideally, the BEF should have been left to complete its training before being committed to battle, but in the strategic circumstances of 1916 that was a non-starter. Instead, the BEF had to go through the hideously costly business of onthe-job training while fighting an immensely tough, well-trained and well-prepared enemy."¹⁶⁵ Moreover, as Jonathon Boff observes, "learning how to defeat the German army was not an abstract exercise aimed at solving a single static equation but an intensely practical attempt to unpick a series of different specific tactical, operational, and strategic knots."166

¹⁶⁴ General Staff, Field Service Regulations Part I, 126.

¹⁶⁵ Sheffield, The Chief: Douglas Haig and the British Army, 147.

¹⁶⁶ Jonathon Boff, *Winning and Losing on the Western Front: The British Third Army and the Defeat of Germany in 1918* (New York: Cambridge University Press, 2012), 248.

Unpicking these knots required solutions formed by the complex interaction of technology, logistics, training, organization, and doctrine. Furthermore, each solution meant solving a myriad of smaller problems, over time, through trial and error. Haig realized this and wisely concluded that this process had to come from the bottom instead of the top. Following the decentralized concept of command found in both organizational culture and the FSR, he allowed his subordinates great leeway with which to experiment and improve operational and tactical methods. Consequently, Haig directed GHQ to collect and disseminate "lessons learned" and encouraged his subordinate armies to establish technical schools behind the lines. On the other hand, he could never quite bring himself to issue prescriptive doctrine or even BEF-wide standards. The result was that even in late 1918 one brigade could fight very differently than its neighbor. Put another way, while the BEF did climb a learning curve, it was formed by an aggregate of individual data points, featuring outliers, which only appears smooth from a distance.¹⁶⁷

Yet Haig's diary reveals a commander intensely interested in the mechanics of war, be it technology, tactics, or logistics. For example, in August 1916 he noted "the general principle of these attacks has been a steady and accurate bombardment with heavy shells throughout 48 hours, or more, with occasional intensive bursts of 18 pounder to make the Enemy expect an attack and man his trenches. Then at 9 pm or thereabouts an intensive barrage with 18 pounder shrapnel is opened behind which our infantry advanced, close up to our shells, and entered Enemy's trench before he had become aware of the attack."¹⁶⁸

Moreover, Haig did more than just jot notes in his diary. Recognizing the beginnings of Jonathan Bailey's "indirect fire revolution," he ensured the new methods spread. Meeting with the Australian Corps,

¹⁶⁷ Boff, Winning and Losing on the Western Front, 243-251.

¹⁶⁸ DHMsD, 5 August 1916, in *Douglas Haig: War Diaries and Letters*, 215.

newly arrived on the Western Front from Gallipoli, he mentioned to its commander that his Commander Royal Artillery (CRA) "had no experience of our present artillery or the methods which had developed during the war. I therefore wished to give him an up to date CRA." He expressed regret at moving him, "but in the present situation I would be failing in my duty to the country if I ran the risk of the Australians meeting with a check through faulty artillery arrangements."¹⁶⁹

Under Haig's leadership, the BEF refined its operational design and tactical technique until it was the instrument of destruction he intended it to be. The Germans were certainly under no illusions as to its capabilities or purpose. As Ludendorff described the challenge facing senior German leaders at the end of 1916, "bear in mind that the enemy's great superiority in men and material would be even more painfully felt in 1917 than in 1916. They had to face the danger that 'Somme fighting' would soon break out at various points on our fronts, and that even our troops would not be able to withstand such attacks indefinitely, especially if the enemy gave us no time for rest and for the accumulation of material." In addition to its effect on the German army, the BEF's relentless hammering "also had an impact on the minds of the German politico-military leadership that helped to deflect them onto paths that proved ultimately disastrous for their cause."¹⁷⁰

Overall, Haig rates Slightly Effective for his ability to optimize operational design and tactical technique to further Britain's national strategy. He demonstrated mastery of the mechanics of war, successfully building an army fit for its purpose of killing Germans, quickly and in large numbers. The BEF employed increasingly effective methods, especially in artillery, and by 1918 achieved method superiority. Haig

¹⁶⁹ DHMsD, 25 July 1916, in *Douglas Haig: War Diaries and Letters*, 209.

¹⁷⁰ Quoted in Sheffield, The Chief: Douglas Haig and the British Army, 195-196.

led the BEF along its learning curve, even if the arc was uneven, colored with hard fighting and heavy losses, and plotted through trial and error.

Fostering Intelligence and Technological and Doctrinal Innovation

"Trial and error" aptly describes how the BEF responded to the war's uncertainty, whether in regard to intelligence or to technological and doctrinal innovation. Faced with the unprecedented, Haig was willing to try just about anything that might provide his army an advantage. Such an approach, however, has pitfalls, as he noted in his *Final Dispatch*. "The constant birth of new ideas has demanded the exercise of the greatest care, not only to insure that no device or suggestion of real value should be overlooked or discouraged, but also to regulate the enthusiasm of the specialist and prevent each new development assuming dimensions out of proportion to its real value."¹⁷¹

For a man with a reputation for having a mind as closed at it was dim, Haig had a voracious appetite for military intelligence. He took careful pains to inform himself about the arcane techniques of photoreconnaissance, signals intelligence, and human intelligence and was a key sponsor in their technological and organizational development. Unfortunately, Haig undermined his positive influence on intelligence with his penchant for being his own analyst—and a bad one, at that.¹⁷²

Haig suffered from severe confirmation bias, fueled by optimism and faith in his strategy. He compounded his bias by surrounding himself with the like-minded, the most noteworthy being Brigadier General John Charteris, his senior Intelligence Officer for most of the war. According to Sheffield, "some of Charteris's assessments of enemy morale and manpower 'bordered on wishful thinking' although the idea that he deliberately fed Haig information that he thought the C-in-C wanted to hear is untrue. Charteris shared Haig's optimism rather than

¹⁷¹ War Department, "Haig's Final Dispatch," 32.

¹⁷² James Beach, *Haig's Intelligence: GHQ and the German Army, 1916-1918* (New York: Cambridge University Press, 2013), 320-326.

being the cause of it. A staff officer claimed that he heard Haig admit that he knew Charteris embellished intelligence, but that he was correct more frequently than he was wrong. If this was true, it does not reflect well on Haig's judgment. In short, too often, Haig believed what he wanted to believe about the Germans, and this was his most serious defect as a commander."¹⁷³

One passage from his Diary captures Haig's approach to intelligence at both its best and worst. It reveals his enthusiasm for personally reviewing intelligence reports, his confirmation bias, and his sometimes bizarre opinions of those who disagreed with him.

Charteris reports that on 12 October [1917] two pioneer companies of the [German] 233rd Division 'refused to attack.' This is another direct instance of insubordination in German Army and consequent loss of fighting spirit. Yet it is stated in a note by the DMI [Director of Military Intelligence] War Office dated 1 October (WP 49) 'That moral of the troops in the field gives no cause for anxiety to the German High Command.' I cannot think why the War Office Intelligence Department gives such a wrong picture of the situation except that General Macdonogh (DMI) is a Roman Catholic and is (unconsciously) influenced by information which doubtless reaches him from tainted (i.e., Catholic) sources.¹⁷⁴

However, one should not let Haig's misuse of intelligence obscure the benefits his advocacy for it provided the BEF. Intelligence did not drive Haig's strategy—he was going to attack with or without it—but intelligence did make his strategy more effective. The same can be said for technological and doctrinal innovation.

With the possible exception of his determination, Haig's greatest contribution to his army and strategy was his tireless advocacy for better equipment and better means to employ it. His decentralized command

¹⁷³ Sheffield, *The Chief: Douglas Haig and the British Army*, 140-141.

¹⁷⁴ DHMsD, 15 October 1917, in *Douglas Haig: War Diaries and Letters*, 336-337. The Pope had issued a call for peace talks that August and was perceived in Great Britain as being pro-German.

style, "insatiable curiosity and enthusiasm for new ideas," and common sense perfectly complemented the British asystematic and pragmatic approach to innovation. Haig had the patience to wait as the BEF pursued multiple paths to similar objectives, confident that they would usually arrive at satisfactory, if not necessarily optimal, solutions. Once he judged solutions, such as tanks or the Stokes mortar, fit for purpose, he put "his personal weight behind them in his correspondence with the people and organizations to make things happen."¹⁷⁵

Haig's applied a similar command influence on doctrinal innovation. Whether one calls it an "indirect fire revolution" or the creation of a "Modern System of Warfare," it did not happen by accident. Rather it happened because of Haig's common sense, vision, and patience to let the trial and error system work. As Crenshaw argues, "what is inescapable is that by the time of the Somme all the weapons with which the war would be won were in place—but not until late 1917 would the command and control and support systems be in place to make full use of them, and not until the summer of 1918 would they be available in sufficient quantity to give the operational flexibility that facilitated the victories of the Hundred Days."¹⁷⁶

Thus, Haig rates Slightly Effective for his ability to foster intelligence and technological and doctrinal innovation. He would rate higher, but for his profound confirmation bias regarding intelligence. Haig was at his very best when managing the technological and doctrinal innovation necessary to transform the BEF from the clumsy, amateur army of 1916 into the all-arms, attritional killing machine of late 1918.

Summary

¹⁷⁵ Michael Crawshaw, "The Impact of Technology on the BEF and its Commander," in *Haig: A Reappraisal 70 Years On*, eds. Brian Bond and Nigel Cave (Barnsley, UK: Leo Cooper, 1999), 168-169.

¹⁷⁶ Crawshaw, "The Impact of Technology on the BEF and its Commander," 162-163.

Table 3 summarizes Haig's proficiency in each of the six evaluative criteria. His biggest strength was his clear strategic vision and iron determination to see it through. Haig also excelled at creating an army fit for his strategic purpose due to his common sense and mastery of the mechanics of war. Haig allowed confirmation bias, on the other hand, to cloud his judgment regarding intelligence. He repeatedly underestimated the German army's resiliency and the BEF paid the price for his overoptimism in heavy losses. Haig's biggest weakness, however, was his inability to nurture relationships with his superiors and subordinates. In particular, the mutual distrust between Haig and David Lloyd George held the potential to derail his strategy of attrition.

Table 3: Summary of the Proficiency of Sir Douglas Haig

Haig	Highly Ineffective	Slightly Ineffective	Competent S	lightly Effective 1	lighly Effective
• Balar	ncing doctrinal a	dherence with fl	exible adap	tation	
Haig	Highly Ineffective	Slightly Ineffective	Competent S	lightly Effective	Highly Effective
• Nurtu	uring relationshi	ps with higher c	ivil and mil	itary authorit	ies
Haig	Highly Ineffective	Slightly Ineffectiv	e Competent	Slightly Effective	Highly Effective
• Nurtu	uring relationshi	ps with subordir	nate comma	unders and wa	rriors
Haig	Highly Ineffective	Slightly Ineffective	Competent	Slightly Effective	Highly Effective
• Optin	nizing operation	al design and ta	ctical tech	nique	

Source: Author's Original Work

By aggregating Haig's performance over the six individual criteria one can form a composite evaluation. His Highly Effective rating for translating policy objectives into coherent strategy and operations offsets his Slightly Ineffective rating for nurturing relationships with higher civil and military authorities. Overall, Haig's generalship rates as being Slightly Effective for his proficiency employing the strategy of attrition to support Britain's national strategy.

Haig may not have been a Great Captain, but he was surely the right man, with the right strategy, to win the war that confronted Great Britain in World War I. The road to victory ran through the German army in France and Flanders, and there was no shortcut. Defeating the German army meant gradually annihilating it through attrition. To do so required a commander able to build an army fit for this purpose with the will to use it. Great Britain had both in Field Marshal Sir Douglas Haig.

80

Chapter 4

"I kill thousands of people every night!": Sir Arthur Harris and Attrition

Harris may be a savage, he may be the best man for the job, but in him one sees the means to which England, so old and once so proud, is reduced in this fight for existence.

German Radio Propaganda

This strength of character, which Clausewitz says is the main feature of a good commander, can easily degenerate into obstinacy and dogmatism, and it is this obstinacy and dogmatism which prevent Harris from being a truly great commander. These features of Harris's character came perilously close to derailing British strategy at a number of points in the war, especially after 1942.

Christina Goulter

Sir Arthur Harris was notorious for driving his Bentley at high speed through the streets from his headquarters in High Wycombe to the Air Ministry. Upon pulling him over late one night, a policeman purportedly admonished Harris with "you might have killed somebody, sir." "Young man," he snapped, "I kill thousands of people every night!"¹⁷⁷ This anecdote captures the essence of Arthur Harris and the tremendous responsibility he shouldered as Air Officer Commanding-in-Chief (AOC-in-C) of RAF Bomber Command. As Peter Lee points out, "when great evil stalked Europe and Britain had to take the fight to its Nazi enemy, Harris more than anyone was prepared to embrace a lesser evil in order to defeat it. He never shirked from his task, never denied it, never apologized and never regretted his actions. Harris had blood on his hands and never tried to hide it, and it was this that singled him out as a scapegoat. Churchill wanted his legacy and many in the country wanted to forget what they had demanded of Harris in the darkest hours

¹⁷⁷ Max Hastings, Bomber Command: The Myths and Reality of the Strategic Bombing Offensive 1939-45 (New York: The Dial Press/James Wade, 1979), 149-150.

when fear and danger were overwhelming."¹⁷⁸ Arthur Harris is perhaps history's most infamous practitioner of the strategy of attrition. This chapter examines his proficiency planning and executing that strategy.

