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COVID-19

The COVID-19 Enemy is Still Advancing

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ABSTRACT: The US military has a historical precedence for dealing with a pandemic while simultaneously conducting large-scale combat operations. Two twentieth-century examples assess the extent to which the military adapted operations following an influenza outbreak, and make clear military and civilian leaders must balance strategic objectives when facing threat multipliers such as COVID-19.

The strategic environment remains uncertain, complex, and continues to change rapidly.¹ The novel coronavirus has validated this point, inducing a pivot in history and altering the landscape: on March 11, 2020, the World Health Organization declared Coronavirus Disease 2019 (COVID-19) a global pandemic.² “Now the trumpet summons us again—not as a call to bear arms . . . but a call to bear the burden of a long twilight struggle . . . a struggle against the common enemies of man: tyranny, poverty, disease, and war itself.”³ Although the virus seemingly has eclipsed what military leaders have trained to defeat—a visible adversary with agency—the virus bears a striking resemblance to a thinking enemy; it utilizes stealth, speed, and surprise.

Before COVID-19 gained momentum, the United States was responding to multiple dilemmas around the globe. In early 2020, tensions between the United States and Iran spiked following mutual retaliatory military actions in the aftermath of the US airstrike that killed the Islamic Revolutionary Guard Corps Commander, Major General Qassem Soleimani, triggering a standoff.

In Afghanistan, the United States was continuing to struggle with asymmetric warfare despite the doctrinal shift toward near-peer and large-scale combat operations.⁴ Terrorist and insurgent groups continued to present challenges to US, Afghan, and Coalition forces.⁵ Although US-Taliban negotiations were on the horizon, conditions were far from ideal. In January, the Department of Defense released a semiannual

1. Chairman of the Joint Chiefs of Staff (CJCS), *Joint Planning*, Joint Publication 5-0 (Washington DC: CJCS, 2017), 1-1.

2. US Department of Health and Human Services, *Guidance for Certifying Deaths Due to Coronavirus Disease 2019 (COVID-19)*, (Washington, DC: Centers for Disease Control, 2020), 1.

3. John F. Kennedy, presidential inaugural address (transcript), Washington, DC, January 20, 1961, <https://www.ourdocuments.gov/doc.php?flash=true&doc=91&page=transcript>.

4. Hew Strachan, “Learning lessons from Afghanistan: Two Imperatives,” *Parameters* 49, no. 3 (2019): 7.

5. DoD, *Enhancing Security and Stability in Afghanistan* (Washington, DC: Amazon Digital Services LLC, 2019), 25.

report on Afghanistan, which stated Taliban violence, coupled with al-Qaeda and ISIS-Khorasan operations in Afghanistan, continued.

In early 2020, escalating tensions in the Pacific were equally challenging. By the end of 2019, North Korea had fired at least 25 ballistic missiles in 13 launches, including tests of new short-range and submarine-launched ballistic missiles.⁶ The United States, with over 28,500 soldiers stationed in South Korea, had successfully avoided conflict while preventing North Korea's nuclear ambitions. But North Korea continued to reject peaceful negotiations with the United States and amplified its aggressive rhetoric against its southern neighbor and some in the region were questioning American commitment to and influence in northeast Asia.⁷

In Africa in early 2020, the US military continued to rotate forces. Al-Shabaab was the dominant insurgent terrorist organization operating from Somalia in the Horn of Africa. In 2012, al-Shabaab merged with al-Qaeda, and the enhanced group continued to maintain its tenacity.⁸ Similarly the influence of China and Russia had deepened in the region. Africa generally views China, its biggest trading partner, positively, and in October 2019, Russian President Vladimir Putin hosted the first Russia-Africa summit.⁹ In February, the Department of Defense deployed the Army's 1st Security Force Assistance Brigade in place of elements of the 101st Airborne Division to the continent to conduct train, advise, and assist missions.¹⁰ As of January 2020, over 5,000 US military personnel were deployed in Africa in support of US Africa Command.¹¹ In total, at the time of the declaration of the pandemic, the US military had over 171,000 active duty personnel deployed around the globe.¹²

The addition of COVID-19 to existing complex and nonlinear threats worldwide, including extreme weather, rising sea levels, and arctic warming, creates a new challenge and forces military leaders to

6. Colum Lynch, "North Korea Continues to Flout Trump, Advance Nuclear Ambitions," *Foreign Policy*, April 20, 2020, <https://foreignpolicy.com/2020/04/20/north-korea-trump-advance-nuclear-ambitions/>.

