

# Palestine 1918: General Edmund Allenby's Application of Operational Art and Design

A Monograph

by

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## Abstract

Palestine 1918: General Edmund Allenby's Application of Operational Art and Design, by MAJ Kyle T. Trotter, 67 pages.

The British led Egyptian Expeditionary Force serves as the missing link in the evolution of operational art. From the Suez Canal to Aleppo, Syria, the British connected a series of joint combined arms operations in time, space, and purpose to achieve the strategic goals of the Empire. The campaign is a template of multi-domain battle integrating regular and irregular forces across the land, air, and sea domains as well as information and public perception.

This monograph analyzes the campaign in Palestine through the lens of Army Design Methodology (ADM) to illuminate how future leaders can innovate and adapt to thrive in conditions of complexity and uncertainty. The elements of operational art and ADM explain how General Edmund Allenby was able to win a decisive campaign. For contemporary leaders, this campaign and the cognitive process used to achieve victory, is a fine example of how to lead joint, inter-organization, multinational organizations fighting through rapid military, social, and technologic change to win in a complex world.

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## Acronyms

ADM	Army Design Methodology
COG	Center of Gravity
DMC	Desert Mounted Corps
EEF	Egyptian Expeditionary Force
GHQ	General Headquarters
OE	Operational Environment
RAF	Royal Air Force

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## Introduction

For most students of the history of warfare, World War One began with the execution of Germany's Schlieffen Plan. The German's intention was to conduct a war of maneuver to quickly defeat the French, then using their superior interior lines of communication transition to the Eastern Front where they would destroy the Russians. The war did not go as planned and transitioned into a war of attrition characterized by enormous casualty lists. The general narrative is that World War One witnessed a clash of new technology with old tactics. While technological and tactical innovations like the tank or the German Hutier tactics showed promise, it was too little too late to decisively sway the war.

Throughout the nineteenth century, there was an increase in the scale, complexity, and destructiveness of war. The development of railroads, improvements in communications, and the advancements in weapons and munitions was witnessed throughout the Napoleonic wars, then the Austro-Prussian War, the American Civil War, the Franco-Prussian War, the Russo-Japanese War, and World War One. The ability for industrialized nations to mobilize their entire population and economy was unleashing the full potential of man's destructive power. Many would try to study this change, make sense of it, and develop theories of warfare to apply these new means, in efficient and effective ways, to meet political and military ends.

Russian General Mikhail N. Tuchachevsky was one of these theorists who wrote in 1926:

Modern operations involve the concentration of forces and uninterrupted blows of these forces against the enemy throughout an extremely deep area. The nature of modern weapons and modern battle is such that it is an impossible matter to destroy the enemy's manpower by one blow in a one-day battle. Battle in a modern operation stretches out into a series of battles not only along the front but also in depth until that time when

either the enemy has been struck by a final annihilating blow or when the offensive forces are exhausted.<sup>1</sup>

What Tuchachevsky gave birth to was the Soviet Deep Battle Theory of War. It began with an acknowledgement that over the last one hundred years of war armies no longer fought single decisive battles, but had to arrange tactical actions in time, space, and purpose to achieve a strategic goal; modern US Army doctrine refers to this as operational art. By 1929, the Soviet Army's doctrine and organization was to achieve deep operations that could "advance 75-90 kilometers on a 200 kilometer front in a six or seven day period."<sup>2</sup> This doctrine emphasized:

(1) the aim of each operation and battle is that destruction of enemy forces and his technical means of combat; (2) that aim can be achieved only by skillful and decisive action, based on simple, but artful maneuver, conducted violently and persistently. In addition, to complete a maneuver operation successfully, it is necessary to assess correctly the enemy forces and possible action of the enemy, to supply material means for the operation and to organize firm and continuous command and control.<sup>3</sup>

By World War Two the Soviets, Germans, and Allies all transformed their training, doctrine, equipment, and organization to conduct some variation of joint combined arms maneuver operations. Is it fair to characterize all of World War One as attrition warfare? As World War One spanned from France to Russia, Turkey to Mesopotamia, is there not a single example of maneuver warfare? Was there not a leader who could successfully connect political end states to military operations; integrate air, land, and sea operations; employ combined arms maneuver with allies; sustain a campaign over hundreds of miles with the support of irregular forces?

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<sup>1</sup> Colonel David M. Glantz, *Soviet Military Operational Art in Pursuit of Deep Battle* (New York: Frank Cass and Company Limited, 1991), 22.

<sup>2</sup> *Ibid.*, 24.

<sup>3</sup> *Ibid.*, 21.

The British led, EEF is an anomaly of warfare at this period in history and serves a missing link in the evolution of operational art. In 1918, the British would connect a series of decisive joint combined arms operations over six hundred miles from the Suez Canal to Aleppo, Syria to achieve the strategic goals of the Empire. The actions of the EEF achieved the stated desired outcomes of Tuchachevsky's Soviet Deep Battle Theory of War and were studied by the US Army Command and General Staff College throughout the 1930s to influence the US leaders of World War Two.<sup>4</sup>

This monograph analyzes of the campaign in Palestine through the lens of the Army Design Methodology (ADM) to illuminate how future leaders can innovate and adapt to thrive in conditions of complexity and uncertainty. The four sections of the paper correspond with the four activities of ADM (Framing Operational Environments, Framing Problems, Framing Solutions, and Reframing), and analyzes the actions of the EEF through each of those elements. The first section, Framing Operational Environments, outlines complexity theory as a way to enable leaders to understand their current environment and develop a desired future state. The second section, Framing Problems, highlights ways to apply Peter Senge's "limits to growth model"<sup>5</sup> to ensure organizations do not endlessly attack symptoms looking for quick wins, but actually address the root cause of problems in a holistic manner in order to achieve the nation's policy aims. The third section, Framing Solutions, focuses on how the elements of operational art guide the development of an operational approach and production of a coordinated narrative to link the application of joint combined arms operations to the strategic objective. Finally, the fourth

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<sup>4</sup> A search of the Combined Arms Research Library card catalogue reveals fifty-four papers written by students at the US Army Command and General Staff College on the "Palestine 1918" campaign between 1931 and 1933.

<sup>5</sup> Peter M. Senge, *The Fifth Discipline* (New York: Doubleday/Currency, 2006), 94.

section, Reframe, demonstrates how General Sir Edmund Allenby reframed before, during, and after each action the EEF took to ensure he understood the operational environment (OE), how it changed, and adjusted his operational approach as necessary to ensure the campaign was decisive.

Although operational art and design did not exist in 1917-1918, the actions of General Allenby and the EEF indicate he possessed a mindset to design and execute a campaign that is in line with these methodologies. He was able to win in a complex world by applying patterns of thought and habits of inquiry that align with the elements of operational art and a design methodology. Throughout history, leaders have proven victory starts with clear thinking. For contemporary leaders, this campaign, and the cognitive process used to achieve victory sets a fine example of how to lead joint, inter-organization, multinational organizations fighting through rapid military, social, and technologic change.

## Victory Starts with Clear Thinking

Army Techniques Publication (ATP) 5-0.1, *Army Design Methodology*, begins by stating, “Military operations are human endeavors characterized by the continuous mutual adaption of give and take, moves, and counter moves among all participants, which often are unpredictable.”<sup>6</sup> Design facilitates the commander’s understanding of the OE and the problem(s) that stand between the current state and desired future state. It assists in the process of visualizing an operational approach that can address the interaction of interrelated and interdependent components within a system. The commander can create a learning environment characterized by dialogue, collaboration, and critical and creative thinking to facilitate effective design.<sup>7</sup> To

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<sup>6</sup> Army Techniques Publication (ATP) 5-0.1, *Army Design Methodology* (Washington, DC: Government Printing Office, 2015), 1-1.

<sup>7</sup> *Ibid.*, 1-7.

achieve victory requires clear thinking about the problem and the context or meaning associated with it.

Bar-Yam Yahner proposes that design solutions must account for context. “The solution to a problem has to be related to the type of or structure of the particular problem and account for the emergent or interdependent relationship between agents.”<sup>8</sup> Eric Stolterman says, “Design is the integration of thought and action.”<sup>9</sup> He expands on this by saying, “design is inclusive of things found in science such as reason and in the arts such as creativity. Design is the ability to imagine that which does not yet exist, to make it appear in concrete form as a new, purposeful addition to the real world.”<sup>10</sup> The ADM is a way to create context for a situation; this facilitates shared understanding with the commander, which builds trust. The real power of ADM is the integration of thought and action. With understanding, a commander can provide clear intent, a staff can develop mission orders, and subordinates can exercise disciplined initiative and accept prudent risk. Thinking clearly about a problem enables mission command and the effective application of combat power in time, space, and purpose to achieve strategic aims (operational art).

The ADM is defined as, “a methodology for applying critical and creative thinking to understand, visualize, and describe unfamiliar problems and approaches to solving them.”<sup>11</sup> The ADM consists of four activities: Framing Operational Environments, Framing Problems, Framing

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<sup>8</sup> Yaneer Bar-Yam, Chitra Ramalingam, Laurie Burlingame, and Cherry Ogata, *Making Things Work* (Cambridge, MA: NECSI, Knowledge Press, 2004), 15.

<sup>9</sup> Erik Stolterman and Harold G. Nelson, *The Design Way: Intentional Change in an Unpredictable World* (Cambridge, MA: MIT Press, 2012), 1.

<sup>10</sup> *Ibid.*, 12.

<sup>11</sup> Army Doctrine Reference Publication (ADRP) 3-0, *Operations* (Washington, DC: Government Printing Office, 2016), 4-3.

Solutions, and Reframing or Assessment (see figure 1). It is through this process the commander and staff can increase shared understanding and trust through dialogue to enable clear commander’s intent, orders production, and mission execution with disciplined initiative and prudent risk (mission command).

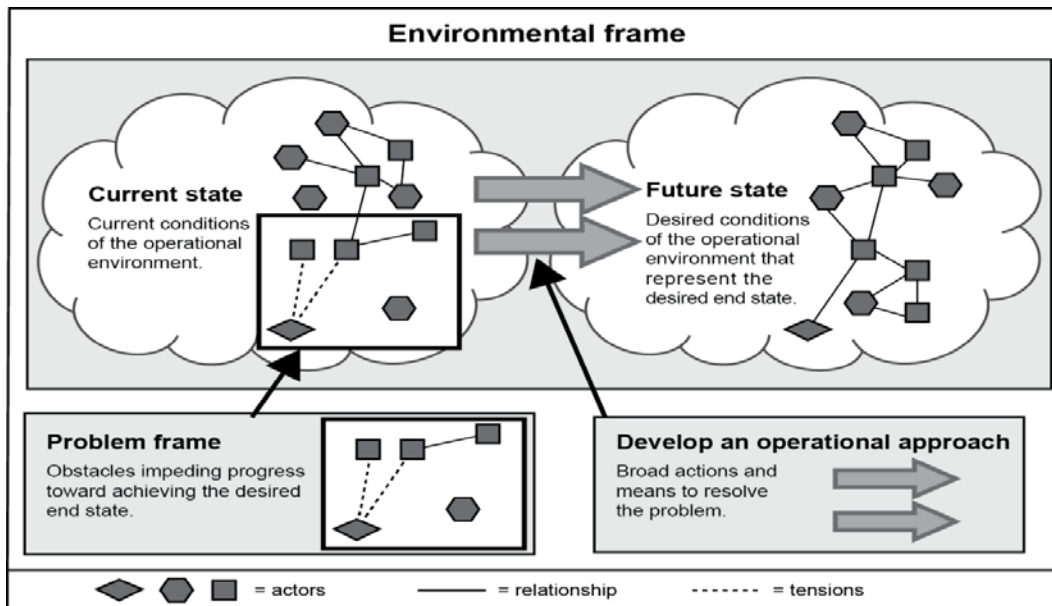


Figure 1. The Activities of Army Design Methodology

Source: Army Techniques Publication 5-0.1, *Army Design Methodology* (Washington, DC: Government Printing Office, 2015), 5-1.

Upon assuming command of the EEF in July 1917, the “current state” reflected the Western Front’s trench warfare.<sup>12</sup> Each attempt to penetrate the German and Turkish Armies’ defense near Gaza in March and April of 1917 resulted in enormous failures and tens of

<sup>12</sup> General Sir Edmund H.H. Allenby, Chris H.C. Pirie-Gordon, and Edwards H. Metcalf, *A Brief Record of the Advance of the Egyptian Expeditionary Force under the Command of General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G., July 1917 to October 1916*, 2nd ed. (London: His Majesty’s Stationery Office, 1919.), 1.

thousands of dead soldiers.<sup>13</sup> The desired future state for the British was to seize Jerusalem, Amman, and Damascus; destroy the Turkish Army; and further isolate Germany setting the conditions for a favorable British post-war settlement. The problem was how to develop a way to integrate the new industrial era means with unified action partners to achieve an end against a neer peer threat.

The solutions included a complete reorganization of the EEF and the development of joint combined arms operations doctrine and training with their unified action partners, especially Thomas Edward (T. E.) Lawrence and Sharif Feisal. They also developed a narrative published through regional and international newspapers and radio stations, as well as by every joint and multinational partner in their daily interaction with the local populace. The result was a campaign that attacked five hundred miles in thirty-six days, led to the collapse of the Ottoman Empire and the isolation of Germany. General Allenby reframed after the seizure of Jerusalem, Amman, and Damascus as the OE and problems changed. The linkage of conceptual and detailed planning led to decisive maneuver, the likes of which Europe would not see until 1939.

The ADM is a way of making sense of emergent trends within the current environment through synthesis, identifying problems, and developing solutions that inform and guide detailed planning. It is a tool to enable commanders and staffs to think clearly about their situation, problem, and develop meaningful solutions. The conceptual thinking of ADM serves as a road map to understand where you are and visualize a way forward to the desired future state. Understanding the context of the past and present and the purpose of the future, allows leaders and organizations to better maneuver the obstacles encountered along the path.

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<sup>13</sup> James E. Kitchen, *The British Imperial Army In The Middle East* (London: Bloomsbury Academic Publishing PLC, 2014), 17.

