

To the Left of Planning: Lawrence, Wingate, and Operational Design

A Monograph

by

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14. ABSTRACT Military history is full of unorthodox characters. For centuries, individuals imbued with a rebellious streak have created unique strategies and operational approaches. When design first appeared on the curriculum of the School of Advanced Military Studies (SAMS), studying these individuals, their habits of thought, and patterns of inquiry, formed much of the theory behind emerging design concepts. Since then, design has evolved into a series of models and methodologies which, when studied, often reduce a willingness to depart from certainty and think expansively, imaginatively, and creatively—everything that should happen to the left of any design process. This paper seeks to reassess what creative principles can be drawn from two of Britain's most eccentric individuals: T.E. Lawrence and Orde Wingate. In doing so, the paper will consider who they were, why they were successful, and the cognitive characteristics they demonstrated when generating their operational approaches. Ultimately, this paper will explore how military practitioners think about thinking in an increasingly complex operating environment.					
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Abstract

To the Left of Planning: Lawrence, Wingate and Operational Design, by Major William Tulloch, British Army, 68 Pages.

Military history is full of unorthodox characters. For centuries, individuals imbued with a rebellious streak have created unique strategies and operational approaches. When design first appeared on the curriculum of the School of Advanced Military Studies (SAMS), studying these individuals, their habits of thought, and patterns of inquiry, formed much of the theory behind emerging design concepts. Since then, design has evolved into a series of models and methodologies which, when studied, often reduce a willingness to depart from certainty and think expansively, imaginatively, and creatively—everything that should happen to the left of any design process. This paper seeks to reassess what creative principles can be drawn from two of Britain's most eccentric individuals: T.E. Lawrence and Orde Wingate. In doing so, the paper will consider who they were, why they were successful, and the cognitive characteristics they demonstrated when generating their operational approaches. Ultimately, this paper will explore how military practitioners think about thinking in an increasingly complex operating environment.

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Acronyms

ADM	Army Design Methodology
DADO	“Dado” is a nickname for “David” in Hebrew. The DADO center is a body within the operations directorate of the IDF responsible for the development of operational thinking and learning in the IDF.
DSO	Distinguished Service Order
EEF	Egyptian Expeditionary Force
IDF	Israeli Defense Force
LRP	Long-range Penetration
NAA	National Arab Army
SAMS	School of Advanced Military Studies
SOD	Systemic Operational Design
SNS	Special Night Squads

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Introduction

It is because I am abnormal that I win battles.

— Charles Orde Wingate, Burma, 1943

The British love an eccentric. Rakish politicians, insuppressible adventurers, ostentatious aristocrats, and hapless diplomats, have all earned themselves a fond place in British cultural memory.¹ Eccentrics do not even have to be real to be popular; the British continue to enjoy the adventures of George Macdonald Fraser's epochal anti-hero, Harry Flashman. Eccentricity might well appeal to the British mentality because it rejects the rigid societal conformity that dominating much of British history, or it may be more straightforward—eccentrics provide thoroughly entertaining stories. They think differently, act differently, challenge assumptions, and push boundaries. They dare to operate outside the accepted cultural norms, paradigms, and parameters. As a result, eccentrics are often a considerable asset to organizations that are so often subject to hierarchically imposed collective thinking.²

Unorthodox and unconventional thinkers have found a home in British military history partly because the British way of warfare is dependent on it. Britain's position as an island, conveniently separated from, but uncomfortably close to Europe, an imperial, maritime,

¹ David Weeks and Jamie James, *Eccentrics: A Study of Sanity and Strangeness* (New York: Kodansha America, 1995), 40-91, 136-157; Kevin Coyd, "Seven of the Most Eccentric People in British History," *The Telegraph*, October 12, 2016, accessed October 1, 2018, <https://www.telegraph.co.uk/only-in-britain/most-eccentric-people/>.

² There is a difference between eccentricity and madness. Madness has a destructive nature about it, a mental condition that damages relationships and endangers lives. An eccentric, on the other hand, is merely unusual, deviates from normalcy, and, either through thought, deed, or both, stands out from the herd. The difference can often be extremely thin; the jury remains out on many characters in history who have walked this precarious line, and rightly so. People who declare themselves mad, or eccentric, are often neither, and almost always suffering delusions of deeper psychological orientation. Peers judge eccentrics on account of their ideas and actions, balanced against the disruption that accompanies them. Eccentrics run against the grain of an organization and are therefore easy to identify. Often, they are routed out and shunned for fear of causing friction in a socially harmonious group. The majority of great paradigmatic changes in history, however, have resulted from an individual doing something different; it would have been considered unusual thinking to smash two stones together to make fire.

explorative, and expanding nation, meant that continental conflict tended to absorb the resources and willpower of European belligerents, whereas the British could “effectively isolate the various theatres of war and thus conduct truly limited operations in locations of their choosing.”³ The British, where possible, rejected continental, decisive battle, favouring an indirect approach that focuses on isolating and attacking an enemy’s weak point, and promoting effectiveness above all else.⁴ Obtaining military objectives with comparatively little force requires imagination, deception, misdirection, trickery, and bluff. Troy, for example, did not solely fall because of Greek military might.⁵ Unusual individuals often demonstrate the cognitive characteristics that lead to such audacious ideas. What those characteristics are once formed the platform for what has now become known as military design.

In the mid-1990s, the School of Advanced Military Studies (SAMS) began a relationship with the Israeli Operational Theory Research Institute headed up by the charismatic Israeli Defense Force (IDF) Brigadier Shimon Naveh. Naveh pioneered a different approach to operational planning, one that addressed what he saw as a lack of operational thinking stemming from the Yom Kippur War in 1973. Systemic Operational Design (SOD) became an attractive way of addressing the “conceptual contradictions” facing American commanders as the Iraq War began to embroil the American military in a prolonged counterinsurgency between 2003-05.⁶

³ Azar Gat, *A History of Military Thought: From the Enlightenment to the Cold War* (Oxford: Oxford University Press, 2001), 488.

⁴ The indirect approach is more a method of warfare than a particular set of tactics or techniques, and is, in essence, about paralyzing enemies rather than destroying them. It does not necessarily reject the idea of identifying the enemy’s center of gravity and attacking it, but identifies the center of gravity as the will to fight, rather than its ability to fight. Sir Hew Strachan, *Big Wars, Small Wars: The British Army and the Lessons of War in the 20th Century* (Oxford: Routledge, 2006), 4; Lawrence Freedman, *Strategy: A History* (Oxford: Oxford University Press, 2013), 134-138.

⁵ Curiously, much of British defense policy in the last decade has focused on fifth generation air power, carrier strike capability, and special forces, while restructuring existing formations into rapidly deployable, agile, multi-functional units. At a time of financial restriction, it is odd the British defense effort focused on technology and mass, two aspects that have rarely proved to be decisive on the battlefield in the British historical experience, are expensive, and quickly grow outdated.

⁶ Systemic Operational Design (SOD) embraced systems theory to affect the operational environment, is based on epistemology rather than teleology, and is described as one of its chief proponents

SOD made its debut in SAMS in 2005.⁷ Taking its lead from Israeli design theory, military design sought a different approach to campaign planning, one that encouraged creative thinking, problem setting, and an escape from the perceived linearity of most military planning processes. Between 2005 and 2008, British officers attended SAMS to contribute to, and learn from, the emerging concept of military design.

Having evolved through various twists and turns, and been significantly challenged along the way, military design has splintered into distant offshoots of the original premise in the three major contributing militaries. Design has all but disappeared from most British doctrine. In order to “lower the bar of understanding,” the US Army has blended the original theory of design with a linear process called Army Design Methodology (ADM).⁸ Most Israeli doctrine remains classified, but the process taught at the DADO institute most resembles the original concept.⁹ Nonetheless, by focusing on models and process, it has diluted much of what was originally presented as the crucial aspect of design—how do military planners understand themselves, and the scientific foundation from which they draw their knowledge, to construct a cognitive framework to reason through complexity? Certain individuals, many of them British, offered some clues. Field Marshall Sir William Slim, Julien Corbett, Admiral Sandy Woodward, and T.E.

as “the postmodern incarnation of Soviet Operational Art in western militaries...low tech by essence and humanist in nature.” Ofra Graicer, “Self Disruption: Seizing the High Ground of Systemic Operational Design (SOD),” *Journal of Military and Strategic Studies* 17, no. 4 (2017), 1-12; School of Advanced Military Studies, *Design Student Text Version 2.0*, (Fort Leavenworth, Kansas; 2018), 12.

⁷ SAMS, *Design Student Text Version 2.0*, 9.

⁸ The Army design methodology is “a methodology for applying critical and creative thinking to understand, visualize, and describe unfamiliar problems and approaches to solving them.” US Department of the Army, *Army Doctrine Publication (ADP) 5-0, The Operations Process* (Washington, DC: Government Printing Office, 2012), 7.

⁹ The DADO institute—the center for operational thinking and learning in the IDF General Staff—suggests that “the essence of (systemic) operational art is the ability to learn the changes in the environment, to understand the required strategic trends, and to present a conceptual framework of a campaign – a systemic idea that allows implementing strategy by way of building and employing force and frameworks which are adapted to the changing environment.”

Lawrence all featured on the original syllabus.¹⁰ How and why they thought in the way they did was of more importance than models and process that dominate current doctrine. Perhaps it is worth another examination.

Thomas Edward Lawrence and Charles Orde Wingate stand out as eccentric British officers who devised unique operational approaches that significantly contributed to the outcome of campaigns. Lawrence, the lionized soldier-scholar who led an irregular force of Bedouin tribesmen to the gates of Damascus in conjunction with the Egyptian Expeditionary Force's (EEF) advance through Palestine in 1918, went on to present his ideas as "a new philosophy on irregular warfare" in his posthumously published *Seven Pillars of Wisdom*.¹¹ The less-celebrated Wingate, the pugnacious upstart who operated in the Sudan, Palestine, Ethiopia, and Burma before, and during, World War II, while lacking Lawrence's considerable gift for the written word, formulated ideas still in use by military forces today.¹² Both men were unusual. Both men designed concepts that were unique, imaginative, and bold.¹³ This paper will explore the reasons why.

Methodology

This study is not about design. The focus will be how military planners might prepare themselves before approaching military design by looking at the cognitive characteristics of Lawrence and Wingate. The study will open by introducing Lawrence and Wingate, with

¹⁰ SAMS, *Design Student Text Version 2.0*, 9-154.

¹¹ Dick Benson-Gyles, *The Boy in the Mask: The Hidden World of Lawrence of Arabia* (Dublin: The Lilliput Press, 2016), 9.

¹² Simon Anglim, *Orde Wingate: Unconventional Warrior: From the 1920s to the Twenty-First Century* (Barnsley: Pen and Sword Military, 2014), 1.

¹³ Brevity and available materiel limit the number of individuals this study can analyze. There are, of course, plenty more: the voluminous anecdotes of soldier-scientist Richard Meinertzhagen, the insuppressible ideas of the ever controversial J.F.C. Fuller, the corkscrew mind of intelligence supremo Dudley Clarke, the guile of SAS founder David Stirling, and the dauntless Alfred Wintle to name but a few.

particular focus on the elements of their early life that explain their unconventional nature, as well as the context of their operational success. In a bid to understand why Lawrence and Wingate were successful where others were not, the study explores the relationship they had with their commanders using leadership theory associated with design thinking. The doctrine from the DADO centre and ADM will be used to examine the operational approaches and strategies Lawrence and Wingate created, but it will be argued that the models are insufficient when trying to explain why they created them. The study then shifts to aspects of their thought processes that led to the creation of their strategies and operational approaches.¹⁴ The study concludes by arguing how planners think about thinking, as demonstrated by Lawrence and Wingate, is of more use than following modular frameworks. Design should be less mechanical and more conceptual, where planners are encouraged to explore the deeper recesses of their minds; challenge the assumed; speak the unspeakable; make sense of chaos, and extract the feasible from the fantastic. In a world where conflict is only going to become more complex, lifting barriers to imagination is going to become a necessity.

The Enigmatic Genius of Thomas Edward Lawrence

He will always have his detractors, those who sneer at the ‘Lawrence legend’; who ascribe his successes with the Arabs to gold; who view the man as a charlatan in search of notoriety by seeming to seek obscurity; who regard his descent from colonel to private as evidence of some morbid *nostalgie de la boue*. They knew not the man. Those who

¹⁴ It is perhaps more useful to address what strategy is about, rather than what it is. Some theorists, like Sir Basil Liddell-Hart and Henry Mintzberg, argue that strategy is about planning; a guiding logic that applies means to fulfill policy. Others, such as Everett Dolman and Robert Jervis, argue that systemic dimensions are too complex for reductionist, non-linear solutions, and cognitive barriers and biases limit an individual’s ability to impose order on a recalcitrant world. Strategy, they argue, is how about navigating the never-ending competition between social and political competition to ensure a position of relative advantage. Perhaps both schools are right. Strategy, as Colin Gray argues, can be theoretical in nature, but connects means to ends, and the present to the future, while strategies are the operational plans created to do so. Sir Basil H. Liddell-Hart, *Strategy* (London: Faber and Faber, 1967), 319-360; Henry Mintzberg, *The Rise and Fall of Strategic Planning: Reconceiving Roles for Planning, Plans and Planners* (New York: Simon and Schuster, 1994), 5-32; Everett Carl Dolman, “Seeking Strategy,” in *Strategy: Context and Adaptation from Archidamus to Airpower*, eds. Richard J. Bailey., James W. Forsyth Jr., and Mark O. Yeisley (Annapolis, MD: Naval Institute Press, 2016), 5-37; Robert Jervis, *System Effects: Complexity in Political and Social Life* (Princeton, NJ: Princeton University Press, 1998), 1-87; Colin Gray, *The Strategy Bridge: Theory for Practice* (Oxford: Oxford University Press, 2010), 14-87.

did, even casually and sporadically, like myself, can answer for his greatness. The complexity of his character, the ‘mystery’ of Lawrence, on which so much has been written, seems to lie mainly in the fact that he transcended the ordinary heights in so many qualities: in courage, in knowledge, in self-discipline, in skill with his hands, in artistry of words, in sympathy with the common working man and with the scholar, in demanding so little from life for his body and so much—too much perhaps—for his mind. But I am not competent to analyze the man: all I can say is that he was cast in heroic but very human mould, and that it was good to know him.

— Field Marshall Wavell, *T.E Lawrence By His Friends*

The 1962 film, *Lawrence of Arabia* and *Seven Pillars of Wisdom*, Lawrence’s personal account of the Arab revolt from 1917 to 1918, portrayed Lawrence as the leader and *vis primera* behind the Arab tribesmen who fought off the yoke of Turkish oppression in World War I, only to be betrayed by British and French machinations for hegemony in the Middle East following the armistice of 1918. The efficacy of the Arab revolt in the broader Middle Eastern campaign, and Lawrence’s role in it, remain questionable.¹⁵ What has been less debated is Lawrence’s remarkable skill as a writer and thinker; in particular, his revealing description of his theory of war in chapter thirty-three of *Seven Pillars of Wisdom*. The value of studying Lawrence lies less in the tangible results he produced, and more in the cognitive process Lawrence demonstrated when he presented his critique of trench warfare and suggested an antidote to it.

Lawrence’s childhood was as nomadic as the life he would go on to lead. A shy, introverted, impenetrable, but deeply intense individual, Lawrence rejected the rules and restrictions of society, mainly because society rejected him. Lawrence was the son of a wealthy Irish baronet, Sir Thomas Chapman, who eloped with a governess, Sarah Lawrence, in 1885. Chapman’s wife refused to accept a divorce; Lawrence grew up in the pretence of upper-middle-

¹⁵ Scholars such as Lawrence James and Suleiman Mousa debunk what they see as the “Lawrence myth,” and present Lawrence as a fabricator who created and embellished his own legend, often to the detraction of those less allured by fame. While these critiques no doubt hold considerable truth, the finer details of what Lawrence did, or did not do, is less important than what he thought—much of which is written down and therefore harder to challenge. See Lawrence James, *The Golden Warrior: The Life and Legend of Lawrence of Arabia* (New York: Paragon House, 1990), 267-346; Suleiman Mousa, *T. E. Lawrence: An Arab View* (London: Oxford University Press, 1966), 257-279. Wingate’s debated legacy will be discussed later in the study.

class respectability, but judgmental Victorian disdain for such scandal was never far away. A rejected marriage proposal in 1909 and a strained relationship with his mother, whose approval he sought but was consistently denied, created in Lawrence what the historian Neil Faulkner described as a “psychic mirror of his mother’s neurosis.”¹⁶

Lawrence’s family home in Oxford provided a near perfect environment for a child with an insatiable thirst for learning. Lawrence disliked school and rejected sport because it had rules, preferring instead to immerse himself in the world of antiquities.¹⁷ Study became an obsession and won him a place at Oxford University in 1907.¹⁸ A passionate interest in the history of the Crusades, the anonymity of the open desert, and the pursuit of nomadic isolationism combined in him to form a love affair with Arabia that absorbed most of the next ten years of his life. Fleeing from his mother and the risk of discovery of the family secret, Lawrence travelled alone through Palestine and Syria in 1909, before becoming an intrepid explorer and archaeologist in Syria from 1910 to 1914, where, according to Faulkner, he “retreated into a mythologized past, and came to imagine himself as one of its great protagonists.”¹⁹

At five foot five inches, military regulations barred Lawrence from service in the regular Army at the outbreak of war in 1914. Instead, the intellectual Arabist joined the intelligence section of Middle Eastern Command in Cairo. Lawrence watched as the Allied situation become increasingly desperate: the frantic defence of the Suez Canal in early 1915; the staggering failure of the Gallipoli campaign between March and December, 1915; the imperial hubris that led to Townshend’s disastrous surrender at Kut on April 26, 1916; the mechanized slaughter of the Western Front which reached a crescendo at the Somme in July, 1916; unrestricted submarine

¹⁶ Neil Faulkner, *Lawrence of Arabia’s War: The Arabs, the British and the Remaking of the Middle East in WWI* (New Haven, CT: Yale University Press, 2016), 191.

¹⁷ Anthony Sattin, *The Young T. E. Lawrence* (New York: W.W. Norton and Company, 2014), 32.

¹⁸ *Ibid.*, 34.

¹⁹ Faulkner, *Lawrence of Arabia’s War*, 198.

warfare's wanton destruction of material and morale at sea, all had a profound impact on Lawrence. Aside from a failed mission to bribe the Turks to allow Townshend's withdrawal from Kut, the "scruffy and insolent" officer spent most of the two years bound to a desk, amusing himself by correcting senior officers' grammar.²⁰

Determination and opportunity met when the Sharif of Mecca, Hussein bin Ali, leader of an army of untrained Bedouin Arabs, seized Mecca and Medina from the Ottomans in June and July 1916. For the British, an Arab revolt would undermine the Sublime Porte, and fix Ottoman forces away from Suez and the advancing EEF. For Lawrence, winning the war was paramount, but he was at odds with duplicitous European realpolitik, preferring to be part of a national movement for the Arabs, establishing a commonwealth of free people, one that would "biff the French out of Syria."²¹ Lawrence may also have had deeply personal reasons for doing so.²² Whatever his motives, few people were better qualified to navigate the complex relationship between emerging Pan-Arabism, the nationalism that accompanied the retraction of the Ottoman Empire, and the Islamic jihadism that threatened to flare up not just across the Middle East, but among the seventy million Muslims under British imperial control.²³

²⁰ The historian and psychologist John E. Mack summarizes Lawrence's approach during this period as a "determination to deflate pomposity, expose inefficiency and explode pretension." John E. Mack, *A Prince of our Disorder: The Life of T. E. Lawrence* (Cambridge, MA: Harvard University Press, 1998), 133.