7. "American Steadfastness Is in Doubt in South Korea Thanks to Trump's Policies" *Washington Post*, November 23, 2019, https://www.washingtonpost.com/opinions/american-steadfastness-is-in-doubt-in-south-korea-thanks-to-trumps-policies/2019/11/23/efdaf63c-0bc4-11ea-97ac-a7ccc8dd1ebc_story.html.

8. Rajen Harshé, "Al Shabaab's Insurgency and the Somali Imbroglio in the Horn of Africa," Observer Research Foundation, July 7, 2020, <https://www.orfonline.org/expert-speak/al-shabaabs-insurgency-and-the-somali-imbroglio-in-the-horn-of-africa-69289/>.

9. Danielle Paquette, "Trump Administration Unveils Its New Africa Strategy—with Wins and Snags," *Washington Post*, June 19, 2019, https://www.washingtonpost.com/world/trump-administration-unveils-its-new-africa-strategy-with-wins-and-snags/2019/06/19/c751be4c-91f5-11e9-956a-88c291ab5c38_story.html.

10. Alyssa Farah, "Statement on the Deployment of Army's 1st Security Force Assistance Brigade to Africa," DoD (website), February 12, 2020, <https://www.defense.gov/Newsroom/Releases/Release/Article/2082314/statement-on-the-deployment-of-armys-1st-security-force-assistance-brigade-to-a/>.

11. Luis Martinez, "Pentagon to Decide Soon on Possible Troop Cut in West Africa" ABC News, January 16, 2020, <https://abcnews.go.com/Politics/pentagon-decide-troop-cut-west-africa/story?id=68342094>.

12. "Department of Defense Personnel," Defense Manpower Data Center.

rethink how to maintain global strategic initiatives. More importantly, the conventional threats in each region mentioned above persist. Put simply, the virus is a threat multiplier; it is unconventional with real impacts on national security.¹³ Threat multipliers intensify conditions that tip the scale for societies already vulnerable to social, political, and economic instability, compelling the United States and its allies and partners to respond.

While COVID-19 has made an effective assault against the United States and its allies, partners, and adversaries alike, Iran, North Korea, China, Russia, and terrorist groups continue to pose a threat to national security and would surely exploit opportunities to gain dominance. In other words, the enemy is still advancing. The military's challenge is to strike a balance between pursuing global opportunities while also protecting servicemembers, families, and civilian employees. While COVID-19 feels like an unfamiliar problem, the military has overcome this type of complexity before.

Historical Precedence

"One should not be surprised that diseases occur in a loosely constituted polity such as a multitude of states of various sizes: after all, they also occur in the marvelously structured organic whole of all living nature."¹⁴ The United States entered World War I in April 1917, one year before the outbreak of the influenza. The years of conflict saw the central powers of Germany, Austria-Hungary, and the Ottoman Empire fighting the Allies—Great Britain, the United States, France, Russia, Italy, and Japan.¹⁵ Even though Russia's decision to end the war via a separate peace treaty with Germany in March 1917 risked a death blow to the Allied cause, Britain, France, and other partners were able to absorb the shock thanks to the Americans.¹⁶ The United States shifted away from neutrality aimed at continental defense and found itself in the throes of a new strategic environment featuring aerial combat, chemical weapons, the unyielding gridlock of trench warfare, and a new invisible enemy.