The Strategic Context

Like Douglas Haig before him, Sir Arthur Harris fought his war significantly constrained by the strategic context. First, few campaigns have been dominated by war's uncertainty like the strategic bombing of Germany. Second, RAF Bomber Command went to war wholly unfit for its strategic purpose, yet waiting for the necessary improvements in aircraft, training, and tactics was an unaffordable luxury. Third, by taking command in February 1942, Harris largely inherited, rather than created, Bomber Command's strategy and concept of operations.

Uncertainty influenced every facet of Arthur Harris's war. From take-off to landing, RAF Bomber Command aircrew were figuratively, and sometimes literally, immersed in the fog of war. British bombers flew as individuals, at night, within vast bomber streams, unlike their American counterparts who flew daylight missions in tight formation. This reality heightened the aircrews' anxiety and sense of isolation, all intensified by their duels in the dark with the German night fighters.

Targeting represented another profound uncertainty. Although subject to rigorous Operations Research analysis, the inability to obtain ground truth limited the fidelity of targeting. This was especially true for battle damage assessment (BDA). As the post-war bombing surveys confirmed, knowing that a bomb had pierced the roof of a given factory building provided scant evidence as to the actual damage inflicted, and even less for the impact that particular bomb had on German industrial production as a whole. And targeting presumed the bombers could even

¹⁷⁸ Peter Lee, "Return from the Wilderness: An Assessment of Arthur Harris' Moral Responsibility for the German City Bombings," *Royal Air Force Air Power Review* 16, no. 1 (Spring 2013): 86.

find their targets in the first place.¹⁷⁹ Through 1942 aircrews experienced a terrible time finding their targets due to poor training, rudimentary navigation aids, and northern Europe's chronic bad weather—all exacerbated by the need to fly at night to mitigate the German air defenses. As the Butt Report informed the Air Ministry in August 1941,

on any given night of operations, it was already understood that around a third of all aircraft returned without claiming to have attacked their primary target. So Mr Butt analyzed only the target photographs and reports relating to the remaining two-thirds of crews who had allegedly bombed their targets, during the preceding two months of June and July 1941. He reported that of these, only one-third had come within five miles of the aiming point. Against the Ruhr this proportion fell to one-tenth. At the moment when perceptive airmen already foresaw an end of moonlit bombing operations as German night-fighting activity intensified, Mr Butt found that moonlight was indispensable to the crews of Bomber Command: two crews in five came within five miles of their target on full-moon nights; this ratio fell to one in fifteen on moonless ones.¹⁸⁰

While Bomber Command made some progress rectifying these deficiencies, Webster and Frankland captured perfectly the essence of the force over which Harris assumed command in 1942. "The limitations of the force were only gradually discovered, and for more than two years Bomber Command, in spite of a few remarkable successes, was to a great extent lost in the dark, the haze, and the searchlight glare."¹⁸¹

The fundamental problem was that the RAF had invested twenty years arguing with evangelical zeal for a strategy of relentless strategic bombardment, yet had failed to create a bomber force capable of performing its intended mission. As Tami Biddle Davis describes, "it is

¹⁷⁹ Tami Davis Biddle, *Rhetoric and Reality in Air Warfare: The Evolution of British and American Ideas about Strategic Bombing*, 1914-1945 (Princeton, NJ: Princeton University Press, 2002), 270-286.

¹⁸⁰ Hastings, *Bomber Command*, 117-118.

¹⁸¹ Webster and Frankland, SOAG Vol III, 298.

surely understatement to argue that this period [1939-1942] represented a crisis for the RAF: the gap between the rhetoric and the reality proved to be nothing less than an abyss."¹⁸² Bomber Command's bombers were too small, too few, too vulnerable, and flown by crews who were too inexperienced. According to Harris in his *Despatch*, "I confidently believed, however—and with good reason—that the Command's main task could be achieved successfully if only we could overcome the handicaps under which, so far, the bomber force had labored in vain. These were, primarily, lack of suitable aircraft in sufficient number, absence of effective navigational aids, and a serious deficiency of trained crews. Moreover, the handicaps were not only due to lack of material and trained personal, as there were technical and tactical problems affecting the employment of the force which could only be surmounted by intensive research, continual experiment, and unshakeable resolution."¹⁸³

Harris was correct, and through his leadership Bomber Command would eventually overcome, or at least mitigate, most of the technical and tactical problems. What Bomber Command needed most in the early years was time: time for British industry to produce the Lancaster fourengine bomber in large numbers; time to develop and field navigation aids and target-marking tactics; and time for an aircrew training expansion scheme to bear fruit. But as much as Harris would have preferred to wait for the force to mature and become fit for its purpose, he was acutely aware of what his government and country expected from Bomber Command.¹⁸⁴

As Harris noted in *Bomber Command*, "this then was the force with which I had to begin an immediate offensive against Germany; it was also

¹⁸² Biddle, Rhetoric and Reality in Air Warfare, 178-186.

¹⁸³ Arthur Harris, *Despatch on War Operations: 23rd February, 1942 to 8th May,* 1945. Ed. Sebastian Cox (London: Frank Cass, 1995), 8.

¹⁸⁴ Arthur Harris, Bomber Offensive (London: Collins, 1947), 70-75.

the only force in the west which then could take any offensive action at all against Germany, our only means of getting at the enemy in a way that would hurt at all." Moreover, it was the most tangible way of demonstrating Allied resolve and support to the Russians. "The importance of beginning the offensive as soon as possible could hardly be overestimated. The bomber offensive, or rather what could be made of it, was the only means we had of actively helping the Russians, who, though the German offensive in Russia had been halted, had every appearance of being *in extremis*."¹⁸⁵

Finally, from an institutional standpoint, the RAF knew its reputation was on the line and the only way to secure the resources necessary for its sustained growth was to deliver at least some immediate results. "The result," according to Webster and Frankland, "was that, early in 1942, the decision was taken to press the offensive forward with the utmost vigor at once. This meant making continued use of the relatively inefficient and under-trained crews and of reinforcing them with recruits who were hardly better trained and who were even more inexperienced. The consequence, of course, was that many gallant men and good machines were lost in action and in flying accidents which might otherwise have been avoided, but, if the offensive was to be maintained and increased, this was inevitable."¹⁸⁶

Harris not only inherited a mandate to attack, but also specific instructions regarding how and why to do so. Due to the prohibitive losses and poor results associated with selective (a more accurate description than "precision") daylight bombing, from the fall of 1941 onwards, Bomber Command flew the overwhelming majority of its missions at night and against urban targets.¹⁸⁷ Although the distinction

¹⁸⁵ Harris, Bomber Offensive, 73-74.

¹⁸⁶ Webster and Frankland, SOAG Vol III, 298-299.

¹⁸⁷ John Terraine *Time for Courage: The Royal Air Force in the European War, 1939-1945* (New York: Macmillan, 1985), 259-269.

may have been lost on the residents of Hamburg or Cologne, the change was due to a pragmatic response to operational problems and mirror imaging, not doctrinal adherence or strategic malice. As Harris summarized in his *Despatch*, "the strength of the enemy defenses made it impracticable to depart from the established policy of operating mainly by night. The limitations which this imposed on bombing accuracy largely controlled the choice of targets, since large industrial areas were more suitable for heavy attacks than individual factories and plants. This policy, although based on the meager chances of direct hits on small targets except under most favorable conditions, was also supported by a study of the results of German night attacks on this country, which indicated that the quickest and most economical way of achieving the aims of the offensive was to devastate in turn the large industrial cities of Germany."¹⁸⁸

The Air Ministry accordingly reverse-engineered its strategy to fit the operational reality. It issued a policy directive on 14 February 1942—ten days before Harris assumed command—directing Bomber Command "to focus attacks on the morale of the enemy civil population, and, in particular, of the industrial workers." This directive codified into strategy a September 1941 Air Staff paper that asserted "the ultimate aim of the attack on a town area is to break the morale of the population which occupies it. To ensure this we must achieve two things; first, we must make the town physically uninhabitable and, secondly, we must make the people conscious of constant personal danger. The immediate aim, is therefore, twofold, namely, to produce (i) destruction, and (ii) the fear of death."¹⁸⁹

Arthur Harris accepted this mission wholeheartedly and without hesitation, to include the strategy guiding it and the means required to

¹⁸⁸ Harris, *Despatch*, 7.

¹⁸⁹ Harris, Despatch, 7.

execute it. In his words, "my primary authorized task was therefore clear beyond doubt: to inflict the most severe material damage on German industrial cities. This, when considered in relation to the force then available, was indeed a formidable task. Nevertheless, it was possible, but only if the force could be expanded and re-equipped as planned, and if its whole weight could be devoted to the main task with the very minimum of diversions."¹⁹⁰ This paragraph neatly encapsulates the major issues, from city bombing to diversions, that would pre-occupy Harris and embroil him in heated disputes with his superiors as well as with posterity. Although Harris would transform his command's capabilities, "the guiding assumptions about how Bomber Command could be used most effectively were never really challenged." It is these unchallenged guiding assumptions, derived largely from Britain's experience in the First World War, that provide the key to understanding the coherency of British policy, strategy, and operations in the Second.¹⁹¹ **Translating Policy Objectives into Coherent Strategy and Operations**

Churchill, Harris, Portal, and the rest of Britain's wartime decision-making elite all had personal experience fighting in World War I; and this shared memory provided a powerful and indelible metaphor. This metaphor, even if unspoken, framed how these men understood their second global war, managed its uncertainty, and served as a diagnostic tool for decision making. As Yuen Foong Khong notes, "when analogies are used to define the situation and evaluate the options in the way indicated, they 'introduce choice propensities into an actor's decision making': they predispose the actor toward certain policy options and turn him away from others."¹⁹² The "certain policy option" that Churchill,

¹⁹⁰ Harris, Despatch, 7.

¹⁹¹ Robert Pois and Philip Langer, *Command Failure in War: Psychology and Leadership* (Bloomington, IN: Indiana University Press, 2004), 170.

¹⁹² Yuen Foong Khong, Analogies at War: Korea, Munich, Dien Bien Phu, and the Vietnam Decisions of 1965 (Princeton, NJ: Princeton University Press, 1992), 19-25.

Harris, et al., turned away from was the attrition strategy Haig used to win World War I.

The strategic pessimism that afflicted Britain in 1917-1918 carried over through 1939 and beyond. It was not that British statesmen and soldiers did not want to win the war, but they saw little difference between winning in the style of 1918 and losing. The strategic imperative was still to win, but win while avoiding the high casualties thought to be inevitable with a large commitment of ground forces to the continent. British policy makers sought relief through the countermetaphor of Britain's traditional maritime blockade strategy, but blockades are slow and expensive to maintain against a continental enemy as powerful as Germany. The RAF's vision of strategic bombing promised to reconcile the metaphors into a coherent strategy that would win the war, win it relatively quickly, and at low cost—at least in lives.¹⁹³

British strategic-bombing theory rejected Haig's concept of the structured battle as outlined in the 1909 Field Service Regulations. Because bombers could quite literally bypass the enemy's fielded forces, the RAF believed that there would be no need for the FSR's long and costly "wearing-out fight." Then Chief of the Air Staff (CAS) Hugh Trenchard formally stated in 1928 that "the object to be sought by air action will be to paralyze from the very outset the enemy's productive centers and munitions of war of every sort and to stop all communications and transportation."¹⁹⁴ In addition to indirectly striking the enemy's morale and national will. Many theorists, both RAF and civilian, "assumed the intolerance of the civilian population for the disruption of their normal routines. Disruption would lead to chaos, particularly

¹⁹³ Peter Gray, *The Leadership, Direction and Legitimacy of the RAF Bomber Offensive from Inception to 1945* (London: Continuum Books, 2012), 57-65.

¹⁹⁴ Biddle, Rhetoric and Reality in Air Warfare, 94-97.

among the lower classes, and such chaos would lead to the loss of government control—perhaps revolution."¹⁹⁵

The failure of strategic bombing to deliver its pre-war promises revealed the RAF's strategy and operations to be incoherent with Britain's political objectives. The policy makers were dissatisfied, and "it was precisely because the Air Staff perceived the need to still the doubts being expressed about the effectiveness of the bomber offensive by the Prime Minister and others that Harris was appointed as C-in-C Bomber Command."¹⁹⁶

Harris's level of devotion to strategic bombing theory remains open to debate. As pragmatic as he was determined, it is doubtful that Harris ever fully embraced the RAF's pre-war strategic evangelism. Nevertheless, his experience from 1939-40 as a bomber group commander grounded him fully in reality. His comments, albeit in hindsight, resemble Douglas Haig's determination, common sense, and doctrinal confidence, but without Haig's perpetual optimism. Harris recorded his initial strategic assessment upon taking command in early 1942. He believed that Britain's only option "was to get at Germany by the only means left to us, which was by the bombing offensive. I most certainly regarded this, not only as the only alternative then available to us, but also as an entirely practicable method of beating the enemy, provided only that we got on quickly enough to keep ahead of the enemy's counter-measures."¹⁹⁷ Yet Harris felt compelled to apply an immediate caveat:

But in the light of our experience I was not at all happy about our ability to beat the enemy's growing defenses; we ourselves seemed to have been quick enough in finding

¹⁹⁵ Biddle, Rhetoric and Reality in Air Warfare, 102-110.

¹⁹⁶ Sebastian Cox, "Sir Arthur Harris and the Air Ministry," in *Air Power Leadership: Theory and Practice*, eds. Peter W. Gray and Sebastian Cox (London: The Stationary Office, 2002), 213.