²¹ James, *Golden Warrior*, 112.

²² Much attention has been paid to the mysterious dedication of *The Seven Pillars of Wisdom* to "S.A." Neil Faulkner suggests that it is "all but certain" to be for a young Arab boy called Dahoum who worked with Lawrence on the Carchemish archeological site. Lawrence wrote that he was particularly fond of "a certain Arab," and "thought that freedom for the race would be an acceptable present." Other authors tend to agree. Faulkner, *Lawrence of Arabia's War*, 195; James, *Golden Warrior*, 57-61. Other scholars, however, have presented alternative candidates for the dedication, including: Janet Laurie, who rejected his proposal of marriage in 1909, Sarah Aaronsohn, a Jewish wartime heroin, and Farida al Akle, a Christian Arab whom Lawrence met during his pre-war travels in Syria. Or, it may be a deliberately enigmatic message, "wrapped up in troubadour poetic practice and complex personality," designed to keep readers guessing. If so, it was successful. Benson-Gyles, *The Boy in the Mask*, 225.

²³ Few of Lawrence's superiors saw the utility of investing in untrained irregular forces. Lawrence remained doggedly determined to prove them wrong, and his "pre-war years living in Syria, a working knowledge of Arabic; powers of endurance well beyond the average, a natural gift for leadership,

Lawrence joined the revolt, ostensibly as a British liaison officer, but acting far more as a mentor, guide, and leader in the National Arab Army (NAA). Following the seizure of the port of Aqaba in July 1917, Lawrence's fame grew, offering a glimmer of hope in an otherwise stalling campaign.²⁴ The Sykes-Picot agreement between France and Great Britain, negotiated in secret, allocated post-war spheres of influence in the Middle East. Lawrence felt a deep sense of betrayal and guilt that he had let down the Arab cause. He became increasingly disillusioned and doubtful of the nobility and intentions of Arab and Allied leaders, and began to court his destruction as it became clear that the "heroism of ideals was not always matched by reality."²⁵ The British delegation at Versailles largely ignored Lawrence's attempts to lobby for Arab interests following the surrender of the Ottoman Empire in October 1918. Lawrence could not quite reconcile himself with his fame—he courted it when it suited and retreated from it when it did not.²⁶ The increasingly isolated figure spent the last years of his life in various military guises, lamenting the predictable unravelling of British policy in the Middle East, and writing. Lawrence died in a motorcycle accident in 1935.

dissimulation and manipulation, and a driven urge to succeed, all suggested that he was tailor-made for the job of motivating and orchestrating Bedouin irregulars." Benson-Gyles, *The Boy in the Mask*, 8.

²⁴ General Sir Archibald Murray was relieved of command of the Egyptian Expeditionary Force following the Second Battle of Gaza. This failed attempt to advance to Jerusalem was a frontal assault on heavily defended Turkish positions—the combined British and ANZAC forces suffered 50 percent casualties in some divisions. The operation to seize Aqaba, by contrast, was a well-executed turning movement that demonstrated what maneuver warfare could be, deceived the Turks by approaching from land, rather than the sea, and cost comparatively little in blood, equipment, and ammunition.

²⁵ Faulkner, *Lawrence of Arabia's War*, 320.

²⁶ Much of Lawrence's initial post war fame was the result of a show put on in London by Lowell Thomas. Thomas, a journalist who spent time with Lawrence in Arabia, portrayed Lawrence as the "Arthurian hero" he had hoped to become in his production of "With Allenby in Palestine and Lawrence in Arabia." Four million people watched the show. While this catapulted Lawrence to iconic status, his "dream had long since faded in the bitter light of intrigue and betrayal, bleached out by secret diplomacy of the war and the back room deals of the peace." Faulkner, *Lawrence of Arabia's War*, 460.

The Indefatigable Orde Charles Wingate

Come on Orde, you are not Napoleon yet, nor even T. E. Lawrence!
A jibe from Wingate's friends.

— Trevor Royle, *Orde Wingate: A Man of Genius*

One of Lawrence's detractors was Charles "Orde" Wingate. Wingate described *Seven Pillars* as "an uncomfortable masterpiece" and the handover of Arabia to the Arabs "an absurd transaction" largely created by the myth of a genius who had bought thin Arab loyalty for gold, and single-handedly created a malign influence on British policy in the Middle East.²⁷ This combative assessment was Wingate's trademark. While one sees the efficacy of Lawrence's actions more often than his theory, it is Wingate's character that has dominated much of the post war discourse. To some, he was a proselytising bore, a semi-sane man whose narrow and ardent pursuit of personal passions sat between recklessness and treachery. To others, he was a loyal companion who applied restless energy to a creative mind, a genius, and original thinker, who challenged institutional conventions, lethargy, and waste, and devised strategies that led in no small part to victory in Ethiopia and Burma. Wingate is therefore worth studying for two reasons. First, to reveal how an institution handles a recalcitrant character like Wingate, and second, to explore the thought process that led to the creation of a genuinely unique strategy, which even his critics concede contributed to victory in the Burma theatre of World War II.²⁸

²⁷ Anglim, *Unconventional Warrior*, 36-37. Interestingly, Wingate frequently complained of Lawrence's legacy to his cousin and patron, Sir Reginald Wingate, who had been instrumental in assisting the Arab revolt, and had cited Lawrence for a Victoria Cross.

²⁸ Wingate's contribution to military success in World War II and subsequent influence on special forces concepts remain debated. The official biographers of World War II, along with Field Marshall Slim, largely rejected the impact of the Chindits, the name of the unit Wingate formed and lead behind enemy lines in Burma. There are numerous reasons for people to doubt it. Slim was a critic of special forces in general, anti-Semitism may have been a factor, and Wingate's ability to make enemies, particularly on the staff, certainly was. But the view is short-sighted. In Palestine, Wingate's Special Night Squads (SNS) are hailed as the forerunner to the Israeli Defense Force (IDF) and reflect the model of operations used by special forces as recently as 2011. Wingate's actions in Ethiopia saw a small force of largely irregular, indigenous soldiers defeat a regular force of superior numbers and equipment. The concept pioneered by Wingate through the Long Range Penetration in Burma was carried forward by men such as Mike Calvert, who applied the concept when in command of the Malayan Scouts in the early 1950s, and Sir Robert

Wingate was born into a family of traditional military service and low church conservatism in 1903. Although a quiet and reclusive man by nature, Wingate developed a distinctive sense of personal isolationism and contempt for authority following collective punishment while a cadet at the Royal Military Academy in Woolwich, which he attended from 1921 to 1923.²⁹ Wingate joined the Royal Artillery the same year, and after learning Arabic, commanded a company in the Sudanese Defence Force.³⁰ Throughout his short life, Wingate championed a cause. From 1936 to 1938 he served in Palestine, where he became a committed Zionist, establishing and leading irregular squads of Jewish fighters to combat increasing attacks from Arab gunmen. At the outbreak of war, Wingate formed 'Gideon Force,' a mixture of British regular soldiers and Ethiopian fighters tasked with ousting the Italian appointed emperor and re-installing the Ethiopian nationalist Haile Selassie on the throne. Although part of the Allied war plan, Wingate ferociously challenged attempts by the British to exert influence and control over Ethiopia, which achieved full independence in 1944. Wingate's fame was cemented in Burma,

Thompson who would become a celebrated counterinsurgency theorist following British operations in Malaya, 1948–1960. Perhaps the most recent endorsement of Wingate's legacy was the establishment of 77 Brigade in the British Army, named after Wingate's original Chindit organization, and responsible for psychological operations. Christopher Sykes, *Orde Wingate: A Biography* (Cleveland, OH: The World, 1959), 436-8; Mark Urban, *Task Force Black: The Explosive True Story of the Special Forces War in Iraq* (New York: St Martin's Press, 2010); Anglim, *Unconventional Warrior*, 1-20; George Allison, "What does the Secretive 77th Brigade do?" *United Kingdom Defence Journal* (June 21, 2016), accessed December 7, 2018, <https://ukdefencejournal.org.uk/secretive-77th-brigade/>.

²⁹ Following a relatively insignificant infraction, Wingate was ordered to run a gauntlet of fellow cadets, who, as tradition held, would beat the victim with knotted cloth and throw them into an ice-cold pond. Rather than run the gauntlet, as survivalist instinct might suggest be wise, Wingate walked confidently along the line, staring at his tormentors in turn, absorbing the increasingly lackluster blows from the assembled punishers, before calmly diving into the pond of his own accord. Despite the bravery, the incident wounded Wingate deeply. Sykes, *Orde Wingate*, 38-40.

³⁰ The Sudan Defence Force (SDF) was a locally recruited force, commanded by British officers, that was formed in 1925 and used to secure British interests in Sudan. The battalions, named 'Corps,' would often be isolated in remote parts of the country. The units assisted civil servants with internal policing, countered slave trading, and patrolled the border of British controlled territory. Wingate, who spoke Arabic, commanded a company in the SDF between 1928 and 1933.

where his theory of long-range penetration (LRP) was put to use against Japanese lines of supply in two major operations in 1943 and 1944.³¹

Wingate's eccentricities were well known. He ate six raw onions a day and conducted much of his business in the nude, often combing his chest hair with a toothbrush while he conversed with curious observers. When invited to more formal occasions, he would often surprise his hosts by eating with his hands, all the while lecturing assembled guests about whatever issue most irked him at the time.³² Never one to believe a theory unless experienced himself, he decided to see how long it would take for the African sun to render him unconscious by lying naked in the midday heat, and attempted to motivate sick buffalos by force-feeding them whisky. He also developed unusual theories of his own. Sucking sugar would, according to Wingate, prevent the majority of tropical diseases.³³ Wingate demonstrated an uncanny ability to ambush senior officers and present an effective pitch for his ideas.³⁴ His approach won him occasional support from senior figures but generated bad feelings from officers bypassed by this direct link to the top; Wingate's particularly dismissive approach toward bureaucracy, orthodoxy, and what he lamented as "the tyranny of the dull mind," exacerbated their contempt.³⁵

³¹ Long-range Penetration (LRP) will be discussed in greater detail later in the study. In short, it combined large amounts of irregular forces who attacked and disrupted an adversary's rear area, drawing away men and materiel from the front, which created opportunities for advancing regular forces. Simon Anglim, "Orde Wingate, Guerilla Warfare, and Long-range Penetration, 1940-44," *Small Wars and Insurgencies* 17, no. 3 (September 2006): 241-262.

³² One particular lunch in 1942 was recalled by Field Marshall Wavell's wife, Lady Eugenie Wavell, who "neither liked his disorderly clothes, nor his disorderly hair, nor the way he gobbled his food," was surprised when Wingate berated her for not understanding the utility of the jungle as a suitable operating environment for irregular forces. Sykes, *Orde Wingate*, 473.

³³ Sykes, *Orde Wingate*, 377.

³⁴ On a training exercise in 1936, Wingate accosted the Chief of the Imperial General Staff, Sir Cyril Deverell, to question why he had been denied a place at Staff College earlier that year. Wingate also flagged down General Archie Wavell's car in Palestine to explain his ideas for the Secret Night Squads, and absconded from a boat trip back to Britain to present his ideas of a Jewish Army to the Commander of Middle Eastern forces, Sir Edmund Ironside, in Gibraltar. On return from Burma, Wingate found himself briefing Churchill directly on his long-range penetration concept.

³⁵ Sykes, *Orde Wingate*, 67.

There was a sense of fatalism that accompanied Wingate's thinking and action. A blend of Calvinistic and Free Church evangelism formed the backbone of Wingate's religious conviction, which, combined with robust self-discipline and physical grit, demonstrated an ancestry of "Norse blood flowing through covenanting veins."³⁶ He saw the Old Testament as literal history—his speeches and political fulminations often reflected this belief.³⁷ Colleagues suggested that Wingate was subject to a mysterious internal power, one that explains his zeal and concentration that ultimately achieved results. This mysterious power, however, was combined with "attendant demons" which made him prone to bouts of depression and unhappiness—leading to a suicide attempt in 1941. By the time of his death in a plane crash in 1944, Wingate earned two bars for his Distinguished Service Order (DSO).

Lawrence and Wingate challenged the institutions they served. Where Lawrence disdained the military convention and pomposity of the intelligence bureau in Cairo, Wingate's "ideas were devoid of all reverence for the world's establishments, and such ideas could not be congenial to a minute society of officials charged with the maintenance of rule."³⁸ Both represent a distinctive British type; "the romantic 'misfit' compensating for perceived rejection and 'outsider' status among their people by taking up another people as their cause."³⁹ Both experience perceived betrayal: Lawrence by the machinations of European States, Wingate by the British abandonment of the Jews in 1939. Both were prone to considerable mood swings, and both courted a fatalistic, mystical approach to their mortality. Both struggled balancing loyalty to their country with commitment to their cause. Both suffered loss: two of Lawrence's beloved brothers were killed in 1915; Wingate's sisters died in 1931 and 1938. Both were courageous,

³⁶ Royle, *Man of Genius*, 188.

³⁷ Anglim, *Unconventional Warrior*, 4.

³⁸ Sykes, *Orde Wingate*, 61.

³⁹ Anglim, *Unconventional Warrior*, 38.

both were men of action, both were eccentric, and both had an impact on the outcome of wider military operations, either in theory or practice.

Command and Control: Managing Unorthodoxy

To see things in the seed, that is genius.

— Lao Tzu, *Tao-Te-Ching*

Lawrence and Wingate were allowed to succeed. Neither could have achieved what they sought to achieve without approval, however non-committal, from superior officers. The hierarchical nature of militaries can hinder ideas and innovation. An effective military ranks discipline, obedience, order, and team work, over individual aspiration. Militaries, often wedded to the traditions of the past, prefer predictability and standardization to awkward unknowns. They embrace top down concepts and doctrine, making them allergic to organizational change.⁴⁰ An eccentric with an aberrant mind will often reject accepted paradigms and assumptions, making them more likely to be innovative. They are also likely to be socially stunted, politically naïve, and obsessive. Investing in them, especially in an organization that puts so much stock in uniformity, carries significant risk. That both Lawrence and Wingate received the investment they sought demonstrates the flexibility and imagination of the senior decision makers as much as it does the efficacy of their ideas.

Worshipping the Bull: Lawrence's Relationship with Allenby

Allenby came nearest to my longings, but I had to avoid him, and keep out of sight of the man whom I wanted to worship, not daring to bow down, for fear lest he show feet of clay.

— T. E. Lawrence, *Seven Pillars of Wisdom*

⁴⁰ Andrew Hill, "Culture and the U.S. Army: Military Innovation and Military Culture," *Parameters* 45, no. 1 (Spring 2015): 85-98, accessed October 30, 2018, <https://pdfs.semanticscholar.org/pdf>.

His cooperation was marked by the utmost loyalty, and I never had anything but praise for his work, which, indeed, was invaluable throughout the campaign. (Allenby on Lawrence).

— Neil Faulkner, *Lawrence of Arabia's War*

It must have been a curious sight in General Sir Edmund Allenby's office on the July 9, 1917. A six-foot, barrel chested general, known as "the Bull," was receiving a strategic proposal from a young, animated, five-foot five captain, with a sun-burnt face, wearing Arab dress. Lawrence had recently become a household name in Cairo after seizing the port of Aqaba, not as the Turks expected, from the sea, but by a daring overland maneuver led by Arab forces. Seizing Aqaba changed the strategic calculus of the Palestine campaign; men and materiel could now be projected directly into the Trans-Jordan rather than over the Sinai peninsula.⁴¹ Lawrence briefed Allenby in his usual style, with a "precocious belief in the rightness of his own views to the disparagement of those of others, even of those of much more senior officers."⁴² If properly supplied by the British, his adopted Arab forces could attack Turkish supply routes along the Hijaz railway, and force the Ottoman Empire to commit significant forces to defending it, forces that would otherwise be used to defend Gaza and Jerusalem.⁴³ Such actions would secure Allenby's right flank as he advanced north through Palestine.

It would be tempting to suggest Allenby had little to lose from approving this concept.⁴⁴ To do so would overlook the risk it entailed. The National Arab Army (NAA) was only 3,000

⁴¹ James Stejskal, *Masters of Mayhem: Lawrence of Arabia and the British Military Mission to the Hejaz* (Haverton, PA: Casemate, 2018), 50-65.

⁴² Benson-Gyles, *The Boy in the Mask*; 8; Brian Gardner, *Allenby of Arabia: Lawrence's General* (New York: Coward-McCann, 1966), 137-40.

⁴³ Mousa, *T. E. Lawrence: An Arab View*, 79; Philip Walker, *Behind the Lawrence Legend: The Forgotten Few Who Shaped the Arab Revolt* (Oxford: Oxford University Press, 2018), 50-65; James, *The Golden Warrior*, 192.

⁴⁴ James, *Golden Warrior*, 194.

strong.⁴⁵ If the Arabs became decisively engaged and defeated, which was a real possibility if the more mobile Arabs could not maintain balance with the advancing EEF, Allenby would have to divert precious resources to shore up his flank. Secondly, the strategy relied on the local recruitment of Syrian tribesman—there was no guarantee that they would bolster the ranks of the Arab forces, and the majority of British officers in Cairo placed little stock in the efficacy of untrained Arab irregulars. Additionally, the British remained concerned about catastrophic success; a liberating Arab army could always trigger a Pan-Islamic jihad across the empire.⁴⁶ Despite these concerns, Allenby approved the plan, telling Lawrence that “I will do for you what I can.”⁴⁷

It is unlikely Allenby gave his approval based on military value alone. Lawrence himself suggested Allenby could not make out “how much [of Lawrence] was genuine actor and how much charlatan.”⁴⁸ Allenby struggled to find an answer for as long as he knew Lawrence, but accepted that he was a man of rare quality, and the only person capable of executing such an audacious plan. Allenby backed this confident young protégé, informing the War Office of Lawrence’s operational concept, and stating his support for it.⁴⁹ In Allenby, Lawrence found an unlikely ally, the general being neither a “hidebound member of the military caste, nor a brilliant

⁴⁵ The historian Matthew Hughes describes estimates that there were 8,000 regular and 17,000 irregular Arab soldiers as “nonsense.” If that were the case, they would have outnumbered the Turkish Fourth Army, who could normally only muster 2,000 soldiers per division. The actual figure is much more likely to be around 3,000. Matthew Hughes, *Allenby and British Strategy in the Middle East 1917-1919* (London: Frank Cass, 1999), 77.