Known as the Three Day Fever, Grippe, Grip, knock-me-down fever, Flanders Grippe, Spanish Grippe, and most commonly Spanish flu, this new strain of influenza struck all combatants without prejudice.¹⁷ The German Army reportedly lost 14,000 soldiers to influenza.¹⁸ The influenza pandemic of 1918–19 circled the globe in three waves:

13. Michael T. Klare, *All Hell Breaking Loose: The Pentagon's Perspective on Climate Change* (New York: Henry Holt and Company, 2019), 21.

14. Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1984), 374, Kindle.

15. Cynthia A. Roby, *Strategic Inventions of World War I* (New York: Cavendish Square Publishing, LLC, 2016), 5.

16. Kevin Hillstrom, *World War I and the Age of Modern Warfare* (Detroit, MI: Omnigraphics, Inc., 2013), 73.

17. Grant T. Harward, "Get the Boys Home—Toot Sweet," *Army History* 115 (Spring 2020): 29.

18. Peter C. Wever and Leo Van Bergen, "Death from 1918 Pandemic Influenza during the First World War: A Perspective from Personal and Anecdotal Evidence," *Influenza and Other Respiratory Viruses* 8, no. 5 (2014): 540.

spring 1918, fall 1918, and winter 1918–19.¹⁹ While there are several theories explaining the origins of the influenza pandemic, in recent years researchers such as Mark O. Humphries, Christopher Langford, Dorothy A. Pettit, and Janice Bailie have adopted the hypothesis that the influenza pandemic diffused as a result of the Chinese Labor Corps following the sinews of war, moving from China, to North America, to Europe, to Africa, and then back again.²⁰ Despite its origin, scholars widely agree the pandemic's explosion in the summer and autumn of 1918 can be explained by the massive movements of demobilized armies.²¹

By the summer of 1918, First Army was busily engaged in preparations for the Saint-Mihiel offensive.²² The Saint-Mihiel offensive was the first major operation of the American Expeditionary Force (AEF) and served as a proving ground for American soldiers and for General John J. Pershing, vindicating his insistence the American soldier fight as an independent entity with unique objectives and responsibilities.²³ The Saint-Mihiel offensive was the first time Pershing fielded an entire army with 550,000 troops.²⁴ The operation took place in trench warfare, a new tactical method requiring great detail and synchronization.

As a result of the rapid increase of American troops in Europe and subsequent Allied and American victories during the summer of 1918, in September the Allies successfully conducted a large convergent offensive movement against the German forces on the Western Front—the Meuse-Argonne offensive.²⁵ For the Allies, the Meuse-Argonne offensive coincided with the highly fatal second wave of influenza.²⁶ The high watermark for deaths in the United States came the week of October 4, 1918, with 6,160 officially recorded deaths and in the AEF, the week of October 11, 1918, there were 1,451 deaths from flu during the height of the American Meuse-Argonne campaign.²⁷ For the month of October the AEF evacuated some 110,000 patients, over a division per week, due to influenza.²⁸ Strategic success depended upon crippling the Germans. The American Army was to advance northward between the Meuse River and the Argonne Forest, supported on its left by the French Fourth Army west of the Argonne.²⁹ The First US Army, which reached a strength in early October of about 900,000 Americans and was

19. Mark Osborne Humphries, "Paths of Infection: The First World War and the Origins of the 1918 Influenza Pandemic," *War in History* 21, no. 1 (2013): 56.

20. Humphries, "Paths of Infection," 58.

21. Humphries, "Paths of Infection," 60.

22. American Battle Monuments Commission (ABMC), *American Armies and Battlefields in Europe: A History, Guide, and Reference Book* (Washington, DC: US Government Printing Office (GPO), 1938), 171.

23. Allan Kent Powell, ed., *Nels Anderson's World War I Diary* (Salt Lake City: University of Utah Press, 2013), 100.

24. Carol R. Byerly, *Fever of War: The Influenza Epidemic in the US Army during World War I* (New York: New York University Press, 2005), 99.