## Analyzing the Map: Understanding Where You Are and Where You Want to Go

The first activity, Framing Operational Environments (OE), looks to understand the current state and desired future state using systems thinking and produces an OE frame graphic and narrative. Army Doctrine Reference Publication 6-0, *Mission Command*, acknowledges, “military operations are human endeavors. They are contests of wills characterized by continuous and mutual adaption by all participants. Army forces conduct operations in complex, ever-changing, and uncertain operational environments.”<sup>14</sup> For commanders and staffs to win in an ill-structured climate they need to understand the environment and actors comprising the system. Jamshid Gharajedaghi describes systems as open, purposeful, multidimensional, emergent, and counterintuitive.<sup>15</sup> He then says, “to influence the actors in our transactional environment we have to understand why they do what they do.”<sup>16</sup> Before a force can apply any defeat or stability mechanism it is critical to understand how each agent within a system views themselves, and how they view other agents. This enables an understanding of context as proposed by Bar-Yam and Gharajedaghi.

One can understand the complexity of the problem by understanding the interdependent variables and their relationships within a given system.<sup>17</sup> Further, this allows one to discern

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<sup>14</sup> Headquarters, Department of the Army, Army Doctrine Reference Publication 6-0, *Mission Command* (Washington, DC: Government Printing Office, 2012), 1-3.

<sup>15</sup> Jamshid Gharajedaghi, *Systems Thinking Managing Chaos and Complexity: A Platform for Designing Business Architecture*, 2nd ed. (Burlington, MA: Butterworth-Heinemann, 2006), 29.

<sup>16</sup> *Ibid.*, 33.

<sup>17</sup> Dietrich Dörner, *The Logic of Failure: Why Things Go Wrong and What We Can Do To Make Them Right* (New York: Metropolitan Books, 1996), 38.



patterns of change or emergence within the complex system.<sup>18</sup> One should understand complexity theory to better understand how to frame an OE.

Robert Axelrod and Michael Cohen define a complex system as one that has “strong interactions among its elements, so that current events heavily influence the probabilities of many kinds of later events.”<sup>19</sup> They go on to define two of the most important characteristics of a complex system, agent and strategy. An agent “has the ability to interact with its environment, including other agents. An agent can respond to what happens around it and can do things more or less purposefully.”<sup>20</sup> A strategy is, “the way an agent responds to its surroundings and pursues its goals.”<sup>21</sup> As an agent pursues its strategy, it will introduce new stimuli into the system; Carl Everett Dolman defines these new stimuli as “emergent behavior.”<sup>22</sup> He emphasizes that an agent’s emergent properties cannot be predicted, but “the pattern of change can be discerned and understood” in terms of probability of occurrence.<sup>23</sup>

If one cannot absolutely predict what action an agent might take and the precise outcome of that emergent behavior, then understanding how each agent views themselves and others enables leaders to develop probabilities of action. One is able to identify tendencies based upon the history of the agent and their past strategies. This in turn allows a leader to determine the

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<sup>18</sup> Everett C. Dolman, *Pure Strategy* (London: Frank Cass, 2005), 110.

<sup>19</sup> Michael D. Cohen and Robert Axelrod, *Harnessing Complexity* (New York: The Free Press, 2000), 7.

<sup>20</sup> *Ibid.*, 4.

<sup>21</sup> *Ibid.*

<sup>22</sup> Dolman, 110.

<sup>23</sup> *Ibid.*

probable outcomes of their actions within the system by accounting for cultural and historical context.

Upon defining the system of the current state, the planning team then reflects on all available guidance it has and discerns how the system should look to achieve the desired future state. This activity requires high levels of collaboration and dialogue amongst the commander and staff and is critical in creating a shared understanding of what the ends should be. How the desired future is defined will determine the application of ways and means and what constitutes acceptable risk.

## Palestine 1917: Understanding Where You Are and Where You Want to Go

The British Campaign in Palestine held enormous geo-political ramifications. The area was part of the Ottoman Empire for nearly six hundred years. British control of Palestine, Egypt, and Mesopotamia would signify the end of the Caliphate and major changes to the Muslim world. Major Henry Lock of the Dorsetshire Regiment understood the historical significance of the British campaign through Palestine when he wrote: “The Holy Land has long been the scene of war since the dawn of history. Here on the high roads between Asia and Africa, were fought the great wars of Egyptians and Assyrians, Israelites and Canaanites, Greeks and Romans, Saracens and Crusaders.”<sup>24</sup>

Mohamed Ali, the viceroy of Egypt from 1805-1846, led his country through a period of modernization including industrial, economic, political, social, military, and education reforms.<sup>25</sup> During this period, British companies began to invest in Egyptian industries, especially

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<sup>24</sup> Henry O. Lock, *With the British Army in the Holy Land* (London: Roxburghe House, 1919), 1.

<sup>25</sup> Helen A.B. Rivlin, “Muhannad ‘Ali,” *Encyclopedia Britannica*, 20 July 1998, last updated 6 March 2013, accessed 11 November 2016, <https://www.britannica.com/biography/Muhammad-Ali-pasha-and-viceoy-of-Egypt>.

agriculture. In 1869, the Suez Canal was open for traffic and became the great artery of the British Empire connecting Europe, Africa, and Asia.

The outbreak of war in August 1914 saw Germany negotiating with Turkey to enter the conflict on the side of the Central Powers. For Turkey, this was a way to restore Ottoman dominance of Egypt and the Suez Canal. For Germany, Ottoman control of the Suez was an indirect approach to draw British combat power away from Europe.<sup>26</sup> To accomplish these ends, the Yilderim (meaning thunder), a combined German and Turk Army, was established under the command of General Liman von Sanders. The German Army provided officers to command Turkish battalions, divisions, and corps, and lead their staffs. They also provided modern military hardware and the technical experts for the implementation of such equipment.

The general sentiment of the British was that Egypt and the Suez Canal would be easy to defend. They believed the western desert to Libya and southern desert to Sudan were impassable by large armies. To the east, the Sinai Desert also provided one hundred miles of waterless terrain, which would make an invasion from a Turk-German Army highly unlikely.

However, on 3 February 1915, a large Yilderim Army successfully crossed the desert, secured the eastern bank of the Suez Canal, deployed custom pontoon bridges courtesy of the German Army, and attempted to cross a force into Egypt.<sup>27</sup> Ultimately, a combined force of Punjabis, Rajputs, and Gurkas supported by a torpedo boat destroyed the bridges and repelled the assault.<sup>28</sup> On 8 April, a small party of Turks swam across the Little Bitter Lake and captured an

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<sup>26</sup> Lock, 4-5.

<sup>27</sup> Ibid., 6.

<sup>28</sup> William T. Massey, *The Desert Campaigns* (London: G. P. Putnam's Sons, 1918), 11-13.

Italian employee.<sup>29</sup> In June, the Turks placed a mine in the channel, which the British steamer *Teresias* struck, stopping all traffic for a day.<sup>30</sup> All of these displays of ineptitude by British military leaders fell within the strategic context of the failed Gallipoli Expeditions and the surrender of Brigadier General Charles V.F. Townshend's brigade to the Turks within Mesopotamia. Thus, thru 1916, the Western Front was static and everywhere else throughout the world, the British were losing.

Following these events, Lord Kitchner asked the EEF commander, General Archibald Murray, "are you defending the Canal, or is the Canal defending you?"<sup>31</sup> In response, the War Department reframed their strategy from simply securing Egypt to securing the entire Empire. Unlike the Yilderim Army, which conducted a deep raid, the British determined the best way to secure the Suez Canal was to secure Palestine. They had to develop the capabilities to sustain a campaign that extended across the Sinai. British leaders knew this plan would mean vast expenditure of money and labor, but it would secure the Empire.<sup>32</sup> The plan required building immense amounts of railways, roads, and pipelines. It would expose the men to temperatures above one hundred degrees for extended periods, flies and malaria, in addition to tactical hazards. However, British leaders determined they could no longer maintain a passive defense. The best way to defend the Suez Canal, Egypt, and the Empire was to establish a permanent defense in Palestine.<sup>33</sup>

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<sup>29</sup> Massey, *The Desert Campaigns*, 19.

<sup>30</sup> *Ibid.*

<sup>31</sup> *Ibid.*, 20.

<sup>32</sup> *Ibid.*, 23.

<sup>33</sup> Lock, 9.

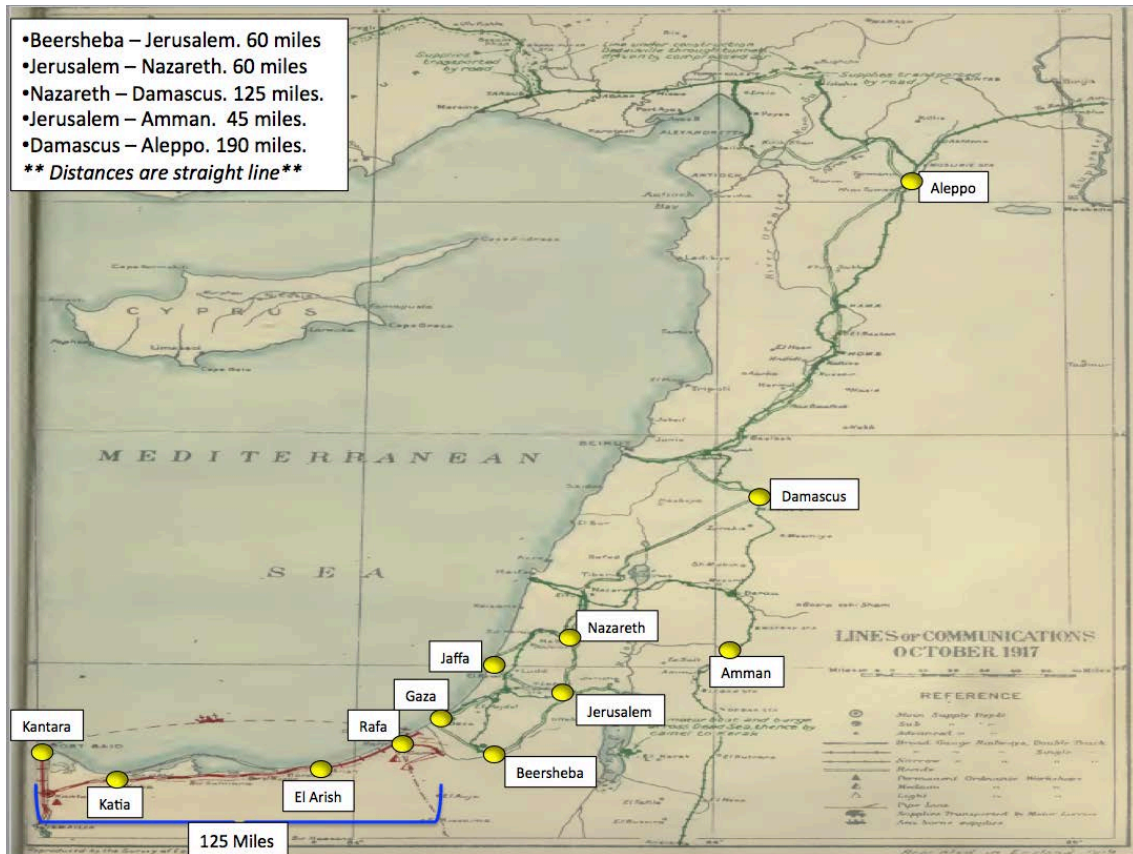


Figure 2. The British Sinai Campaign

Source: General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G., Charles H.C. Pirie-Gordon, and Edwards H. Metcalf, *A Brief Record of the Advance of the Egyptian Expeditionary Force under the Command of General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G, July 1917 to October 1918*, 2nd ed. (London: His Majesty's Stationery Office, 1919), plate 2.

General Sir Archibald Murray's campaign goal was to attack across the canal zone in vicinity of Kantara to Katia then occupy it during the summer, El Arish in the winter, with a subsequent objective of Rafa. The occupation of Rafa would enable the opening of a port to bypass the 125-mile overland route through the Sinai Desert and enable rapid transport of supplies. Finally, this position would put the EEF in the historic Holy Land. Beyond its symbolic

significance, Gaza was a land of abundant agriculture to sustain the EEF with barley, fruit trees, tomatoes, artichokes, vegetables, almonds, peaches, oranges, apricots, figs, and pomegranates.<sup>34</sup>

Kantara was the base from which General Murray would generate, project, and support his combat power. It possessed the water purification plant, reservoirs, and pump houses that would push water forward throughout the campaign. It possessed the railway depot, warehouses full of all classes of supplies, repair facilities for all end items, veterinary services, hospitals, and a prisoner of war camp.<sup>35</sup>

One of the greatest concerns for the British was bilhaziasis, “a parasitic worm found in the waters of the Nile and affects not only those who drink the water, but also those who bathe in it or merely wash.”<sup>36</sup> Through an intensive filtration and chlorination process, the medical service eliminated all germs and diseases and gave the Army water free from harmful microbes.<sup>37</sup> With the development of proper basing and sustainment capabilities at Kantara, the British were ready to conduct offensive operations.

The construction of roads, railroads, pipelines, and installations of telephone and telegraph poles and wires would not be possible without multinational collaboration and host nation assistance. It was the EEF’s ability to build coalitions, embrace partners into the collective team, and create a unifying sense of purpose that enabled the accomplishment of incredible feats under harsh weather conditions. The infrastructure was built by the Royal Engineers with the Sikh Pioneers and Egyptian Labor Corps who according to official correspondent William

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<sup>34</sup> Massey, *The Desert Campaigns*, 120.

<sup>35</sup> *Ibid.*, 33.

<sup>36</sup> Lock, 11.

<sup>37</sup> Massey, *The Desert Campaigns*, 37.

Massey, “received much more than the market rate of pay in the Delta, their food was good and plentiful, they had uniforms and blankets provided for them and tents to sleep in. At the end of every three months ten day’s leave on free passes was given. The officer, by tactful control, got the most out of them and they each had well earned his holiday.”<sup>38</sup>

<i>Egyptian Labour Corps.</i>												
The strength of the corps was as under :—												
										Officers.	Men.	
In Jan., 1916	...	...	...	...	...	...	...	...	...	...	39	2,973
In Aug., 1916	...	...	...	...	...	...	...	...	...	...	88	24,838
In Aug., 1917	...	...	...	...	...	...	...	...	...	...	292	55,592
In Aug., 1918	...	...	...	...	...	...	...	...	...	...	418	85,547
In Nov., 1918	...	...	...	...	...	...	...	...	...	...	504	100,002*

Figure 3. Egyptian Labor Corps

Source: General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G., Charles H.C. Pirie-Gordon, and Edwards H. Metcalf, *A Brief Record of the Advance of the Egyptian Expeditionary Force under the Command of General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G, July 1917 to October 1918*, 2nd ed. (London: His Majesty’s Stationery Office, 1919), 108.