⁴⁶ Faulkner, *Lawrence of Arabia's War*, 167.

⁴⁷ Walker, *Behind the Lawrence Legend*, 99.

⁴⁸ Faulkner, *Lawrence of Arabia's War*, 280.

⁴⁹ On July 16, 1917, Allenby telegraphed the Chief of the Imperial General Staff, Sir William “Wully” Robertson to say that “the advantages offered by Arab co-operation on (the) lines proposed by Captain Lawrence are, in my opinion, of such importance that no effort should be spared to reap (the) full benefit,” and that this plan “may cause the collapse of Turkish campaigns in the Hejaz and in Syria.” Allenby stressed the importance of having Lawrence put under his command, a wish that was granted on August 9, 1917. James, *Golden Warrior*, 192-193.

innovator: he was a solid but thoughtful professional, rooted in conventional soldiering, but willing to improvise.”⁵⁰ Allenby possessed the humility and self-awareness to see in Lawrence what he did not have himself: an unusual mind, youthful energy, and unbridled ambition. Allenby’s greatest asset was the ability to delegate along with his wider understanding of what is now termed “mission command.”⁵¹ Summarizing his approach to handling Lawrence, Allenby wrote that “after acquainting him with my strategical plan, I gave him a free hand.”⁵² The relationship between the two men solidified as Lawrence proved himself following their initial meeting. After successfully distracting the Turks from re-taking Aqaba, Allenby re-subordinated the NAA to the EEF, regularly coordinating disrupting attacks with Allenby’s advance towards Jerusalem and Damascus.⁵³ Arab forces, initially a convenient side show, became a key asset.

A commander needs to understand when to drive subordinates forward, and when to hold them back. Allenby demonstrated both. Increasingly torn between his loyalty to the Arabs and his countrymen, Lawrence requested reassignment after a series of errors was compounded by a betrayal of trust.⁵⁴ Allenby refused, emphasizing the impact Lawrence and the NAA had on the campaign. As British and Arab forces closed in on Damascus, Lawrence’s split allegiance was pushed to breaking point. The post war plans for the Middle East had been secretly agreed by the British diplomat Mark Sykes and his French counterpart Francois Georges-Picot in the summer of 1916 and leaked to the Manchester Guardian in November 1917. Lawrence was almost certainly

⁵⁰ Faulkner, *Lawrence of Arabia’s War*, 283.

⁵¹ The Army Operations Process is the commander driven activities of planning, preparing, executing, and assessing. The US Army defines mission command as the “exercise of authority and direction by the commander using mission orders to enable disciplined initiative within the commander’s intent to empower agile and adaptive leaders in the conduct of unified land operations.” US Army, *ADP 5-0*, (2012), iv; US Department of the Army, *Army Doctrine Publication (ADP) 6-0, Mission Command* (Washington, DC: Government Printing Office, 2012), 5.

⁵² Allenby writing after the war, quoted in Faulkner, *Lawrence of Arabia’s War*, 281.

⁵³ Stejskal, *Masters of Mayhem*, 70-93; Walker, *Behind the Lawrence Legend*, 142-161.

⁵⁴ Stejskal, *Masters of Mayhem*, 87.

aware of British and French intentions, but claimed to know nothing about them when questioned by Allenby on arrival in Damascus on October 3, 1918.⁵⁵ Lawrence's denial might have been to assuage the guilt he felt for betraying Faisal and the Arabs or it might have been genuine. Either way, Allenby informed Faisal that Syria would be governed in conjunction with the French, that Lebanon and Palestine would be outside of Arab control, the British mandate would include Jordan, and there was no recourse to the decision.⁵⁶ Despite Faisal's thwarted intentions, and Lawrence's shattered dream, Lawrence unquestioningly obeyed the man he described as "an idol . . . prismatic with the unmixed self-standing quality of greatness, instinct and compact with it."⁵⁷

Recognizing Remarkable Qualities: Wingate and Wavell

I have better cause than anyone to recognize his genius, and be grateful for it. [Wavell on Wingate].

— Simon Anglim, *Orde Wingate: Unconventional Warrior*

General Sir Archibald Wavell was one of the few senior officers Wingate did not thoroughly annoy. It is perhaps unsurprising that it was Wavell who placed the greatest store in Wingate's potential. Wavell worked on Allenby's staff during the Palestine campaign of 1917 to 1918, and wrote Allenby's biography. As a result, he was well acquainted with the combined effect of conventional operations and irregular tactical action, as well as how to best use unorthodox visionaries like Lawrence.⁵⁸ Yet Wavell was, as the historian Simon Anglim states,

⁵⁵ James, *Golden Warrior*, 263.

⁵⁶ James, *Golden Warrior*, 263. Lawrence's apparent duplicity has been cited as evidence to support the claim that Lawrence joined the Arab revolt less out of interest in Arab nationalism, or the British war effort, but to seek and liberate Dahoum, or satisfy whatever personal motives he held.

⁵⁷ T. E. Lawrence, *Seven Pillars of Wisdom* (New York: Doubleday, Doran and Company, 1935), 565.

⁵⁸ Wavell was tasked to dissuade Lawrence from returning to Syria in 1920, for fear of creating further unrest in the French mandate. Additionally, Wavell's father led irregular South African forces in the 1880s, and Wavell had studied the emerging Soviet doctrine of achieving cognitive shock through deep operations; he met one of the pioneers of the concept.

“pragmatic, rather than revolutionary,” rooted in the tactics and techniques of conventional maneuver warfare and a firm advocate of the cultural and social sinews of the regimental system.⁵⁹ Like Allenby, however, Wavell was imaginative, flexible, and prepared to experiment and change his mind. Wavell searched for what lay beneath superficial appearances, remained unexcited by stories of daring-do or egregious insolence, and rather than dismiss Wingate as the “rebellious misfit” he certainly was, identified the “remarkable qualities beneath and beyond the oddity which he recognized and sought to encourage.”⁶⁰

Wingate’s introduction to Wavell was almost as unusual as Lawrence’s to Allenby. Rather than wait for an audience with Wavell in the usual manner, (Captain) Wingate ambushed Wavell’s staff car as it circulated Palestine in 1938, got in, told the driver to drive on, and passionately presented his ideas for the Special Night Squads (SNS) to the surprised, but impressively restrained general.⁶¹ Although no Zionist himself, Wavell saw the utility of the SNS to protect rural Jewish communities and disrupt armed Arab gangs. Wavell approved the plan that would earn Wingate his reputation, and first DSO. Wavell moved on before the SNS began to have a substantial effect in Palestine, but did not forget Wingate. After deciding the most effective method of driving the Italians out of East Africa was to foment patriotic rebellion in Ethiopia; Wavell summoned Wingate whom he recognized as “someone who might be valuable as a leader of unorthodox enterprise in war.”⁶² Wavell’s faith was not misplaced; Wingate cemented his reputation in the Ethiopian campaign and earned a bar to his DSO. Later on in the

⁵⁹ Anglim, *Unconventional Warrior*, 36.

⁶⁰ Sykes, *Orde Wingate*, 138; John Connell, *Wavell: Scholar and Soldier* (New York: Harcourt, Brace and World, 1964), 196.

⁶¹ Although historian Simon Anglim suggests this story is somewhat of a myth, it features in most biographies, and is certainly in character with Wingate, who had performed a similar stunt when he accosted Sir Cyril Deverell in Catterick. Interestingly, Wingate did not extend the same courtesy to Enoch Powell when the latter requested to be part of *Operation Tuesday* after jumping his car in Cairo in 1943. Anglim, *Unconventional Warrior*, 64-65; Sykes, *Orde Wingate*, 142-143.

⁶² Connell, *Wavell*, 360.

campaign against the Japanese in Burma, and shortly after arriving as Commander-in-Chief, India, in late 1941, Wavell once again summoned Wingate. Although initially unsure of what role Wingate would play, Wavell foresaw an opportunity for irregular combat that Wingate had passionately, if intemperately, lobbied for after the conclusion of operations in Ethiopia. Wavell was instrumental in the establishment of 77 Brigade, the renowned *Chindits*, which would seal Wingate's fame, and earn him yet another bar to his DSO.⁶³ Wavell was not the only commander Wingate worked for, or with, but was the commander that believed most in Wingate's enterprises and provided the opportunity for them to be put to the test.

Wingate died before his view of the relationship between the two men could be written down. Never one for effusive praise, it is unlikely Wingate would have felt the same affection as Lawrence did for Allenby. Yet Wingate was at his best when backed by Wavell, and his worst when the two had no relationship. Wavell pulled Wingate from the mundane boredom of anti-aircraft battery command in early 1941 and requested his service in Burma shortly after Wingate's suicide attempt later that year. Wavell managed Wingate's irascible moods and abrasive approach with a deft touch. When Wingate doubted the ability of his troops after a shambolic exercise in September 1942, it was Wavell who told him to "put his misgivings away and persist in the work he had begun."⁶⁴ Nor was Wavell reluctant to rein Wingate in: he forbade Wingate from returning to Palestine en route to Africa in 1941, chastised him for a particularly galling report in which Wingate referred to senior officers as "military apes" over the conduct of the East Africa campaign, and tempered the more audacious aspects of his LRP operations.⁶⁵

⁶³ Royle, *A Man of Genius*, 236.

⁶⁴ Sykes, *Orde Wingate*, 377.

⁶⁵ Wingate's report contained a scathing assessment of the soldiers sent to him: "mediocre or inferior officers," NCOs who were so substandard they "were almost a nuisance," and "cowardly and lazy signalers." This was, Wingate fumed, unsurprising in an army "whose commanders learn most their art in dummy operations which are in war what dummy operations would be in medicine—fruitful sources of false doctrine and orthodoxy." After reading Wingate's report, Wavell wrote that it "would almost have

Ultimately, Wavell knew that Wingate walked a very precarious line between genius and lunacy. In May 1944, two months after his death, Wavell wrote that Wingate “was killed at the right moment, both for his fame, and for the safety of his division.”⁶⁶

World War I and II were times of national crisis—commanders entertained people and ideas that would otherwise not find an audience. It is hard to imagine characters like Lawrence and Wingate existing for long in a modern army. The idea of Orde Wingate with a Twitter account is enough to make the most resilient commander balk. Indeed, it could be argued that such recalcitrance can be infectious. After Wingate stormed the hotel room of Commander of British Forces in East Africa, Sir William Platt, after being banned from meeting with him in a conventional environment, Platt allegedly quipped that “the curse of this war is Lawrence in the last.”⁶⁷ Yet the relationship between these generals and their unconventional charges still offers lessons. At a personal level, identifying strengths that one does not possess in another, having the humility to nourish those strengths, and finding ways to channel the energy and ideas of an unusual thinker into productive projects will generate a symbiotic relationship with an individual who will feel more invested in the system they so often rail against. How a commander differentiates a dangerous, hair-brained scheme from an individual with delusions of grandeur, from a plan that might hold merit is an art—one that cannot be taught. For every Arab revolt or LRP theory, there will be hundreds of convictions that have, as Lawrence said, “needed shooting to be cured.” A willingness to hear ideas, experiment, and think anew, along with sound judgement of character and self-awareness, serves as an important attribute in a commander.

been justified placing him under house arrest for insubordination.” Royle, *Man of Genius*, 212-213; Sykes, *Orde Wingate*, 385.

⁶⁶ Penderel Moon ed., *Wavell: The Viceroy's Journal* (London: Oxford University Press, 1973), 71.

⁶⁷ Sykes, *Orde Wingate*, 250.

The problem of identifying genius in unusual people, however, is more than an introspective, personal, one. Large organizations, especially militaries, are prone to rejecting new ideas which require a change to organizational structure. In 1990, economists Rebecca Henderson and Kim Clark published a paper that in many ways mirrors John Boyd's theory of destruction and reconstruction. Henderson and Clark describe "architectural innovation" as the process of breaking down existing components of an organization before re-assembling the same components with a different relationship to one another, while retaining the basic knowledge and design of those components.⁶⁸ Although a base comparison to what Henderson and Clark had in mind, Allenby re-designed himself within an organization, as well as the operation itself, when he altered the force structure and operating procedures of the EEF and incorporated the irregular NAA. Wavell took significant risk by creating an organization that would complement and operate alongside conventional forces.⁶⁹ Both generals invested in a concept, but only after they worked out how it would complement existing structures. They were, in short, thinking holistically, systemically, and creatively; tactics are zero sum, strategy is not.⁷⁰ The politics of organizational change, however, are far from easy. It requires significant skill and diplomacy, diplomacy that is unlikely deliverable by people like Lawrence and Wingate. Wire diagrams, budgets, and structures, might be stale to a soldier, but modern commanders will have to

⁶⁸ Rebecca M. Henderson and Kim B. Clark, "Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms," *Administrative Science Quarterly* 35, no. 1 (March 1990): 9-30, accessed October 31, 2018, http://dimetic.dime-eu.org/dimetic_filesHendersonClarkASQ1990.pdf.

⁶⁹ Wavell was somewhat of an organizational reformer. In 1933 he called for the establishment of a branch of the War Office to focus on recruiting soldiers along the line of national characteristics, a popular notion at the time, and reformed the command and control network of the Indian Army on assuming command in 1941. The establishment of 77 Brigade was not popular as it took away valuable resources from other parts of the theatre. Anglim, *Unconventional Warrior*, 20; Royle, *Orde Wingate*, 236.

⁷⁰ Systems thinking challenges the view that the world is inherently reductionist, linear, simplistic, where explanations why people do things are universally applicable, and subject to independent variables. Systems thinking offers an ecological approach, one that presents the world as a complex environment where parts of a system interrelate, and decisions made are multi-causal, emergent, and subjective (to context). John Lewis Gaddis, *The Landscape of History: How to Map the Past* (Oxford: Oxford University Press, 2002), 53-58, 72-76.

understand them and not be afraid to dismantle, redesign, and reassemble them to incorporate new, relevant ideas in the face of continuous change.

The challenge for commanders is therefore both personal and organizational. It is also addressed in doctrine. For the US Army, the primary framework for exercising mission command is the operations process. Mission command is guided by six mission principles: build cohesive teams through mutual trust, create shared understanding, provide a clear commander's intent, exercise disciplined initiative, use mission orders, and accept prudent risk. Allenby initially allowed Lawrence to operate independently to the EEF, but by absorbing the NAA towards the end of the campaign, created unit cohesion and unity of purpose (however disingenuous it might have been). Lawrence, in turn, although initially operating as the sole interlocutor between the Arabs and the British, went on to form irregular mechanized teams which had a significant impact in the Hejaz.

Wavell allowed Wingate the opportunity to put his untested theories into practice, while Wingate's infectious personality gave him a remarkable ability to forge teams in Palestine, Ethiopia, and Burma. Even Field Marshall Slim, who was not a one of Wingate's chief supporters, remarked "he could ignite fire in men's bellies...you could not fail to be stimulated either to thought, protest, or action by his somber vehemence and his unrelenting persistence."⁷¹ In both situations, teams were formed, and trust was mutual. Allenby and Lawrence met consistently throughout the campaign in the Middle East, Wingate regularly met with Wavell, until he was re-assigned to India, then with Slim, following the latter's appointment as Commander of the Fourteenth Army in Burma. These frequent meetings created an understanding of the capabilities, strengths, and weaknesses of the NAA or Wingate's myriad forces. Little was conducted in isolation of the main effort. Lawrence and Wingate worked for commanders who always provided clear intent—although perhaps not written down—and latitude for initiative in

⁷¹ Field Marshall Sir William Slim, *Defeat into Victory* (London: Macmillan, 1956), 162.

meeting it. Both Allenby and Wavell demonstrated an acceptance of prudent risk, a key concept where these historical examples diverge from modern doctrine.

Allenby accepted significant risk by diverting resources to Lawrence's operations. If they failed, and there were certainly tactical errors made by Lawrence and the NAA, Allenby would have to divert men as well as material to support their operations. By consistently backing the controversial Wingate, Wavell not only risked his reputation, but the loss of forces as well. Indeed, following the first Chindit operation into Burma in 1943, which Wavell authorized, over a third of Wingate's men failed to return. Slim described the operation as "a costly schooling," justified only by the psychological impact it had on the Japanese.⁷² The risk of Lawrence and Wingate's missions inherently differs from situations envisaged by modern doctrine. In World War I and World War II, the stakes were higher, political will assured, and high casualty rates expected. Commanders were prepared to take greater risks as a result. Despite fundamental contextual differences, the comparison reveals an important point. Historically, when a country is at war; strategic leaders remove cautious, risk averse, reckless, or generally underperforming generals—a sign the system worked. In more recent times, removing a general from his or her post—in peace or on operations—has been interpreted as a failure of the system, where the individual has been unprepared for, or unsupported in, the appointed position. Rather than viewing removal from post as a success of the institution, it is interpreted as a failure of the individual. This leads to an attitude of entrenchment in key positions; preventing things from going wrong often trumps the ambition to create unique and bold concepts necessary for contemporary conflict.⁷³

⁷² Slim, *Defeat into Victory*, 162-3.

⁷³ Thomas E. Ricks, "General Failure," *The Atlantic*, November 2012, accessed January 3, 2019, <https://www.theatlantic.com/magazine/archive/2012/11/general-failure/309148/>.

Historic studies of commander-subordinate relationships yield insights with contemporary application. If future conflict is—as current US military strategies indicate—large scale combat operations, doctrinal principles that guide the concept of mission command today are as applicable now as they were one hundred years ago. Difficult individuals can be a considerable asset, when managed effectively, and US doctrine provides the framework for that to take place. Allenby and Wavell saw “things in the seed,” and created the environment for the seed to germinate. What they saw in the two unusual subordinates that made it worthwhile to invest in them forms the next part of the study.

What Made Them Stand Out?

The defining characteristic of warfare is precisely the inevitable distance that separates the reality of it from its model. To think about warfare is to think about the extent to which it is bound to betray the ideal concept of it.

— Francois Jullien, *A Treatise of Efficacy*

Lawrence’s “Waking Dream”

It is easy to apply design models and methodologies on to successful historical figures to demonstrate their efficacy. Students at SAMS for example, study Field Marshall Slim’s campaign in Burma through the lens of ADM. The danger of this exercise is that it encourages students to study a model, rather than the characteristics of thought that made the individual worth studying in the first place; the model becomes the explanation rather than its content. Focusing on doctrinal methodologies and models dilutes the generative capability and capacity of military designers. It would perhaps be more useful to seek out certain principles, or rules, demonstrated by the great military minds of the past, and use them as guidelines as opposed to structural methodologies that seem to be applied to any situation, regardless of its context. The next part of this study seeks to address this divergence. After a brief description of Lawrence and Wingate through the lens of the DADO design concept and ADM, further exploration of Lawrence and Wingate will seek to

draw out the creative characteristics that may be of use to military planners in an increasingly complex operating environment.