25. ABMC, *American Armies*, 167.

26. Wever and Van Bergen, "Death from 1918 Pandemic," 538.

27. Carol R. Byerly, *Fever of War*, 80.

28. Edward G. Lengel, ed., *A Companion to the Meuse-Argonne Campaign* (West Sussex, UK: John Wiley & Sons, 2014), 383.

29. ABMC, *American Armies*, 167.

reinforced by more than 100,000 French, was responsible for leading the offensive.³⁰

By the end of the Meuse-Argonne offensive, hundreds of thousands of soldiers had crossed the Atlantic, many traveling with and spreading the virus. Pandemic influenza struck all the armies, but the highest morbidity rate was found among the Americans as the disease sickened 26 percent of the US Army, over one million men.³¹ The pandemic struck at the climax of US military operations and created a new complexity for military leaders. The influenza clogged transportation lines along the battlefield, overwhelmed hospitals, killed thousands of soldiers, and rendered many more noneffective.³² Despite the pandemic's devastating effects, the military had no choice but to continue its assault into France until the November 11, 1918 Armistice.

Lessons from History

To paraphrase Helmuth von Moltke the Elder, no plan survives contact with the enemy. During World War I, the enemy was not only the German Army but the influenza pandemic. World War I produced 8.5 million casualties, remarkable by any measure.³³ But advanced planning against a known threat is not always enough. The influenza pandemic of 1918–19 killed approximately 40 million people worldwide.³⁴ With its common ally, pneumonia, influenza was the deadliest enemy to strike during that war, ignoring the Armistice to wage its third and final campaign during the first half of 1919.³⁵ Military leaders could not have predicted a pandemic would occur at the height of the war. Though we tend to think of World War I dangers in terms of artillery, gunfire, poisonous gas, and barbed wire, the influenza pandemic had a much greater impact on the US military than occasional references would suggest.³⁶

Military leaders struggled to combat the spread of the virus. Researcher Kathleen Fargey details Army experiences in five locations—Camp McClellan, Alabama; Camp Merritt, New Jersey; Camp Meade, Maryland; Camp Greenleaf, Georgia; and Camp Gièvres, France—between 1918 and 1919. Camp McClellan first experienced the influenza on September 20, 1918. Medical officers learned that by keeping buildings clean, airing out tents and bedding daily, exposing troops to fresh air, and keeping recovering patients isolated for an additional 10 days, they could mitigate the impacts of the flu. Despite officials quarantining the

30. ABMC, *American Armies*, 192.

31. Wever and Van Bergen, "Death from 1918 Pandemic," 539.

32. Carol R. Byerly, "The U.S. Military and the Influenza Pandemic of 1918–1919," *Public Health Reports* 125, supplemental 3 (2010): 89.

33. John Graham Royde-Smith and Dennis E. Showalter, "World War I," *Encyclopædia Britannica* (website), July 21, 2020, <https://www.britannica.com/event/World-War-I/Killed-wounded-and-missing>.

34. US Homeland Security Council, *National Strategy for Pandemic Influenza: Implementation Plan* (Washington, DC: The White House, 2006), 1.

35. Kathleen M. Fargey, "The Deadliest Enemy: The US Army and Influenza," *Army History* 111 (Spring 2019): 25.

36. Fargey, "The Deadliest Enemy," 25.

camp from October 2 to October 14, over 4,900 cases of influenza and pneumonia and about 228 reported deaths from these causes occurred there in October 1918.

Pandemic influenza arrived at Camp Merritt on September 16, 1918, and after a few days doctors realized the new flu cases were “of far greater severity” than earlier cases of the flu.³⁷ This camp was a critical hub for mobilization. Between December 1917 and November 1919, over 500,000 soldiers representing dozens of Army divisions deployed overseas. Camp (now Fort) Meade, Maryland, was another large cantonment established in 1917 to handle draftees. Camp Meade’s doctors were aware of influenza outbreaks at other Army camps and had cleared beds—moving patients, convalescents, and staff to tents—in anticipation of the flu’s arrival.