¹⁹⁷ Harris, Bomber Offensive, 52.

methods of confusing or beating off the German attacks on Britain, by interfering with the enemy's radio beams for navigation at night, by starting dummy fires, and later on by equipping our night fighters with the first of the radar devices which enabled them to find the bombers in the dark. I did not then have that high regard for the ability of our scientists that I subsequently acquired as the war progressed and as I saw their inventions pull us time and again out of a mess.¹⁹⁸

For Harris, the question was not whether the strategy of attrition was correct, but whether or not the nation would have the wisdom and will to do what was necessary to see the strategy through to victory. He agreed with the pre-war air power advocates that the enemy's army could and should be bypassed; but, unlike them, he saw no shortcuts to victory. Not unlike Haig's concept of attrition, Harris viewed strategic bombing as a wearing-out battle against both the enemy's capability and willingness to wage war—which one crumbled first was, to him, immaterial. Harris was certain "that a bomber offensive of adequate weight and the right kind of bombs would, if continued for long enough, be something that no country in the world could endure." ¹⁹⁹ He therefore considered anything that diverted resources from building the bomber offensive to its "adequate weight" as a form of strategic infidelity that would only delay ending the war.²⁰⁰

It was this conviction, that he absolutely had the correct strategy to meet Britain's dual policy objectives of achieving victory and minimizing casualties, that led to his strategic myopia and fueled the frustration that so permeates his wartime correspondence and memoirs. If Haig's *Final Dispatch* come across as a triumphal "I told you so," then Harris's *Despatch* and book reflect an anguished "if only you had listened

¹⁹⁸ Harris, Bomber Offensive, 52.

¹⁹⁹ Harris, Bomber Offensive, 53.

²⁰⁰ Harris, Bomber Offensive, 53.

to me." This despair is illustrated by the following long passage from

Bomber Offensive:

It is an obvious and most certain conclusion that if we had had the force we used in 1944 a year earlier, and if we had then been allowed to use it together with the whole American bomber force, and without interruption, Germany would have been defeated outright by bombing as Japan was; the two atom bombs only added three per cent to the already existing devastation, and their use against two cities merely gave the Japanese, as all American authorities agree, a pretext for immediate surrender when they had already been defeated by area bombing of the same kind as that used against Germany. To have had the force we built up in 1944 a year earlier would have been perfectly feasible, and this is not an absurd speculation like wondering what aircraft could have done in the Battle of Waterloo. We were only prevented from having that force by the fact that the Allied War leaders did not have enough faith in strategic bombing. As a result, the two older services were able to employ a large part of the nation's war effort and industrial capacity in the production and use of their older weapons, and were also able, when the older weapons failed, to get what amounted to more than half our existing bomber force for their own purposes.²⁰¹

Thus, Harris rates as Slightly Effective for how well he translated policy objectives into coherent strategy and operations in support of Britain's national strategy. When he took command, Harris assumed responsibility for a strategy and operations that were still largely incoherent with policy. Harris discarded lingering pre-war theoretical notions and embraced a strategy of attrition designed to wear down Germany's military capability and national morale. By doing so, he realigned strategic bombing strategy and operations to support a national strategy to win the war, yet without the national bloodletting that characterized World War I. His strategic determination, however, approached obstinacy when it came to adapting his long-term strategy to meet intermediate and competing national-strategic goals.

Balancing Doctrinal Adherence with Flexible Adaptation

²⁰¹ Harris, Bomber Offensive, 263.

As the official historians succinctly noted, Arthur Harris "was a man of strong convictions and unshakeable determination," but one who viewed any idea that differed from his own as a "mere obstruction."²⁰² These traits were among his greatest strengths during the dark days of 1942 and 1943 when he had to build up Bomber Command, while simultaneously risking its destruction every night as Britain's only offensive capability. On the other hand, Harris's determination tended towards obstinacy and strategic tunnel-vision when the war's fortunes expanded Britain's strategic obligations and opportunities.

As noted previously, Harris took over a Bomber Command that was literally and figuratively in crisis. Unfit for its purpose due to shortcomings in aircraft, aircrew, and methods, strategic and institutional imperatives compelled Bomber Command to attack relentlessly rather than prudently. Eschewing caution, Harris sought a dramatic demonstration of Bomber Command's capabilities and—more importantly—its potential if properly resourced.

Supremely confident that his command's hitherto disappointing results were due to too little, not too much, doctrinal adherence, he gathered every aircraft and crew he could muster until he could launch 1,000 bombers in a single raid. In gambling terms, Harris "doubled down" on Bomber Command and strategic bombing, betting that concentrating aircraft in time and space over the target area would overwhelm the German air defenses.²⁰³ According to David Lonsdale,

There can be no finer example of an act of moral courage than Arthur 'Bomber' Harris' 'Millennium' raid against Cologne in May 1942. In an effort to prove the value of Bomber Command, Harris brought together virtually his entire bomber force, including reserves, in one attack. This was at a time when Bomber Command was taking significant losses on most big raids. The Official History describes the risks involved: "such a bold action might produce a great

²⁰² Webster and Frankland, SOAG Vol I, 345-346.

²⁰³ Cox, "Sir Arthur Harris and the Air Ministry," 216.

triumph, but, if anything went wrong, the disaster might well be irremediable". John Terraine's assessment of this decision is undoubtedly correct: "Harris' calm, deliberate decision to stake his whole force and its future, on the night of May 30/31, showed the true quality of command."²⁰⁴

Harris's gamble paid off, not for the strike's material effect on the Germans, but for its psychological impact on the Allies. "Harris had done what he had set out to do; he had captured the imagination of the British and American public, he had exhilarated his Command, and he won the unreserved admiration of the Prime Minister, thus saving the bomber offensive for a yet more vigorous future. Churchill told him: 'This proof of the growing power of the British Bomber Force is also the herald of what Germany will receive, city by city, from now on.'"²⁰⁵

Harris subsequently showed a certain readiness to adapt doctrine to meet circumstances, but only within rather narrow parameters. For instance, he tolerated deviations from urban area bombing, such as the raids on the Nazi rocket development site at Peenemünde or the Ruhr dams, as long as the bombers remained under his command, the raids were isolated events, and they still fit within his overall strategy of wearing out Germany's military capabilities and national will.²⁰⁶ What he could not countenance, however, was the diversion of bombers under his command to other theaters and missions. As Peter Gray observes, "it is clear that, to Harris at least, any utilization of Bomber Command aircraft, crews, or senior personnel for other tasks was an unnecessary diversion from the true mission of the area bombing of Germany. And it would provoke inevitable protest even though the priorities had been set by the prime minister, the Chiefs, or the Combined Chiefs."²⁰⁷

²⁰⁴ David Lonsdale, *The Nature of War in the Information Age* (London: Frank Cass, 2004), 117-118.

²⁰⁵ Terraine *Time for Courage*, 487.

²⁰⁶ Terraine *Time for Courage*, 537-542.

²⁰⁷ Gray, The Leadership, Direction and Legitimacy of the RAF Bomber Offensive, 255.

The diversion of heavy bombers to support the Battle of the Atlantic particularly incensed Harris. He pointed out correctly that bombing U-boat bases on the French coast was as futile as it was costly—the RAF simply did not possess the capability to penetrate the reinforced concrete structures, even if it had been able to hit them. Harris even had valid cause to complain about the diversion of over 500 aircraft and crews to Coastal Command in 1942. Administratively losing the equivalent of 28 bomber squadrons unquestionably inhibited his strategy, and he would have been negligent as C-in-C if he had failed to protest. Harris's real problem, however, was not that he complained, but the manner in which he did so. His penchant for hyperbole and sarcasm undermined his message and desensitized his audience to even his legitimate grievances. A perfect example was Harris's letter to Churchill complaining about the diversion of bombers for maritime duty in which he described Coastal Command "as merely an obstacle to victory."²⁰⁸

Sebastian Cox points out the strategic flaw in Harris's argument. "He did not explain how the population, including his aircrews, were to be fed, or his aircraft fueled, if the U-boat war was lost, nor did he explain how fighting the Battle of the Atlantic could be avoided. Harris in this instance, as in many others, would have done better to eschew hyperbole, and limit himself to a considered exposition of the impact on his Command of such diversions. But that very single-mindedness which was to prove such an asset in pulling his Command together and focusing it on its task also did not permit him to develop the broadness of vision to see the other side of the coin."²⁰⁹ In this case and in others, Harris exhibited signs of "that strength of character" that Clausewitz warned "turns into obstinacy as soon as a man resists another point of

²⁰⁸ Cox, "Sir Arthur Harris and the Air Ministry," 214-215.

²⁰⁹ Cox, "Sir Arthur Harris and the Air Ministry," 215.

view not from a superior insight or attachment to some higher principle, but because he *objects instinctively*."²¹⁰

This duality in Harris's character results in his aggregate rating of Competent for his ability to balance doctrinal adherence with flexible adaptation in support of Britain's national strategy. Nobody ever doubted Harris's determination and courage of conviction; indeed, they factored heavily in his selection as Bomber Command C-in-C. He had faith in his interpretation of strategic bombing doctrine and succeeded in convincing others to follow his vision, as evident in the British public's and Churchill's reactions to the Thousand Plane Raids. This same determination, unfortunately, blinded Harris to appreciate any strategic perspective other than his own. Without Arthur Harris, the moribund Bomber Command of 1941 would have never survived to become the Leviathan of 1945. The irony was that Harris's obstinacy and petulance toward his superiors nearly deprived Bomber Command of its leader just at it approached its zenith.

Nurturing Relationships with Higher Civil and Military Authorities

Arthur Harris was <u>not</u> a man to nurture relationships with anyone, even those for whom he worked. This was due both to his traditional view of command and his irascible personality. Harris was volatile if he felt others had infringed upon his command prerogatives or undermined his strategy, and he was positively combustible if he inferred both were being threatened. Yet for all the effort Harris invested in expressing his indignation, his actions exhibited little of the shirking behavior described by Feaver and demonstrated by Douglas Haig. Harris was undoubtedly a difficult agent, but was not disloyal to his principal.

Having begun his career within an army organizational culture dominated by Douglas Haig, the FSR, and a "man-on-the-spot" leadership philosophy, it should be not surprising that Harris viewed

²¹⁰ Clausewitz, On War, 108-109.

command autonomy as being sacrosanct. He saw the proper role of a higher headquarters to be one of providing broad guidance, allocating resources, and enabling the decisions of their subordinate commanders. When a senior Air Staff officer himself, he claimed to have "stopped subordinates from writing to Commanders-in-Chief staying that they were 'directed' to say this, that, and the other. I looked upon Commanders-in-Chief in the field as responsible people who were not to be bothered by the trumpery opinions of young Jacks-in-office who felt that they could blow themselves up with the full authority of the Air Council." He further claimed, however, that "the same thing began again when I left the Air Ministry and was myself a Commander-in-Chief." ²¹¹

While Harris may have genuinely believed that he, and he alone, had struck the right balance between staff and command, Sebastian Cox is probably correct that "it is doubtful, in fact, if the ideal of harmonious relations can ever exist in practice. The reason for that is simple: it is the C-in-C's job to fight the enemy and therefore to battle, and I use the word advisedly, for the resources to allow him to do so. Those resources can only be allocated to him by the politicians and staff in the Ministry. The Ministry, however, has to deal with more than one C-in-C and, needless to say, such resources are never infinite and seldom even sufficient to meet all the demands made on them. There are therefore the inherent seeds of a combative relationship present from the start."²¹²

No issue strained Harris's relationship with his higher authorities more than target selection. Harris believed there was one, and only one, proper targeting selection and this was night area bombing of Germany's industrial cities. He aggressively resisted any form of selective targeting of specific sectors of the German war economy such as ball bearings, oil, or aircraft engines. He derisively called such schemes "panaceas," nicely

²¹¹ Harris, Bomber Offensive, 49-50.

²¹² Cox, "Sir Arthur Harris and the Air Ministry," 210.

captured in one of his many wartime letters on the subject: "I do not believe in 'panacea' targets, eg oil, rubber, ball bearings. Specializing on one such means that the enemy concentrates all his defenses, and nothing else in Germany including morale and housing is likely to suffer. If the 'panacea' fails all is lost. Finally I distrust experts and specialists on 'panacea' commodities...for example a fortnight after we were told Germany was nearly on the rocks for oil she staged the biggest campaign in history [Russia] using billions of gallons. Not even the 'oily boys' attempted to laugh that off. They just hid their heads for a spell and now raise the same song again."²¹³

Critics have offered various explanations for the source of Harris's intransigence, to include overconfidence, insufficient "cognitive capacity," and psychological dysfunction.^{214.} Missing from these critiques is a discussion of the *purpose* of his intransigence, which was the management of war's uncertainty. Harris was a pragmatist, but one whose mastery of the mechanics of war was streaked with pessimism. He did not reject attacking "panacea" targets because he was too Pollyannaish, dumb, or pathological to understand industrial webtheory, but because he was too well-informed to ignore the practical difficulties of executing it. His common sense told him that any of the selective targeting strategies required a synergy of precision intelligence, engagement, and persistence that was beyond Bomber Command's capabilities, at least until 1945.²¹⁵

When Harris and Portal rhetorically sparred in their infamous "demi-official" correspondence over targeting, their debates were largely academic. Whether Harris directed a thousand bombers to bomb the rail

²¹³ Henry Probert, Bomber Harris: His Life and Time (London: Greenhill, 2001), 257.

²¹⁴ Harris, Despatch, xvii-xviii; Gray, *The Leadership, Direction and Legitimacy of the RAF Bomber Offensive*, 256-257; and Pois and Langer, *Command Failure in War*, 168-172.