There are five major stages to the DADO design concept: structuring the learning process, identifying the relevancy gap, creating the preliminary framework, critically challenging and forming the strategy, and developing the campaign configuration.⁷⁴ The first stage will be discussed later, as it warrants a section of its own. While lying stricken with fever outside Wadi Ais, Lawrence defined the relevancy gap, which, according to the DADO design concept, is the “critical investigation of the gap between assumptions, beliefs, practices, structure and organization, and the change in the environment,” before asking “what (potential) opportunities exist to enable more relevant strategy.”⁷⁵ Lawrence railed against his interpretation of the Clausewitzian emphasis on absolute war, or “murder war,” and presented an alternative theory. By looking through the lens of algebraic elements: measurable mathematical objects, the geographic features, the physical strength of an army, and the territory it controls, Lawrence was able to conceptualize the distance the Turks needed to defend, being beholden to terrain, and how far they would have to disperse themselves to do so. The variability of man and the unpredictability of his actions formulated Lawrence’s concept of stretching time and space in order to attack the biological elements that supported man: water and food. If he could compel them to withdraw willingly, Lawrence did not need to attack the Turks, whose strengths were measured in terms of numerical superiority and territory they controlled.⁷⁶ The psychological aspect of Lawrence’s strategy was his concept of what compelled men, both friend and foe, to

⁷⁴ Israeli Defense Force, DADO, *Design: Learning Processes and Knowledge Development for the Development of Concepts at the General Staff Headquarters and the Major HQs* (Tel Aviv: Israeli Defense Force Publishing Branch, 2015), 9.

⁷⁵ Ibid., 9.

⁷⁶ Lawrence, *Seven Pillars*, 192.

fight.⁷⁷ The algebraic, biological, and psychological aspects of Lawrence's theory became his strategic principles—the preliminary strategic framework, and third stage, in the DADO design concept.⁷⁸

The next stage of the DADO design doctrine is to critically challenge the primitive framework and assist the improvement and development of the strategy on its conceptual and practical levels. What can cause it to fail? What are the risks? Who in the system will object to it, and why?⁷⁹ Lawrence wondered what the Arabs could attack, questioning the use of a soldier without a target. If the Arabs could not attack the Turks for fear of self-destruction, it was hard to conceive what use they would be.⁸⁰ The target, Lawrence concluded, did not have to be the Turks, but their lifelines. Lawrence analyzed the garrisons and guard posts along the Hejaz, and focused attention on the unoccupied areas, where “sedition might raise her head.”⁸¹ Materiel support, so long a concern of European militaries became irrelevant; not only would the Arabs attack the Turkish supply lines, “the long stems to the head,” the nomadic nature of the Arabs meant they did not have to worry about their own lines of communication. Finally, the opportunity to exploit space added more substance to the strategic framework. The desert, long since considered a barrier against movement, would be the opposite; a plain of movement that offered protection and assured tactical surprise.

The final stage of the DADO design concept is the development of the idea and campaign configuration—the “actualization of the idea.”⁸² The end process of this stage is the concept of employment for force, a formal outcome from a theoretical process. Lawrence identified an

⁷⁷ Lawrence, *Seven Pillars*, 190-96.

⁷⁸ Israeli Defense Forces, DADO, *Design: Learning Processes and Knowledge Development*, 9.

⁷⁹ *Ibid.*, 9.

⁸⁰ Lawrence, *Seven Pillars*, 191.

⁸¹ *Ibid.*, 192.

⁸² Israeli Defense Forces, DADO, *Design: Learning Processes and Knowledge Development*, 9.

imbalance between ends and means when analyzing the situation he faced; the Arabs did not have an interest (end), or the capability (means), to annihilate the Turks, so the way had to become one of exhaustion, not annihilation.⁸³ Lawrence's primary concern was how the Arabs might achieve exhaustion, knowing they fought solely for freedom, "which was a pleasure to be tasted only by a man alive."⁸⁴ Force preservation was thus the key challenge; if the Arabs became fixed, they would be defeated. Mobility, popular support, variation, and unpredictability, would therefore form the "campaign concept," to use DADO design language.⁸⁵

Lawrence's individual, ethereal exercise in Wadi Ais created the principles, strategic concept, and operational framework—but it would not be formally constructed until after the war. The flurry of activity that immediately followed Lawrence's time of feverous reflection is evidence of "the implementation of strategy in relation to the conceptual efforts."⁸⁶ Lawrence attacked the Hejaz railway twice between March 10, 1917 and April 13, 1917 and decided it was better the Turks remained in Medina (which had little military value) than attempt to dislodge them, formulated the plan to seize Aqaba from land, which was eventually captured in July, and attacked the Hejaz again in September and October, 1917. The arrangement of forces, organization, target selection, and command and control was the execution of a plan, a plan based entirely around a "concept for employment of force."⁸⁷

Design models have their use, and to dismiss them out of hand would be unwise. The DADO model, shown in its entirety in Figure 1, in particular, has useful elements. Identifying the

⁸³ James J. Schneider, *Guerilla Leader: T. E. Lawrence and the Arab Revolt* (New York: Bantam Books, 2011), 59.

⁸⁴ Lawrence, *Seven Pillars*, 191.

⁸⁵ "Governments saw men only in mass; but our men, being irregulars, were not formations, but individuals. An individual death, like a pebble dropped in water, might make out a brief hole; yet the rings of sorrow widened out therefrom. We could not avoid casualties." Lawrence, *Seven Pillars*, 194.

⁸⁶ Israeli Defense Forces, DADO, *Design: Learning Processes and Knowledge Development*, 9.

⁸⁷ *Ibid.*, 23.

relevancy gap and emerging potential in the international, regional, and rival systems, can be useful to military planners obsessed by end states. No strategic situation “ends,” and military “ends states” are simply pauses in ongoing competition, be it violent or otherwise. Analyzing how to exploit emerging relationships and tensions, and influence trends, creates strategies that are long term, account for second and third order effects, and lessen the likelihood of today’s solutions becoming tomorrow’s problems. Secondly, the DADO design concept is not means—or capabilities—focused. The might of the US Army was checked by irregular militias in Iraq between 2003-07 despite US forces holding vastly superior means. Lawrence was no Luddite; the mechanized vehicles and planes that began to arrive in the Middle East at the end of 1917 enhanced his operational approach, but the approach was not designed around them. In a world where adversarial states and groups make it increasingly difficult for NATO countries to bring their strengths to bare, operational approaches should rely less on what is traditionally seen as strength: firepower, airpower, fleet size, mass, for example, and more on the subtle cultural nuances that encourage or dissuade humans to fight—the psychological aspect of Lawrence’s theory of warfare.

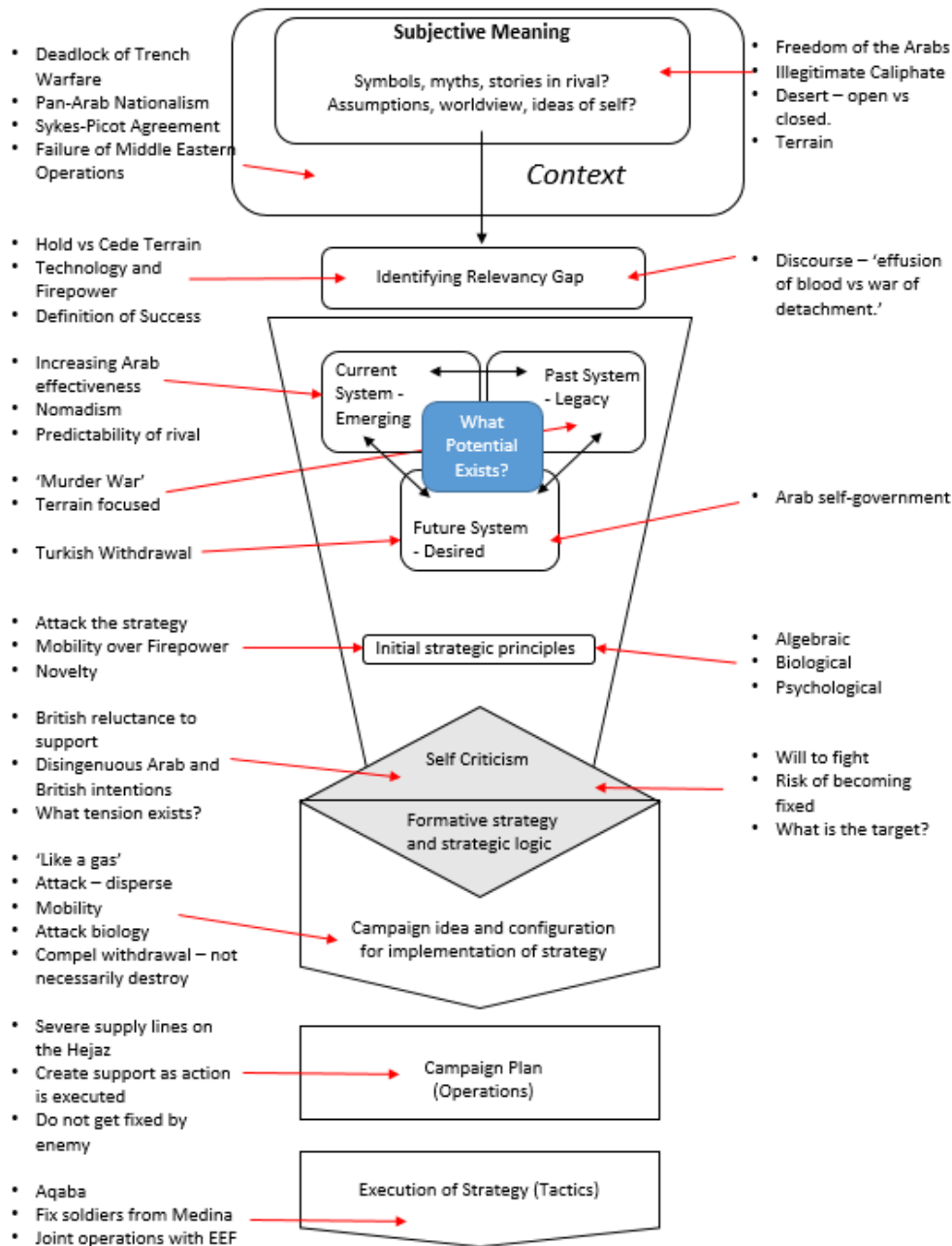


Figure 1. Lawrence’s formulation of strategy viewed through Israeli design doctrine. Structure based on the Israeli Defense Forces, DADO. *Design: Learning Processes and Knowledge Development for the Development of Concepts at the General Staff Headquarters and the Major HQs* (Tel Aviv: Israeli Defense Force Publishing Branch, 2015).

While using a design thinking process like the DADO design concept can be useful in constructing unique operational approaches that embody strategic logic, the real utility of studying Lawrence comes from the more abstract aspects of his character. The first principle that

military planners could follow, is a holistic approach to strategy. Military planners are quick to identify the tactical, operational, and strategic levels of war. So did Lawrence, but rather than view them as layers of conflict, to Lawrence, strategy and tactics was interactive. A good strategy was a long-term, holistic endeavor, the “full house of war,” that gained strength in execution. Tactics were the “particular steps of its staircase” that linked means to ends.⁸⁸ Unlike many commanders in World War I, Lawrence thought and acted in both realms. Lawrence’s considerable intellect linked politics and strategic aims with tactics, theory to practice, the abstract to the concrete.⁸⁹ It is, of course, perhaps telling that this remarkably elegant account of formulating strategy was written ten years after the event. The result of the campaign in Arabia and the pedestal Lawrence found himself on as a result, may well have influenced how Lawrence viewed the episode with hindsight.

The second principle of creative thinking is to identify the perception of reality, time, and space in different actors. The Turkish mindset presented an opportunity for Lawrence, who realized that the concept of holding territory did not apply to the Arabs, whose “kingdoms lay in each man’s mind.”⁹⁰ Armies mirror society, and the Arabs were a people who needed to move to survive.⁹¹ Territory meant different things to different actors. Klaus Krippendorff, a designer who was widely read during the early stages of the design program at SAMS, argues that a new type of design is required for post-modernist societies, where universalist concepts, singular meta-

⁸⁸ Lawrence, *Seven Pillars*, 192.

⁸⁹ Charles M. Stang, ed., *The Waking Dream of T.E. Lawrence: Essays on His Life, Literature, and Legacy* (New York: Palgrave, 2002), 165.

⁹⁰ Lawrence, *Seven Pillars*, 192.

⁹¹ Lawrence’s appeal to pan-Arab nationalism as a mechanism for inciting revolt is illustrated by the passage in *Seven Pillars* where he writes that “I meant to make a new nation, to restore a lost influence, to give twenty million Semites the foundation on which to build an inspired dream palace of their national thoughts.” John E. Mack suggests such ambition was always bound to fail, partly because of what the psychologist Manfred Halpern described as the tendency for “Muslim cultures to yield to authority (“subjection”), and to submerge individual identity, essential for mature political self-consciousness, with that of a protective overwhelming authority (“emanation”)” and partly because of what George Kirk described as “the fatal Arab tendency to political separatism.” Mack, *A Prince of Disorder*, 115.

narratives, and epistemological problems, are deconstructed and re-constructed by communities rather than privileged observers.⁹² Meaning can be loosely defined as “the thing one intends to convey.”⁹³ Yet, as the scholars Mary Jo Hatch and Ann L. Cunliffe argue, “whenever you create meaning, or grasp someone else’s, you make things, feelings, ideas experiences, values, and expectations into ideas and concepts.”⁹⁴ Conventional military wisdom in World War I, for example, focused on terrain, reflecting a belief in many European militaries that land held cultural, economic, and social value and had a singular meaning that was zero sum and quantifiable. It was therefore worth defending. This was not what terrain meant to the Arabs, and Lawrence seized an opportunity to use terrain as weapon rather than a possession. Operational approaches can be developed by understanding what meaning a certain object or idea has to the enemy, and to one’s own forces. People do not act on things, but on what those things mean to them, or how they understand them in time and space.⁹⁵ In US doctrine, critical vulnerabilities—those things that matter most to the enemy—are almost always material.⁹⁶ Attacking what makes

⁹² Postmodernism is hard to define; the very nature of the concept rejects absolute truth and accompanying boundaries. Simplistically, postmodernists, led by the French philosophers Jean-Francois Lyotard, Jacques Derrida, Jean Baudrillard and Michel Foucault, reject grand theories and accepted paradigms, are skeptical of ideology, and suspicious of reason. Reality and knowledge are subject to experience, culture, language, and context—understanding reality is therefore relativist, not objective. Part of the philosophy focuses on how narratives are deconstructed: suppositions, moral opinions, ideological assumptions, and binary oppositions are intentionally distorted—the reader holds authority over the meaning of the text, not the author. Language, and access to its use, is the source of power and change. The Stanford Encyclopedia of Philosophy describes postmodernism as “a set of critical, strategic and rhetorical practices employing concepts such as difference, repetition, the trace, the simulacrum, and hyperreality to destabilize other concepts such as presence, identity, historical progress, epistemic certainty, and the univocity of meaning.” Stanford Encyclopedia of Philosophy, “Postmodernism,” last updated February 5, 2015, accessed December 15, 2018, <https://plato.stanford.edu/entries/postmodernism/>.

⁹³ Merriam-Webster Online Dictionary, “Meaning,” accessed November 10, 2018, <https://www.merriam-webster.com/dictionary/meaning>

⁹⁴ Mary Jo Hatch and Ann L. Cunliffe, *Organization Theory. Modern, Symbolic, and Postmodern Perspectives*, 2nd ed. (Oxford: Oxford University Press, 2006), 4.

⁹⁵ Algirdas Paskevicius Na Xiong, Kenta Ono, and Makoto Watanabe, “Design to Create a New Product Meaning,” *Bulletin of JSSD* 62, no. 1 (2015): 49-58, accessed January 14, 2019, https://www.jstage.jst.go.jp/article/jssdj/62/1/62_1_49/_pdf.

⁹⁶ Doctrine states that critical vulnerabilities “are those aspects or components of critical requirements that are deficient or vulnerable to direct or indirect attack in a manner achieving decisive or

people fight, and the societal support that maintains their will to fight—as the epic tragedy of US involvement in Vietnam demonstrated—rather than what the enemy fights with, leads to a more efficient application of effort.

A third principle of creative thought is to be heretical. Recency bias—what has worked recently will work again—is created when accepted truths and paradigms remain unchallenged while circumstances and context change. Relevance is found in context, so every strategy and operational approach or concept must include learning about how paradigms become irrelevant because the context and rival continue to change. Official discourse, which is doctrine, and unofficial discourse, which is the linguistic interaction between military practitioners, must constantly evolve to suit the unique circumstances faced by militaries. Much of the generalship in World War I was characterized by how best to employ available technology, and the tactics that accompanied it, to defeat the enemy. New equipment: tanks, planes, and individual weapons systems, were designed, produced, and employed with the same function—to destroy the enemy. Products emerged from an understanding of the function they were required for—“form followed function.”⁹⁷

significant results.” US Department of Defense, Joint Staff, *Joint Publication (JP) 5-0, Joint Planning* (Washington, DC: Government Printing Office, 2017), IV-25.

⁹⁷ Form following function has its purpose. It can provide the routine and mundane aspect of a peacetime military with efficient, cost effective, robust, equipment and infrastructure a military needs to operate with and from; but it is operations and tactics without strategy.

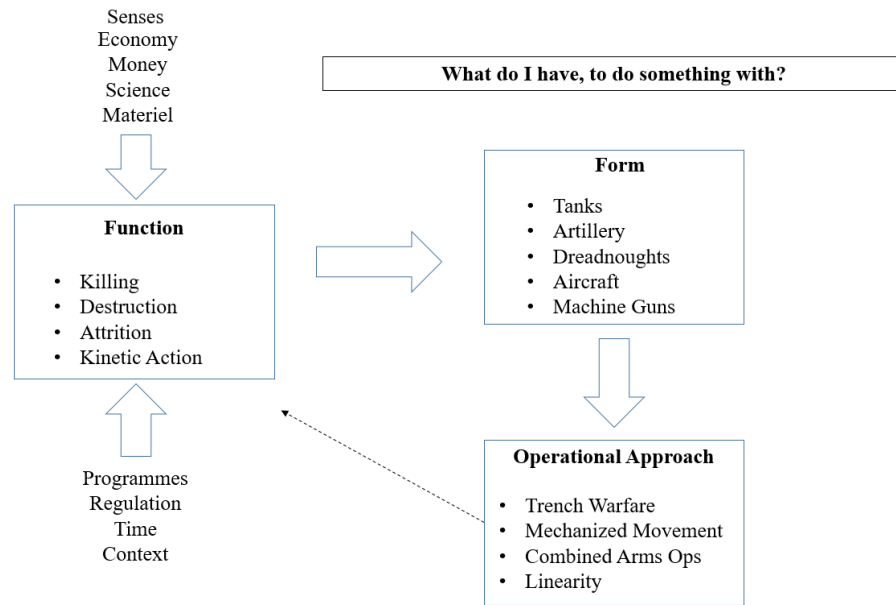


Figure 2. “Form Follows Function”—World War I. Created by author.