On 19 July, “airmen made an evening reconnaissance over Bir el Abd that identified a large force of the enemy within fifty miles of the Canal.”<sup>39</sup> To prepare for this attack, Germany provided the Turkish Army with modern equipment and training. According to William Massey, official EEF correspondent, the Germans “designed special camel packsaddles,” innovated new “machine gun mounts,” and “provided two complete field hospitals that lacked nothing the German scientist could suggest for treatment.”<sup>40</sup> Massey continues by describing how, “German and Austrian artillery, machine gun corps, wireless telegraph sections, supply units, and field

<sup>38</sup> Massey, *The Desert Campaigns*, 32.

<sup>39</sup> *Ibid.*, 52.

<sup>40</sup> *Ibid.*, 52-53.

hospitals had undergone special training in Germany for this expedition.”<sup>41</sup> Kaiser Wilhelm II invested heavily in this force, as he needed this campaign to sever the British Empire. Wilhelm hoped these actions would lead to a British withdrawal from the war, which would create more favorable conditions on the Western Front.

The battle of Romani (19 July-12 August 1916) put an end to Kaiser Wilhelm’s dream of “bleeding the British Empire to death by severing what he had termed its most vital artery.”<sup>42</sup> Rather than a British defeat, Romani became a severe blow to the German-Turk war effort. The combined force of 20,000 suffered 9,000 casualties and 4,000 prisoners of war.<sup>43</sup> General Murray accomplished his goal and occupied El Arish on 21 December 1916. He then seized Rafa where the Australian Naval Bridging Brigade built a jetty to enable joint over the shore logistics.<sup>44</sup> The joint logistics capability increased the speed and efficiency of British sustainment by having sea lines of communication as well as road and rail. The tactical actions achieved their strategic objective of denying the German-Turk forces access to the Suez. They secured the Empire.

On 26 March 1917, General Murray’s EEF attacked to seize Gaza resulting in nearly 4,000 casualties. Then again on 19 April, a second frontal assault of infantry on the town’s reinforced defenses resulted in 6,500 EEF casualties.<sup>45</sup> Following the defeats at the First and Second Gaza Campaigns, the Palestine campaign became immobile like the Western Front. Artillery became the number one cause of casualties and static trench defenses assumed control.<sup>46</sup>

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<sup>41</sup> Massey, *The Desert Campaigns*, 53.

<sup>42</sup> *Ibid.*, 51.

<sup>43</sup> *Ibid.*, 72.

<sup>44</sup> *Ibid.*, 104.

<sup>45</sup> Kitchen, 17.

<sup>46</sup> Kitchen, 39.



General Murray's campaign through the Sinai and Gaza were a slow methodical frontal assault into the Yilderim's linear defense. T. E. Lawrence would classify Murray as an "algebraic" military leader whose "Jominian" tactical approach to war was essentially formulaic and predictable.<sup>47</sup> The two frontal assaults into Gaza displayed a lack of clear thinking. Murray failed to understand the situation, the problem, and use critical and creative thinking to generate an appropriate solution. He did not use design like thinking.

Following these defeats, division and corps commanders and staffs lost confidence in Murray's ability to command an army in the field. Many felt "he was an intelligent staff officer, but he could not win battles."<sup>48</sup> General complaints of the EEF officers were that his headquarters was not set up to conduct large-scale operations and that since Murray remained in the rear for most of the battles, he was too far back from the front to understand the events unfolding and make timely decisions. Further, because he had no reserve, "he ceased to play any real part in the battle."<sup>49</sup>

From 1914 to 1916, the EEF's mission was to defend the Suez Canal. Following the battle of Romani however, they transitioned to offensive operations attacking across the Sinai. During this campaign, General Murray maintained his regionally based garrison command in Cairo and delegated command to the Desert Column or divisional size units. This method of command and control worked up to the Rafa. "First Gaza was a battle on a much grander scale, involving two mounted divisions and three infantry divisions fighting modern industrialized

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<sup>47</sup> T. E. Lawrence, *Seven Pillars of Wisdom* (Garden City, NY: Doubleday, 1935), 197.

<sup>48</sup> Kitchen, 118.

<sup>49</sup> *Ibid.*, 117.

warfare.”<sup>50</sup> The ad hoc command structure produced confusion and denied coordination between units. The failure to develop a proper organizational structure and authorities would result in a violation of the six principles of mission command and operational failure.

In stark contrast to Murray stood General Edmund Allenby, an operational artist who could effectively dialogue with senior civil leaders and translate strategic guidance into tactical action. Allenby would provide the EEF clear thinking, as he understood the strategic context of observed patterns and developed future actions based upon them. Even more importantly, he led his staff to identify the internal and external problems that were prohibiting progress toward the achievement of their goals. Allenby would bring a mastery of tactics and mobile warfare having served as a cavalry regimental commander in South Africa during the Second Boer War. After serving three years as commander of the 3rd Army in France, he understood organizational management and how armies should be structured to maximize the application of combat power for modern forces. His professional knowledge, skills, and experiences shaped him to use a thought process similar to a design methodology.

### Roadblocks: Clear Thinking for Problems on the Journey

The second activity of ADM, Framing Problems, produces a problem narrative. It was the failure to distinguish between the root causes and symptoms in complex systems that led to the incorporation of design into the Army planning processes. ATP 5-0.1 provides three types of problems and solution strategies (see figure 4). By understanding the emergent interactions and desires of the multiple actors in an open and purposeful system (current state) and contrasting that with the desired future state, one is able to derive the problems as those things hindering the achievement of the ends.

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<sup>50</sup> Kitchen, 119.

Peter Senge proposes a “limits to growth model,” where organizations typically look to achieve “quick victories” and will attack symptoms not the root problem.<sup>51</sup> Ultimately, the process of repeatedly applying resources towards symptoms will exhaust the organization and lead to their failure. To remove the problem equates to removing friction, making the system work more effectively to enable higher levels of achievement in an efficient manner. Through the process of framing an OE and applying intellectual tools like complexity theory, a commander and staff can gain context and understanding of the current environment. To recognize limits to growth or problems standing between the current and desired future state requires an understanding of the relationships between each agent within the system and their strategies. It is only when one understands the purpose behind another’s action that they can determine patterns, tendencies, and determine the probability of future events. Through achieving a shared understanding of the system and the problem, the commander and staff can develop an operational approach to achieve the desired future state. Failure to properly recognize the root cause will lead to exhaustive efforts applying means in ineffective ways never achieving an end. Victory demands clear thinking and General Allenby provides an example of understanding context, identifying root problems, and developing an effective operational approach.

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<sup>51</sup> Senge, 94.

	<i>Well-structured</i>	<i>Medium-structured</i>	<i>Ill-structured</i>
<b>Perception</b>	The problem is self-evident.	Leaders easily agree on its structure.	Leaders have difficulty agreeing on problem structure and will have to agree on a shared hypothesis.
<b>Solution development</b>	Solution techniques are available and there are verifiable solutions.	There may be more than one "right" answer. Leaders may disagree on the best solution. Leaders can agree on a desired end state.	Leaders will disagree on— <ul style="list-style-type: none"> <li>• How the problem can be solved.</li> <li>• The most desirable end state.</li> <li>• Whether the end state can be attained.</li> </ul>
<b>Execution of solution</b>	Success requires learning to perfect technique.	Success requires learning to perfect techniques and to adjust the solution.	Success requires learning to perfect technique, adjust the solution, and continuously refine understanding of the problem.
<b>Adaptive iteration</b>	No adaptive iteration required.	Adaptive iteration is required to find the best solution.	Adaptive iteration is required to refine the problem structure and solutions.

Figure 4. Types of Problems and Solution Strategies

Source: Army Techniques Publication 5-0.1, *Army Design Methodology* (Washington, DC: Government Printing Office, 2015), 4-1.

On 28 June 1917, General Edmund Allenby assumed command and brought a new command style to the EEF. General Murray preferred to command out of his General Head Quarters in Cairo and would go to the front when required. Allenby on the other hand, “never left the front unless his presence in Egypt was necessary for an official function.”<sup>52</sup> He focused on accomplishing the mission. His staff once said, “a Spartan life was the rule at GHQ, work was the order of the day everyday.”<sup>53</sup>

Edmund Allenby was a man of “strong will and great energy.”<sup>54</sup> He ensured strict enforcement of standards and discipline, but earned the loyalty of his men through genuine personal interactions. Living on the front line, Allenby was able to meet with soldiers from different units on a daily basis. Through this, he was able to build a cohesive team based on mutual trust and instill individual and unit discipline to enable his force to accomplish remarkable

<sup>52</sup> William T. Massey, *Allenby's Final Triumph* (London: Constable and Company Ltd., 1920), 8.

<sup>53</sup> Ibid.. GHQ stands for General Head Quarters.

<sup>54</sup> Ibid., 11.

feats. The frequent travel also resulted in Allenby and his driver knowing Palestine better than anybody else in the EEF, which enabled his ability to understand the problem and visualize solutions.<sup>55</sup>

Unlike Murray, Allenby was prepared to listen to the recommendations of his subordinate commanders, a direct response to his experience as commander of 3rd Army in France. Following a series of engagements that resulted in significant casualties, three of his division commanders pleaded for a new course of action. When he and his three division commanders spoke to Field Marshall Douglas Haig, Commander of the British Expeditionary Force in France, they expressed their believe further attacks would be futile; this resulted in the immediate relieve of all four commanders for insubordination.<sup>56</sup> He learned, to the detriment of his career, that subordinate leaders often understand the tactical challenges more thoroughly than senior leaders and can often have innovative ideas. From this came a great willingness to absorb the inputs of subordinate commanders to refine plans and trust them through execution.

By living on the front lines and conducting daily battlefield circulation General Allenby was able to build a clear understanding of the operational and mission variables. His daily dialogues with subordinate commanders, staffs, and individual soldiers enabled him to understand the current state of the EEF and Turks through a mental process similar to systems thinking and complexity theory. From this understanding of the interactions between friendly, enemy, and civilian actors within this complex system, General Allenby determined his most immediate problems were internal. His secondary problem was the defeat of the Turkish Army. He needed to remove internal structures and agents generating friction in order to unleash the full potential of

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<sup>55</sup> Kitchen, 102.

<sup>56</sup> Ibid., 120.

the EEF team. If he could do this, then arranging joint combined arms operations (tactical actions) in time, space, and purpose in pursuit of strategic objectives would be possible. General Edmund Allenby applied a process like Senge's "limits to growth model"<sup>57</sup> where he restructured the organization and its culture in a manner to allow the application of the joint, interorganizational, and multinational combat power to achieve decisive results.

The combination of tactical prowess and organizational leadership General Allenby provided enabled the EEF to win battles and achieve strategic aims. Throughout 1917, he forged a modern army that was capable of conducting joint combined arms operations with multiple corps. He created a joint task force organized to integrate, coordinate, and deconflict actions between the air, land, and sea domains. These command reforms would capitalize on the logistical network Murray built to support joint combined arms operations over five hundred miles with decisive results; the likes of which Tukhachevsky could only dream about for the next decade.

General Allenby concentrated his efforts on reforming the command and control structure of the EEF to mirror the corps on the Western Front to enable the synchronized application of combat power. Allenby's three years of service in Europe enabled him to understand how to organize and apply combat power across domains to achieve strategic aims. He was acutely aware of the need for professional military staffs able to conduct conceptual and detailed planning to achieve operational success.<sup>58</sup> "Two infantry corps, the XX and XXI commanded by Lieutenant Generals Philip Chetwode and Edward Bulfin respectively and a cavalry corps, the Desert Mounted Corps (DMC), commanded by Lieutenant General Chauvel, replaced Murray's

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<sup>57</sup> Senge, 94.

<sup>58</sup> Kitchen, 119.

ad hoc system of command and control.”<sup>59</sup> Other changes included the formation of “corps heavy artillery groups” to enable rapid massed delivery of fires. Finally, lackluster staff officers were fired and replaced by competent ones who demonstrated potential for promotion and increased responsibility.<sup>60</sup> Together, these changes to structure and character of the organization enabled the EEF to apply its qualitative and quantitative superiority in a coordinated effort that would overwhelm the Turks with dilemmas from multiple domains to win decisively.

General Allenby, by taking action in line with Senge’s model, was able to apply his understanding gained through his environmental frame to identify the root problem, not symptoms. He figured out the greatest barrier to success was not his opponent or the terrain, but the structure and attitudes of the EEF. By removing the internal frictions, the natural abilities of the organization were free to conduct operations with decisive results. After getting the EEF in order, General Allenby was free to frame solutions to his second problem, the destruction of the Turkish Army. Effectively framing the problem(s), would enable the EEF to decisively defeat the Turkish Army in a manner almost exactly as Tukhachevsky would theorize a decade later. Although the elements of operational art did not exist in 1917, the next section frames the operational approach of the EEF through the lens of the elements of operational art as a way to demonstrate to a modern audience how they facilitate the application of combat power across domains in time, space, and purpose.

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<sup>59</sup> Kitchen, 119.

<sup>60</sup> Ibid.

## Choosing the Route and Forging the Path

The third activity of ADM, Framing Solutions, takes the understanding of the OE(s) and problem(s) to develop an operational approach, “a description of the broad actions the force must take to transform current conditions into those desired at end state.”<sup>61</sup> Dietrich Dörner suggests through complexity theory, it is possible to understand the links within a system, to determine where the roots of certain deficiencies lie, and to begin to define goals accurately. It is through this process then one can clarify what needs to be done and when.<sup>62</sup> “The commander and planning team use elements of operational art to visualize and describe the operational approach. They consider resources and risk and describe the operational approach in a visual model with supporting text.”<sup>63</sup> The operational approach graphic and narrative are an essential link between conceptual and detailed planning. They become the basis for the commander’s intent and concept of the operation. An operational artist needs to understand strategy, the elements of operational art and narrative, to frame a solution.

Throughout history, many authorities have attempted to define strategy. Antoine Henri Jomini said, “strategy is the art of making war upon a map.”<sup>64</sup> Colin Gray suggests, “strategy is the bridge that relates military power to political purpose.”<sup>65</sup> B.H. Liddel Hart said, “strategy is the art of distributing and applying military means to fulfill the ends of policy. When the

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<sup>61</sup> ATP 5-0.1, 5-1.

<sup>62</sup> Dörner, 75-76.

<sup>63</sup> ATP 5-0.1, 1-4.

<sup>64</sup> Antoine Henri Jomini, *The Art of War* (Westport, CT: Greenwood Press, 1971), 62.