²¹⁵ Richard Overy, *The Bombing War: Europe 1939-1945* (London: Allen Lane, 2013), 367-368.

lines in Cologne selectively or to area-bomb the city center, the results would have been virtually indistinguishable, especially for those on the ground. As the official historians concede, "for a long period, the strategic air offensive was placed in the circumstances of a vicious cycle in which it scarcely mattered whether the bombing policy was general or selective. For that reason, it cannot be established that, in their dispute with Sir Arthur Harris on this issue, the Air Staff was right and he was wrong. On the contrary, whatever the theoretical merits of the argument may have been, it was Sir Arthur Harris who showed the more realistic appreciation of the possibilities."²¹⁶

According to principal-agent theory, however, it does not matter whose "appreciation of the possibilities" is more realistic. As the agent, Harris's responsibility was to execute the mission given to him by Portal, his principal. To act otherwise would be shirking. Many, to include the official historians, have suggested that Portal should have fired Harris for his insubordinate attitude.²¹⁷ But did such candid, even inflammatory, private exchanges actually rise to the level of shirking? Harris was incensed at the mere suggestion, as the official historians duly note from one of his letters to Portal: "'It has always been my custom', he wrote, 'to leave no stone unturned to get my views across, but, when the decision is made I carry it out to the utmost and to the best of my ability. I am sorry', he said, 'that you should doubt this, and surprised indeed if you can point to any precedent in support of your statement."²¹⁸

The Chiefs of Staff and BBSU at the time, and historians ever since, have specifically investigated whether Bomber Command could have done more in support of the officially sanctioned selective-targeting schemes, and the answer is generally negative. As Cox concludes, there

²¹⁶ Webster and Frankland, SOAG Vol III, 294.

²¹⁷ Webster and Frankland, SOAG Vol III, 80-88.

²¹⁸ Webster and Frankland, SOAG Vol III, 87.

were only a "relatively small number of occasions when the weather was good but oil targets were not hit, and it follows from this that, given the factor of tactical conditions as well as the weather, it is difficult to convict Harris convincingly" of shirking.²¹⁹

As with any principal-agent relationship, moreover, Harris's superiors share a measure of responsibility for failing to monitor their subordinate more effectively. Cox points out that the Pointblank Directive, which prioritized targeting the German aircraft industry, was ambiguous if not contradictory, "and allowed Harris not only to continue area attacks in general, but also to extend them to Berlin. Noble Frankland also commented that 'when later the Air Staff began to complain that Sir Arthur Harris was not taking part in the attack on the German Air Force they only had themselves to blame, because they could have issued a much clearer directive on 10 June [1943]."²²⁰

The Air Ministry, furthermore, was not timid in providing guidance. During his tenure as C-in-C, the Air Ministry sent Harris 62 formal instructions regarding the conduct of the bomber offensive, in addition to countless lesser memoranda and other examples of micro-management. With this picture in mind, one may read with some sympathy Harris's complaint to Portal of "the endless suggestions I get for dispersing the effort of this Command, the mere rebuttal of which becomes a weariness to the flesh."²²¹ Harris would have certainly concurred with J.F.C. Fuller's caustic prediction that, unchecked, "the staff becomes an allcontrolling bureaucracy, a paper octopus squirting ink and wriggling its tentacles into every corner."²²²

²¹⁹ Cox, "Sir Arthur Harris and the Air Ministry," 222-226.

²²⁰ Cox, "Sir Arthur Harris and the Air Ministry," 221.

²²¹ Gray, The Leadership, Direction and Legitimacy of the RAF Bomber Offensive, 255.

²²² J.F.C. Fuller, *Generalship: Its Diseases and Their Cure: A Study of the Personal Factor in Command* (London: Faber and Faber, 1933), 66.

Thus, perhaps counter-intuitively, Harris overall rates as Competent for his ability to nurture relationships with higher civil and military authorities in support of Britain's national strategy. The "demiofficial" correspondence between Harris and Portal continues to exert a magnetic pull on historians, but the letters reflect an agent who was a disgruntled servant, not a disloyal shirker. Although guilty of hyperbole, Harris's incendiary exchanges with Portal resulted in lots of smoke, but very little fire. As Gray concludes, "although Harris was vociferous in his objections to any deviation, or diversion, from his course of action, Bomber Command carried out the tasks broadly as directed; this was especially evident during *Overlord*. This may not always have been to the satisfaction of all in the air staff, but that did not necessarily give serious grounds for considering removing Harris from command."²²³

Nurturing Relationships with Subordinate Commanders and Warriors

Arthur Harris's reputation as a leader suffers from his reclusive command style, acerbic correspondence, and sardonic wit demonstrated by the anecdote that introduces this chapter. He appears to be not a very nice man, as well as one who conducted a campaign that was decidedly not nice. There was much more, however, going on behind his habitual glower. As his critic Max Hastings concedes, "those who seek to present him simply as a latter-day 'Donkey,' indifferent to casualties, do him an injustice. He was passionately concerned to give every man in his command the best possible chance of survival."²²⁴

Harris presents a classic case of how conventions of the present obscure our view of the past. As Dan Todman explains, "for much of the twentieth century, studies of the generals tended to be biographically based: they examined the personal qualities of the High Command in effort to divine their abilities. Much passion was expended on whether

²²³ Gray, The Leadership, Direction and Legitimacy of the RAF Bomber Offensive, 275.

²²⁴ Hastings, Bomber Command, 279.
they were nice or nasty men. This sort of history as Blind Date makes a fundamental mistake about the nature of command—whether these men are personally sympathetic to later generations bears little relationship to whether they were good commanders at the time."²²⁵

Harris's command style was authoritative and directive, best summarized in the words he used to rebut Portal's suggestion that Harris's lack of enthusiasm for the oil plan would rub off on his staff. "I do not give my staff views, I give them orders. They do and always have done exactly what I tell them to. I have told them to miss no opportunity of prosecuting the oil plan, and they have missed no worth while (sic) opportunity."²²⁶ Harris's headquarters routine was formal and scripted. As Probert describes it, "invariably his working day began with the Operations Room conference at which he appeared, sat at his little table without a word or smile, and expected and got the punctual attendance of those he wanted to consult. There was trouble if the right man was not there or not ready to reply. Then as soon as the conference was over he left the room without another word or smile; it was rare to see him again, except by appointment." Harris picked the night's targets, approved numbers of aircraft, aircraft bomb loads, and times on target, and made the final weather go/no-go call; the rest he left for his staff and subordinate commanders to work out.227

The pressure upon Harris was intense. It is difficult to identify another commander who had to make such life-or-death decisions so often or for so long. Writing of the disastrous Nuremberg raid of March 1944, Martin Middlebrook reminds us "Bomber Command was not run by a committee or board but by one man...Hindsight gives us the ability to judge that Harris was solely to blame for the decision to mount this

²²⁵ Dan Todman, *The Great War: Myth and Memory* (London: Hambledon and London, 2005), 83.

²²⁶ Gray, The Leadership, Direction and Legitimacy of the RAF Bomber Offensive, 272.

²²⁷ Henry Probert, Bomber Harris: His Life and Time (London: Greenhill, 2001), 150-155.

raid and then persist with it, but hindsight does not give us the right to be overcritical. An admiral might fight one major battle in his lifetime. A general might fight three such battles. Harris committed the whole of his front line force to combat approximately ten times in each month for three and a quarter years."²²⁸

Harris was an even more remote and imposing figure in the eyes of the Bomber Command rank and file. While it is not accurate that he never visited his units, he did not do it very often. But when he did circulate among his Airmen, it was to convey strength and purpose, not warmth and sympathy. Probert records one Bomber Command veteran's remembrances of a Harris visit. "The C-in-C spoke in the Briefing Room for some ten minutes, telling the men how proud they should feel to be the only fighting men who were able to hit back at the Hun. He knew it was rough, and it would get a lot rougher. He finished saying, 'I want you to look at the man on either side of you. In six months' time only one in three will be left, but if you are the lucky one I promise you this. You will be two ranks higher.' As he strode towards the door there was strumming on the table tops, the Poles [flying with the RAF] started to cheer and soon everyone was joining in; there seemed to be genuine affection for the man who had just told them he would send them over Germany again and again until, finally, only one in three remained."229

This self-imposed physical isolation and emotional detachment was probably necessary for Harris to execute his strategy of attrition successfully. Mutual trust and respect were a necessity, while mutual affection was a luxury better left for post-war reunions. Where Harris fully demonstrated his concern for those under his command was his relentless advocacy on their behalf. He used his technical mastery and rhetorical prowess to pressure the Air Ministry for better aircraft. A

102

²²⁸ Martin Middlebrook, *The Nuremberg Raid 30-31 March 1944* (New York: William Morrow, 1973), 283.

²²⁹ Probert, Bomber Harris, 199-200.

champion of the Avro Lancaster and critic of the Handley Page Halifax, he considered the latter's poor speed and ceiling to be lethal, predicting that losses "will ensue on an ever-increasing scale if we persist in our present policy of sending crews to fight in inferior aircraft instead of converting our production to a type of proved operational efficiency."²³⁰

Harris similarly pressed for better food, living conditions, and recognition for his ground crews. In the summary chapter in *Bomber Command* he points out that "it may be imagined what it is like to work in the open, rain, blow, or snow, in daylight and through darkness, hour after hour, twenty feet up in the air on the aircraft engines and airframes, at all the intricate and multifarious tasks which have to be undertaken to keep a bomber serviceable. And this was on wartime aerodromes, where such accommodation as could be provided offered every kind of discomfort and where, at any rate during the first years of the war, it was often impossible even to get dry clothes to change into between shifts." These are not the words of an indifferent commander.²³¹

Surprisingly, given his reputation, Harris rates as Highly Effective for his ability to nurture relationships with his subordinate commanders and warriors, significantly contributing to his strategy's support of national-policy objectives. The men and women of RAF Bomber Command did not need a commander who was warm, inspirational, and witty. The subordinate commanders required a C-in-C who was decisive, gave clear direction, provided the sound administration that met their basic needs, and let them get on with fighting their war. The Airmen, particularly the aircrews, needed a C-in-C who was supremely confident, competent, and determined to do everything in his power—to include confronting his superiors—to ensure Bomber Command had the

²³⁰ Probert, Bomber Harris, 220.

²³¹ Harris, Bomber Offensive, 268.

equipment and training necessary to accomplish its mission. Bomber Command had exactly the commander it needed in Arthur Harris.

Optimizing Operational Design and Tactical Technique

Arthur Harris's strategy of attrition was simple in concept but difficult in execution. His bombers had to destroy Germany's urban infrastructure systematically until either its military capability or its national will were sufficiently degraded that the Nazi regime would capitulate to Allied demands. The key variable for success was numerical superiority, but in materiel, not manpower. Harris's strategy came down to a mathematical formula, because in his own words "a bomber offensive of adequate weight and the right kind of bombs would, if continued long enough, be something that no country in the world could endure."²³² Since such a strategy had never before been attempted, however, "it was anybody's guess what effort would be required and over what period the offensive would have to be continued."²³³ The guiding principle was maximizing tonnage on target, and Harris never questioned or diverged from it. Because the resource allocation for Bomber Command was the War Cabinet's purview, the only variable Harris could control was method—improving operational design and tactical technique to optimize both the effectiveness and the efficiency of the strategic numerical superiority necessary for victory.

The operational design problem was easily defined, however, and it pre-dated Harris's assumption of command: how to deliver an acceptable quantity of bombs on target at an acceptable cost in lost bombers and aircrews. "When Bomber Command switched to night bombing, the critical factor was that daylight attacks were proving too costly. In all fairness, however, the decision to go from precision to area attacks was made before Harris took command. Nevertheless, the guiding

²³² Harris, Bomber Offensive, 52-53.

²³³ Harris, Bomber Offensive, 53.

assumptions about how Bomber Command could be used most effectively were never really challenged."²³⁴ Bomber Command would area-bomb Germany's industrial cities by night. All else devolved to tactics and technique in a never-ending game of move-countermove between attacker and defender.

From February 1942 through July 1943, according to Harris's *Despatch*, "the tactical aim of Bomber Command in this period can be described in the one word 'concentration.' The policy of individual routing to the target was therefore discontinued in June, 1942, and, with the improvements in navigation provided by GEE, a move was made to step-up concentration in time. To demonstrate the effects of saturation of the defenses, both in respect of losses and in the infliction to damage to the target, and to prove that large concentrations were practicable, the first 1,000 bomber raid was planned." Due to the limited inventory of heavy bombers at this stage of the war, Harris tended to concentrate all available bombers against a single target; and he coordinated attack plans and routes with the goal of concentrating 10 aircraft per minute across the target.²³⁵

A major problem with this approach was that a single large bomber stream was easily tracked on radar, telegraphing that night's target and allowing the Germans to concentrate their air defenses, over the objective and along the inbound and return legs. The British responded by introducing electronic counter-measures, most notably chaff, and developed improved navigation and target marking to boost the concentration over target to 30 bombers per minute. The Germans, in turn, responded with electronic counter-counter measures and better night-fighter tactics.²³⁶

²³⁴ Robert Pois and Philip Langer, *Command Failure in War: Psychology and Leadership* (Bloomington, IN: Indiana University Press, 2004), 170.

²³⁵ Harris, Despatch, 118.

²³⁶ Harris, *Despatch*, 120-124.