Lawrence was heretical enough to overturn these accepted truths. Not only did he dismiss the futility of attrition, he understood that “form following function” did not apply in the desert of Arabia. Identifying a gap between the relevance of military doctrine designed for industrialized, mechanized, linear warfare, the unique environment of Arabia, and the cultural idioms of the Arabs, Lawrence created his own discourse to present a new theory of warfare. Krippendorff’s “trajectory of artificiality,” serves as a useful framework to demonstrate the gap between contemporary, conventional, thought that existed during World War I and what Lawrence proposed. Tactics in Krippendorff’s model, equate to products which he describes as “the end result of a manufacturing process.” Projects involve human co-operation, have a “purpose, a point, an objective,” are subject to direction, space, time and resources - what is now commonly referred to as the operational level of war. Discourse, described as “organized ways of talking, writing, and acting accordingly,” represents the strategic level of war.⁹⁸ By analyzing chapter

⁹⁸ Krippendorff’s full model includes “Products” (utility, functionality, universal aesthetics), “Goods,” “Services,” and “Identities” (marketability, symbolic diversity, folk and local aesthetics), “Interfaces” (natural interactivity, understandability, re-configurability), “Multiuser Systems/Networks” (informativeness, connectivity, accessibility), “Projects” (social viability, directionality, commitment), and

thirty-three of *Seven Pillars*, and mapping it onto Krippendorff’s model, it is possible to see the difference between what Lawrence described as “the effusion of blood,” and his proposed solution, a “war of detachment.”

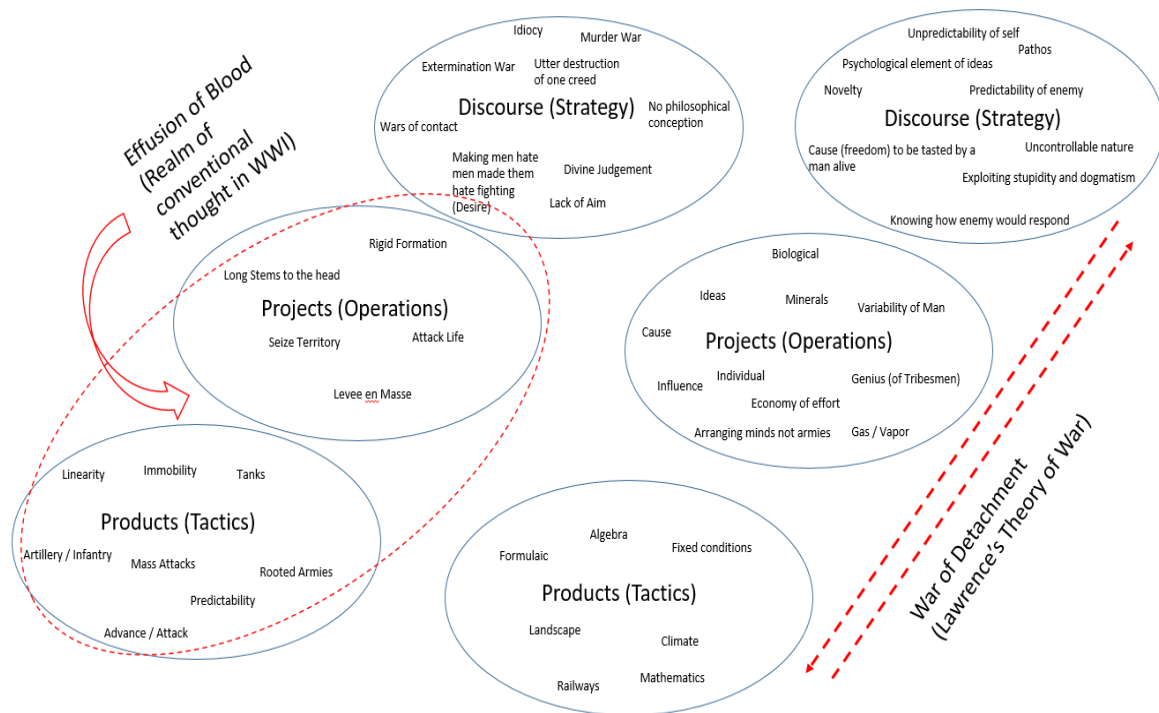


Figure 3. Lawrence’s interpretation of conventional military thinking and his proposed alternative—the war of detachment—mapped on to Krippendorff’s “Trajectory of Artificiality.” Created by author. Data from T. E. Lawrence, *Seven Pillars of Wisdom* (New York: Doubleday, Doran and Company, 1935), Chapter 33.

These three principles of creative thinking are all linked, and can perhaps be reversed. Lawrence was heretical enough to identify the irrelevancy of an existing paradigm, and that it had to change. The “war of detachment” was human centric design, constructed around what the Turks and the Arabs valued, rather than what they had, and his ability to view the entire military operation as an interrelated politico-strategic, operational, and tactical endeavor in no small part

“Discourses” (generativity, re-articulability, solidarity). For ease, the model has been reduced to the main concepts: products, projects, and discourses. Krippendorff, *Semantic Turn*, 9-11.

explains his success.⁹⁹ In the modern operating environment, these principles will assist planners in developing operational approaches that incorporate more than destructive effects. Deception is crucial, and needs to be credible; and will require a thorough understanding of what makes people believe what they believe. Creating and exploiting narratives, especially in an age when discourse has become partisan and bi-polar, will, as Lawrence said, “arrange minds.”¹⁰⁰ Tactical actions are becoming increasingly harder to dislocate from strategic aims—the “strategic corporal” is a revealing, if overused, addition to military vocabulary. So while Lawrence provides some principles of creative thinking, perhaps Wingate can provide some more.

Wingate—Staring out a Tiger

Wingate’s premature death prevented post-war self-analysis of his ideas. Wingate was, however, never reluctant to analyze and express his thoughts as he formulated them, and the post-operational reports from his service in Palestine and Ethiopia offer insights into his thought process. This section will briefly examine the three major campaigns of Wingate’s career, viewed through the lens of ADM, before analyzing what principles of creative thought Wingate demonstrated can be drawn that are of relevance to the modern military practitioner.¹⁰¹

⁹⁹ “Human centeredness” in design is a shift away from a society that adapts to technological change, assisted by a designer, to one where humans influence technological advancement. A vacuum cleaner, for example, had the mundane function of sucking up dirt and grime until the turn of the twenty first century. The form of vacuum cleaners reflected this bland requirement, until designer James Dyson revolutionized the market by creating a product that was interesting, agile, sleek, original, user friendly, glossy, and desirable. By changing the discourse (new aesthetic standard) and the usability (new experience), Dyson altered the concept of what a vacuum cleaner could be. Similarly, and conversely, when Henry Ford produced the Model T car en masse in 1908, he altered the discourse of what a car could be. Previously a luxury item used for pleasure driving by the affluent few, it became a common method of transport for many. Kamel Michlewski, *Design Attitude* (Oxford, Routledge, 2015), 53-83, 119-135; Austin Webber, “Ten Ways the Model T Changed the World,” *Assembly*, September 2, 2008, accessed December 4, 2018, <https://www.assemblymag.com/articles/85804-ten-ways-the-model-t-changed-the-world>.

¹⁰⁰ Lawrence, *Seven Pillars*, 193.

¹⁰¹ The four key activities in ADM are framing the operational environment, identifying a problem not obvious to others, proposing unique solutions and operational approaches to solve it, and reframing. US Department of the Army, *Army Techniques Publication (ATP) 5.0, Army Design Methodology* (Washington, DC: Government Printing Office, 2015), 1-3.

Framing an operational environment, defined in doctrine as “a composite of the conditions, circumstances, and influences that effect the employment of capabilities and bear on the decisions of the commander,” requires a thorough understanding of the strategic context.¹⁰² Wingate knew the major concern for the British toward the end of the 1930s was the risk of losing control of the Suez Canal, which would cut the sea lines to India. The Italians menaced the Red Sea entrance after the invasion of Ethiopia in 1935 while unrest in Palestine fixed forces that would be otherwise free to garrison the canal.¹⁰³ As attacks on Jewish settlements from Arab gunmen increased after 1936, the military response from the Jewish paramilitary group, the Haganah, which the British did not officially recognize, threatened to further destabilize the febrile mandate. The Peel report of 1936, and the more informative Woodhead Commission of 1938 did little to calm things down.¹⁰⁴

Wingate framed the problem within this strategic context.¹⁰⁵ Whereas the British high command largely rejected policies that would increase unrest, Wingate argued that rather than hold down a Jewish army, the British should create one, finance and equip it, and make it responsible for the territorial security of Jewish settlements.¹⁰⁶ Wingate knew the Haganah were politically toxic, and suggested instead creating a force drawn from, and committed to protecting,

¹⁰² Definition of “Operating Environment” taken from US Department of Defense, Joint Staff, *Joint Publication (JP) 3-0, Joint Operations* (Washington, DC: Government Printing Office, 2017), IV-1.

¹⁰³ Michael J. Cohen, “British Strategy and the Palestine Question 1936-39,” *Journal of Contemporary History* 7, no. 3/4 (July-October 1972): 157-162.

¹⁰⁴ The Peel Commission, which reported in 1937 in response to the increasing violence in Palestine, was the first report to recommend partition of the mandate between Arabs and Jewish settlers. The findings of the Peel Commission split the Zionist movement and was universally opposed by the Arabs, who renewed attacks on Jewish settlements. The Woodhead Commission, which reported the following year, refined the details of partition, but was rejected by Arab and Jewish groups in 1939. *Ibid.*, 167-169.

¹⁰⁵ Framing the problem in doctrine is described as “the set of interrelated problems or system of problems in a narrative supported by visual models. The problem frame supports the commander’s dialogue with higher commanders and unified action partners in defining problems and developing common expectations regarding resolution.” US Department of the Army, *ATP 5.0*, 4-2.

¹⁰⁶ Sykes, *Orde Wingate*, 180 -200.

the communities most under threat—a state sponsored local police force. For the British, this would create an efficient way of freeing up forces. For Wingate, it would fulfill a long held ambition. The doctrine of the SNS, as the small teams of Jewish fighters became known, was formed from a rationalization of the rival. Wingate watched as Arab gangs operated with relative impunity at night, attacking settlements before melting away. The response from the clumsy apparatus of the colonial mandate was routine, obvious, and slow. The solution was to link the predictability and resources of the cumbersome British mandate with the unpredictability of small units of irregular fighters.¹⁰⁷

Wingate was removed from Palestine after his political lobbying for the creation of a Jewish state became well known in both London and Palestine.¹⁰⁸ Wavell personally selected Wingate to lead an irregular force against the Italians in Ethiopia in 1940. Understanding the unique operating environment allowed Wingate to frame the problem differently. Since 1939, British policy in Ethiopia was to create a pan-Ethiopian revolt against the Italians led by supporters of the exiled Emperor Haile Selassie. At best this uprising would cause the Italians to withdraw, at worst fix their forces and limit their ability to attack the Suez Canal. Wingate rejected the simplicity of this policy. Making this an Ethiopian problem lacked initiative. Rather than appeal to the “cupidity” and “self-interest” of the Ethiopians, as had hitherto been the case, the British should present them with their “bona fides” by fighting alongside them and convincing them that “we [the British] were not only brave soldiers, but devoted to the cause of their

¹⁰⁷ “Once commanders and planners agree on the problem or set of problems, they develop ways to address them [solution framing]. They do this by developing an operational approach—a description of the broad actions the force must take to transform current conditions into those desired at end state. An operational approach is the commander’s visualization of what needs to be done to solve or manage identified problems. It is the main idea that informs detailed planning.” US Department of the Army, *ATP 5.0*, 5-1.

¹⁰⁸ Sykes, *Orde Wingate*, 194-204.

liberties.” This changed the campaign from one fought from without, to one fought from within.¹⁰⁹

The solution in Ethiopia was the germination of Wingate’s long-range penetration theory.¹¹⁰ Disciplined, well trained, soldiers, formed into separate columns but under unified command, accompanied by “patriot” fighters, and regular sustainment, would conduct attacks on the enemy’s rear areas, fomenting revolt as they did. LRP did not constitute what would now be regarded as “special operations” which are more closely associated with sabotage and subterfuge; tactics dislocated from major operations. Like Lawrence’s war of detachment, Wingate viewed LRP as an operational approach that would gain strength as it was executed; it would win over locals by demonstrating success, providing a more solid base for sustainment and support, while hastening the demise of the enemy. Objectives had to be carefully selected; their achievement must have a decisive effect on the wider campaign, and therefore the force “must be given a political doctrine consonant with our war aims.”¹¹¹

“Gideon Force,” as Wingate’s columns of British, Sudanese, and Ethiopian fighters became known, had considerable success, not least the surrender of 14,000 Italians at Debra Markos on May 19, 1941. It was also beset with failure: Wingate’s reliance on camels proved disastrous, internecine rivalry between the British political and military factions hampered the military effort, and the poor quality of soldier sent to fight with Gideon Force led Wingate to

¹⁰⁹ The historian Simon Anglim points out that Wingate’s theory on guerilla warfare, which was constructed at the same time as Mao Zedong’s, but predated Che Guevara’s, focuses on the primacy of political factors in the execution of guerilla operations. This precocious consideration provides further evidence that Wingate was reaching well outside established thought at the time. The British had little doctrine on the subject of guerilla warfare until the publication of a manual on how to conduct it in 1957. Anglim, *Unconventional Warrior*, 119; Sir Hew Strachan, “British Counter-Insurgency from Malaya to Iraq,” *The RUSI Journal* 152, no. 6 (December 2007): 8-11.

¹¹⁰ The original concept of LRP was presented at a strategy meeting for Ethiopia in December 1940, when “the most junior and least welcome of the delegation [Wingate] made a deep and favorable impression.” Sykes, *Orde Wingate*, 252.

¹¹¹ Ofra Graicer, “Two Steps Ahead. From Deep Ops to Special Ops – Wingate the General” (PhD diss., Dayan Base, 2015), 99.

doubt the sincerity of support pledged to him by HQ Middle Eastern Command.¹¹² Despite creating considerable anger among the staff of Middle Eastern Command by writing blistering, critical post operational reports of their role in the Ethiopia operation, and having recovered from acute malaria, and a suicide attempt that was seconds from succeeding, Wingate found himself in Burma on Wavell's orders once more.

The Burma theatre was an entirely different operational environment to Ethiopia. The enemy knew nothing but success, held mythical status among the broken allied armies, and consistently maintained an offensive spirit that caused the near disintegration of the East Indian Army in 1942 and 1943. The environment was not the rocky deserts and arid mountains of the Middle East and East Africa, but the razor edge mountains of the Burma-India border, swathed with thick jungle, dissected by the Chindwin and Irrawaddy rivers, and subject to monsoon rains for five months of the year. Disease was rife, indigenous forces did not exist in any significant number, and the priority of Allied supply for both men and materiel was to Europe.¹¹³ This did not phase Wingate, however, who quickly emphasized the importance of altering operational approaches to suit the context—operational logic could not be transported and imposed on a recalcitrant environment—what worked before would not necessarily work again. Wingate challenged the assumptions that formed much of the Allied operational approach: the jungle was impenetrable, British troops were unable to fight for any length of time in the jungle, and any force operating behind enemy lines would need to be sustained by ground lines of communication. In Burma, Wingate saw the problem as much as institutional inertia as enemy capability.

The final evolution of LRP was the operational solution. Wingate reasoned that attacking the Japanese lines of communication and rear installations would draw troops and resources from

¹¹² Sykes, *Orde Wingate*, 319.

¹¹³ Slim, *Defeat into Victory*, 3-191.

the front to protect the rear—“employment was denied, and deployment reversed.”¹¹⁴ In so doing, LRP could take the sting out of the enemy’s offensive while weakening enemy positions when friendly forces could regain the initiative.¹¹⁵ The Japanese considered the jungle a natural barrier to British attack, allowing time to build defensive forces in preparation for the inevitable attempts to re-seize Burma. Wingate demonstrated that the jungle was not an impenetrable barrier; dispersal and concentration of forces provided an effective method to maneuver undetected and strike at undefended areas, and that the right forces could deploy and sustain themselves for long periods of time in the particularly inhospitable environment of western Burma. The first Chindit operation, which deployed in February 1943, provided little more than a morale boost to Allied forces desperate for good news. The second operation, which began a year later in February 1944, had more tangible success, albeit without their charismatic leader who was killed in March the same year. The long range penetration of Japanese lines by Chindit forces later in 1944 contributed to the Japanese decision to withdraw its besieging forces at Imphal and Kohima—against orders. Again, the cognitive shock of mobile columns changed the vision of the operational space in the minds of the adversary, giving the impression of greater forces operating in the enemy’s rear area than was the case.¹¹⁶

¹¹⁴ Graicer, “Wingate the General,” 138.

¹¹⁵ Unlike Lawrence, whose thinking was unquestionably unique when set against the backdrop of trench warfare of World War I, long range operations behind enemy lines took many forms in World War II. After a slow start, the Long Range Desert Group, founded by David Stirling in 1943, became increasingly effective in Egypt and Libya. Commando raids and Special Operations Executive (SOE) missions on mainland Europe increased in frequency and effectiveness as the war progressed. German forces were parachuted into Norway, Poland, Austria and Crete, while the allies landed troops in Sicily, Normandy, and Arnhem. Long Range Desert Group operations were designed to gather intelligence and disrupt the enemy’s rear areas, while airborne operations were largely designed (with the possible exception of Crete) to seize key objectives before the advance of the main force. Wingate’s LRP was different, however—the columns were the fighting force. Wingate’s strategic concept, shaped by a different discourse and rationalization of the enemy, created a unique project, or operational plan, consisting of products—tactical actions—that were only effective in the particular strategic environment. In short, as Israeli historian and military instructor Ofra Graicer argues, Wingate was the first to “systemize the theory (logic), organization (form), and technology (means) of letting the full (operational) potential of the concept come about.” Graicer, “Wingate the General,” 140.

¹¹⁶ The Japanese commander of 18th Division (which occupied western Burma) conceded in 1945 that Wingate’s actions “brought about a great change in my strategic thinking, which had hitherto been

ADM provides a useful frame to explore the various theatres of Wingate's career. In each situation, Wingate framed the operational environment as it was, and how he thought it should be. In each theatre, he identified the obstacles preventing the transition from one to the other, be they institutional or adversarial. In each theatre Wingate developed an operational approach, be it the small teams of Jewish fighters operating at night in Palestine, or the brigades of regular British soldiers in the jungles of Burma. ADM is less useful, however, when used to explore why Wingate developed the operational approaches that he did. The danger of doing so is that ADM becomes a process to be followed without any consideration of the cognitive characteristics that Wingate demonstrated when creating his operational approaches. Like Lawrence, there are certain principles that can be drawn out from Wingate's reports and biographies which planners might find useful when approaching military design.