<sup>65</sup> Colin S. Gray, *Modern Strategy* (New York: Oxford University Press, 1999), 17.



application of the military instruments merge into actual fighting, it is called tactics.”<sup>66</sup> Finally, Helmuth von Moltke (the elder) states, “strategy controls the means required by tactics in order to be ready at the right time in the right place.”<sup>67</sup>

All of these definitions of strategy are useful, but the definition proposed by Everett Dolman provides greater clarity. “Strategy represents the link between policy and military action. It connects the conduct of war with the intent of politics. Thus, strategy, in its simplest form, is a plan for attaining continuing advantage. The goal for strategy is not to culminate events, to establish finality in the discourse between states, but to influence states’ discourse in such a way that it will go forward on favorable terms.”<sup>68</sup> From Dolman’s perspective, “the strategist understands that war is but one aspect of social and political competition, an ongoing interaction that has no finality.”<sup>69</sup> This perspective of warfare is holistic, it understands that the impacts of conflict across diplomatic, socio-cultural, economic, and information realms extend well beyond the battlefield. Thus, the impact of victory or defeat in war shapes people, nations, and the world.

T. E. Lawrence compared the tactical level of war to algebra, but he likened strategy to psychology. Lawrence declared strategy arranged the minds of the army, the enemy, the nation supporting us, and the neutrals in a favorable manner.<sup>70</sup> Like Lawrence, Dolman links strategy and tactics in a “unity of opposites” like a yin and yang.<sup>71</sup> Victory starts with clear thinking, thus

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<sup>66</sup> B.H. Liddell Hart, *Strategy*, 2nd ed. (New York: Meridian, 1991), 321.

<sup>67</sup> Helmuth Moltke and Daniel J. Hughes, *Moltke on the Art of War* (Novato, CA: Presidio Press, 1993), 220.

<sup>68</sup> Dolman, 6.

<sup>69</sup> *Ibid.*, 5.

<sup>70</sup> Lawrence, *Seven Pillars of Wisdom*, 201.

<sup>71</sup> Dolman, 188.

leaders must continually balance conceptual and detailed planning, strategy and tactics, algebra and psychology.

Operational artists must master tactics and strategy equally. They must understand the strategic and political desired future state and why those conditions are important for their nation. From this, a broad strategy can be arranged linking action to the achievement of the desired strategic objective. To link the conceptual planning to the detailed planning of an executable operation, the leader must develop an operational approach guided by the elements of operational art.

The elements of operational art are intellectual tools to help commanders and staffs “understand an operational environment and visualize and describe their approach for conducting an operation.”<sup>72</sup> They help “integrate and synchronize the elements of combat power” to enable arrangement of tactical actions in time, space, and purpose in pursuit of strategic objectives.<sup>73</sup> They are not a checklist, but a way of thinking that links the conceptual and detailed, strategic and tactical aspects of planning. Modern operational art, like Tikhachevsky, acknowledges that on the modern battlefield there will not be a single decisive battle, but a series of battles over hundreds of kilometers. Therefore, tactical actions must be arranged over time and space to achieve the desired future state that achieves a continuing position of relative advantage.

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<sup>72</sup> ADRP 3-0, 2-4.

<sup>73</sup> Ibid.

<ul style="list-style-type: none"> <li>• End state and conditions</li> <li>• Center of gravity*</li> <li>• Decisive points*</li> <li>• Lines of operations and lines of effort*</li> <li>• Basing</li> </ul>	<ul style="list-style-type: none"> <li>• Tempo</li> <li>• Phasing and transitions</li> <li>• Culmination*</li> <li>• Operational reach*</li> <li>• Risk</li> </ul>
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Figure 5. Elements of Operational Art

Source: Headquarters, Department of the Army, Army Doctrine Reference Publication 5-0, *The Operations Process* (Washington, DC: Government Printing Office, 2012), 2-4.

When framing solutions that integrate and synchronize the elements of combat power, information operations are critical to winning in domains like public perception. Porter Abbot suggests, “narrative is the principle way in which our species makes sense of space and time; it literally enables one to ‘shape time’.”<sup>74</sup> The rhetoric of narrative is power. It can explain causation or create normalization for life’s events.<sup>75</sup> T. E. Lawrence, understanding the psychology of war and the need to influence regional and international audiences created a narrative about the EEF and Arab Army that shaped public perception around the world.<sup>76</sup> As a subordinate to General Allenby, Lawrence’s narrative was an integral part of the synchronization of tactical and strategic actions that would lead to the defeat of the Ottoman Empire and place the British in a continuing position of relative advantage throughout the region for decades after the war.

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<sup>74</sup> H. Porter Abbott, *The Cambridge Introduction to Narrative* (Cambridge, UK: Cambridge University Press, 2002), 10.

<sup>75</sup> *Ibid.*, 40-44.

<sup>76</sup> Lawrence, *Seven Pillars of Wisdom*, 201.

Working with the British War Department, General Allenby had the Press Bureau produce a D-Notice reminding the press how they should approach the British Army's Middle Eastern operations. The notice said:

The attention of the press is again drawn to the undesirability of publishing any article paragraph or picture suggesting that military operations against Turkey are in any sense a Holy War, a modern Crusade, or having anything whatever to do with religious questions. The British Empire is said to contain a hundred million Muhammadan subjects of the King and it is obviously mischievous to suggest that our quarrel with Turkey is one between Christianity and Islam.<sup>77</sup>

The desire to avoid antagonizing non-Christian opinion around the world, and particularly in the British Empire, led Lloyd George to establish guidelines for how General Allenby would enter the city of Jerusalem. The EEF would secure and protect all holy sites (Christian and Muslim) and Allenby's entrance would be the polar opposite from Kaiser Wilhelm's grande entrance procession in 1898. He would enter the city on foot surrounded by all the various nationalities within the EEF, especially Muslims, during public ceremonies.<sup>78</sup>

The desire of the British narrative was to ensure the local populace in Palestine knew the British were liberators, here to free them of the oppressive and vile Germans. To further this image, the British would intentionally ensure their Muslim soldiers from throughout the empire and their Arab allies were always in the forefront during periods of engagement with civilians. With a strategy guided by the elements of operational art supported by a strong narrative, the EEF was ready to conduct a decisive campaign.

Although ADM and the elements of operational art did not exist in 1917, if one were to develop an operational approach guided by the elements of operational art for the Palestine campaign it would allow current leaders to understand the logic behind actions and clearly show

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<sup>77</sup> Kitchen, 72.

<sup>78</sup> Ibid., 73.

the linkage between tactical actions and strategic objectives. A retrospective operational approach is listed below.

At End State, friendly forces control Palestine. The British Empire and its key terrain (Suez Canal) are secure. The Turkish Army is defeated and the Turkish government withdraws from the war. The civil population successfully transitions authority as prescribed in post-war settlements. The Center of Gravity (COG) for the Turkish Army is its command and control nodes in Jerusalem, Amman, and Damascus. These nodes hold all the radiotelegraph equipment and key staff to coordinate and synchronize land and air forces. Removal of the COG will disintegrate the Turkish Army.<sup>79</sup>

Jerusalem, Amman, and Damascus are Decisive Points because they are the locations of the command and control nodes, supply depots, and the German/Turkish airfields. Additionally, they hold significant symbolic value in demonstrating the legitimacy of the EEF narrative that they are a force of good to liberate the citizens of the evil Germans who have been holding Islam hostage. Ground Lines of Operations must extend from Gaza north thru Amman and Damascus, which will require significant infantry to secure and engineers to improve roads, build new rail lines, and install hundreds of miles of telephone wire. Ground lines must link to sea lines vicinity Jaffa, Haifa, Beirut, and Tripoli to extend Operational Reach, maintain Tempo, and prevent Culmination. Aerial lines of operation must project forward one hundred miles from the forward line of troops to provide freedom of maneuver to ground forces and deny enemy artillery or air interdiction. Additionally, aerial information collection will enable ground forces to maintain Tempo, inform decision points for Phasing or Transitions, and reduce Risk.

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<sup>79</sup> ADRP 3-0, 2-3. Disintegrate means to disrupt the enemy's command and control system, degrading its ability to conduct operations while leading to rapid collapse of the enemy's capabilities or will to fight.

Combat power will project from the current Basing at Gaza, but each subsequent seizure of a major port will rapidly become another base. This will enable redundancy and further projection of combat power to maintain Tempo, extend Operational Reach, and prevent Culmination. This operation will apply simultaneous and sequential operations with audacity to develop situations. This will present more dilemmas to the Turkish forces than they can effectively handle forcing them to risk their force and create opportunities to exploit. The key is to balance Tempo with Basing, Phasing/Transitions, and Culmination to mitigate Risk and ensure victory.

The severity of Risk is high, but the probability can reduce significantly through detailed planning that maximizes Tempo towards the disintegration of the COG. Risk will also reduce through an integrated strategic narrative employing regional and international media (radio and newspapers) and joint inter-organizational multinational partners, especially the Arab Army and Egyptian forces to spread information directly to the local population.

The final solution General Allenby had to produce was an effective way to integrate the joint inter-organizational multinational capabilities of the EEF in a manner that facilitates decisive battlefield victories through maneuver warfare, not attrition. The extensive training conducted during the summer of 1918 was a revolutionary integration of cross-domain capabilities. TRADOC Pamphlet 525-3-1, *The U.S. Army Operating Concept, Win in a Complex World*, calls joint combined arms operations, the “synchronized, simultaneous, or sequential application of two or more arms or elements of one service, along with joint, inter-organizational, and multinational capabilities combined with leadership and education across services to ensure

unity of effort and create multiple dilemmas for the enemy to seize, retain, and exploit the initiative.”<sup>80</sup>

Through actions similar to joint combined arms operations, the British were able to present multiple dilemmas to compel the Turkish Army to assume risk and take actions that would render them incapable of effectively responding. The application of air, naval, and land combat power of the British Empire with the irregular warfare capabilities of the Arab Army achieved decisive battlefield results. The British complemented these operations with a mass media campaign that influenced regional and global audiences to win beyond the physical battleground in contested spaces such as public perception, which set the conditions to win at the strategic level across the elements of national power for decades following post-war settlements.

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<sup>80</sup> Department of the Army, Headquarters, US Army, TRADOC Pamphlet 525-3-1, *The U.S. Army Operating Concept, Win in a Complex World* (Fort Monroe, VA: US Army Training and Doctrine Command, 2014), 47.

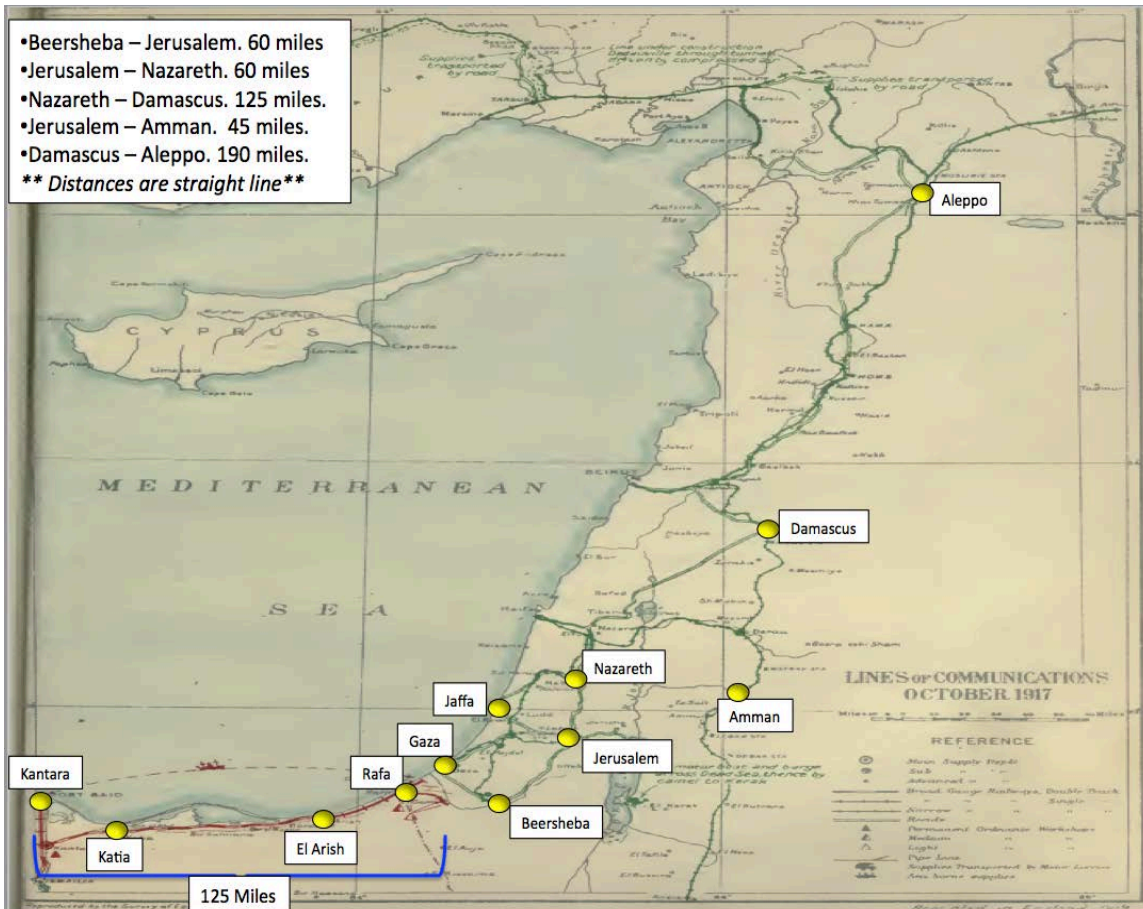


Figure 6. The Egyptian Expeditionary Force Campaign

*Source:* General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G., Charles H.C. Pirie-Gordon, and Edwards H. Metcalf, *A Brief Record of the Advance of the Egyptian Expeditionary Force under the Command of General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G, July 1917 to October 1918*, 2nd ed. (London: His Majesty's Stationery Office, 1919), plate 2.

## Checkpoints: Continuous Route Refinement

Army Doctrinal Reference Publication 1-02, *Operational Terms and Military Symbols*, defines a checkpoint as “a predetermined point on the ground used to control movement, tactical



maneuver, and orientation.”<sup>81</sup> This section reviews the fourth activity of ADM, reframing and how General Allenby deliberately build in phases and transitions into his campaign to serve a checkpoint to allow the EEF to reframe the situation prior to beginning the next operation. These planning efforts reduced risk, prevented culmination, and maintained continuous tempo.