For this thesis' purpose, the individual details of each tactical development are less important than the process used in developing them. Arthur Harris could influence operations and tactics to a far greater degree than could Haig. By centralizing operational planning at High Wycombe and reserving target selection to himself, Harris exercised significant control over how his bombers fought. Moreover, the repetition of operations and Harris's superb feedback mechanism with his units enabled a tactical development system through trial and error that would have been impossible in a short campaign and difficult in one where operations were intermittent, rather than nearly continuous. Harris had the time to allow tactical natural selection to refine techniques in support of his strategy as well as the authority to implement best practices across Bomber Command.

In their analysis of Harris, Robert Pois and Phillip Langer argue that "the air strategy decision-making process might well be considered as tinkering rather than thinking," and they mean "tinkering" as a pejorative. Their critique, however, is shortsighted. When the authors begrudgingly grant that "the daily tactical demands encouraged quickand-dirty solutions," they presume that elegant answers are better responses to quick-and-dirty problems.²³⁷ Given the strategic context and operational problem, short of the atomic bomb there was no idea, even in hindsight, that would have changed fundamentally Harris's strategy. His mission was to bomb and keep bombing, and his ability to tinker allowed Harris to modify his Command's operations and tactics steadily, as evidenced by its smooth transition from bombing German cities to French rail yards before D-Day.²³⁸

Overall, Harris rates Slightly Effective for his ability to optimize operational design and tactical technique to further Britain's national

²³⁷ Pois and Langer, Command Failure in War, 168-172.

²³⁸ Gray, *The Leadership*, *Direction and Legitimacy of the RAF Bomber Offensive*, 265-268.

strategy. He combined a thorough mastery of the mechanics of strategic bombing with a sure vision of what was both possible and necessary. Furthermore, Bomber Command's centralized command system provided Harris with an unprecedented ability to influence operational design and tactical technique. If Harris could respond to Pois and Langer, he would probably plead guilty to tinkering—but would point out acidly that such tinkering forged a force that by 1945 flew with impunity over the Third Reich's smoldering ruins.

Fostering Intelligence and Technological and Doctrinal Innovation

Arthur Harris was strangely ambivalent about intelligence, technology, and innovation. His papers reveal a man comfortable and confident with technical details, respectful of expertise, and willing to experiment and innovate. On the other hand, he was prone to confirmation bias, quick to pass lasting judgment on people, and only with great difficulty could be moved from a strongly held conviction—and Harris held few others. Paradoxically, the man responsible for fighting one of the most intelligence, technology, and innovation-driven campaigns in history failed to use them to his full strategic advantage.

Harris's took pride in his technical expertise and common sense, immersing himself in highly technical matters relating to aircraft design and weapons. He left no stone unturned looking for ways to make his strategy of attrition more effective and efficient. For instance, he concerned himself with the finest details of bomb load-outs and compositions, in search of the perfect combination of high explosive (HE) and incendiary munitions. In a letter that is classic Harris, he stated: "I am always being pressed to concentrate entirely on incendiaries but I do not agree with this policy. The moral effect of HE is vast. People can escape from fires, and the casualties on a solely fire-raising raid would be as nothing. What we want to do in addition to the horrors of fire is to bring the masonry crashing down on top of the Boche, to kill Boche, and to terrify the Boche; hence the proportion of HE.^{"239} The fact that Harris appended 148 pages of highly technical detail to his 61-page *Despatch* is yet another indicator of the man's technical involvement and acumen.²⁴⁰

Harris had a similarly voracious appetite for intelligence, yet tended to digest only the data that conformed with his inclinations. His intelligence officer was one of the few people permitted to speak at his morning operations conference, and Harris's first question was inevitably "did the Hun do anything last night?"²⁴¹ Harris maintained his own personal Blue Book on German targets which included pre and poststrike imagery and BDA. He, unfortunately, also tended to use intelligence selectively as supporting evidence for his pre-determined conclusions and courses of action. He shared his Blue Books with visiting dignitaries, but mostly to impress them with Bomber Command's activities and to confirm the effectiveness of his strategy.²⁴² And in a particularly egregious incident, Harris was so convinced that his bombing of Berlin in 1944 heralded a "German defeat comparatively quickly" through the "collapse of morale as well as of production on the homefront" that he demanded both the Joint Intelligence Committee and Air Staff produce intelligence reports on German morale—only to dismiss them when they came back with assessments contrary to his own.²⁴³

This incident over the morale reports illustrates one of the more significant defects of Harris's character. When a person or agency brought him information dissonant with his opinions, he tended to disregard vehemently both the message and the messenger. Harris's *bête noir* was the Ministry of Economic Warfare (MEW). Originally conceived as a collator of foreign economic intelligence, it evolved into an

²³⁹ Probert, Bomber Harris, 223.

²⁴⁰ Harris, *Despatch*, 5.

²⁴¹ Probert, *Bomber Harris*, 152.

²⁴² Probert, Bomber Harris, 177-180.

²⁴³ Biddle, *Rhetoric and Reality in Air Warfare*, 230-232.

organization that offered increasingly strident—and influential—opinions on targeting priorities. Harris recoiled from any agency, especially one comprised of civilian Boffins, telling him how to fight his war.²⁴⁴ And after a high-profile miscalculation of the strategic effectiveness of targeting German ball-bearing production, Harris permanently relegated the MEW analysts to the category of "panacea mongers." As Christina Coulter observes,

Harris's view of the MEW was typical of the man. Intolerant of mistakes, once he had made up his mind about an individual, an organization, or a plan of action, he was usually unshakeable. As has been shown elsewhere, MEW analyses were usually very accurate, and the only time Harris had a real cause to complain about their analysis was over the ball-bearing issue; but even without this, he would have had an instinctive distrust of their advice because they were civilians. The official historians make the comment also that Harris 'made a habit of seeing only one side of a question and then exaggerating it. He had a tendency to confuse advice with interference, criticism with sabotage and evidence with propaganda.'²⁴⁵

Harris's personality had an overall detrimental impact on his strategy. Although he correctly followed a trial-and-error approach to technological and doctrinal innovation, he sometimes allowed his personal biases and predilections to interfere with the necessary natural selection for best practices. As Webster and Frankland noted, "his mind tended to reject simplified ideas which seemed to offer quick or easy solutions, and from the early days of his command he adopted towards the question of operational feasibility an attitude of stark realism amounting at times almost to pessimism."²⁴⁶

²⁴⁴ The British military popularly referred to civilian scientists and technical experts as Boffins. The connotation was a curious mixture of grudging respect, derision, affection, and exasperation, depending upon circumstances.

²⁴⁵ Christina Goulter, "Sir Arthur Harris: Different Perspectives," in *Challenges of High Command in the Twentieth Century: The British Experience*, eds. Gary Sheffield and Geoffrey Till (Camberley, UK: Strategic and Combat Studies Institute, 1999), 133.

²⁴⁶ Webster and Frankland, SOAG Vol I, 385.

While there is little evidence to show that Harris prevented innovation, he was guilty of delaying it, with the Pathfinders being a notable case in point. The Pathfinder Force (PFF) in concept was uncontroversial; the difficulty in finding targets at night led to complex navigational technology and target marking techniques, and mastering such complexity recommended aircrew specialization. The dispute arose over whether it was better to skim the best crews from throughout the command to create a dedicated Pathfinder Group or maintain unit integrity by forming target-finding "raid leaders" or PFF squadrons within existing Groups. While Harris's objections to stripping the line squadrons of their best crews had merit, the real issue was that the idea of the dedicated PFF was downward-directed, which so rankled Harris that he could not resist noting in his *Despatch* that "the Air Ministry, however, insisted on the formation of a separate Pathfinder Force as a separate Group—yet another occasion when a Commander in the field was over-ruled at the dictation of junior staff officers in the Air Ministry." Regardless, the practical effect of this territorial dispute between Harris and the Air Ministry was to delay the development of one of Bomber Command's key doctrinal innovations.²⁴⁷

Harris rates overall as Slightly Ineffective for his ability to foster intelligence and technological and doctrinal innovation. His confirmation bias and inability to separate message from messenger overshadow his passion for technical detail. With his previously described unprecedented authority and ability to disseminate best practices rapidly, Harris could have accelerated Bomber Command's technological and doctrinal development. Instead, at times Harris sacrificed his strategy on the altar of his ego, principles, and prerogatives.

Summary

²⁴⁷ Harris, *Despatch*, xiv-xv and 10-11.

Table 4 summarizes Harris's proficiency in each of the six evaluative criteria. His biggest strength was his ability to spread his determination and faith in his strategy throughout his command. Bomber Command did not have to love the man to appreciate his profound competence, clear vision, and dedication. His common sense and mastery of his war's mechanics allowed him to build a powerful striking force and his moral courage and determination enabled him to risk destroying it night after night. His single-mindedness, however, could also be his undoing. Although he inevitably followed his orders, his hyperbole and passionate argumentativeness strained his working relationship with his higher headquarters to the breaking point and sometimes delayed technological and doctrinal innovation.

Table 4: Summary of the Proficiency of Sir Arthur Harris

Summ	Summary of the Proficiency of Sir Arthur Harris as a Practitioner of Attrition								
 Translating policy objectives into coherent strategy and operations 									
Harris	Highly Ineffective Slightly Ineffective Competent Slightly Effective Highly Effective	ve							
• Balan	cing doctrinal adherence with flexible adaptation								
Harris	Highly Ineffective Slightly Ineffective Competent Slightly Effective Highly Effective	ve							
• Nurtu	ring relationships with higher civil and military authorities								
Harris	Highly Ineffective Slightly Ineffective Competent Slightly Effective Highly Effective	ve							
• Nurtu	ring relationships with subordinate commanders and warriors								
Harris	Highly Ineffective Slightly Ineffective Competent Slightly Effective Highly Effective	7e							
• Optin	nizing operational design and tactical technique								
Harris	Highly Ineffective Slightly Ineffective Competent Slightly Effective Highly Effective	ve							
• Foste	ring intelligence and technological and doctrinal innovation								
Harris	Highly Ineffective Slightly Ineffective Competent Slightly Effective Highly Effective	ve							



By aggregating his performance over the six individual criteria, Harris rates overall as Slightly Effective for his proficiency employing the strategy of attrition in support of Britain's national strategy. His Highly Effective rating at nurturing relationships with subordinate commanders and warriors offsets his Slightly Ineffective rating for fostering intelligence and technological and doctrinal surprise. Furthermore, his Slightly Effective rating for optimizing operational design and tactical technique overshadows his Competent rating for nurturing relationships with higher civil and military authorities. A thousand Lancasters over Bremen or Hamburg quite literally had a greater impact on Harris's strategy of attrition than his acrimonious "demi-official" correspondence.

Nobody would have blamed Portal if he had relieved Harris of his command; that he did not is testament to Portal's wisdom and judgment, not Harris's. What Portal recognized was that, for all his faults, Arthur Harris was absolutely the right man for the job. Everything he did, wrote, or said during his tenure of command was in direct support of his strategy of attrition; he demanded no less from his Airmen, and received it. Together they transformed Bomber Command into an instrument of gradual annihilation that, like its commander, was fit for its purpose.

Chapter 5

Conclusions and Implications for Twenty-First Century Strategists

The unlimited wars of the twentieth century were won, and could only be won, by bludgeons rather than rapiers.

Jonathan Boff

We don't need discourses. We need plain talk, honest answers, and the will to close with the enemy and kill him. And to keep on killing him until it is unmistakably clear to the entire world who won.

Ralph Peters

Strategy fundamentally comes down to context and decisions. There is no single strategy that guarantees success, though some may augur failure. "We can now see," wrote Clausewitz, "that in war many roads lead to success, and that they do not all involve the opponent's outright defeat. They range from *the destruction of the enemy's forces, the conquest of his territory, to a temporary occupation or invasion, to projects with an immediate political purpose, and finally to passively awaiting the enemy's attacks*. Any one of these may be used to overcome the enemy's will: the choice depends on circumstances."²⁴⁸ In both World Wars the strategic context drove Britain to turn to strategies of attrition that ultimately proved successful. This thesis has examined how, and how well, Sir Douglas Haig and Sir Arthur Harris executed strategies of attrition to support Britain's national strategy and political objectives.

This chapter summarizes the analysis found in the historical examples and draws conclusions regarding the relative proficiency of Haig and Harris as attrition practitioners. These conclusions suggest implications for contemporary strategists who might be considering

²⁴⁸ Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret. Rev ed. (Princeton, NJ: Princeton University Press, 1989), 94.

employing the strategy of attrition, as well as the possible future of attrition in the twenty-first century.

Douglas Haig and Arthur Harris Compared

The evidence demonstrates that Haig and Harris proved proficient practitioners of attrition, both rating overall as Slightly Effective, though with Haig being marginally more proficient than Harris. As Table 3 reveals, however, they arrived at the same ranking but by different paths, with each demonstrating varying degrees of proficiency among the six criteria for evaluating generalship in strategies of attrition. Comparing their rankings across the six criteria allows one to draw conclusions regarding which criteria and leadership traits are key factors for successful attrition generalship.