Wingate's confident, forceful, and brash character may have concealed a deep insecurity. Like Lawrence, his phlegmatic upbringing, distrust for authority that came from cruel experiences, may have forced him to develop a coping mechanism that concealed an inner lack of self-belief. It is foolish to suggest that insecurity might be a principle of a creative thinker, but insecurity leads to self-doubt, and self-doubt to self-awareness—and self-awareness is very much a crucial part of creative thinking. How an individual views the environment around them is the only thing that does not change about that environment. Whether it was in the orange groves of Palestine, the deserts of Ethiopia, or the jungles of Burma, Wingate was able to reframe the situation because of his ability to understand the gaps in his knowledge, and that of the institution he served, visualize how the British were viewed by the enemy, and exploit it accordingly. Wingate persuaded an Italian commander to surrender at Debra Markos by announcing via letter that the force facing the Italians was primarily the patriot fighters of the feared Ethiopian leader

based on the assumption that the defense of Burma could be achieved by a defensive attitude using these great forests as a barrier." Graicer, "Wingate the General," 136.

Ras Kassa. If the Italian commander would not surrender that day, Wingate could not guarantee that Ras Kassa's forces, already carrying an undeserved reputation for brutality, would act in accordance with the Geneva Convention.¹¹⁷ It was a bluff, but one that succeeded because Wingate knew the limits of what the British forces and their co-fighters could achieve conventionally, but also how they were viewed by the numerically superior Italians. After the surrender of the Italians in Ethiopia, Wingate might have congratulated himself on the success of the campaign. Instead, he conducted an assessment of himself and the British Army that was so scathing it contributed to his suicide attempt. Again in Burma, it was Wingate's ability to see the limits of British imperial forces: the reluctance to operate at night, the attitude of the jungle being a barrier to movement, the obsession with frontal attacks, and the vision of the enemy as undefeatable, that allowed Wingate to exploit a different operational approach. Wingate's explosive temper could be used as evidence of a complete lack of self-awareness. It hardly portrayed humility. To accept this however, would be to overlook a key point. For many, passion is treated as an impediment to reason; emotion a barrier to logic. For Wingate, self-awareness drove reason, and reason, along with the initiative it created, especially in the face of bureaucratic obstinacy, often had to be passionately projected.

The second principle of creative thinking Wingate demonstrated was his ability to work within a system. Unlike Lawrence, who enjoyed the isolation of operating on the periphery of Allenby's EEF, Wingate usually operated in, and through, the regular structure of the British military. He established the SNS by exploiting British concerns about unrest in Palestine, but was beholden to regular forces for support. He leveraged the Ethiopians' sense of liberty rather than conforming to British duplicity, but accepted they would be ineffective without British military men and materiel, and knew that the dire situation in Burma would not change by deploying columns alone, but in conjunction with what became Slim's 14th Army. To Wingate, changing a

¹¹⁷ Anglim, *Unconventional Warrior*, 130.

system did not mean attacking it head on, and breaking it, but identifying what the historian John Lewis Gaddis identifies as “flows one can go with.”¹¹⁸ Wingate was prepared to accept the status quo at times—LRP relied on conventional operations—and would adhere to bureaucracy so long as doing so did not become an objective in itself. Identifying the structural flaws in a system, such as the perception of immobility in the jungle, was simply a way of strengthening the system rather than overthrowing it. Similarly, Wingate’s proposed concept for LRP in Burma demonstrated a systemic understanding of the enemy as well. Wingate insisted that columns operating behind enemy lines were separated by time and space—but not intent. Attacking the enemy’s rear area reversed the Japanese operational logic, forcing them to re-deploy troops away from the front would make it easier for regular British forces to advance. The psychological effect of attacks on supply depots and lines of communication boosted British morale and damaged the enemy’s, while having a physical impact on the supply lines that sustained the Japanese front line. Wingate viewed the operating environment as a system that would not be defeated by attacking one part of it, but by causing the system to collapse on itself.

One of the elements of operational art in US doctrine is identifying the enemy’s center of gravity.¹¹⁹ This is (usually) identified as a physical part of the enemy that, if destroyed or defeated, will render the enemy unable to continue operations. This encourages a linear approach to systemic problems, suggests that a system is based around a singular nucleus of power rather than a series of interrelated nodes, and creates a paradox in US doctrine, where planners are encouraged to think about problems systemically, while identifying a singular source of power. To Wingate, however, sources of strength and weakness were interrelated and multiple: physical, geographical, conceptual, human, political, logistical, cultural, all of which can be exploited to

¹¹⁸ John Lewis Gaddis, *On Grand Strategy* (New York: Penguin Press, 2018), 47.

¹¹⁹ Center of gravity is “a source of power that provides moral or physical strength, freedom of action, or will to act.” Joint Staff, *JP 5-0, Joint Planning*, (2017), IV-23.

create the desired change in the system. Wingate reasoned that attacking the enemy through a series of frontal assaults, designed to destroy or defeat the Japanese, was less effective than simultaneously attacking psychological and physical aspects of the enemy to *enable* decisive frontal assaults.

The final creative principle that can be drawn from studying Wingate's career centers around Wingate's role as both architect and commander of the various theatres in which he served. Wingate declared that "there were two ways to get a job done: write a report, or go to the spot and obtain results."¹²⁰ Whether it was getting excessively sun-burnt, or leading a column of Chindits, Wingate had to experience reality for himself, rather than rely on others to describe it for him. This curious attitude not only generated a respectable leader, who was seldom far away from the execution of his plans, but it mobilized all of Wingate's senses, allowing him to see things others could not see. In Palestine, for example, Wingate walked the terrain, learnt the language, saw first-hand the effects of enemy attacks and the psychological effect it had on the Jewish communities with which he spent so much time.

Wingate constructed a proposed operational solution that de-regulated the existing rule book. Understanding that cognitive shock can be as effective as physical shock, Wingate made the rival's advantage his own: operating at night, using surprise, mobility, and acute violence to alter accepted paradigms of time, space, and effect.¹²¹ Mobile ambushes, while they would result in fewer enemy killed, created a far more significant shock to the cognitive domain, creating the illusion that the SNS covered far more ground than was in fact the case. Although Wingate lamented the predictability of the British military in Palestine, he harnessed their ability to supply

¹²⁰ Sykes, *Orde Wingate*, 147.

¹²¹ Accepting that warfare is a human endeavor, and that conflict is the physical aspect of an individual's interpretation of time, space and context, deep cognitive shock seeks to paralyze an adversary's ability to respond to events by attacking their core beliefs. Originally explored by Soviet theorists in the 1930s whose concept of 'operational shock' fragmented an enemy force quicker than they were able to respond, 'operationalizing' cognitive shock requires a thorough understanding of an adversaries cultural and societal context in order to analyze the ability to attack what matters most.

regular reinforcements and materiel to the SNS.¹²² It is unlikely Wingate would have been able to devise such an operational solution had he never set foot in Palestine, or ventured outside the confines of a battalion headquarters or the officers' mess. The creative principle that can be drawn, therefore, can perhaps be aligned to what philosophers refer to as an "aesthetic attitude."

For many people, an object holds practical value which increases or decreases according to how much it can further their aims or purpose. A flower, for example, might be viewed as something that needs watering to stay alive. Others, who are often romantic, theatrical, artistic and creative by nature, view objects through a more aesthetic lens. The same flower, to continue the example, might evoke feelings of joy at the smell, color, and texture; an overall richer enjoyment of the flower's multiple features. In this example, most people fall into the latter category. In military planning cycles, a disinterested attitude to objects, unless they have a practical purpose, is the norm. A map of Baghdad will provide main routes in and out, rivers, power stations, hospitals, schools, and mosques. Statistics of recent market activity will give an insight into stability. Intelligence reports will identify threat patterns. And for many planners, these practical aspects of the operational theatre will be enough to construct and measure their operational approach. An aesthetic approach, by contrast, might (superficially) have limited tangible value. The smells of the streets, the sound of the market place, the colors of the mosques, can hardly be incorporated into a briefing for a senior officer who must approve the plan. They are features of the environment that offer nothing more than "a desire-free glimpse into the essence of things."¹²³ Yet, as Wingate demonstrated, an aesthetic attitude holds significant value. What things mean and how they are understood can produce relevant strategy. An aesthetic approach removes the cognitive distortion that "restricts our attention to those aspects of things

¹²² Gracier, "Wingate the General," 92.

¹²³ Stanford Encyclopedia of Philosophy, "The Concept of the Aesthetic," last updated October 17, 2017, accessed March 3, 2019, <https://plato.stanford.edu/entries/aesthetic-concept/#AesAtt>.

relevant to the fulfilling or thwarting of our desires.”¹²⁴ This is not to say every military planner should immerse themselves in a foreign culture, or potential combat zone, but commanders and staff—if they are to think alike—should embrace every opportunity to maximize their exposure to the operating environment. Planners remaining in windowless rooms limits their potential to harvest information they might otherwise miss. An aesthetic attitude will offer subtle nuances in the environment that may provide an advantage for a military planner, engender an open mind, where truth is not the sole object of information but psychology of the mind, meaning, and value, and draw many more observations from a singular object than would otherwise be the case.

Learning in a Changing World.

The peace Army had prepared for war by forming a caste habit, which tried all ideas by King's Regulations and rejected such as transgressed in matter or even manner.

— T. E. Lawrence, *Lawrence of Arabia's War*

While there are certain principles that can be attributed to either Lawrence or Wingate, there are also principles that very much apply to them both. First, Lawrence and Wingate were educated men, in the fullest meaning of the word. Lawrence not only held a first-class degree in classics from Oxford, he was a subject matter expert in field archaeology, medieval history, and Arab culture, spoke several dialects of Arabic, and held a solid grasp of Latin, Greek, and French.¹²⁵ Lawrence was also well travelled; he walked the crusader routes prior to the war, cycled across Europe, and spent the best part of four years working on an archaeological site in northern Syria. Although Wingate's formal education was less notable, he was a voracious reader, an accomplished linguist in Hebrew and Arabic, could memorize vast tracts of documents and

¹²⁴ Stanford Encyclopedia of Philosophy, “The Concept of the Aesthetic,” last updated October 17, 2017, accessed March 3, 2019, <https://plato.stanford.edu/entries/aesthetic-concept/#AesAtt>.

¹²⁵ Benson-Gyles, *The Boy in the Mask*, 6-7.

books, especially the bible, and had spent his twenties posted in, and travelling around, North Africa.

The education of these men is partly relevant because it shaped the way they thought, as well as contributed to their ability to understand, empathize with, and operate alongside their various adopted co-fighters.¹²⁶ It is also relevant that their education allowed them to write down their theories and experiences in a way that distilled learning in others—verbal fluency could be a creative principle in itself. It is also relevant because the intangibility of education programs in such diverse organizations as militaries and nonprofit organizations means that they are constantly in the spot light for “efficiency” savings, an astonishingly short sighted view. It is mainly relevant, however, because their education shaped the way they learned.

Lawrence did not follow a model of thought or learning, he created one. By launching a critical investigation of the gap between assumptions and reality, and how they were formed; beliefs about terrain and mobility; concepts of theory and practice; gaps between the organizational rigidity of the Turks compared to the nomadic nature of the Arabs, he was able to establish what potential existed in the identified gaps. Wingate was naturally cynical and equally critical of assumptions and beliefs that were not constantly re-addressed as the situation changed. Facts, while interesting, were irrelevant: what was not known and what was changing was important. At the start of any US or NATO design, or planning process, military planners launch into an assessment of the environment they will operate in. In so doing, they miss an opportunity. The strategic context is unique; the operating environment is not static; both are characterized by unceasing change processes. Trying to identify the operational environment as a snap shot in time is counter-productive. To exploit what is becoming emerging opportunity in a fluid environment,

¹²⁶ The historian Anthony Sattin suggests the Shia sect known as the Hashashans, or Assassins, famous for persuading the numerically superior armies of Saladin to withdraw from Masyaf Castle after slipping past a heavily armed guard and planting a dagger next to Saladin’s bed in 1176, was reminiscent of Lawrence’s assertion that he did not have to fight the Turks to compel them to withdraw. Sattin, *Young Lawrence*, 57-8.

planners first need to establish a learning process: its stages, its partners, the indicators of success and failure, and what reference materials will be required. This is thinking about thinking, not following a process.

The DADO design process and ADM discuss the learning process, with the latter encouraging both single and double loop learning.¹²⁷ Much of military learning focuses on an impulsive correction to something going wrong; an officer can expect to be chastised for not producing a deliverable on time, for example. Double loop learning focuses less on what rules have been broken, and more on whether they were appropriate in the first place. Was the timeline realistic? Has something changed that invalidates the need for the deliverable? The learning is therefore focused less on what rule has been broken, and more on whether the rule should be changed. Critics argue that the definitions of single and double loop learning in US doctrine are not only insufficient, they are a reductionist approach that loses validity when militaries are faced with the kaleidoscopic character of modern warfare: complex, asymmetric, four dimensional threats have replaced the Jominian principles militaries have largely adhered to for two hundred years.¹²⁸ What is required, they suggest, is “triple loop learning,” which analyzes the deepest ontological issues: identity, principles, and values, causing the learner to consider a thorough

¹²⁷ In doctrine, single-loop learning takes place when individuals, groups, or organizations modify their actions according to the difference between expected and obtained outcomes. An organization detects errors and makes corrections to accomplish existing goals and solve familiar problems. In contrast, double-loop involves error correction where things are not so predictable. In double-loop learning, individuals, groups, or organizations question the values, assumptions and policies that led to the actions in the first place. US Department of the Army, *ATP 5.0*, 6-3.

¹²⁸ The philosopher Donald Schon described single loop learning as “a thermostat that learns when it is too hot or too cold, and turns the heat on or off. The thermostat can perform this task because it can receive information (the temperature of the room) and take corrective action.” Chris Argyris and Donald Schon, *Organizational Learning: A Theory of Action Perspective* (Reading: Addison-Wesley, 1978), 3; Double loop learning occurs not when an action needs to be corrected, but when an issue is addressed at its roots by assessing the underlying cause. This incites professionals to “think at the meta-level about their actions, implications, and potential consequences, what makes an issue a problem (i.e. problem setting), rather than directly attempting to correct it (i.e. problem-solving).” Ofra Graicer, quoted in Philippe Beaulieu-B and Philippe Dufort, “Introduction: Revolution in Military Epistemology,” *Journal of Military and Strategic Studies* 17, no. 4 (2017): 6-1.

understanding of self: organizational structures, societal assumptions, and professional perspectives.

To return to the example, not only would it be prudent to assess what rule was broken and how it can be corrected, or whether the rule was fit for purpose in the first place, it is also important to assess how and why the rules are viewed in the way they are. Triple loop learning seeks to analyze the structural and behavioral patterns of an individual or organization that causes people to believe what they believe. Only then can changes in an individual or an organization's values and principles, or a transformation of a cognitive framework, be proposed. The intent is admirable, but is not a process that can be achieved by a narrow mind. Lawrence and Wingate were concerned about philosophical problems: religion, values, society, causes, knowledge, and life. Both were aware of the perceptions, attitudes, and beliefs that shaped the structures from which they drew their knowledge and framed their thought. The first part of chapter thirty-three of *Seven Pillars* is a one-man exercise in learning to learn. It is hard to draw a succinct creative principle as a result—few military planners will replicate such an interest in philosophy. Perhaps, however, the principle could be to uncouple ourselves from cognitive comfort, to re-assess our assumptions about the world and what is 'real' when forming strategy, develop fundamental—not temporary—self-criticism, and encourage radical changes in organizations. Lawrence and Wingate demonstrated that freedom can be found if an open mind can access the previously unthinkable, or, as Israeli military theorist Ofra Graicer wrote, “intellectual emancipation is efficacy, and efficacy is validity.”¹²⁹

¹²⁹ Ofra Graicer, quoted in Beaulieu-B and Dufort, “Revolution in Military Epistemology,” 16.

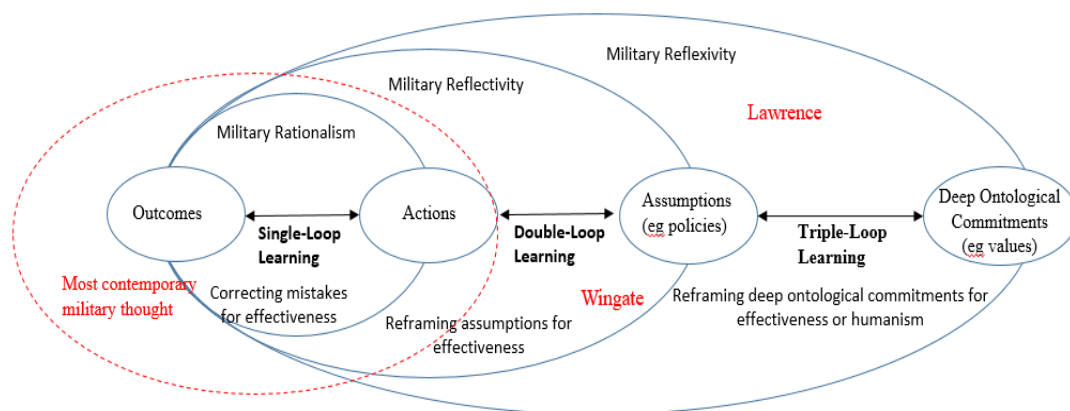


Figure 4. Single to triple loop learning. Philippe Beaulieu-B and Philippe Dufort, “Introduction: Revolution in Military Epistemology,” *Journal of Military and Strategic Studies* 17, no. 4 (2017): 7.

A Fine Disregard for the Rules

It would be easy to dismiss Lawrence and Wingate as men who held a contempt for rules and regulations. Both men broke rules that defined the natural order of their world: Lawrence routinely antagonized senior officers by ignoring their orders, and pushed the boundaries of loyalty to his country when discussing policy with the Arabs. Wingate largely ignored the chain of command when it came to accessing senior officers, railed against the bureaucracy of the staff, and wore whatever suited him, in whatever state, or nothing, rather than conform to the uniform tradition of the British Army. To accept that both men were constantly contemptuous of rules, however, would oversimplify an important aspect of their characters—regulations, discipline, and laws that enforced social harmony, had their place. Lawrence executed a Moroccan at the behest of Ageyl tribesman who demanded blood vengeance for the killing of their kinsman in a fight.¹³⁰ Wingate earned renown as a disciplinarian who enforced high standards; the “passionately violent

¹³⁰ Faulkner, *Lawrence of Arabia's War*, 217.

libertarian” could go to “fantastic extremes” to do so.¹³¹ Rules had their place, but both Lawrence and Wingate took it upon themselves to decide where that place began, and ended.

Five years ago, psychologists at Harvard and the Massachusetts Institute of Technology conducted an experiment to test whether intelligent people were more likely to break rules. They were not, the experiment concluded, but creative people were.¹³² “The ability of people to behave dishonestly might be bounded by their ability to cheat and at the same time feel they are moral individuals,” the authors explain. “The more creative you are, the easier it is to retell the story of what happened when you behaved dishonestly, or to justify why it is morally permissible.”¹³³ This is a key point. Lawrence and Wingate held an unshakeable belief in the virtue of the causes they fought for, be it theoretically or practically. Breaking the rules was acceptable—not all the time—but when it was necessary to achieve their ultimate objective.