Reframing includes revisiting early hypotheses, conclusions, and the operational approach that underpins the current plan. In reframing, the commander and staff revise their understanding of the OE and problem. If required, they develop a new operational approach to overcome the challenges or opportunities that precipitated the need to reframe.<sup>82</sup> Actions will change the complex system, often in unpredictable ways, thus regular reframing is required to understand emergent responses and to develop appropriate reactions. According to Eliot Cohen, it is the failure to learn, anticipate, and adapt that often leads to military misfortunes.<sup>83</sup> The ability to reframe or learn is what Donald Schoen labels reflecting. Schoen describes reflection on action, “as the way of thinking back on what we have done in order to discover how our action may have contributed to an unexpected outcome.”<sup>84</sup> He further illustrates reflection in action, “is to think about actions in the present period of time when we can still make a difference to the situation at hand.”<sup>85</sup> For the operational artist, the ability to reframe “in the moment” and “after the event” is critical to making timely decisions that gain or maintain positions of relative advantage.

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<sup>81</sup> Headquarters, Department of the Army, Army Doctrinal Reference Publication 1-02, *Operational Terms and Military Symbols* (Washington, DC: Government Printing Office, 2012), 1-6.

<sup>82</sup> ATP 5-0.1, 6-2.

<sup>83</sup> Eliot A. Cohen and John Gooch, *Military Misfortunes: The Anatomy of Failure in War* (New York: The Free Press, 1991), 26.

<sup>84</sup> Donald A. Schön, *Educating the Reflective Practitioner* (San Francisco: Jossey-Bass, 1987), 26.

<sup>85</sup> *Ibid.*

General Allenby continually reframed during the course of his campaign to ensure he was either adhering to his original campaign plan because his assumptions were still valid at that time or he adjusted the campaign plan to align the elements of operational art to better reflect changes to the OE. He would reframe after the seizure of Jerusalem, his raid on Amman, and the attack to seize Damascus.

## Checkpoint One: The Third Gaza Campaign

General Allenby's first action was a sixty-day battle (28 October-31 December 1917) commonly referred to as the Third Gaza Campaign to set it apart from Murray's failures. This operation ended with the seizure of the port of Jaffa and the Turkish General Head Quarters in Jerusalem. It focused on the disintegration of the COG by seizing a decisive point and a new base. These actions would put the EEF in a position of continuing relative advantage whereby they would increase their operational reach to their second decisive point, Amman.

On 28 October 1917, the Royal Air Force (RAF) initiated the attack in the east at Beersheba. "The RAF not only gained valuable and timely information for General Headquarters (GHQ), but also repeatedly attacked the enemy's troops and transports with bombs and machine gun fire from low altitudes," inflicting considerable losses at ranges up to one hundred miles behind the front lines.<sup>86</sup> The ability to engage uncommitted echelons, and disrupt command and control nodes, sustainment facilities, and enemy airfields enabled freedom of maneuver to the main body and created the conditions for their successful attack and pursuit.

The Turks at Beersheba were completely surprised.<sup>87</sup> The combination of massed artillery and infantry, the speed and mobility of the cavalry, and the continuous pressure of the RAF

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<sup>86</sup> Allenby, Pirie-Gordon, and Metcalf, 13.

<sup>87</sup> *Ibid.*, 3.

presented too many dilemmas to the Turks. The design of Allenby's campaign physically and cognitively outmaneuvered his enemy, which reduced risk and enabled mission success.

With Beersheba and the right flank secure, joint fires massed on the left flank and the assault towards Jaffa began. The RAF and Royal Navy, along with a French battleship, conducted a bombardment of the Gaza defenses in preparation for the assault along the left flank.<sup>88</sup> From 1 to 8 November, British forces aggressively attacked the prepared Turkish defensive positions and by 9 November, transitioned to a general pursuit as the Turks rapidly withdrew north. Allenby's instructions issued on 9 November for the mounted troops were to "press the enemy relentlessly."<sup>89</sup>

By 14 November, the Turkish Army broke into two parts, which retired north and east respectively. Allenby wrote, "in fifteen days our force had advanced 60 miles on the right and 40 on the left . . . over 9,000 prisoners, about eight guns, more than 100 machine guns, and very large quantities of ammunition and other stores had been captured."<sup>90</sup> The EEF successfully seized a new base with the port of Jaffa, and a decisive point with the Turkish General Head Quarters within Jerusalem.

The initial EEF offensive to seize Jerusalem accomplished the 1929 goal of the Soviet Deep Battle Doctrine Theory of War to advance (seventy-five to ninety kilometers), which is (forty-six to fifty-five miles). It achieved this with a combination of joint combined arms maneuver where joint fires and aviation would shape the uncommitted echelons and enable massed infantry and artillery to penetrate a defensive zone to allow a shock or strike force to

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<sup>88</sup> Allenby, Pirie-Gordon, and Metcalf, 2.

<sup>89</sup> Ibid., 6.

<sup>90</sup> Ibid., 7.

conduct a deep envelopment; therefore creating a classic hammer (infantry/artillery/aviation) and anvil (cavalry) whereby the enemy force has been presented more dilemmas than they are able to handle. This action, guided by the elements of operation art, deliberately manages risk through phases and transitions that account for basing, culmination, and operational reach to maintain an appropriate tempo to achieve the decisive points. This resulted in a position of relative advantage for the EEF's next battle, for as Tuchachevsky wrote, victory would result from a series of deep battles, not a single decisive one.<sup>91</sup>

The British used the tactical victory to confirm and promote the strategic narrative. Allenby's 16 December 1917 dispatch to the Secretary of State for War was republished within *The London Gazette* and other publications like *Al Mokattam*. British intelligence said the paper was "printed in Cairo and published by Syrian gentlemen of high standing who have always supported the British, its area of circulation extends from the northwest of Africa in a continuous line through Persia to the borders of Afghanistan, and its reputation is so high that during the war it was a deadly crime in the eyes of the Germans or Turks to possess a copy."<sup>92</sup> Because of the coordinated narrative, a global audience was reading about the British success or hearing about it over the radio, the whole point of T. E. Lawrence's psychological approach to warfare.<sup>93</sup>

T. E. Lawrence was keenly aware of the global audience, the need to demonstrate legitimacy of the Arab cause to continue support from London, as well as being able to strike fear within the hearts of Turks. Lawrence said, "the printing press, and each newly discovered method

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<sup>91</sup> Glantz, 22.

<sup>92</sup> Massey, *Allenby's Final Triumph*, 248.

<sup>93</sup> Lawrence, *Seven Pillars of Wisdom*, 201.

of communication favored the intellectual above the physical.”<sup>94</sup> Allenby and Lawrence looked to exploit the technological revolutions of this era to gain and maintain his position of advantage and to dominate across multiple domains, especially public perception.

The Third Gaza Campaign demonstrated the value of the development of an army headquarters and three corps to facilitate the synchronized applications of joint combined arms operations. This organizational construct achieved decisive battlefield victories in line with the elements of operational art. The operation was simple, surprised the Turks, and had unity of command. The battle had clearly defined objectives for the offensive operation that massed in the east, then the west, which enabled joint maneuver through the land, maritime, and air domains. Most importantly, with the cooperation of the Press Bureau, local and international newspapers and radio stations, the Arab and British Armies demonstrated legitimacy and dominated public perception through their coordinated narrative.

Reflecting on action, the British realized the Turkish General Head Quarters relocated from Jerusalem to Amman. Amman was within the operational reach of the new British base in Jerusalem, as well as their Arab partners led by Sherif Feisal and T. E. Lawrence. The Third Gaza Campaign seized one decisive point and created an opportunity to mass combat power against the Turkish COG and a second decisive point, Amman. General Allenby would reframe based upon the changes to the current OE and again develop an operational approach aligned with the elements of operational art to conduct a second joint combined arms operation to support tactical actions in pursuit of the strategic objective.

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<sup>94</sup> Lawrence, *Seven Pillars of Wisdom*, 201.

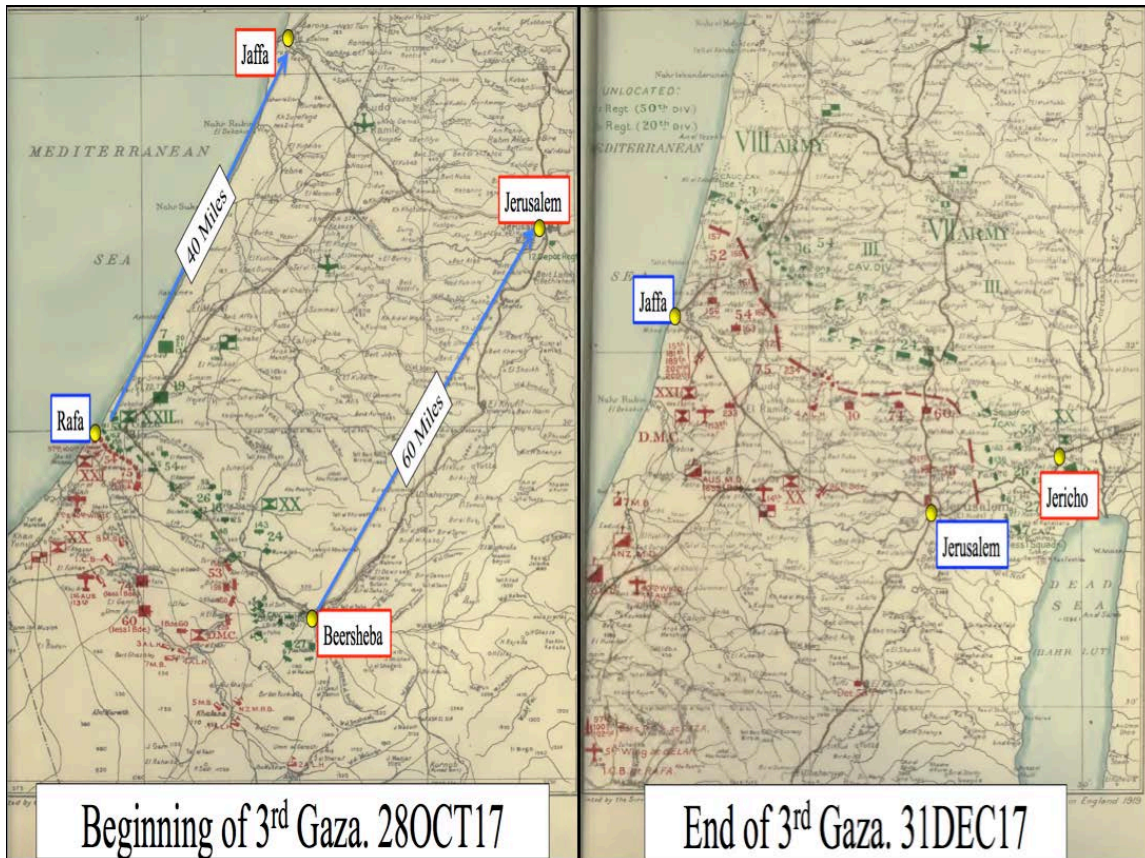


Figure 7. The Third Gaza Campaign

Source: General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G., Charles H.C. Pirie-Gordon, and Edwards H. Metcalf, *A Brief Record of the Advance of the Egyptian Expeditionary Force under the Command of General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G, July 1917 to October 1918*, 2nd ed. (London: His Majesty's Stationery Office, 1919), plate 30.

## Checkpoint Two: Amman

On 21 February 1918, the 60th and 53rd Divisions supported by the Australian Mounted Brigade and the RAF seized Jericho. This action secured the right flank from Jerusalem to the Jordan River and put a natural obstacle between the British and Turks. Jericho provides a secure location to mass combat power for a raid on Amman. The importance of Amman was clear to General Allenby when he said:

I determined to carry out a raid on Amman, with the object of destroying the viaduct and tunnel and, if this should be found impossible, to damage the railway as much as possible. Even if traffic was only interrupted for a short time, the mere threat of a repetition of this raid would compel the enemy to maintain a considerable force to cover Amman. The troops available to operate against the Arabs would be reduced, and possibly the enemy might transfer a portion of his reserves from the west to the east of the Jordan, thereby weakening his power to make or meet any attack on the main front.<sup>95</sup>

The raid was in line with his operational approach. It focused on the COG, and decisive points and was used as a phase that set the conditions for success in a subsequent phase. Finally, it would not only be a combined operation to build trust and interoperability with the Arab Army, but also set conditions for them to conduct future independent operations.

The EEF together with T. E. Lawrence and Feisal's Arab Army conducted the strategic raid on Amman from 21 March to 2 April 1918. William Massey notes, "the full object of the raid was not achieved."<sup>96</sup> They failed to destroy the tunnel and all the prescribed railways. However, Allenby's dispatch to the Secretary of State for War asserts, "the raid had succeeded in drawing northwards and retaining not only the Turkish troops that had been operating against the Arabs, but in addition a portion of the garrison of Ma'an and the stations further south."<sup>97</sup> He estimates Turkish troop concentrations in Amman nearly doubled because of the raid. This created freedom of maneuver for Sherif Feisal, supported by the RAF, to attack Ma'an and other outlying Turkish garrisons and rail lines unimpeded. While the raid did not decisively defeat the Turks, the combination of conventional and irregular warfare across multiple domains overwhelmed them with continuous dilemmas and helped shape the campaign for the decisive phase. However, that would have to wait since the Western Front was the priority for war efforts.

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<sup>95</sup> Allenby, Pirie-Gordon, and Metcalf, 17-18.

<sup>96</sup> Massey, *Allenby's Final Triumph*, 57.

<sup>97</sup> Allenby, Pirie-Gordon, and Metcalf, 20.

On 30 April 1918, General Allenby was ordered to send the 52nd Division, 74th Division, nine Yeomen regiments, six siege batteries, ten British battalions, and five machine gun companies to the Western Front. This was a significant loss of experienced combat power. Most of these men had fought in the theater since 1915. In return, the EEF received the 3rd (Lahore) Division from Mesopotamia, ten Indian battalions, and nine Indian cavalry regiments.<sup>98</sup>

William Massey noted the composition of the EEF now had “English, Scottish, Irish, and Welsh. Each colony in the Australian Common Wealth had many regiments of horse and foot. New Zealand and South Africa each provided a brigade. India provided Gurkas, Sikhs, Bikaners, and Punjabis. The Tea Planters of Ceylon came to Egypt as a rifle corps. Singapore and Hong-Kong each provided a mountain battery. The West Indies also sent a battalion.”<sup>99</sup> He further states, “Turkey was the only front of World War One that ‘Imperial troops were exclusively employed’.”<sup>100</sup> The British were devoted to training the new soldiers and by August, they “had passed through their tests with such consistently sound results that their fighting qualities were rated high.”<sup>101</sup>

Following the raid on Amman, whatever reflection the EEF conducted changed as their current state transformed dramatically with the rotation of forces. They transitioned from a period of high tempo offensive operations to a more defensive posture in order to train the new Imperial forces in joint combined arms operations. Throughout the summer as training progressed EEF leaders communicated changes in readiness and the dialogue between them generated shared

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<sup>98</sup> Allenby, Pirie-Gordon, and Metcalf, 21-22.