On September 23, 1918, the second and deadlier wave of the epidemic arrived at Camp Greenleaf. By October 26, there were roughly 5,160 flu cases and 999 cases of pneumonia resulting in 325 deaths.³⁸ In June 1918, the flu broke out in Camp Gièvres, in central France, among Chinese laborers. Many historians believe US troops carried the flu to France following outbreaks at fourteen large Army camps in the United States in the spring of 1918.³⁹ Desperation to build up troops in France led Army Chief of Staff Peyton March to reject recommendations from the medical experts to execute a one-week quarantine prior to embarkation and to reduce the capacity of troop ships. March would later agree to a 10 percent reduction in crowding on troopships, but that was all.⁴⁰

Despite the added complexity of the influenza, leaders adapted and never lost sight of their strategic objective to defeat the Germans. At Camp Humphreys, a US Army training camp in Virginia, leaders discovered crowding increased the spread of influenza as its incidence grew proportionally with the number of soldiers in the barracks.⁴¹ Similarly, Surgeon General Charles Richard recommended a one-week quarantine of all troops before embarkation and a reduction in the capacity of troopships by one-half.⁴² In October 1918, the US Army Medical Department recognized leaders could minimize influenza on troopships by transporting soldiers who had recovered from or been exposed to the flu. By mid-October, the practice of taking men who had already weathered the epidemic also reduced the influenza rates on troopships and in the AEF.⁴³ In similar efforts to contain the outbreak, the commander of Camp Upton, New York, Brigadier General John Skinner Mallory, placed the camp’s 30,000 inhabitants under quarantine, barring travel except on urgent business.⁴⁴

37. Fargey, “The Deadliest Enemy,” 27.

38. Fargey, “The Deadliest Enemy,” 29.

39. Fargey, “The Deadliest Enemy,” 30.

40. Byerly, “Pandemic of 1918–1919,” 90.

41. Wever and Van Bergen, “Death from 1918 Pandemic,” 543.

42. Byerly, “Pandemic of 1918–1919,” 89.

43. Byerly, “Pandemic of 1918–1919,” 90.

44. Byerly, “Pandemic of 1918–1919,” 87.

Pershing is another example of adaptable leadership. During then-Colonel George C. Marshall's assignment as the chief of operations for the First Army, he recounts life became "a succession of dangers, discomforts, and hungers, with a continuous pressure being exerted on the individual to do more than he felt himself or his organization capable of accomplishing."⁴⁵ By October 1918, First Army faced the enemy along 90 miles of the front between the Aire River and the Meuse River, one third of which was subject to continued assault.⁴⁶ Marshall adds, under these conditions "real leaders of the Army stood forth in bold contrast to those of ordinary clay."⁴⁷ First Army also faced the most deadly form of influenza that fall, which was soon accompanied by pneumonia; both peaked in October.⁴⁸ The pandemic and the Meuse-Argonne offensive stressed the entire medical system.⁴⁹

According to firsthand accounts by Marshall, October marked the crisis of battle both due to the enemy and to the rampant pessimism among high-ranking officers.⁵⁰ Organizations with weak and pessimistic leadership quickly grew ineffective unless a suitable commander was given charge. But Marshall recounts that throughout the crisis, Pershing carried himself with an air of relentless determination to push the operation to a decisive victory.⁵¹ Marshall adds Pershing's presence inspired confidence and his bearing convinced others the "weak-hearted would be eliminated and half measures would not be tolerated."⁵² During the northward advance, Marshall saw the spirit of competition was awakened in the American soldiers where "the men threw aside all thoughts of danger and fatigue in their efforts to exceed their neighbors."⁵³

The military was just beginning to understand the impacts of disease during battle.⁵⁴ Alexander Fleming was a Scottish physician-scientist recognized for discovering penicillin. When World War I broke out, Fleming served in the Army Medical Corps as a captain. During this time, he observed the death of many of his fellow soldiers, not always from wounds inflicted in battle, but from the ensuing uncontrolled infection. The primary means to combat infection was antiseptics, which frequently did more harm than good. In 1928, Fleming began experimenting with the common staphylococcal bacteria and was able to isolate a mold fluid he identified as a member of the genus *Penicillium*.⁵⁵

45. George C. Marshall, *Memoirs of My Services in the World War, 1917–1918*, ed. James Lawton Collins (New York: Houghton Mifflin, 1976), 175.