Haig	Highly Ineffective	Slightly Ineffective	Competent	Slightly Effective	Highly Effective
Harris	Highly Ineffective	Slightly Ineffective	Competent	Slightly Effective	Highly Effective
• Balan	cing doctrinal a	dherence with f	exible ada	ptation	
Haig	Highly Ineffective	Slightly Ineffective	Competent	Slightly Effective	Highly Effective
Harris	Highly Ineffective	Slightly Ineffective	Competent	: Slightly Effective	e Highly Effective
• Nurtu	ring relationshi	ps with higher c	ivil and m	ilitary authorit	ies
Haig	Highly Ineffective	Slightly Ineffectiv	e Competer	nt Slightly Effective	e Highly Effective
Harris	Highly Ineffective	Slightly Ineffective	Competen	t Slightly Effective	e Highly Effective
• Nurtu	ring relationshi	ps with subordir	ate comm	nanders and wa	rriors
Haig	Highly Ineffective	Slightly Ineffective	Competen	t Slightly Effective	e Highly Effective
Harris	Highly Ineffective	Slightly Ineffective	Competent	Slightly Effective	Highly Effective
• Optin	nizing operation	al design and ta	ctical tecl	nnique	
Haig	Highly Ineffective	Slightly Ineffective	Competent	Slightly Effective	Highly Effective
Harris	Highly Ineffective	Slightly Ineffective	Competent	Slightly Effective	Highly Effective
• Foste	ring intelligence	and technologi	cal and do	octrinal innovat	ion
Haig	Highly Ineffective	Slightly Ineffective	Competent	Slightly Effective	Highly Effective
Harris	Highly Ineffective	Slightly Ineffectiv	e Competer	nt Slightly Effective	Highly Effective

Source: Author's Original Work

Haig and Harris were both very adept at translating policy objectives into a coherent strategy executed through optimized operational design and tactical techniques. These were highly competent men, who blended a mastery of the mechanics of war with common sense to determine feasible answers to complex problems, given the strategic context. Both men possessed a clear strategic vision of what was required and, perhaps more importantly, exhibited the determination, stamina, and moral courage to do what was necessary to see their strategy through to victory. Whatever their faults, Haig and Harris embodied Clausewitz's indispensable qualities: "*first, an intellect that, even in the darkest hour, retains some glimmerings of the inner light which leads to truth; and second, the courage to follow this faint light wherever it may lead."²⁴⁹*

This evidence supports Pois and Langer's contention that attrition places a premium on determination. As casualties and uncertainty mount, a general must never lose heart or allow self-doubt to distort his strategic vision if he is to wage a war of attrition successfully. In fact, it is doubtful that Haig and Harris could have withstood the strain of their responsibilities had they possessed what one might consider "normal" levels of intellectual and moral introspection. As an army needs to be fit for purpose, so does its commander. But their obvious intensity and apparent lack of compassion contribute heavily to posterity's viewing these men as being as distasteful as their strategy. Dan Todman and Christina Goulter capture this sentiment well in the following appraisals:

Nonetheless, the twenty-first century mind struggles with some of their attitudes and behavior. Haig, in particular, strikes many of those who study him as unsympathetic: monosyllabic, convinced of his own destiny and the Lord's favor, seemingly hard-hearted to the fate of his men. Yet he appreciated from the start where Britain's main effort would have to be, and seems to have grown to understand how his

²⁴⁹ Clausewitz, On War, 102.

army's effort could be most effectively applied, as demonstrated by his concern with small unit tactics from the end of 1917. Whilst it may have appeared that he did not care about British casualties, this is hard to square with his evident hard work for ex-servicemen after the war. Officers invest time, energy, and emotion in creating their organizations. Unlike all other leaders and managers, however, they have to be willing to destroy what they have created in an instant if circumstances demand it. No general who cared too much about the lives of his soldiers could function in the attritional warfare of the Western Front.²⁵⁰

It is ironic that society and military hierarchies, in general, tend to be more tolerant of dogmatic senior commanders such as Harris during unlimited wars, where national survival is at stake, when one would have thought flexibility and broad strategic vision would be key. But this is because single-mindedness and determination are more likely to be needed in wars of this type, particularly during the dark days, and this, some would say, is when Harris was at his best. But we are unlikely to see Harris-style figures in our military in the near future, not only because of creeping political correctness, but also because of the limited, lowintensity type of warfare in which we will be engaged. In the heavily Joint, and probably Combined, environment of the future, good intra- and inter-service, and inter-state, relations will be of paramount importance, and the Harrises and Pattons of this world are unlikely to be found in prominent positions.²⁵¹

Haig, in particular, suffered from an inability, or unwillingness, to nurture positive relationships with those both above and below him. His faith in the army's Victorian tradition of decentralized command was as antiquated as it was unshakeable. The BEF required a firmer hand than Haig was comfortable giving, and by compounding ambiguous operational guidance with poor agent-monitoring, Haig created a command climate ripe for misunderstanding and shirking. More

²⁵⁰ Dan Todman, *The Great War: Myth and Memory* (London: Hambledon and London, 2005), 83.

²⁵¹ Christina Goulter, "Sir Arthur Harris: Different Perspectives," in *Challenges of High Command in the Twentieth Century: The British Experience*, eds. Gary Sheffield and Geoffrey Till (Camberley, UK: Strategic and Combat Studies Institute, 1999), 135-136.

detrimental to his strategy, however, was his role in allowing the poisoned relationship between David Lloyd George and himself to fester. On numerous occasions he clearly shirked, and that the fact that war ended more in line with his vision than Lloyd George's does not absolve Haig from breaking mutual trust with his principal. Lloyd George would have been justified, though not wise, had he fired Haig. It is ironic that by 1918 the biggest obstacle to Haig seeing his strategy through to victory was himself.

Harris, in contrast, was hardly an easy subordinate. But in the end, he always executed his orders. As his "demi-official" correspondence with Portal reveals, Harris teetered, but never quite fell, over the fine line separating spirited candor from insubordination. Harris was at his best, on the other hand, in the relationship he forged with his subordinate commanders and Airmen. He well employed what would now be considered centralized control, accompanied by decentralized execution. Bomber Command, like a fully-laden Lancaster, operated best with firm hands at the controls. Moreover, under Harris's leadership Bomber Command assumed its commander's no-nonsense persona of single-minded determination and unapologetic dedication to the strategy of attrition.

Both men successfully applied a trial-and-error approach to adaptation and innovation, though Haig was more proficient. They exploited their commonsense and competence, but Haig's optimism and receptivity to outside ideas proved more conducive to innovation than Harris's pessimism and parochialism. Although both championed intelligence, neither utilized it to its full advantage due to powerful confirmation biases. Like horse blinders, the same determination and strategic vision that enabled them to keep their strategy on course also inhibited them from modifying it optimally when such adjustment would have been constructive.

117

Haig and Harris ultimately accomplished the missions the British government entrusted to them. Each inherited both a strategy and a force utterly unfit to execute it. Each transformed the original strategy of attrition into one more coherent with national policy objectives. Each forged a military instrument fit for its purpose, while simultaneously fighting a highly capable, determined, and resilient enemy. That Britain won both wars is due significantly to Sir Douglas Haig's and Sir Arthur Harris's proficiency as practitioners of the strategy of attrition.

Implications for Twenty-First Century Strategists

Although they are men from a different age, it would be a mistake to disregard the experiences of Haig and Harris just because they stare back at us from fading black-and-white photographs. The strategic challenges each faced differ in vernacular from those confronting today's strategists, but not in complexity or magnitude. War remains uncertain; and generals still exist to impose order upon chaos through command, leadership, and management. And attrition persists as a costly, but viable, strategy, whether by design or through unintended consequence.

Proficiency in conducting a strategy of attrition begins with recognizing correctly the type of war one is fighting. As J. Boone Bartholomees argues, "strategists seldom conceptualize their work as attritional even when combating insurgents who themselves employ an attrition strategy. Not accepting that the situation demands an attritional strategy usually means the strategist will fail to take the prudent steps to procure resources and reinforce will that can be the keys to success. Even if he eventually succeeds, the risk is high that his movement or military muddled through at a greater cost than should have been required."²⁵² Even before assuming high command, both Haig and Harris had accurately analyzed the strategic context, compared it

²⁵² J.Boone Bartholomees, Jr., "The Issue of Attrition." *Parameters* 40, no. 1 (Spring 2010), 18.

with Britain's national objectives, and determined that a strategy of attrition was both necessary and sufficient to achieve those objectives. A modern attrition practitioner must do no less.

Identifying a problem is not, however, the same as solving it. In today's strategic context, a proficient attrition practitioner must craft a clear, logically-based strategic vision and be prepared to defend it against criticism from below, above, and beyond. The challenges Haig and Harris experienced managing media relations and public perceptions are nothing compared to what a contemporary strategist will face when he or she argues for a strategy of attrition. Mutual trust at every principalagent level is paramount. As General Stanley McChrystal could attest, the surest way to derail even the best conceived strategy is to sow distrust with higher civil and military authorities.²⁵³ To conduct attrition warfare in a twenty-first century liberal democracy, soldier and statesmen must be strategic partners, not fellow travelers, let alone adversaries. As Gordon Craig argued, "if excessive meddling in operational planning and decision making by political leaders can have disruptive consequences, inability or unwillingness on their part to exercise critical control over such plans and decisions runs the risk of placing in military hands powers that can jeopardize the national security for which the political leadership has ultimate responsibility."254 The principal-agent relationship remains sacrosanct and non-negotiable. This may require relinquishing professional prerogatives and swallowing personal pride in a manner that Haig and Harris could afford—barely—to resist, but a contemporary general simply cannot.

²⁵³ In June 2010, President Obama recalled General McChrystal from his command in Afghanistan following unflattering remarks about the administration attributed to McChrystal's senior staff members that appeared in a *Rolling Stone* magazine article.

²⁵⁴ Gordon A. Craig, "The Political Leader as Strategist," in *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*, ed. Peter Paret (Princeton, NJ: Princeton University Press, 1986), 481.

Finally, a proficient practitioner of the strategy of attrition must foment an institutional climate that balances doctrinal adherence with flexible adaptation and innovation. Wars of attrition are prolonged by definition; being marathons not sprints. There will be sufficient time for each side to observe, orient, decide, and act against the other in recurring and enduring loops. As appealing as empirically validated, elegant, and downward-directed solutions to quick-and-dirty problems appear to be in theory, Haig's and Harris's experiences suggest that the trial-and-error method is more appropriate for attrition warfare.

Attrition in the Twenty-First Century

It would be comforting to believe that wars of attrition, like Haig and Harris themselves, are now little more than historical artifacts with scant relevance to the twenty-first century. Certainly the world will never see another Passchendaele or Thousand-Plane Raid? Perhaps, but strategists should not lull themselves into a false sense of security by mistaking strategic context for strategic certainty. Haig and Harris adopted the strategy of attrition as the best means available to achieve specific national policy objectives under a temporal governing context. Strategists will do likewise in the future, as they have done in the past.

The world may, indeed, never endure another Passchendaele or Dresden. But if so, it will be due to nations rejecting total, industrialized warfare, not the strategy of attrition. Bartholomees argues that, "in fact, attrition may be the most effective form of strategy available in some types of war or for attaining certain political objectives."²⁵⁵ In addition, nations may still find a war of attrition thrust upon them after a failed strategy of annihilation. For instance, the Iranians and Iraqis did not go to war in 1980 intending to fight a war of attrition. Eight years later, however, their war resembled the World Wars in microcosm, down to the trenches and bombing of cities. One can similarly imagine a future war

²⁵⁵ Bartholomees, "The Issue of Attrition," 5.

between India and Pakistan following a similar pattern if the two nations resist the temptation to employ their nuclear weapons.

It is likely that the world will continue to see insurgents adopt variants on the strategy of attrition, as attrition through exhaustion remains the time-honored, preferred strategy of the weak against the strong. Vietnam, Iraq, and Afghanistan provide recent and prominent examples. But the Viet Cong, Jaish al-Mahdi, and Taliban hold no monopoly on attrition. As a hybrid between exhaustion and annihilation, attrition is a flexible strategy that strong actors may decide to employ if they find annihilation to be strategically unfeasible or politically undesirable. This is particularly true for the West's protracted struggle to counter global terrorism. In Ralph Peters writes in his *Parameters* article "In Praise of Attrition":

Far from entering an age of maneuver, we have entered a new age of attrition warfare in two kinds: First, the war against religious terrorism is unquestionably a war of attrition—if one of your enemies is left alive or unimprisoned, he will continue trying to kill you and destroy your civilization. Second, Operation Iraqi Freedom, for all its dashing maneuvers, provided a new example of a postmodern war of attrition—one in which the casualties are overwhelmingly on one side.

Nothing says that wars of attrition have to be fair. It's essential to purge our minds of the clichéd images the term "war of attrition" evokes. Certainly, we do not and will not seek wars in which vast casualties are equally distributed between our own forces and the enemy's. But a one-sided war of attrition, enabled by our broad range of superior capabilities, is a strong model for a 21st-century American way of war.²⁵⁶

American's counterterrorism strategy *is* attrition, regardless of our strategists and policy makers' inability or unwillingness to acknowledge it as such. The strategic objective is negative, the preservation of the status quo; but this objective is pursued through operations that are

²⁵⁶ Ralph Peters, "In Praise of Attrition," *Parameters* 34, no. 2 (Summer 2004): 26-27.

both positive and offensive. In addition, the past 14 years demonstrate America's strategic persistence and ability to adapt. America will use its overwhelming superiority in numbers and method to counter the enemy's advantage in will. If gradual annihilation does not compel the enemy to cease fighting out of a rational gain-loss calculation, the alternative is less rational but more decisive. As Peters concludes, "it is not a matter of whether attrition is good or bad. It's necessary. Only the shedding of their blood defeats resolute enemies."²⁵⁷

Final Thoughts

The strategy of attrition may currently be out of fashion, but it remains a viable, even desirable, strategy depending upon strategic context and a nation's political objectives. Bartholomees is correct when he enjoins that "the strategist has to be aware of the potential benefits and costs associated with each type of strategy considered. He should never discard a strategic approach simply because it has a bad name."²⁵⁸ The key to this adage is that the strategist must possess informed judgment to calculate properly the benefits and costs associated with attrition, or any other strategy for that matter. The study of military history and biography continues to be one of the best methods for cultivating such wisdom. If the contemporary strategist wants to learn about both the positive and negative aspects of the strategy of attrition, there are few better exemplars than those arch-attrition practitioners, Sir Douglas Haig and Sir Arthur Harris.