<sup>99</sup> Massey, *The Desert Campaigns*, 28-29.

<sup>100</sup> Massey, *Allenby's Final Triumph*, 20.

<sup>101</sup> *Ibid.*, 25.



understanding of what this force was capable of and how best to employ them. During this reframe, the British used deception to set the conditions for a final series of decisive battles.

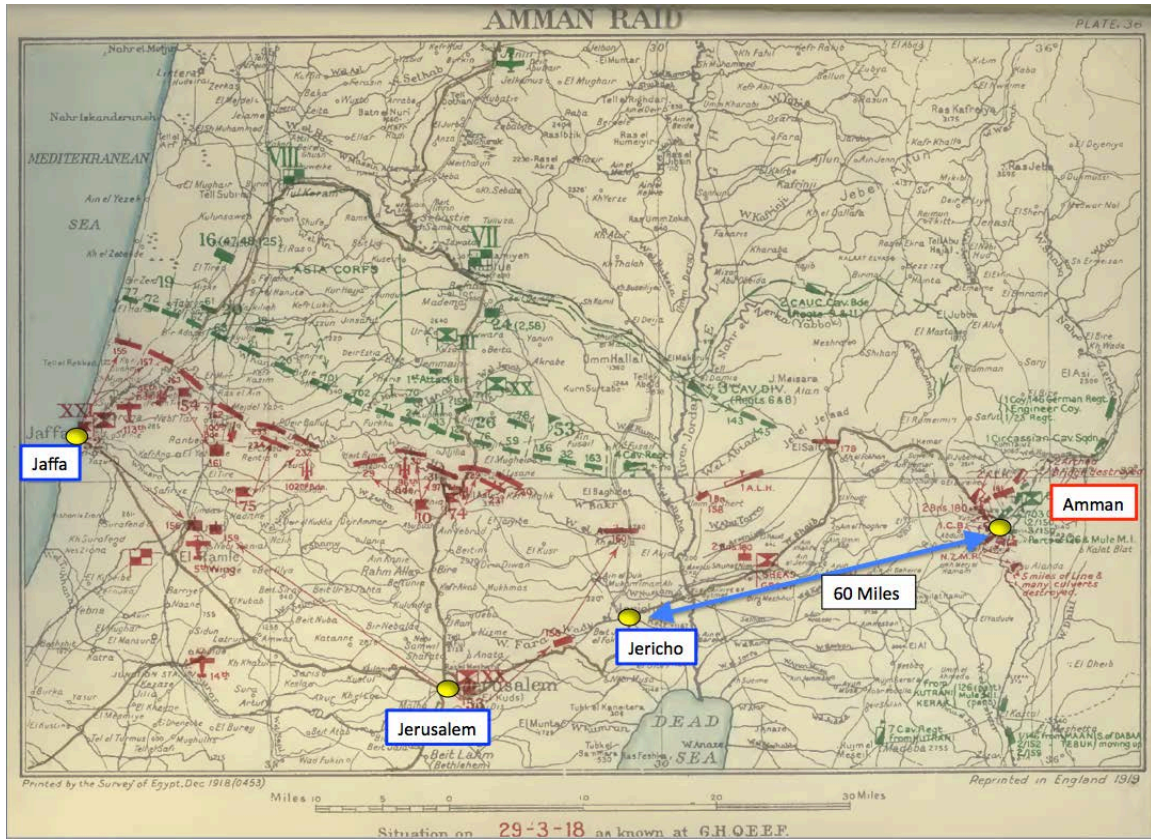


Figure 8. The Amman Raid, March 1918

Source: General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G., Charles H.C. Pirie-Gordon, and Edwards H. Metcalf, *A Brief Record of the Advance of the Egyptian Expeditionary Force under the Command of General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G, July 1917 to October 1918*, 2nd ed. (London: His Majesty's Stationery Office, 1919), plate 36.

## Checkpoint Three: The Use of Deception and Camouflage

Following the exchange of British divisions for Imperial forces in April 1918, the EEF trained diligently to master joint combined arms operations. They also brilliantly employed a series of deception operations to lull the Turks into believing the EEF decisive operation would be within the Jordan Valley towards Amman, when in reality it was along the coastal plains. British intelligence said, “he (General Liman von Sanders) believed there would be no general advance until Amman was captured. And it is certain nothing was done to disturb his ideas while we made preparations to destroy the VII and VIII Turkish Armies. We gave every appearance of inactivity and proper rest during the hot season of June and July. Yet, very quietly, 200,000 men were extremely busy during those summer months.”<sup>102</sup>

One infantry and three cavalry divisions left the Jordan Valley to the coastal sector completely unnoticed by the Turks. They left elaborate camouflage to deceive enemy scouts and aircraft. The three cavalry divisions left their tents, shelters, horse lines and camps untouched after the men ceased to occupy them.<sup>103</sup> On 17 September, two days before the attack began, a German aerial reconnaissance report to von Sanders said: “Far from being any diminution in the cavalry in the Jordan Valley, there was evidence of two or three more squadrons. Squadrons of fake horses!”<sup>104</sup>

Strict enforcement of discipline and joint integration further enabled the deception of the Yilderim. Achieving air superiority allowed the RAF to deny the majority of German aerial reconnaissance. Integrated into troop movements, the RAF provided pockets of air supremacy to

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<sup>102</sup> Massey, *Allenby's Final Triumph*, 95.

<sup>103</sup> *Ibid.*, 97.

<sup>104</sup> *Ibid.*

allow freedom of maneuver. “Horses were generally watered by bucket, but where animals had to be taken from their hiding places for this purpose strict rule prescribed that this should be done between noon and two o’clock when the Royal Air Force arranged to have fighting patrols in the air to keep the enemy aircraft away.”<sup>105</sup> Allenby said, “the chief factor in the secrecy maintained must be attributed to the supremacy in the air which had been obtained by the RAF. In June, on average, 100 German aircraft crossed our line per week. By August it was only 18 per week.”<sup>106</sup>

The EEF knew units would have to conduct multiple wet gap crossings. To emplace bridges without creating suspicion, the British in Cairo established a “bridge building course” for Egyptian civil engineers. “A scheme was devised about six weeks before the attack to establish schools for bridging instruction . . . The schools were continually building bridges and then dismantling them, and finally when the bridges were required for the operation, they were left in place.”<sup>107</sup>

These deception operations, synchronized with persistent pressure from the RAF and Arab Army, gave the appearance of the EEF preparing for an attack on Amman, as Limon Von Sanders anticipated. In reality, the combined Arab and RAF attacks on Derra, Kasr el Azrak, and Hauran were shaping operations to enable the destruction of the Turkish VIII and VII Armies along the coastal plain.<sup>108</sup> These actions reduced the risk to the operation and enabled the success of the British operational approach. The final reframe for General Allenby was a series of reflections in action as his army would attack north from Jerusalem to Damascus and eventually

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<sup>105</sup> Massey, *Allenby’s Final Triumph*, 98.

<sup>106</sup> Allenby, Pirie-Gordon, and Metcalf, 27.

<sup>107</sup> Massey, *Allenby’s Final Triumph*, 102.

<sup>108</sup> Allenby, Pirie-Gordon, and Metcalf, 27.

Aleppo. This attack would possess all the operational qualities Tukhachevsky and other military theorists hypothesized during the inter-war period.

## Checkpoint Four: The Final Attack

September 1918 saw the strength of the IV, VII, and VIII Turkish Armies assessed at “23,000 Rifles, 3,000 Sabers, and 340 Guns with a reserve of 3,000 rifles and 30 guns . . . With the exception of a small and scattered reserve, the whole of the Turkish force west of the Jordan was enclosed in a rectangle forty-five miles in length and only twelve miles in depth.”<sup>109</sup> As Turkish morale dropped, German officers advocated flogging and many other overbearing or brutal forms of correction.<sup>110</sup> This developed animosity and “all German officers were to have a weapon on them at all times so as not to be in a defenseless position.”<sup>111</sup> English propaganda contributed to the degrading enemy morale by stating, “the British were simply and solely carrying on the war against the Turks in order to drive the Germans from the soil of Islam.”<sup>112</sup> The fact that the vast majority of the EEF were Muslims and that Sherif Feisals’ army joined the coalition, gave legitimacy to the message and helped to counter any claims of another crusade. It bolstered active and passive support from the local populace and made it difficult for German soldiers to conduct any activities in public for fear of reprisal. Allenby was winning the strategic narrative and public perception.

In contrast, the EEF had four cavalry divisions, two mounted divisions, seven infantry divisions, and the French detachment. The total ground force consisted of “12,000 Sabers, 57,000

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<sup>109</sup> Allenby, Pirie-Gordon, and Metcalf, 25.

<sup>110</sup> Massey, *Allenby's Final Triumph*, 28.

<sup>111</sup> Ibid.

<sup>112</sup> Ibid., 29.

Rifles, and 540 Guns.”<sup>113</sup> The British held qualitative and quantitative land advantages plus air and naval supremacy. Air and naval components combined with the large artillery force created overmatch with the delivery of joint fires. The superior mobility of the DMC created an advantage in speed to penetrate and engage rear echelons. The mounted force in conjunction with the RAF provided superior reconnaissance and security elements to protect the main body. The multinational coalition with the Arab Army held unique operational reach capabilities to strike areas the British could not and provided legitimacy to the EEF narrative as a force of liberation to the people of Palestine from the oppressive Germans. Having local armies liberate and be the first to enter major metropolitan centers like Amman, Damascus, and Aleppo, and assume responsibility for governance made the transition to stability operations significantly easier and freed British combat power for other operations.

The plan would be a basic hammer and anvil approach with depth and synchronization of a joint combined arms force. Based on the terrain, Allenby wanted to mass land and naval artillery and infantry along the coastal plain to penetrate the Turkish defense; then pass the DMC forward, supported by naval gunfire and the RAF, to seize El Afule, Beisan, and Derra. These vital points of the Turkish lines of communication were the only locations the IV, VII, and VIII Armies could retrograde to, and the point reinforcements would originate. The Yildermin also co-located their headquarters and supply depots at these locations; therefore, the seizure of these junctions would enable the capture or destruction of the Turkish Army's COG. EEF “Force Order No. 68” states, “the Turkish armies were to be destroyed . . . with the object of inflicting decisive defeat on the enemy.”<sup>114</sup> General Allenby wanted a decisive war of maneuver.

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<sup>113</sup> Allenby, Pirie-Gordon, and Metcalf, 25.

<sup>114</sup> Massey, *Allenby's Final Triumph*, 111.



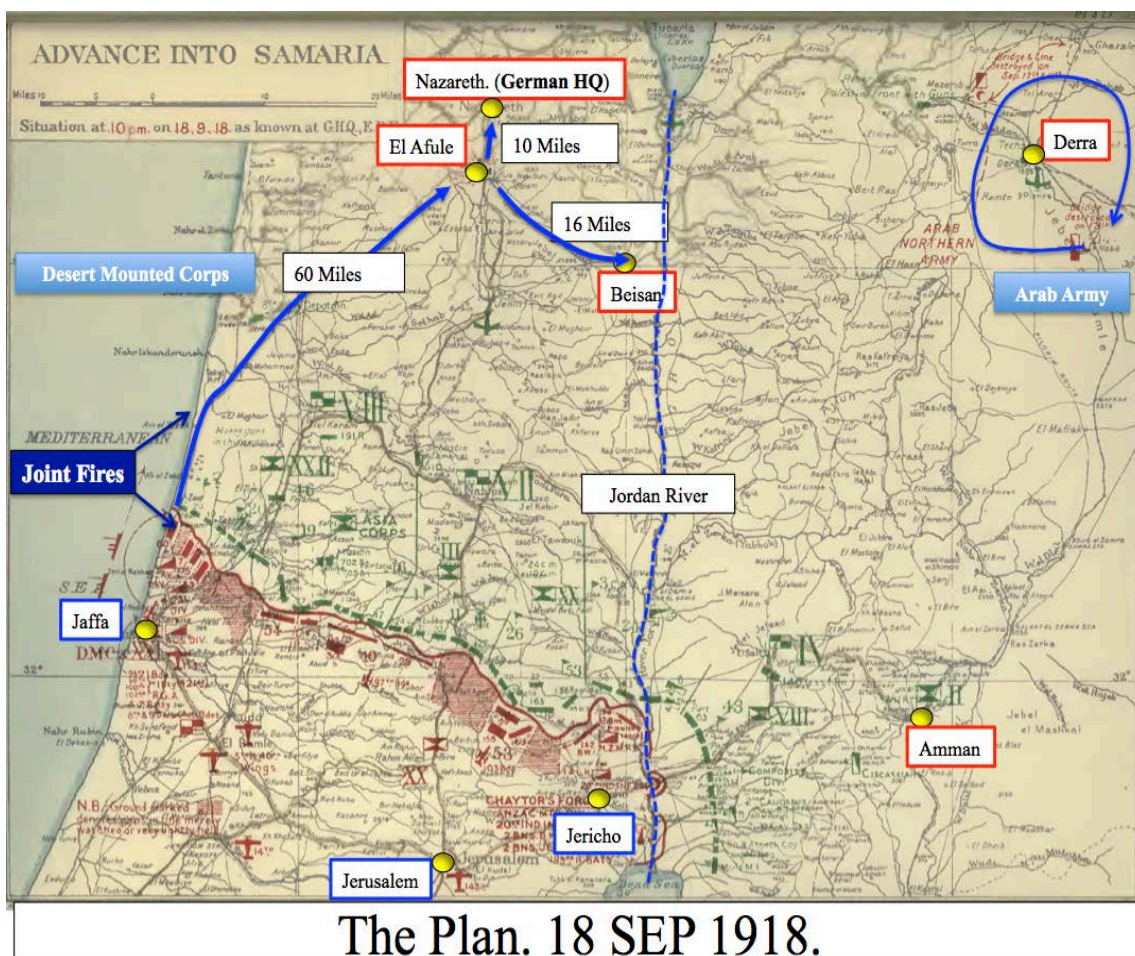


Figure 9. 18 September 1918

Source: General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G., Charles H.C. Pirie-Gordon, and Edwards H. Metcalf, *A Brief Record of the Advance of the Egyptian Expeditionary Force under the Command of General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G, July 1917 to October 1918*, 2nd ed. (London: His Majesty's Stationery Office, 1919), plate 41.