It would be unwise for a junior officer to correct a general’s syntax or conduct meetings naked in a modern army. Yet overlooking these more obvious eccentricities, a critical and creative approach to rules should not necessarily be discouraged. Returning to the philosophy of mission command, the guiding principle of disciplined initiative is worth exploring with Lawrence and Wingate in mind. Disciplined initiative is “action in the absence of orders, when existing orders no longer fit the situation, or when unforeseen opportunities or threats arise.”¹³⁴ *ADP 6-0* informs the reader that commanders not only need to encourage their subordinates to act when opportunities arise, but they rely on it. It is hard to deny that Lawrence not only seized the

¹³¹ Sykes, *Orde Wingate*, 84.

¹³² Jena E. Pincott, “Are These Rules Worth Breaking?” *Psychology Today*, November 4, 2014, accessed December 3, 2018, <https://www.psychologytoday.com/us/articles/201411/are-these-rules-worth-breaking?collection=1113574>.

¹³³ *Ibid.*,

¹³⁴ US Department of the Army, *Army Doctrine Publication (ADP) 6-0, Mission Command* (Washington, DC: Government Printing Office, 2012), 4.

initiative when opportunity arose, but created it as well, or that Wingate understood the mission's "purpose, key task, and desired end-state...and took actions he thought would best accomplish the mission"¹³⁵ While, again, it would be unwise to challenge superior staff headquarters in the way Wingate did, contemporary officers and soldiers should be unafraid to challenge organizational bureaucracy where it serves little purpose, provided alternative solutions are proposed. Rules that channel an organization into the letter of the law, rather than its spirit, are counterintuitive to the flexibility and imagination a modern army requires.

One can draw dangerous lessons from this. Lawrence and Wingate got it right. Plenty of others will not. Encouraging, allowing, or even tolerating people who break rules, especially in the military, to relentlessly pursue goals they hold dear, can be disruptive and damaging to an organization. It may also be illegal. Yet—once again—doctrine accounts for this. The commander's intent sets clear limits for subordinates to operate within, while doctrine explicitly states that commanders and subordinates are "obligated to follow lawful orders."¹³⁶ There is, however, a place for such thought. Deception has always been part of strategy, be it political, military, or economic.¹³⁷ State sponsored redefinition of rules is largely a modern phenomenon. Russia's "little green men" in Ukraine, or China's surreptitious expansion in the South China Sea, for example, are part of strategies that fit along the fault lines of war and peace, challenge democratic assumptions of state unity, economic interdependence, and a global, rules based order.¹³⁸ If there is such a thing as "a rules based order," and if that order is being eroded by the

¹³⁵ US Army, *ADP 6-0, Mission Command*, 4.

¹³⁶ *Ibid.*,

¹³⁷ Michael Howard, *Strategic Deception in the Second World War: British Intelligence Operations against the German High Command* (London: Norton, 1995), ix-xiii.

¹³⁸ Royal Institute for International Affairs, "Challenges to the Rules-Based International Order" (Chatham House, London Conference, 2015), accessed November 10, 2018, <https://www.chathamhouse.org/sites/default/files/London%20Conference%202015%20-%20Background%20Papers.pdf>.

action of autocracies, there are individuals within those autocracies designing concepts to do so. It would not be imprudent to create counter-strategies using similar individuals. As Wingate said, “there is no copyright in war.”¹³⁹

Conclusion

He who knows the enemy, and himself, will never in a hundred battles be at risk.

— Sun Tzu, *The Art of Warfare*

The operating environment for modern militaries has become increasingly complex, congested, and contested. The lines between war and peace have blurred; adversaries achieve military objectives while remaining at a level short of armed conflict. War is unlikely to be, as the recently published US Army *Field Manual 3-0* suggests, a dial-up, dial-down affair, where military force is used in an escalatory fashion to deter, seize the initiative, dominate, stabilise, and hand over to civil authorities.¹⁴⁰ War is not a neat, linear, dichotomous spectrum of conflict, with state on state fighting at one end, and stability operations at the other. Conflict can, and most likely will, be a kaleidoscope in which conventional and regular war-fighting, together with terrorism, insurgency, criminal, and cyber activity, are all part of a dynamic and hybrid combination, a patchwork of “high tech” and protracted stabilisation operations. The consequences of any action are interrelated, and cannot be isolated. Yet NATO forces, while acknowledging the ever changing pace of the operational environment, and the challenges presented therewith, continue to place greater emphasis on models and tools forged from the linearity of Cold War thinking than on the efficacy of military design. Planning mechanisms such as the British “Seven Questions,” and six step “Operational Planning Process,” or the American

¹³⁹ Graicer, “Wingate the General,” 138.

¹⁴⁰ US Department of the Army, *Field Manual (FM) 3-0, Operations* (Washington, DC: Government Printing Office, 2017), 1-13-1-15.

“Military Decision Making Process,” have their uses in solving tactical and, to some extent, operational problems—but they fall short when presented with the complexity of modern warfare, especially when used to solve the wrong problems.¹⁴¹

DADO doctrine and ADM have their uses. Both offer a process that encourages diversity of thought in design teams, systematic strategy development and a link to operational art and problem solving, and the structuring—however simple—of a learning process. By focusing on the emerging strategic context, and the potential opportunity it presents, the DADO design concept attaches the value of things when forming strategy, while the emphasis on reframing in ADM, could be a useful antidote to group think. However, by becoming an off the shelf product for anyone to follow, design processes, models and methodologies also encourage intellectual inertia. Many of the models have evolved from the thoughts and actions of those considered military geniuses, but by reducing the protein of their ideas down to a flow chart invalidates their intellectual legacy.

Lawrence was a dreamer, an idealist, a romantic; a quixotic visionary who poetically outlined his theory of warfare and suffered when his ideals were betrayed by realpolitik. Being able to see a military endeavour as an interaction of strategy and tactics allowed him to become the self declared “architect for all.” His cultural emersion and comprehensive understanding of European idiosyncrasies, himself, the allies, and the Turks, allowed him to frame a strategic concept that focused not on what people *possessed*, like terrain, or numerical superiority, but on

¹⁴¹ As an example, Dr Mike Martin, a former British soldier, political advisor, and author, argues the British effort in Helmand province, Afghanistan, from 2006-2016 was significantly hampered by the British Army’s desperate attempt to solve the wrong problem. The problem was not, as the narrative ran, about ISAF versus the Taliban; democracy versus theocracy; security versus instability. The problem was that ISAF forces were manipulated into funding and equipping centuries old disputes between individuals, families, and groups, over power, land, and resources. The complexity of this situation, and any possible solution, were never going to be identified by planning processes that are enemy centric, linear, and focused on an end-state. Mike Martin, *An Intimate War: An Oral History of the Helmand Conflict, 1972-2012* (Oxford: Oxford University Press, 2014), 157-224.

what those possessions *meant* to them and to others. Finally, his willingness to challenge any view, no matter how established, allowed an originality of thought denied to the majority of his peers.

Wingate, by comparison, was a pragmatic realist. While he shared personal romantic notions—such as the establishment of a Jewish homeland—he sought to achieve it less by an introspective assessment of what things meant to people, and more on identifying institutional lethargy, and how he could exploit it. Wingate’s self-awareness and introspective attitude led him to constantly re-assess his operational approach and adjust it accordingly. His ability to see himself as part of a system allowed him to create opportunities as well as seize them. His constant exposure to the operating environment and insistence on understanding reality for himself allowed him to see past what was obvious, and consider the fantastic. Both men structured a process to adapt to evolving circumstances, and both men acted in an ethically consistent manner. Finally, both men harnessed intellectual prowess and physical robustness under one yoke. The pressure of operational reality opened the more ingenious parts of their mind and their operational approaches would not have got anywhere without Lawrence’s sophisticated diplomacy nor Wingate’s infectious leadership. Sir William Francis Butler wrote that “the nation that will insist on drawing a broad line of demarcation between the fighting man and the thinking man is liable to find its fighting done by fools and its thinking done by cowards.”¹⁴² Lawrence and Wingate demonstrated what can be achieved when no line of demarcation exists.

In a speech to the Royal United Services Institute in the summer of 2018, the Chief of the General Staff, General Sir Mark Carleton-Smith, described his vision of the future British Army as a “winning army, imbued with initiative and daring, with originality and self-confidence.”¹⁴³ This statement offers an opportunity to re-assess how the British Army might approach military

¹⁴² Eliot A. Cohen, “Neither Fools nor Cowards,” *The Wall Street Journal*, May 2005, accessed February 13, 2019, <https://www.wsj.com/articles/SB111594899821632564>.

¹⁴³ General Sir Mark Carleton-Smith, Chief of the General Staff, speech to the Royal United Services Institute (RUSI) (June 20, 2018, London).

design and operational campaign planning. As the character of conflict becomes more complex, it will require more complex solutions, solutions not necessarily solely based on men and materiel, but the ability to harness the intellectual horsepower of an army constrained by financial resources. To focus only on the models and methodologies of militaries that use military design would be a mistake. Britain has a rich history of unorthodox individuals who brought success on the battlefield. A More thorough analysis of how they thought may provide additional principles of creative military thinking, principles that could lead to the construction of different, unique, and effective solutions.

The majority of soldiers will not be a Lawrence or Wingate or come even close. Militaries do not need large numbers of them, however, and by definition, they are a rare commodity. Commanders at all levels have the opportunity to identify a critical and creative mind, those who are prepared to challenge paradigms, question assumptions, are innovative rather than reactive, and view the world differently—and employ them accordingly. It requires humility, judgement, self-awareness, an ability to self-disrupt, and a willingness to take risk. Militaries, perhaps more than any other organization, have the tendency to think, and operate, as a herd. Ignoring those who challenge the herd is often unwise, because, as Wavell said, the “the herd is usually wrong.”¹⁴⁴

¹⁴⁴ Wavell, quoted in Graicer, “Wingate the General,” 23.

Appendix A

Antifragilistas

Lawrence and Wingate were comfortable operating in disorder. The scholar and risk analyst Nicholas Taleb labelled things that gain from variety, volatility, stress and disorder as “anti-fragile,” declaring the first ethical rule of anti-fragility to be “thou shalt not have anti-fragility at the expense of others.”¹⁴⁵ Not in war. Organizations and individuals not only need to be robust enough to weather the storm of unpredictable events—what he calls “Black Swans,” but learn how to profit from them too. It is not simply about being robust and withstanding shocks and disruption, it is about becoming stronger and more creative in response.¹⁴⁶ Military planning processes, especially in NATO, follow a planned concept and course—deviations are predicted, and branch plans and sequels constructed accordingly. In an increasing acknowledgement of growing complexity on the battlefield, more leniency is now given to an “enemy” force to act out with prescribed doctrine, but objectives are still almost always achieved (eventually). Fragility, Taleb argues, is predictive in its approach, but “when you don’t care about the possible dispersion of outcomes that the future can bring, since most will be helpful, you are antifragile.”¹⁴⁷

Lawrence and Wingate were very much “anti-fragilistas.” The table below is selected categories from Taleb’s triad, where he brackets the three types of exposure as “fragile,” where one avoids disruption for fear of its effects; “robust,” where one weathers shocks, and “antifragile,” when one benefits from disorder.

¹⁴⁵ Nicholas Taleb, *Antifragile. Things That Gain from Disorder* (New York: Random House, 2014), x.

¹⁴⁶ *Ibid.*, 67.

¹⁴⁷ *Ibid.*, 71.

Table 1. The Central Triad: Three Types of Exposure

	Fragile	Robust	Antifragile
Mythology-Greek	Sword of Damocles Rock of Tantalus	Phoenix	Hydra
Ways of thinking	Modernity	Medieval Europe	Ancient Mediterranean
Human Relationships	Friendship	Kinship	Attraction
Ethics	The weak	The magnificent	The strong
Regulation	Rules	Principles	Virtue
Learning	Classroom	Real life	Real life and library
Effect on Economic Life	Bureaucrats		Entrepreneurs
Stress	Chronic stressors		Acute stressors with recovery
Physical Training	Organized sports		Street fights

Source: Nicholas Taleb, *Antifragile. Things That Gain from Disorder* (New York: Random House, 2014), 23-27.

When looking at the table, it is easy to see where Lawrence and Wingate sit. They both made constant reference to the ancient world, possessed a mystical attraction to causes, and were bound by a strong ethical conviction, analyzing, as Wingate said, “what makes for rightness.” Rules were not as important as virtue, they were experimental and inventive, swung through periods of deep depression, and would identify with street fighting far more than the organized laws of war.

The concept of antifragility can be incorporated into a growing part of military science and planning—risk management. Most planning cycles, and indeed routine staff briefs now feature a color-coded graph with various risks plotted alongside accompanying arrows denoting whether the risk will move depending on whether it is treated, tolerated, transferred, or terminated. The graph never includes an option of exploiting risk, or a discussion of how a particular event will create opportunities or make the institution stronger. It is therefore approached through a defensive, rather than an offensive lens. In barracks, the consequences of such an approach are limited; on the battlefield it can lead to the loss of initiative.

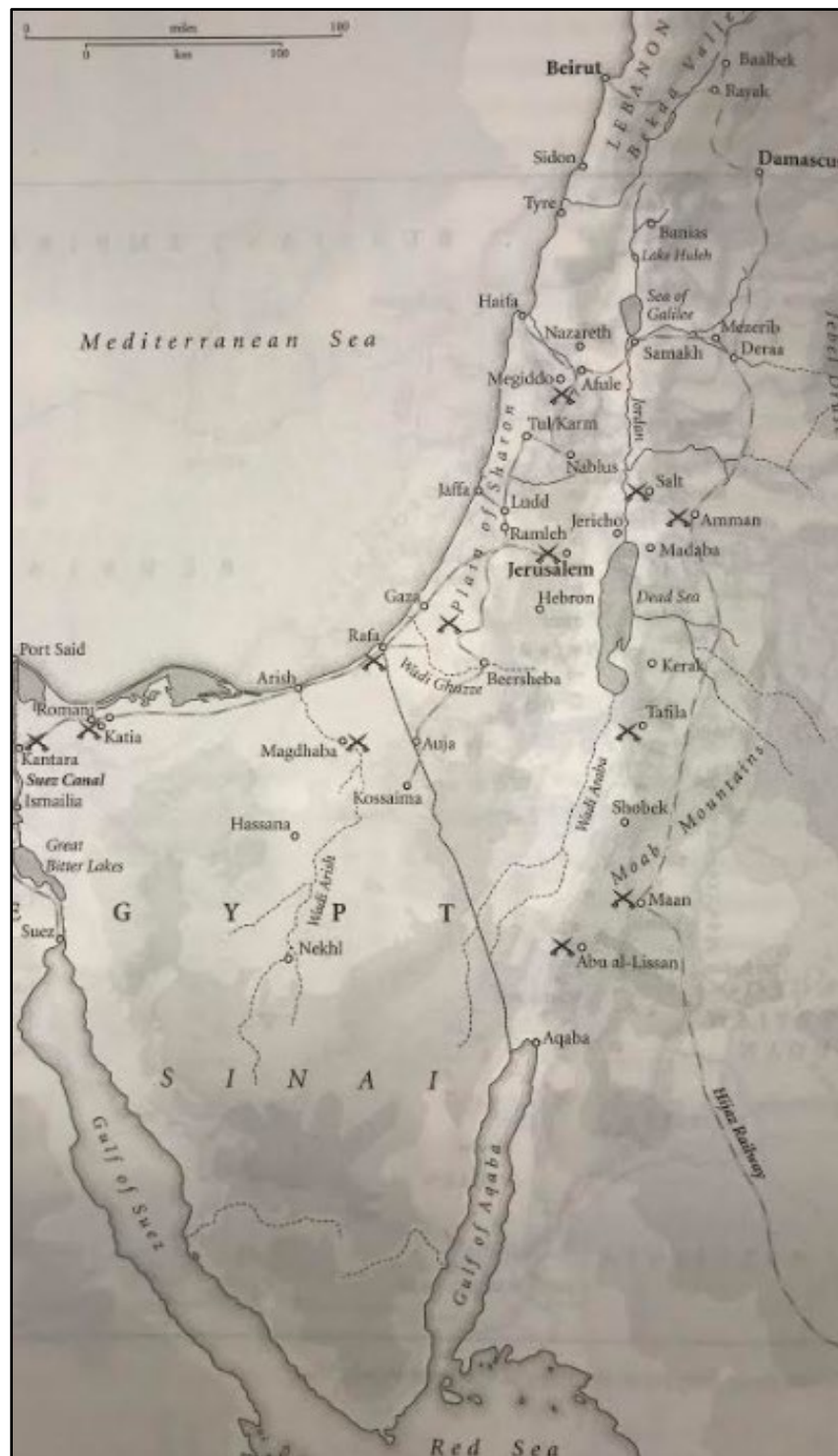
Additionally, commanders must prepare to disrupt themselves before they are disrupted by an enemy. Clayton M. Christensen's theory of disruptive innovation was focused on technology and markets but contains obvious cross over for militaries. At its most simplistic, Christensen argued that a disruptive product is one whose performance is measured in new ways. Measuring new ideas using traditional metrics risks missing the potential of the idea—as J.F.C. Fuller discovered in the early 1920s. The same can be applied to subversion as a strategy, which Lawrence and Wingate ably demonstrated, and was often met with resistance by those who measured its effectiveness in terms of force economy, physical destruction, and cost, rather than the less tangible cognitive and physical shock that it produced. Ofra Graicer argues that “operational art regards subversive thinking as an essential characteristic of generalship—that is—the faculty of thought that is able to provide a critical viewpoint of existing paradigms by cognitively traversing their borders.”¹⁴⁸ This is no doubt true, but such faculties do not need to be the preserve of a general. In the business world, disruptive innovations and ideas tend to be the brainchild of young entrepreneurs, not Chief Executive Officers. Commanders must be prepared, to borrow an overused platitude, to be comfortable with being uncomfortable. If reports that the Russians are reverting to typewriters to communicate at governmental level for fear of leaks and hacking, they are demonstrating a more advanced understanding of disruption, and the need for self-disruption, than NATO forces.¹⁴⁹

¹⁴⁸ Graicer, “Wingate the General,” 22.