²⁵⁷ Peters, "In Praise of Attrition,".32.

²⁵⁸ J. Boone Bartholomees, Jr., "The Issue of Attrition," *Parameters* 40, no. 1 (Spring 2010): 17.

Bibliography

Articles

- Bartholomees, J. Boone, Jr. "The Issue of Attrition." *Parameters* 40, no. 1 (Spring 2010): 5-19.
- Beach, James. "British Intelligence and German Tanks, 1916-1918." War in History, vol. 14, no. 4 (Nov 2007). 454-475.
- -----. "Issued by the General Staff: Doctrine Writing at British GHQ, 1917-1918." *War in History*, vol. 19, no. 4 (Nov 2012). 464-491.
- French, David. "The Meaning of Attrition, 1914-1916." *The English Historical Review* 103, no. 407 (April 1988): 385-405.
- Lee, Peter. "Return from the Wilderness: An Assessment of Arthur Harris' Moral Responsibility for the German City Bombings." *Royal Air Force Air Power Review* 16, no. 1 (Spring 2013): 70-90.
- Peters, Ralph. "In Praise of Attrition." *Parameters* 34, no. 2 (Summer 2004): 24-32.

Books

- Addison, Paul and Jeremy A. Crang, eds. *Firestorm: The Bombing of Dresden in 1945.* London: Pimlico, 2006.
- Ashworth, Tony. Trench Warfare 1914-1918: The Live and Let Live System. New York: Holmes & Meier Publishers, Inc., 1980.
- Bailey, Maj Gen J.B.A. *Field Artillery and Firepower*. Annapolis, MD: Naval Institute Press, 2004.
- -----. "The First World War and the birth of modern warfare." In *The Dynamics of Military Revolution, 1300-2025*, edited by MacGregor Knox and Williamson Murray, 132-153. New York: Cambridge University Press, 2001.
- Bashow, David L. No Prouder Place: Canadians and the Bomber Command Experience, 1939-1945. St Catherines, Ontario: Vanwell, 2005.
- Beach, James. Haig's Intelligence: GHQ and the German Army, 1916-1918. New York: Cambridge University Press, 2013.
- Beckett, Ian. *Haig's Generals*. Barnsley, UK: Pen & Sword Books Limited, 2007.
- -----. "Haig and French." In *Haig: A Reappraisal 70 Years On*, edited by Brian Bond and Nigel Cave. Barnsley, 51-77. UK: Leo Cooper, 1999.
- Biddle, Stephen. *Military Power: Explaining Victory and Defeat in Modern Battle.* Princeton, NJ: Princeton University Press, 2006.
- Biddle, Tami Davis. Rhetoric and Reality in Air Warfare: The Evolution of British and American Ideas about Strategic Bombing, 1914-1945. Princeton, NJ: Princeton University Press, 2002.

- Bidwell, Shelford and Dominick Graham. *Fire-Power: British Army Weapons and Theories of War 1904-1945.* London: George Allen & Unwin, 1982.
- Bloch, Marc. Strange Defeat: A Statement of Evidence Written in 1940. New York: W.W. Norton, 1968.
- Boff, Jonathan. Winning and Losing on the Western Front: The British Third Army and the Defeat of Germany in 1918. New York: Cambridge University Press, 2012.
- Bond, Brian. "Passchendaele: Verdicts, Past and Present." In *Passchendaele In Perspective: The Third Battle of Ypres*, edited by Peter H. Liddell, 479-488. London: Leo Cooper, 1997.
- Bond, Brian and Nigel Cave, eds. *Haig: A Reappraisal 70 Years On.* London: Leo Cooper, 1996.
- Bond, Brian et al. Look To your Front': Studies in the First World War. London: Leo Cooper, 1996.
- Bowman, Timothy and Mark Connelly. *The Edwardian Army: Recruiting, Training, and Deploying the British Army, 1902-1914.* Oxford, UK: Oxford University Press, 2012.
- Bousquet, Antoine. *The Scientific Way of Warfare: Order and Chaos on the Battlefields of Modernity.* New York: Columbia, 2009.
- Caddick-Adams, Peter. "Anglo-French Co-Operation during the Battle of France." In *The Battle of France and Flanders 1940: Sixty Years On*, edited by Brian Bond and Michael Taylor, 35-51. Barnsley, UK: Leo Cooper, 2001.
- Cassar, George H. *Kitchener's War: British Strategy From 1914 to 1916.* Washington, D.C.: Potomac Books, Inc., 2004.
- Cecil, Hugh and Peter H. Liddle, eds. Facing Armageddon: The First World War Experienced. London: Leo Cooper, 1996.
- Cherry, Niall. *Most Unfavorable Ground: The Battle of Loos 1915.* Solihull, England: Helion & Company Limited, 2005.
- Chickering, Roger and Stig Forster, eds. Great War, Total War: Combat and Mobilization on the Western Front, 1914-1918. New York: Cambridge University Press, 2000.
- Chickering, Roger, Stig Forster, and Bernd Greiner, eds. A World at Total War: Global Conflict and the Politics of Destruction, 1937-1945. New York: Cambridge University Press, 2005.
- Childs, David J. A Peripheral Weapon: The Production and Employment of British Tanks in the First World War. London: Greenwood Press, 1999.
- Clark, Alan. *The Donkeys*. New York: William Morrow and Company, 1962.
- Clausewitz, Carl von. *On War*. Translated and edited by Michael Howard and Peter Paret. Rev ed. Princeton, NJ: Princeton University Press, 1989.

Cohen, Eliot A. and John Gooch, eds. *Military Misfortunes: The Anatomy* of Failure in War. New York: Vintage Press, 1991.

- Connelly, Mark. Reaching For The Stars: A New History of Bomber Command in World War II. New York: I.B. Tauris, 2001.
- Cooper, Malcolm. *The Birth of Independent Air Power*. London: Allen Urwin, 1986.
- Corrigan, Gordon. Mud, Blood and Poppycock. New York: Cassell, 2003.
- Cox, Sebastian. The Strategic Air War Against Germany, 1939-1945: The Official Report of the British Bombing Survey Unit. London: Frank Cass, 1998.
- -----. "Sir Arthur Harris and the Air Ministry." In *Air Power Leadership: Theory and Practice,* edited by Peter W. Gray and Sebastian Cox, 210-226. London: The Stationary Office, 2002.
- -----. "Setting the Historical Agenda: Webster and Frankland and the Debate over the Strategic Bombing Offensive against Germany, 1939-1945." In *The Last Word? Essays on Official History in the United States and British Commonwealth*, edited by Jeffrey Grey, 147-173. Westport, CT: Praeger, 2003.
- Cowley, Robert, ed. *The Great War: Perspectives on the First World War.* New York: Random House, 2003.
- Crawshaw, Michael. "The Impact of Technology on the BEF and its Commander." In *Haig: A Reappraisal 70 Years On*, edited by Brian Bond and Nigel Cave. Barnsley, 155-175. UK: Leo Cooper, 1999.
- Debrück, Hans. The Dawn of Modern Warfare: History of the Art of War, Volume IV. Translated by Walter J. Renfroe, Jr. Lincoln, NE: University of Nebraska Press, 1985.
- Dixon, Norman F. On the Psychology of Military Incompetence. London: Cape, 1976.
- Drew, Dennis. "The Three Pillars of Professional Competence: Imperatives for Airpower Leaders." In *Air Power Leadership: Theory and Practice*, edited by Peter Gray and Sebastian Cox, 54-67. London: The Stationary Office, 2002.
- Dupuy, Trevor N. Numbers, Predictions and War: Using History to Evaluate Combat Factors and Predict the Outcome of Battles. New York: Bobbs-Merrill, 1979.
- Echevarria, Antulio J., II. After Clausewitz: German Military Thinkers Before the Great War. Lawrence, KS: University of Kansas Press, 2000.
- Edmonds, James. *Military Operations -- France and Belgium, 1915*, Vol. 2, London: HMSO, 1928 (reprinted, Nashville, TN: The Battery Press, 1995).
- -----. *Military Operations -- France and Belgium, 1916*, Vol. 1, London: HMSO, 1932 (reprinted, Nashville, TN: The Battery Press, 1995).
- -----. *Military Operations -- France and Belgium, 1917*, Vol. 2, London: HMSO, 1948 (reprinted, Nashville, TN: The Battery Press, 1995).

- -----. Military Operations -- France and Belgium, 1918, Vol. 1, London: HMSO, 1935 (reprinted, Nashville, TN: The Battery Press, 1995).
- -----. *Military Operations -- France and Belgium, 1918*, Vol. 2, London: HMSO, 1937 (reprinted, Nashville, TN: The Battery Press, 1995).
- -----. *Military Operations -- France and Belgium, 1918*, Vol. 3, London: HMSO, 1939 (reprinted, Nashville, TN: The Battery Press, 1995).
- -----. *Military Operations -- France and Belgium, 1918*, Vol. 4, London: HMSO, 1947 (reprinted, Nashville, TN: The Battery Press, 1995).
- Edmonds, James and R. Maxwell-Hyslop. *Military Operations -- France and Belgium*, 1918, Vol. 5, London: HMSO, 1947 (reprinted, Nashville, TN: The Battery Press, 1995).
- Edmonds, James and G.C. Wynne. *Military Operations -- France and Belgium*, 1915, Vol. 1, London: HMSO, 1927 (reprinted, Nashville, TN: The Battery Press, 1995).
- Falls, Cyril. Military Operations -- France and Belgium, 1917, Vol. 1, London: HMSO, 1940 (reprinted, Nashville, TN: The Battery Press, 1995).
- Farrell, Brian P. Leadership and Responsibility in the Second World War. Montreal and Kingston: McGill and Queen's University Press, 2004.
- Feaver, Peter. Armed Servants: Agency, Oversight, and Civil-Military Relations. Cambridge, MA: Harvard University Press, 2003.
- Ferguson, Niall. The Pity of War: Explaining World War I. New York: Basic Books, 1999.
- Finkel, Meir. On Flexibility: Recovery from Technological and Doctrinal Surprise on the Battlefield. Stanford, CA: Stanford University Press, 2011.
- Foley, Robert T. German Strategy and the Path to Verdun: Erich von Falkenhayn and the Development of Attrition, 1870-1916. Cambridge, UK: Cambridge University Press, 2005.
- Frankland, Noble. The Bombing Offensive Against Germany: Outlines and Perspectives. London: Faber, 1965.
- French, David. British Strategy & War Aims 1914-1916. London: Allen & Unwin, 1986.
- -----. The Strategy of the Lloyd George Coalition, 1916-1918. New York: Oxford University Press, 1995.
- Friedrich, Jörg. *The Fire: The Bombing of Germany, 1940-1945.* New York: Columbia University Press, 2008.
- Fuller, J.F.C. Generalship: Its Diseases and Their Cure: A Study of the Personal Factor in Command. London: Faber and Faber, 1933.
- -----. The Foundations of the Science of War. London: Hutchinson & Co., 1926.
- Garrett, Stephen A. Ethics and Airpower in World War II: The British Bombing of of German Cities. New York: St. Martins, 1993.

- Girard, Marion. A Strange and Formidable Weapon: British Response to World War I Poison Gas. Lincoln, NE: University of Nebraska Press, 2008.
- Goulter, Christina. "Sir Arthur Harris: Different Perspectives." In Challenges of High Command in the Twentieth Century: The British Experience, edited by Gary Sheffield and Geoffrey Till, 126-136. Camberley, UK: Strategic and Combat Studies Institute, 1999.
- -----."British Official Histories of the Air War." In *The Last Word? Essays* on Official History in the United States and British Commonwealth, edited by Jeffrey Grey, 133-146. Westport, CT: Praeger, 2003.
- Gray, Colin S. Modern Strategy. New York: Oxford University Press, 1999.
- Gray, Peter. *The Leadership, Direction and Legitimacy of the RAF Bomber* Offensive from Inception to 1945. London: Continuum Books, 2012.
- Gray, Peter W. and Sebastian Cox, eds. *Air Power Leadership: Theory and Practice.* London: The Stationary Office, 2002.
- Grayling, A.C. Among the Dead Cities: Was the Allied Bombing of Civilians in WWII a Necessity or a Crime? London: Bloomsbury, 2006.
- Green, Andrew. Writing the Great War: Sir James Edmunds and the Official Histories, 1915-1948. London: Frank Cass, 2003.
- Grey, Jeffrey, ed. The Last Word? Essays on Official History in the United States and British Commonwealth. Westport, CT: Praeger, 2003.
- Grieves, Keith. *The Politics of Manpower*, 1914-18. Manchester. UK: Manchester University Press, 1988.
- Griffith, Paddy, ed. British Fighting Methods in the Great War. London: Frank Cass & Co. Ltd., 1998.
- Griffith, Paddy. Battle Tactics of the Western Front: The British Army's Art of Attack 1916-18. New Haven and London: Yale University Press, 1994.
- Gudmundsson, Bruce I. On Artillery. Westport, CT: Praeger, 1993.
- -----. Stormtroop Tactics: Innovation in the German Army, 1914-1918. New York: Praeger, 1989.
- Haber, L.F. *The Poisonous Cloud: Chemical Warfare in the First World War.* Oxford: Clarendon Press, 1986.
- Harris, Sir Arthur. *Bomber Offensive*. London: Collins, 1947 (reprinted London: Greenhill Books, 1990).
- -----. Despatch on War Operations: 23rd February 1942 to 8th May 1945. Edited by Sebastian Cox. London: Frank Cass, 1995.
- Harris, J.P. *Douglas Haig and the First World War*. New York: Cambridge University Press, 2008.
- Harris, J.P, with Niall Barr. Amiens to the Armistice: The BEF in the Hundred Days' Campaign, 8 August - 11 November 1918. London: Brassey's, 1998.
- Hartcup, Guy. The War of Invention: Scientific Development 1914-1918. London: Brassey's Defence Publishers, 1988.