#### Destruction of VII and VIII Turkish Armies West of Jordan River

In the early morning hours of 19 September 1918, the attack began with RAF bombing the Turkish VII and VIII headquarters in Al Afule to disorganize their signal communications. Along the coastal highway, the artillery bombardment, supplemented by naval gunfire, enabled

freedom of maneuver for the DMC envelopment. The combination of speed, surprise, and overwhelming joint fires, enabled the British infantry to rapidly penetrate the Turkish defense and pass the cavalry. Generals who spent years on the Western Front told reporters “we have never seen such a picture of destruction.”<sup>115</sup> A captured Austrian field artillery officer said, “the advance was so rapid that we were taken completely by surprise.”<sup>116</sup> “The reason for the Turkish debacle was mainly the unexpected rapidity with which the British infantry broke up the 20th Division, which was regarded as the best in the Turkish Army.”<sup>117</sup> While tempo remains important, speed has a decisive quality of its own.

While the joint combined team led by the infantry was serving as a hammer driving the Turkish Army north, the DMC was conducting a deep envelopment to cut off the Turkish Army and force their surrender or destruction. The 4th Cavalry Division seized El Afule at 0800, 19 September. Upon arrival in El Afule, “the 2nd Lancers charged a Turkish Battalion, killed forty-six with the lance, and captured the remaining 470.”<sup>118</sup> The operational reach and tempo the DMC enjoyed throughout the campaign is a direct result of tremendous amounts of planning and preparation by the corps staff. The organization changes implemented by Allenby were now bearing fruit as continuous supply columns were sustaining these deep envelopments and the operational approach the staffs developed.

The DMC continued its deep envelopment on 20 September with the Nazareth Raid. The 13th Cavalry Brigade of the 5th Cavalry Division reached Nazareth, the site of the Yilderim

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<sup>115</sup> Massey, *Allenby's Final Triumph*, 183.

<sup>116</sup> *Ibid.*, 138.

<sup>117</sup> *Ibid.*, 139.

<sup>118</sup> Allenby, Pirie-Gordon, and Metcalf, 30.

General Head Quarters, at 0530 on 20 September and took 2,000 prisoners. “The entry into Nazareth was such a surprise to the enemy that some members of Liman von Sanders’ staff were captured in their pajamas.”<sup>119</sup> While Sanders was able to escape, the 5th Cavalry Division captured the majority of his papers and staff. They covered a distance of eighty miles in thirty-four hours. The speed and maneuverability of the cavalry shocked the Yilderim as they were completely unprepared to defend their rear echelon formation. Within thirty-six hours of the commencement of the battle, the Desert Mounted Corps controlled the main outlets of escape to the Turkish VII and VIII Armies. The anvil was in place for the destruction of the Yilderim.

From 21 to 22 September, the EEF continued to mass its combat power west of the Jordan River. The result was “practically the whole of the VIIth and VIIIth Turkish Armies were captured, with their guns and transport. As a result the IV Turkish Army, east of the Jordan retreated and Ma’an was evacuated.”<sup>120</sup>

Throughout this operation, the RAF and cavalry enjoyed a mutual relationship. The DMC often relied on the aerial reconnaissance and photography of the RAF to maneuver in areas beyond their map sheets.<sup>121</sup> The joint integration of reconnaissance and security operations was a key contributor to their rapid success. The RAF, with air superiority, supported the campaign through the conduct of aerial fighting, bombing, and reconnaissance. Official records show, “the machines of the squadron were in the air for 104 hours in the initial day, and on the following morning seventeen of the eighteen machines were reported ready for duty.”<sup>122</sup>

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<sup>119</sup> Massey, *Allenby's Final Triumph*, 152.

<sup>120</sup> Allenby, Pirie-Gordon, and Metcalf, 28.

<sup>121</sup> Massey, *Allenby's Final Triumph*, 149-150.

<sup>122</sup> Massey, *Allenby's Final Triumph*, 143.



At the completion of this first phase, the British War Department published General Allenby's telegrams in the London papers. He understood the need to message his success back home to bolster the support while simultaneously degrading confidence of both Turkish and German governmental leaders and possibly move them closer toward the negotiation table. The propaganda helped set the stage for a thrust into Amman and then Damascus.

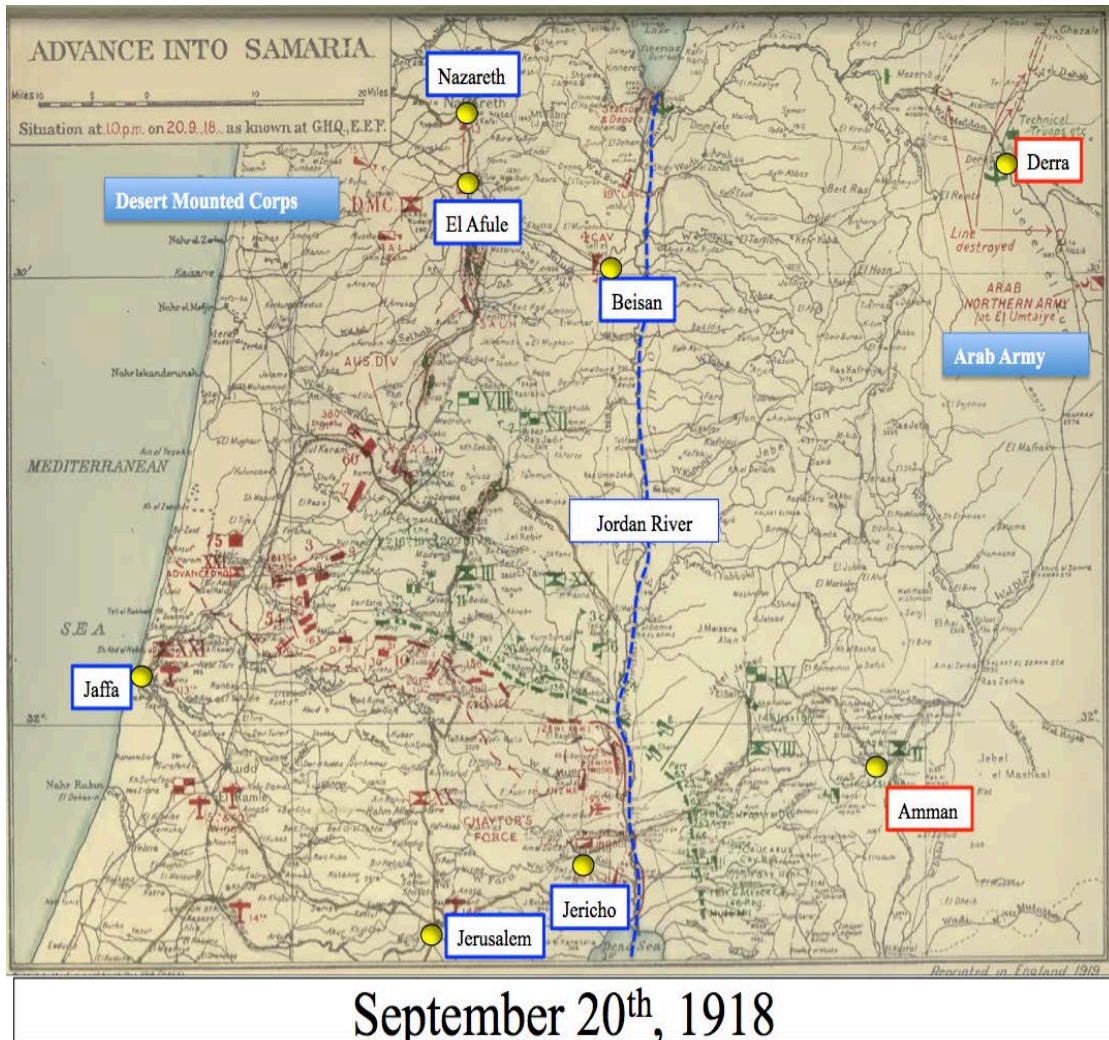


Figure 10. Envelopment of Turkish VIIth and VIIIth Armies

Source: General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G., Charles H.C. Pirie-Gordon, and Edwards H. Metcalf, *A Brief Record of the Advance of the Egyptian Expeditionary Force under the Command of General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G, July 1917 to October 1918*, 2nd ed. (London: His Majesty's Stationery Office, 1919), plate 43.

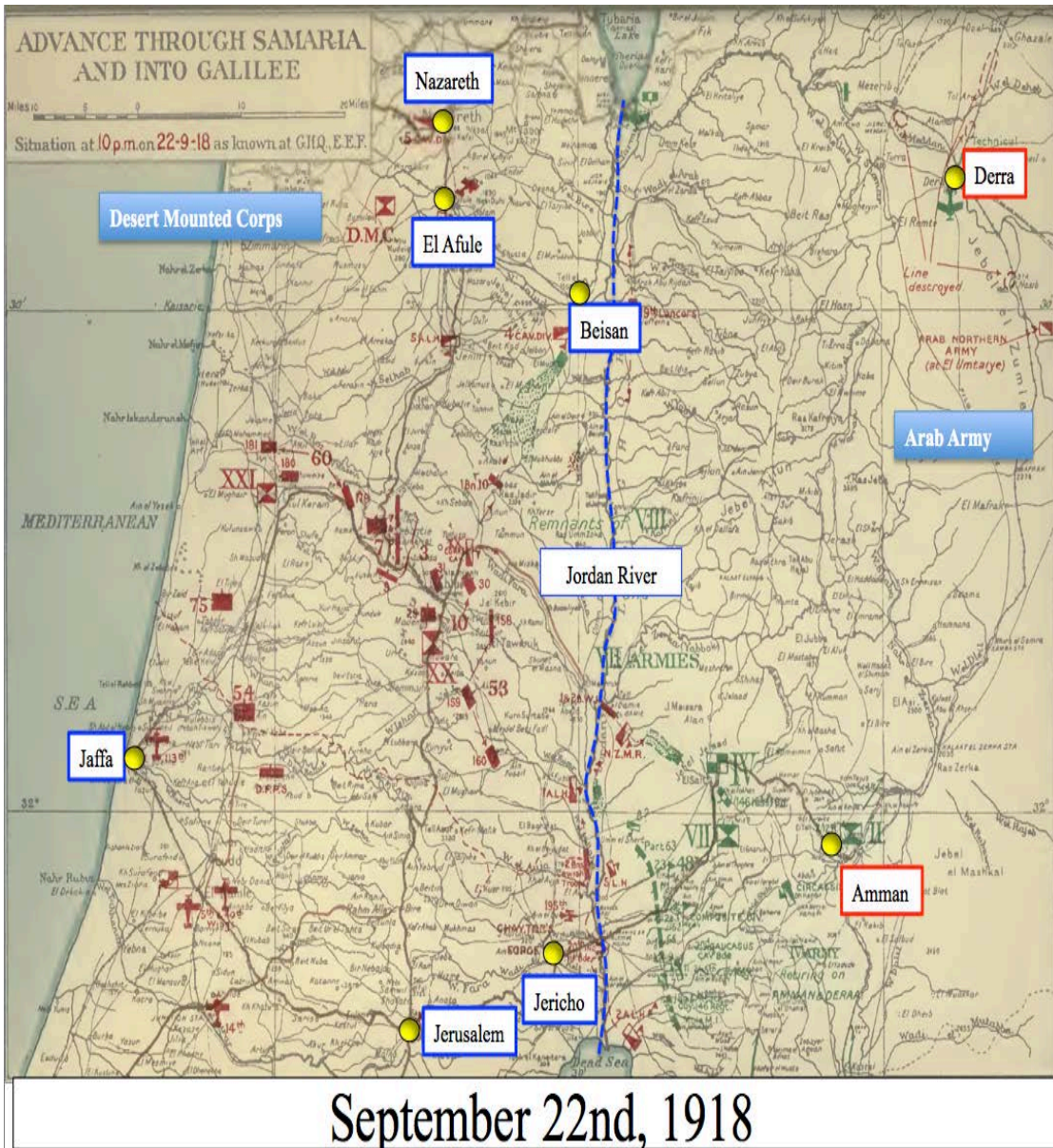


Figure 11. Destruction of Turkish VII and VIII Armies

Source: General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G., Charles H.C. Pirie-Gordon, and Edwards H. Metcalf, *A Brief Record of the Advance of the Egyptian Expeditionary Force under the Command of General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G, July 1917 to October 1918*, 2nd ed. (London: His Majesty's Stationery Office, 1919), plate 46.



## Amman and Damascus

After initially focusing on the VII and VIII Armies west of the Jordan River, on 23 September, the focus shifted toward the IV Turkish Army east of the Jordan.<sup>123</sup> Soon, “the position of the IV Army east of the Jordan was no longer tenable, and, by the morning of September 23rd, this army was in full retreat from Es Salt and Amman, pursued by the Australian and New Zealand Mounted Division, and bombed by the Royal Air Force.”<sup>124</sup>

The Turkish II Corps came into contact with Chaytor’s force of mounted infantry on 28 September at Leban Station. “The Turkish commander, seeing that escape was impossible, surrendered on the following day with 5,000 men.”<sup>125</sup> With the IV Army in retreat and the VII and VIII Armies no longer in existence, there were no obstacles between the EEF and Damascus. On 25 September, General Allenby ordered the DMC, along with the Arab Army, “to occupy Damascus and intercept the retreat of the remnants of the IV Turkish Army.”<sup>126</sup>

“In six days the Turkish VIII, VII, and IV Armies had either been captured, destroyed, or were in a position from which they could not extricate themselves.”<sup>127</sup> These tactical actions would influence the geo-political outcomes of the war and post-war settlement terms. Allenby said, “it was of great importance at this critical period of the war, when the enemy, whether German, Austrian, Bulgarian, or Turk, knew he was beaten, that we should show the world that we were conquerors.”<sup>128</sup> Allenby knew from his experience as a cavalry regimental commander

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<sup>123</sup> Allenby, Pirie-Gordon, and Metcalf, 31-32.

<sup>124</sup> Ibid., 32.

<sup>125</sup> Ibid.

<sup>126</sup> Ibid.

<sup>127</sup> Massey, *Allenby’s Final Triumph*, 220.