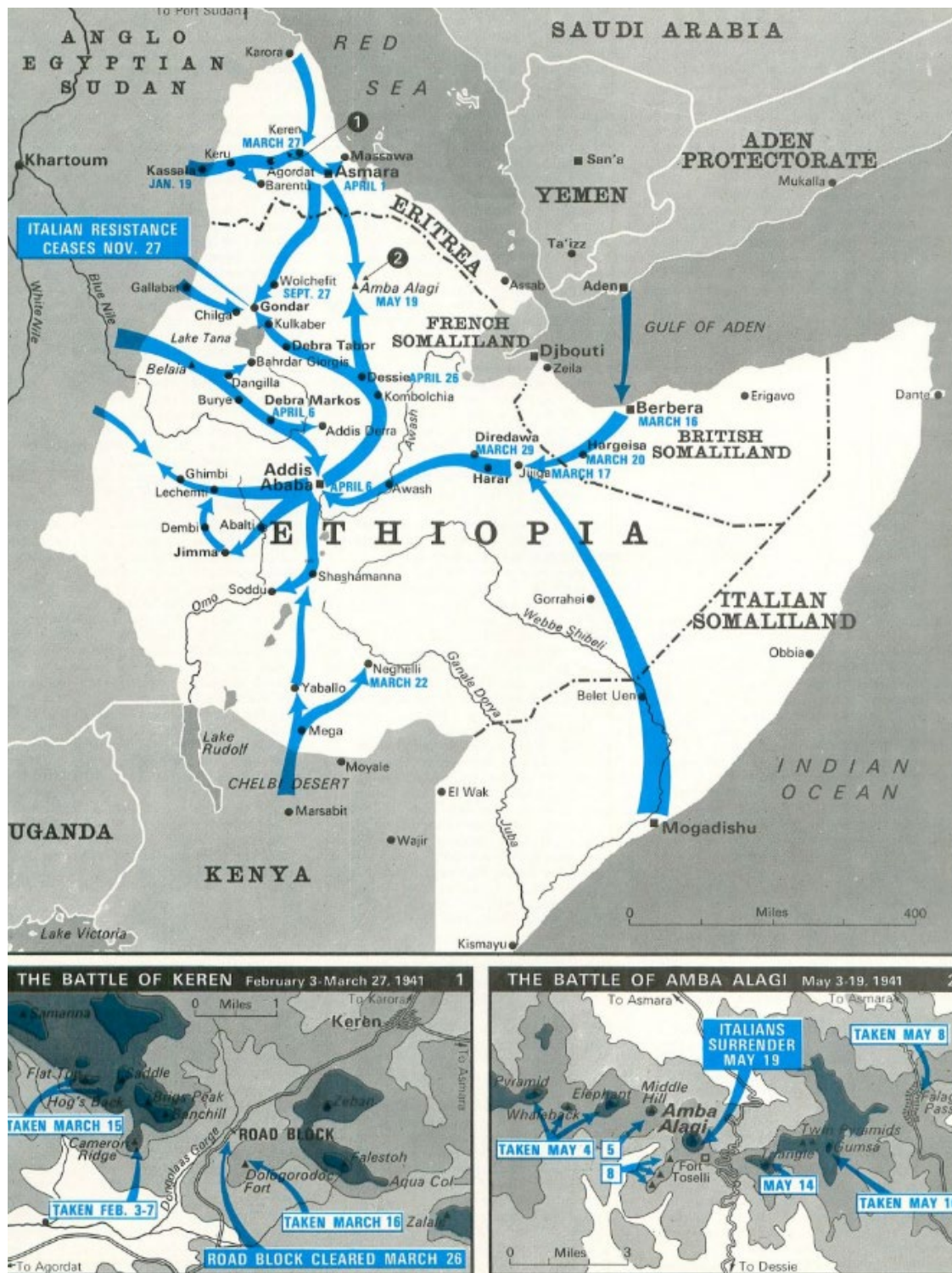
¹⁴⁹ Chris Irvine, “Kremlin Returns to Typewriters to Avoid Leaks,” *The Telegraph*, July 11, 2013, accessed November 26, 2018, <https://www.telegraph.co.uk/news/worldnews/europe/russia/10173645/Kremlin-returns-to-typewriters-to-avoid-computer-leaks.html>; Miriam Elder, “Russia Guard Service Resorts to Typewriters After NSA Leaks,” *The Guardian*, July 11, 2013, accessed November 25, 2018, <https://www.theguardian.com/world/2013/jul/11/russia-reverts-paper-nsa-leaks>; J. Dana Suster, “Russian Security Now Using Typewriters to Thwart USA,” *Foreign Policy*, July 11, 2013, accessed November 23, 2018, <https://foreignpolicy.com/2013/07/11/russian-security-now-using-typewriters-to-thwart-the-nsa/>.

Appendix B

Maps



Source: Neil Faulkner, *Lawrence of Arabia's War: The Arabs, the British and the Remaking of the Middle East in WWI* (New Haven, CT: Yale University Press, 2016), 3.



Source: Weapons and Warfare, "History and Hardware of Warfare, Posted February 7, 2017, accessed November 10, 2018, <https://weaponsandwarfare.com/2017/02/07/soe-in-Ethiopia/>.

Bibliography

Primary Sources

- Hewet, Sir John. *Some Impressions of Mesopotamia in 1919*. London: His Majesty's Stationary Office, 1920.
- Israeli Defense Force, DADO. *Design: Learning Processes and Knowledge Development for the Development of Concepts at the General Staff Headquarters and the Major HQs*. Tel Aviv: Israeli Defense Force Publishing Branch, 2015.
- Ministry of Defence. *A Brief Record of the Advance of the Egyptian Expeditionary Force, July 1917 to 1918*. London: His Majesty's Stationary Office, 1919.
- School of Advanced Military Studies (SAMS). *Design Student Text Version 2.0*. Fort Leavenworth, KS: SAMS, 2018.
- US Department of Defense, Joint Staff. *Joint Publication (JP) 3-0, Joint Operations*. Washington, DC: Government Printing Office, 2017.
- . *Joint Publication (JP) 5-0, Joint Planning*. Washington, DC: Government Printing Office, 2017.
- US Department of the Army, *Army Doctrine Publication (ADP) 5-0, The Operations Process*. Washington, DC: Government Printing Office, 2012.
- . *Army Doctrine Publication (ADP) 6-0, Mission Command*. Washington, DC: Government Printing Office, 2012.
- . *Army Technique Publication (ATP) 5-0.1, Army Design Methodology*. Washington, DC: Government Printing Office, 2015.
- . *Field Manual (FM) 3-0, Operations*. Washington, DC: Government Printing Office, 2017.

Academic Articles

- Anglim, Simon. "Orde Wingate, Guerilla Warfare, and Long-range Penetration, 1940-44." *Small Wars and Insurgencies* 17, no 3 (September 2006): 241-262.
- Beaulieu-B, Philippe, and Philippe Dufort. "Introduction: Revolution in Military Epistemology." *Journal of Military and Strategic Studies* 17, no. 4 (2017): 1-20.
- Boyd, John R. "Destruction and Creation." *Global Guerillas*, May 7, 2009. Accessed August 15, 2018. www.chetrichards.com/modern_business_strategy/boyd.
- Cohen, Michael J. "British Strategy and the Palestine Question 1936-39." *Journal of Contemporary History* 7, no. 3/4 (July-October 1972): 157-183.
- Dawson, Christopher J. "Third Battle of Gaza, October–November 1917." *The RUSI Journal* 68, no. 3 (September 2017): 25-28.

Furtado, Matthew. "Creativity in Complex Military Systems." Monograph, School of Advanced Military Studies, Ft Leavenworth, KS, 2017.

Graicer, Ofra. "Self Disruption: Seizing the High Ground of Systemic Operational Design (SOD)." *Journal of Military and Strategic Studies*, no 4, (2017): 1-12.

Henderson, Rebecca M., and Kim B. Clark. "Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms." *Administrative Science Quarterly* 35, no. 1 (March 1990): 9-30. Accessed October 31, 2018. http://dimetic.dime-eu.org/dimetic_files/HendersonClarkASQ1990.pdf.

Hill, Andrew. "Culture and the U.S. Army: Military Innovation and Military Culture." *Parameters* 45, no 1 (Spring 2015): 85-98. Accessed October 30, 2018. https://ssi.armywarcollege.edu/pubs/parameters/Issues/Spring_2015/10_HillAndrew_Military%20Innovation%20and%20Military%20Culture.pdf.

Strachan, Sir Hew. "British Counter-Insurgency from Malaya to Iraq." *The RUSI Journal* 152, no. 6 (December 2007): 8-11.

Vego, Milan N. "The Case Against Systemic Operational Design." *Joint Forces Quarterly*, no 53, 2nd Quarter, (May 2009): 70-74.

Websites and Newspaper Articles

Allison, George. "What does the Secretive 77th Brigade do?" *United Kingdom Defence Journal*, June 21, 2016. Accessed December 7, 2018. <https://ukdefencejournal.org.uk/secretive-77th-brigade/>.

Cohen, Eliot. "Neither Fools nor Cowards," *The Wall Street Journal*, May 2005. Accessed February 13, 2019, <https://www.wsj.com/articles/SB111594899821632564>.

Coyd, Kevin. "Seven of the Most Eccentric People in British History." *The Telegraph*, October 12, 2016. Accessed October 1, 2018. <https://www.telegraph.co.uk/only-in-britain/most-eccentric-people/>.

Elder, Miriam. "Russia Guard Service Resorts to Typewriters After NSA Leaks." *The Guardian*, July 11, 2013. Accessed November 25, 2018. <https://www.theguardian.com/world/2013/jul/11/russia-reverts-paper-nsa-leaks>.

Graicer, Ofra. "SO SOD: An Antidote to the Futility of Design in Militaries." *The Archipelago*, March 26, 2018. Accessed January 5, 2019. <http://militaryepistemology.com/so-sod/>.

Irvine, Chris. "Kremlin Returns to Typewriters to Avoid Leaks." *The Telegraph*, July 11, 2013. Accessed November 26, 2018. <https://www.telegraph.co.uk/news/worldnews/europe/russia/10173645/Kremlin-returns-to-typewriters-to-avoid-computer-leaks.html>.

Na Xiong, Algirdas Paskevicius, Kenta Ono, and Makoto Watanabe. "Design to Create a New Product Meaning." *Bulletin of JSSD* 62, no. 1 (2015): 49-58. Accessed January 14, 2019. https://www.jstage.jst.go.jp/article/jssdj/62/1/62_1_49/_pdf.

- Pincott, Jena E. "Are These Rules Worth Breaking?" *Psychology Today*, November 4, 2014. Accessed December 3, 2018. <https://www.psychologytoday.com/us/articles/201411/are-these-rules-worth-breaking?collection=1113574>.
- Ricks, Thomas E. "General Failure." *The Atlantic*, November 2012. Accessed January 3, 2019. <https://www.theatlantic.com/magazine/archive/2012/11/general-failure/309148/>.
- Royal Institute for International Affairs. "Challenges to the Rules-Based International Order." Chatham House, London Conference, 2015. Accessed November 10, 2018. <https://www.chathamhouse.org/sites/default/files/London%20Conference%202015%20-%20Background%20Papers.pdf>.
- Stanford Encyclopedia of Philosophy. "Postmodernism." Last updated February 5, 2015. Accessed December 15, 2018. <https://plato.stanford.edu/entries/postmodernism/>.
- Stanford Encyclopedia of Philosophy. "The Concept of the Aesthetic." Last updated October 17, 2017. Accessed March 3, 2019. <https://plato.stanford.edu/entries/aesthetic-concept/#AesAtt>.
- Suster, J. Dana. "Russian Security Now Using Typewriters to Thwart USA." *Foreign Policy*, July 11, 2013. Accessed November 23, 2018. <https://foreignpolicy.com/2013/07/11/russian-security-now-using-typewriters-to-thwart-the-nsa/>.
- Webber, Austin. "Ten Ways the Model T Changed the World." *Assembly*, September 2, 2008. Accessed December 4, 2018. <https://www.assemblymag.com/articles/85804-ten-ways-the-model-t-changed-the-world>.

Books

- Ames, Roger T. *Sun-Tzu: The Art of Warfare*. New York: Ballantine Books, 1993.
- Anglim, Simon. *Orde Wingate: Unconventional Warrior: From the 1920s to the Twenty-First Century*. Barnsley: Pen and Sword Military, 2014.
- Argyris, Chris and Donald Schon. *Organizational Learning: A Theory of Action Perspective*. Reading: Addison-Wesley, 1978.
- Arquilla, John. *Insurgents, Raiders, and Bandits. How Masters of Irregular Warfare Have Shaped the World*. Lanham, MD: The Rowman and Littlefield Publishing Group, 2011.
- Benson-Gyles, Dick. *The Boy in the Mask: The Hidden World of Lawrence of Arabia*. Dublin: Lilliput Press, 2016.
- Connell, John. *Wavell: Scholar and Soldier*. New York: Harcourt, Brace and World, 1964.
- Daniel, Donald C., and Katherine L. Herbig. *Strategic Military Deception*. New York: Pergamon Press, 1981.
- Dolman, Everett Carl. "Seeking Strategy." In *Strategy: Context and Adaptation from Archidamus to Airpower*, edited by Richard, J. Bailey, James W. Forsyth Jr., and Mark O. Yeisley, 5-37. Annapolis, MD: Naval Institute Press, 2016.

- Faulkner, Neil. *Lawrence of Arabia's War: The Arabs, the British and the Remaking of the Middle East in WWI*. New Haven, CT: Yale University Press, 2016.
- Freedman, Lawrence. *Strategy: A History*. Oxford: Oxford University Press, 2013.
- Gaddis, John Lewis, *The Landscape of History: How to Map the Past*. Oxford: Oxford University Press, 2002.
- . *On Grand Strategy*. New York: Penguin Press, 2018.
- Gardner, Brian. *Allenby of Arabia: Lawrence's General*. New York: Coward-McCann, 1966.
- Garfield, Brian. *The Meinertzhagen Mystery/The Life and Legend of a Colossal Fraud*. Richmond, VA: Potomac Books, 2007.
- Gat, Azar. *A History of Military Thought: From the Enlightenment to the Cold War*. Oxford: Oxford University Press, 2001.
- Graicer, Ofra. "Two Steps Ahead. From Deep Ops to Special Ops – Wingate the General." PhD diss., Dayan Base, 2015.
- Gray, Colin. *The Strategy Bridge: Theory for Practice*. Oxford: Oxford University Press, 2010.
- Hatch, Mary Jo, and Ann L. Cunliffe. *Organization Theory: Modern, Symbolic, and Postmodern Perspectives*. 2nd ed. Oxford: Oxford University Press, 2006.
- Hathaway Capstick, Peter. *Warrior. The Legend of Colonel Richard Meinertzhagen*. New York: St. Martin's Press, 1996.
- Howard, Michael. *Strategic Deception in the Second World War: British Intelligence Operations against the German High Command*. London: W. W. Norton and Company, 1995.
- Hughes, Matthew. *Allenby and British Strategy in the Middle East 1917-1919*. London: Frank Cass, 1999.
- James, Lawrence. *The Golden Warrior: The Life and Legend of Lawrence of Arabia*. New York: Paragon House, 1990.
- Jervis, Robert. *System Effects: Complexity in Political and Social Life*. Princeton, NJ: Princeton University Press, 1998.
- Jullien, Francoise. *A Treatise on Efficacy. Between Western and Chinese Thinking*. Honolulu, HI: University of Hawaii Press, 2004.
- Killingray, David, and David Omissi, eds. *Guardians of Empire. The Armed Forces of the Colonial Powers c. 1700-1964*. Manchester: Manchester University Press, 1999.
- Kitchen, James E. *The British Imperial Army in the Middle East. Morale and Military Identity in the Sinai and Palestine Campaigns, 1916-18*. London: Bloomsbury, 2014.
- Krippendorff, Klaus. *The Semantic Turn: A New Foundation for Design*. Boca Raton, FL: Taylor and Francis Group, 2006.

- Latimer, John. *Deception in War*. London: John Murray, 2001.
- Lawrence, T. E. *Seven Pillars of Wisdom*. New York: Doubleday, Doran and Company, 1935.
- . *Revolt in the Desert*. New York: George H. Doran Company, 1927.
- Liddell Hart, Sir Basil H. *Strategy*. London: Faber and Faber, 1967.
- Lord, John. *Duty, Honour, Empire: The Life and Times of Richard Meinertzhagen*. London: Hutchison and Co., 1971.
- Mack, John E. *A Prince of our Disorder: The Life of T. E. Lawrence*. Cambridge, MA: Harvard University Press, 1998.
- Martin, Mike. *An Intimate War: An Oral History of the Helmand Conflict, 1972-2012*. Oxford: Oxford University Press, 2014.
- Michlewski, Kamel. *Design Attitude*. Oxford: Routledge, 2015.
- Mintzberg, Henry. *The Rise and Fall of Strategic Planning: Reconceiving Roles for Planning, Plans, Planners*. New York: Free Press, 1994.
- Moon, Penderel, ed. *Wavell: The Viceroy's Journal*. London: Oxford University Press, 1973.
- Mousa, Suleiman. *T. E. Lawrence: An Arab View*. London: Oxford University Press, 1966.
- Naveh, Shimon. *In Pursuit of Military Excellence. The Evolution of Operational Theory*. London: Frank Cass, 1997.
- Osinga, Frans P.B. *Science, Strategy and War. The Strategic Theory of John Boyd*. Oxford: Routledge, 2007.
- Rankin, Nicholas. *A Genius for Deception. How Cunning Helped the British Win Two World Wars*. Oxford: Oxford University Press, 2008.
- Raugh, Harold E. *Wavell in the Middle East 1939-1941. A Study in Generalship*. London: Brassey's, 1993.
- Rogan, Eugene. *The Fall of the Ottomans. The Great War in the Middle East*. New York: Basic Books, 2015.
- Royle, Trevor. *Orde Wingate: A Man of Genius. 1903-1944*. Barnsley: Frontline Books, 1995.
- Sattin, Anthony. *The Young T. E. Lawrence*. New York: W. W. Norton and Company, 2014.
- Schneider, James J. *Guerilla Leader: T. E. Lawrence and the Arab Revolt*. New York: Bantam Books, 2011.
- Senge, Peter M. *The Fifth Discipline: The Art & Practice of the Learning Organization*. New York: Crown Publishing, 2006.
- Slim, Field Marshall Sir William. *Defeat into Victory*. London: Macmillan, 1956.

- Stang, Charles M., ed. *The Waking Dream of T. E. Lawrence: Essays on his Life, Literature, and Legacy*. New York: Palgrave, 2002.
- Stejskal, James. *Masters of Mayhem: Lawrence of Arabia and the British Mission to the Hejaz*. Haverton, PA: Casemate, 2018.
- Strachan, Sir Hew. *Big Wars, Small Wars: The British Army and the Lessons of War in the 20th Century*. Oxford: Routledge, 2006.
- Sykes, Christopher. *Orde Wingate. A Biography*. Cleveland, OH: The World, 1959.
- Taleb, Nicholas. *Antifragile. Things That Gain from Disorder*. New York: Random House, 2014.
- Urban, Mark. *Task Force Black: The Explosive True Story of the Special Forces War in Iraq*. New York: St Martin's Press, 2010.
- Von Clausewitz, Carl. *On War*. Edited and translated by Michael Howard and Peter Paret. Princeton, NJ: Princeton University Press, 1976.
- Walker, Philip. *Behind the Lawrence Legend: The Forgotten Few Who Shaped the Arab Revolt*. Oxford: Oxford University Press, 2018.
- Weeks, Dr. David, and Jamie James. *Eccentrics: A Study of Sanity and Strangeness*. New York: Kodansha America, 1995.