- Hastings, Max. Bomber Command: The Myths and Reality of the Strategic Bombing Offensive 1939-45. New York: The Dial Press/James Wade, 1979.
- Herrmann, David G. *The Arming of Europe and the Making of the First World War.* Princeton, NJ: Princeton University Press, 1996.
- Holmes, Richard. *Tommy: The British Soldier on The Western Front 1914-*1918. London: Harper Collins, 2004.
- Hussey, John. "Portrait of a Commander-in-Chief." In *Haig: A Reappraisal 70 Years On*, edited by Brian Bond and Nigel Cave. Barnsley, 12-36. UK: Leo Cooper, 1999.
- Johnson, Hubert C. Breakthrough! Tactics, Technology, and the Search for Victory on the Western Front in World War I. Novato, CA: Presidio Press, 1994.
- Jones, Neville. *The Beginning of Strategic Air Power: A History of the British Bomber Force, 1923-39.* London: Frank Cass, 2002.
- Keegan, John. *The Mask of Command: A Study of Generalship*. London: Pimlico, 1999.
- Kiras, James D. Special Operations and Strategy: From World War II to the War on Terrorism. New York: Routledge, 2006.
- Khong, Yuen Foong Khong. Analogies at War: Korea, Munich, Dien Bien Phu, and the Vietnam Decisions of 1965. Princeton, NJ: Princeton University Press, 1992.
- Knox, MacGregor and Williamson Murray, eds. *The Dynamics of Military Revolution, 1300-2025.* New York: Cambridge University Press, 2001.
- Laffin, John. British Butchers and Bunglers of World War One. London: Bramley Books, 1998.
- Levine, Alan J. *The Strategic Bombing of Germany, 1940-1945.* Westport, CT: Praeger, 1992.
- Liddell, Peter H., ed. Passchendaele In Perspective: The Third Battle of Ypres. London: Leo Cooper, 1997.
- Liddell Hart, B.H. *The Real War 1914-1918*. Boston: Little, Brown and Company, 1930.
- -----. Strategy. 2nd rev. ed. 1967. Reprint: New York: Penguin, 1991.
- Lonsdale, David. *The Nature of War in the Information Age*. New York: Frank Cass, 2005.
- Lowe, Keith. Inferno: The Fiery Destruction of Hamburg, 1943. New York: Scribner, 2007.
- Lupfer, Timothy T. The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War, Leavenworth Papers Nr. 4. Fort Leavenworth, KS: U.S. Army Combat Studies Institute, 1981.
- Malkasian, Carter. A History of Modern Wars of Attrition. Westport, CT: Praeger, 2002.

- Meilinger, Phillip S., ed. *The Paths of Heaven: The Evolution of Airpower Theory.* Maxwell AFB, AL: Air University Press, 1997.
- Middlebrook, Martin. *The Nuremberg Raid 30-31 March 1944*. New York: William Morrow, 1973.
- -----. First Day on The Somme. New York: W.W. Norton & Company, Inc., 1972.
- -----. The Kaiser's Battle, 21 March 1918: The First Day of the German Spring Offensive. London: Allen Lane, 1978.
- Middlebrook, Martin and Chris Everitt, eds. *The Bomber Command War Diaries: An Operational Reference Book 1939-1945.* New York: Penguin Books, 1991.
- Miles, Wilfrid. *Military Operations -- France and Belgium, 1916*, Vol. 2, London: HMSO, 1938 (reprinted, Nashville, TN: The Battery Press, 1995).
- -----. *Military Operations -- France and Belgium, 1917*, Vol. 3, London: HMSO, 1948 (reprinted, Nashville, TN: The Battery Press, 1995).
- Millett, Alan R. and Peter Maslowski. For the Common Defense: A Military History of the United States of America. New York: The Free Press, 1994.
- Millett, Allan R. and Williamson Murray, eds. *Military Effectiveness, Vol 1: The First World War.* Boston: Allen & Unwin, 1988.
- -----. *Military Effectiveness, Vol 2: The Interwar Period.* New York: Cambridge University Press 2nd ed, 2010.
- -----. *Military Effectiveness, Vol 3: The Second World War.* New York: Cambridge University Press 2nd ed, 2010.
- Moran, Lord. The Anatomy of Courage. London: Chiswick Press, 1945.
- Murray, Williamson. *Military Adaptation in War: With Fear of Change*. New York: Cambridge University Press, 2011.
- -----. *The Luftwaffe 1933-1945: Strategy for Defeat*. London: Brassey's 1996.
- Neillands, Robin. Attrition: The Great War on the Western Front 1916. London: Robson Books, 2001.
- -----. *The Great War Generals on the Western Front 1914-1918.* London: Magpie Books, 2004.
- -----. The Bomber War: Arthur Harris and the Allied Bomber Offensive 1939-1945. London: Murray, 2001.
- Nicholson, W.N. Behind the Lines: An Account of Administrative Staffwork in the British Army 1914-1918. Stevenage, UK: The Strong Oak Press, 1989.
- Nolan, Alan T. Lee Considered: General Robert E. Lee and Civil War History. Chapel Hill, NC: The University of North Carolina Press, 1991.
- Overy, Richard. *The Air War 1939-1945*. London: Europa Publications, 1980.
- -----. The Bombing War: Europe 1939-1945. London: Allen Lane, 2013.

- -----. The Bombers and the Bombed: Allied Air War Over Europe 1940-1945. New York: Viking Adult, 2014.
- Page, Lewis. *Lions, Donkeys and Dinosaurs: Waste and Blundering in the Armed Forces.* London: Heinemann, 2006.
- Palazzo, Albert P. Seeking Victory on the Western Front: The British Army & Chemical Warfare in World War I. Lincoln and London: University of Nebraska Pres, 2000.
- Paret, Peter, ed. Makers of Modern Strategy: From Machiavelli to the Nuclear Age. Princeton, NJ: Princeton University Press, 1986.
- Philpott, William. Anglo-French Relations and Strategy on the Western Front, 1914-18. London: Macmillan Press, 1996.
- -----. Three Armies on the Somme: The First Battle of the Twentieth Century. NewYork: Alfred A. Knopf, 2010.
- Pois, Robert and Phillip Langer. Command Failure in War: Psychology and Leadership. Bloomington, IN: Indiana University Press, 2004.
- Prior, Robin and Trevor Wilson. Command on the Western Front: The Military Career of Sir Henry Rawlinson 1914-1918. Barnsley, UK: Pen & Sword Books Ltd, 2004.
- -----. Passchendaele: The Untold Story. New Haven, CT: Yale University Press, 1996.
- -----. The Somme. New Haven, CT: Yale University Press, 2005.
- Probert, Henry. Bomber Harris: His Life and Time. London: Greenhill, 2001.
- -----. High Commanders of the Royal Air Force. London: HMSO, 1991.
- Ramsay, M.A. Command and Cohesion: The Citizen Soldier and Minor Tactics in the British Army, 1870-1918. Westport, CT: Praeger, 2002.
- Robbins, Simon. British Generalship on the Western Front 1914-1918. London: Magpie Books, 2004.
- Robertson, Scott. The Development of RAF Strategic Bombing Doctrine 1919-1939. Westport, CT: Praeger, 1995.
- Rosen, Stephen P. Winning the Next War: Innovation and the Modern Military. Ithaca, NY: Cornell University Press, 1991.
- Samuels, Martin. Command or Control? Command, Training and Tactics in the British and German Armies, 1888-1918. London: Frank Cass Publishers, 1995.
- Sheffield, Gary D. Forgotten Victory: The First World War Myths and Realities. London: Headline Book Publishing, 2001.
- -----. Leadership in the Trenches: Officer-Man Relations, Morale and Discipline in the British Army in the Era of the First World War. New York: St. Martin's Press, Inc., 2000.
- -----. *The Chief: Douglas Haig and the British Army.* London: Arum Press, 2011.
- -----. The Somme. London: Cassell, 2003.

Sheffield, Gary and John Bourne, eds. *Douglas Haig: War Diaries and Letters 1914-1918*. Chatham, UK: Weidendfeld & Nicolson, 2005.

Sheffield, Gary and Peter Gray, eds. Changing War: The British Army, The Hundred Days Campaign and the Birth of the Royal Air Force, 1918. London: Bloomsbury, 2013.

Sheffield, Gary and Geoffrey Till, eds. Challenges of High Command in the Twentieth Century: The British Experience. Camberley, UK: Strategic and Combat Studies Institute, 1999.

Sheffield, Gary and Dan Todman, eds. Command and Control on the Western Front: The British Army's Experience 1914-18. Staplehurst, UK: Spellmount Limited, 2004.

Simkins, Peter. "Haig and the Army Commanders." In *Haig: A Reappraisal 70 Years On*, edited by Brian Bond and Nigel Cave. Barnsley, 78-97. UK: Leo Cooper, 1999.

Simpson, Andy. Directing Operations: British Corps Command on the Western Front 1914-1918. Stonehouse, UK: Spellmount Limited, 2006.

- Slessor, Sir John. *The Central Blue: Recollections and Reflections*. London: Cassell, 1956.
- Snyder, Jack. The Ideology of the Offensive: Military Decision Making and the Disasters of 1914. London: Cornell University Press, 1984.
- Sorley, Lewis. A Better War: The Unexamined Victories and Final Tragedy of America's Last Years in Vietnam. New York: Harcourt Brace & Company, 1999.
- Stevenson, David. With Our Backs to the Wall: Victory and Defeat in 1918. Cambridge, MA: The Belknap Press of Harvard University Press, 2011.
- Tedder, Lord. With Prejudice: The War Memories of MRAF Lord Tedder. London: Cassell, 1966.
- Terraine, John. *Douglas Haig: The Educated Soldier.* London: J.B. Lippincott Co., 1963.
- -----. The Smoke and the Fire: Myths & Anti-Myths of War 1861-1945. London: Leo Cooper, 1980.
- -----. The Western Front: 1914-1918. Barnsley, UK: Pen & Sword Books Ltd, 2003.
- -----. White Heat: The New Warfare 1914-1918. London: Sidgwick & Jackson, 1982.
- -----. To Win a War: 1918, The Year of Victory. New York: Doubleday & Company, Inc., 1981.
- -----. A Time for Courage: The Royal Air Force in the European War, 1939-1945. New York: Macmillan, 1985.
- Thucydides. *History of the Peloponnesian War*. London: Penguin Books, 1972.
- Tooze, Adam. The Wages of Destruction: The Making and Breaking of the Nazi Economy. New York: Penguin Books, 2006.

- Travers, Tim. How the War Was Won: Command and Technology in the British Army on the Western Front 1917-1918. London: Routledge, 1992.
- -----. The Killing Ground: The British Army, The Western Front & The Emergence of Modern War 1900-1918. London: Allen & Unwin, 1987 (reprinted, Barnsley, UK: Pen & Sword Books Limited, 2003).
- Tzu, Sun. The Illustrated Art of War: The Definitive English Translation by Samuel B. Griffith. New York: Oxford University Press, 2005.
- Van Creveld, Martin. *Command in War*. Cambridge, MA: Harvard University Press, 1988.
- Verrier, Anthony. The Bomber Offensive. London: Batsford, 1968.
- Wallach, Jehuda L. The Dogma of the Battle of Annihilation: The Theories of Clausewitz and Schlieffen and Their Impact on the German Conduct of Two World Wars. Westport, CT: Greenwood Press, 1986.
- Walzer, Michael. Just and Unjust Wars: A Moral Argument with Historical Illustrations. 4th edition. New York: Basic Books, 2006.
- Watson, Alexander. Enduring the Great War: Combat, Morale and Collapse in the German and British Armies, 1914-1918. New York: Cambridge University Press, 2008.
- Wavell, Archibald. Generals and Generalship New York: MacMillan, 1941.
- Webster, Sir Charles and Noble Frankland. *The Strategic Air Offensive* Against Germany, 1939-1945. London: HMSO, 1960. (4 Volumes).
- Weingartner, Steven, ed. A Weekend With The Great War: Proceedings of the Fourth Annual Great War Interconference Seminar. Shippensburg, PA: White Mane Publishing Company, Inc., 1997.
- Wells, Mark K. Courage and Air Warfare: The Allied Aircrew Experience in the Second World War. New York: Routledge, 1995.
- Winter, Denis. *Haig's Command: A Reassessment.* London: Penguin Books, 1991.
- Wolff, Leon. In Flanders Fields: The 1917 Campaign. New York: The Viking Press, 1958.
- Wynne, G.C. *If Germany Attacks: The Battle in Depth in the West.* London: Faber and Faber, 1940.
- Zabecki, David T. The German 1918 Offensives: A Case Study in the Operational Level of War. New York: Routledge, 2006.
- -----. Steel Wind: Colonel Georg Bruchmuller and the Birth of Modern Artillery. London: Praeger, 1994.

Personal Communications - Interviews/E-Mails

Hart, Peter (Oral Historian for the Imperial War Museum-London) in discussion with the author, January 23, 2014.