<sup>128</sup> Massey, *Allenby’s Final Triumph*, 220.

in South Africa that, “soldiers don’t make wars. Politicians make wars, soldiers end it.”<sup>129</sup> To “end it” your opponent has to know he is defeated. Dolman said, “it is not the winner who typically decided when victory in a war has been achieved. It’s the loser.”<sup>130</sup> The lessons he learned from Africa drove him to think strategically about the conduct of war. These would not be isolated tactical defeats of the Yildermin Army, but strategic actions that influence global public perception and national leaders to rapidly end the war and establish favorable post-war settlement conditions for the allies.

Following the seizure of Amman, the EEF pursued the Turks to Damascus. On 30 September 1918, Feisal and the Arab Army entered Damascus amidst scenes of great enthusiasm while the 4th, 5th, and Australian Cavalry Divisions secured the surrounding towns.<sup>131</sup> Following an operational pause the EEF continued north to seize Homs and Aleppo. By 26 October 1918, the EEF had captured 75,000 prisoners of war.<sup>132</sup> The EEFs application of tactical actions achieved the strategic objective of securing the Suez Canal and the Empire and removing the Turks from the war. This left Germany isolated and with few military or political options to continue the war.

From 19 September to 31 October, General Edmund Allenby was in a constant cycle of reframing. He was continually reflecting in action, and reflecting on action to understand how the operating environment changed, what problems or opportunities existed, and refining or developing new operational approaches that incorporated the elements of operational art to seize,

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<sup>129</sup> Brian Gardner, *Allenby of Arabia, Lawrence’s General* (New York: Coward-McCann, 1966), 22.

<sup>130</sup> Dolman, 7.

<sup>131</sup> Allenby, Pirie-Gordon, and Metcalf, 32-33.

<sup>132</sup> *Ibid.*, 35.

retain, and exploit the initiative. The continual exercise of reframing enabled the EEF to arrange tactical actions in time, space, and purpose in pursuit of strategic objectives. As a result, like he did in South Africa, General Allenby ended the conflict the politicians initiated.

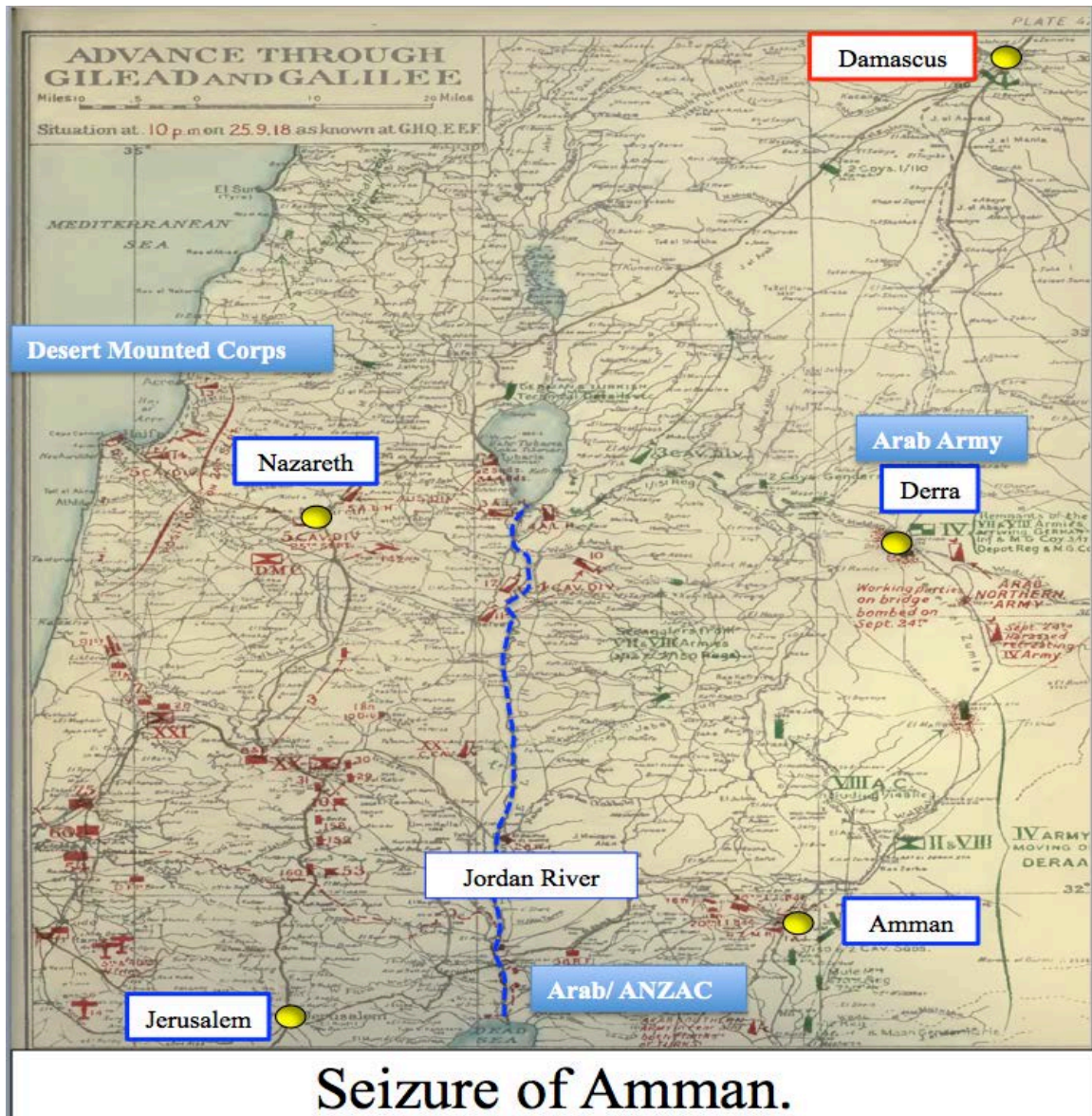


Figure 12. Seizure of Amman, 25 September 1918

Source: General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G., Charles H.C. Pirie-Gordon, and Edwards H. Metcalf, *A Brief Record of the Advance of the Egyptian Expeditionary Force under the Command of General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G, July 1917 to October 1918*, 2nd ed. (London: His Majesty's Stationery Office, 1919), plate 47.

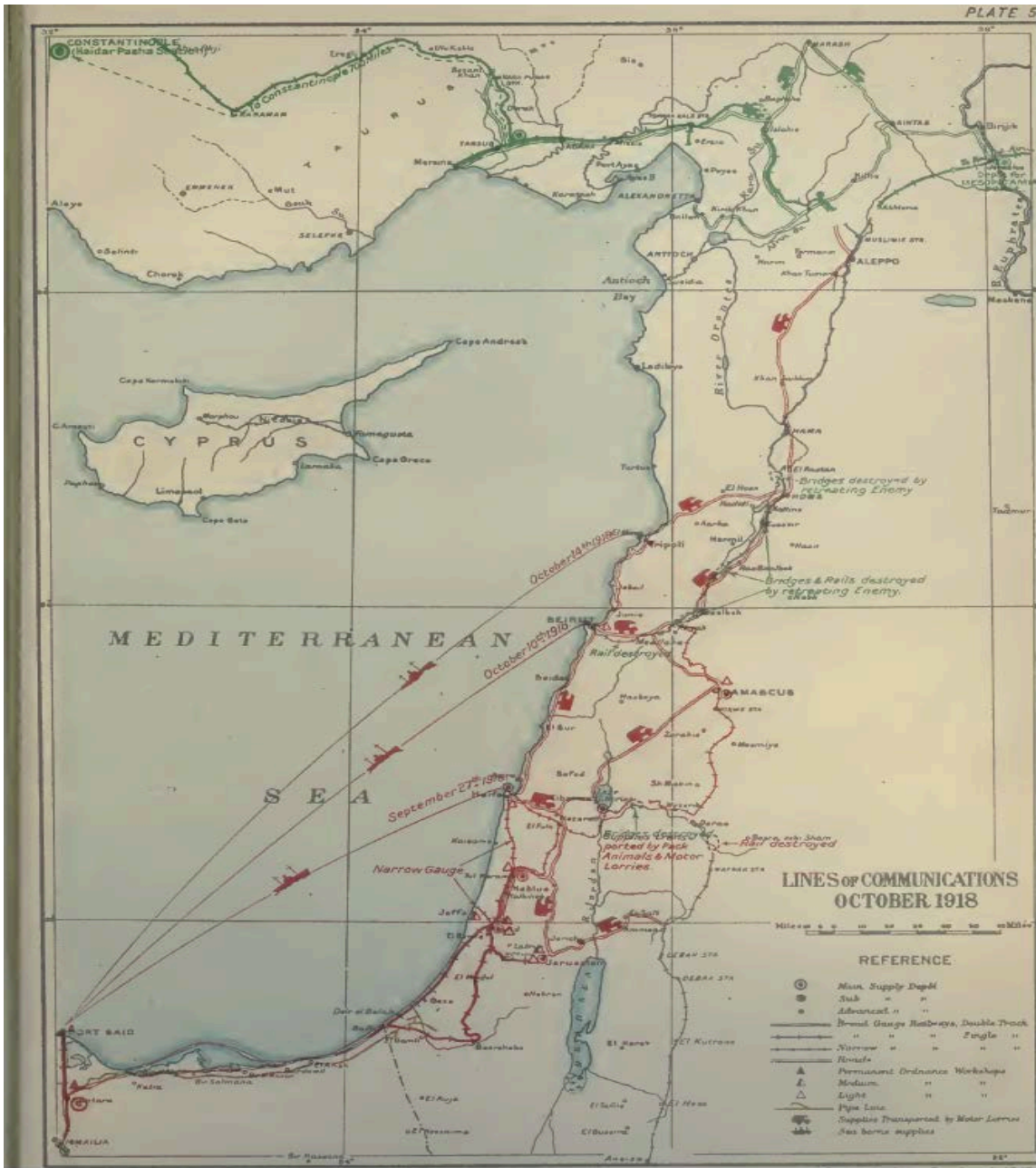


Figure 13. Joint Expeditionary Logistics

Source: General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G., Charles H.C. Pirie-Gordon, and Edwards H. Metcalf, *A Brief Record of the Advance of the Egyptian Expeditionary Force under the Command of General Sir Edmund H.H. Allenby, G.C.B., G.C.M.G, July 1917 to October 1918*, 2nd ed. (London: His Majesty's Stationery Office, 1919), plate 54.

## Conclusion

The British led EEF serves as the missing link in the evolution of operational art. This campaign dispels the popular narrative that all leaders of World War One were incompetent and unable to change their doctrine and tactics to acknowledge and apply technological evolutions. The campaign demonstrates clearly how to develop a joint task force and apply joint combined arms operations in pursuit of unified action. While General Tuchachevsky may have been credited with acknowledging that modern operations have evolved from single one-day decisive battle into campaigns involving a series of battles over extended distances, General Allenby achieved what the Soviets, Germans, and Allies would spend the next two decades trying to replicate.

While neither operational art nor design existed in 1917, General Allenby demonstrated an ability to think critically and creatively that aligns with these theories. He took time to understand his environment, build a collaborative team to study the problem, and innovate solutions. Then, most importantly, he remained humble enough to continually reassess his logic and outcomes to ensure his assumptions were still valid, and adjust his course of action when required. He developed a way of tactical action currently labeled as joint combined arms operations, but only because he understood the strategic military and political aims. He understood that the application of these tactics repeated over time and space would achieve his purpose.

Complexity theories help leaders understand how to frame their OE and provide context to the relationships that exist and how they are structured. This offers the ability to determine tendencies within the system and determine the probabilities of emergent actions. Understanding the current state, one can put the stated strategic and or political objectives in perspective to frame the desired future state. The point(s) of friction preventing the attainment of the desired future

state can be internal or external. Once identified operational artists can then apply the elements of operational art to develop an operational approach to synchronize and coordinate the necessary tactical actions to achieve strategic objectives. Finally, the process of continually reframing, reflecting on action or reflecting in action, enables leaders to adapt to change more rapidly than their adversary to seize, retain, and exploit the initiative to win in a complex world.

General Murray achieved significant logistical advancements for the EEF, but his inept battlefield management at First and Second Gaza Campaigns resulted in a lack of trust with his subordinate corps and division commanders. These battles demonstrated clearly that Turkish forces and their German advisors had grasped many of the tenets that made modern battle so deadly. Following the defeats at First and Second Gaza, EEF leaders lost confidence in General Murray. Allenby's arrival and development of modern corps and division organizations enabled the execution of joint combined arms operations to maximize the qualitative and quantitative superiority of the EEF. He developed a joint task force that executed unified action and applied operational art to design a series of tactical actions to in pursuit of strategic objectives. Through rigorous training and enforcement of discipline and standards morale increased as Soldiers trusted the chain of command.

General Edmund Allenby applied his tactical skills refined in Africa fighting the Boers and his operational experience leading 3rd Army on the Western Front to build a modern organization that could think and execute faster than its adversary. His life experiences shaped him to be able to effectively synchronize and apply joint inter-organizational multinational capabilities to achieve tactical victories on the battlefield, positively inform public perception, and influence strategic leaders. The results were decisive and led to a rapid collapse of the Ottoman Empire and decades of British influence within the region. The actions taken in Palestine display leaders and organizations that were able to thrive in a complex system by



understanding agents, their tendencies, and potential for emergent patterns. By thinking strategically about a problem, designing creative solutions, and integrating joint inter-organizational multinational capabilities the EEF presented dilemmas that surprised and overwhelmed the Turks. The application of innovative ideas with speed and mass across multiple domains devastates opponents as they are unable to effectively respond to the number of problems presented.

Subordinate leaders who are more intimate with the problem set often develop the original thoughts needed to win. Senior commanders must enable regular and effective communication with junior leaders to promote and integrate these ideas. Design does not happen in a vacuum, or in a division-planning cell. General Allenby could innovate because he walked the terrain and spoke to subordinates daily. He clearly understood the environment and problems, which enabled him to effectively visualize solutions. This instilled trust and confidence between the senior commander and his subordinate corps and divisions, which enabled successful joint combined arms operations.

Through the study of operational art and design leaders can recognize the world they are operating within, comprehend the desired future state they must work towards, and create effective operational approaches to achieve strategic objectives. It is his ability to simultaneously think conceptually and in detail, strategically and tactically, that enabled General Allenby to transform an organization to achieve a position of relative advantage in the region for decades following the end of the war. He was a man decades ahead of his time whose actions are still worthy of emulation one hundred years later.

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