46. Marshall, *Memoirs of My Services*, 176.

47. Marshall, *Memoirs of My Services*, 175.

48. Fargey, "The Deadliest Enemy," 33.

49. Wever and Van Bergen, "Death from 1918 Pandemic," 540.

50. Marshall, *Memoirs of My Services*, 175.

51. Marshall, *Memoirs of My Services*, 176.

52. Marshall, *Memoirs of My Services*, 176.

53. Marshall, *Memoirs of My Services*, 192.

54. Leonard Porter Ayres, *The War with Germany: A Statistical Summary* (Washington, DC: GPO, 1919), 123.

55. Siang Yong Tan and Yvonne Tatsumura, "Alexander Fleming (1881–1955): Discoverer of Penicillin," *Singapore Medical Journal* 56, no. 7 (July 2015): 366.

He discovered the fluid killed the bacteria not the mold. Fleming published the discovery of penicillin in the *British Journal of Experimental Pathology* in 1929.

History has pointed out during times of war and peace, militaries will never execute strategies as the planners initially conceived.⁵⁶ Unfortunately, the experiences of the US Army in combating influenza during World War I are often overlooked, in part because the virus came, killed, and moved on with little impact on the course of the war.⁵⁷ Additionally, some would argue the number of influenza fatalities at the time relative to the size of First Army—seven divisions and more than 500,000 soldiers—makes such an example insignificant.⁵⁸

But while the US military helped to subdue the Germans, the medical profession failed to conquer an even more deadly, unseen enemy.⁵⁹ Furthermore, the war fostered disease by creating conditions in the trenches of France some epidemiologists believe enabled the influenza virus to evolve into a killer of global proportions.⁶⁰ The 1918 pandemic influenza had a profound impact on both the military apparatus and the individual soldier.⁶¹ The War Department estimated 51 percent of Army deaths during the war had been caused by disease. The examples above illustrate how Army leadership had to deal with two seemingly overwhelming challenges—large expeditionary forces fighting an unprecedented war and an unrelenting killer virus.⁶² If they are not careful, military leaders today will overlook the lessons of the past.

Recommendations

In the case of COVID-19, the government and science predicted a pandemic was on the horizon. In 2005, the Homeland Security Council published the *National Strategy for Pandemic Influenza: Implementation Plan*. The document warned of a crisis that could overwhelm our health and medical capabilities while leaving hundreds of thousands of deaths in its wake.⁶³ The strategy further advised, “while a pandemic will not damage power lines, banks or computer networks, it will ultimately threaten all critical infrastructure by removing essential personnel from the workplace for weeks or months.”⁶⁴

56. Richard Hart Sinnreich, “Patterns of Grand Strategy,” in *The Shaping of Grand Strategy: Policy, Diplomacy, and War*, ed. Williamson Murray, Richard Hart Sinnreich, and James Lacey (New York: Cambridge University Press, 2011), 254.

57. Wever and Van Bergen, “Death from 1918 Pandemic,” 544.

58. “The American Expeditionary Forces,” Library of Congress (website), accessed August 7, 2020, <https://www.loc.gov/collections/stars-and-stripes/articles-and-essays/a-world-at-war/american-expeditionary-forces/#:~:text=LC%2DUSZ62%2D113824.,of%20127%2C500%20officers%20and%20soldiers>.

59. Byerly, “Pandemic of 1918–1919,” 91.

60. Byerly, “Pandemic of 1918–1919,” 125.

61. Wever and Van Bergen, “Death from 1918 Pandemic,” 544.

62. Patricia Shields and Donald Travis, “Achieving Organizational Flexibility through Ambidexterity,” *Parameters* 47, no. 2 (2017): 74.

63. US Homeland Security Council, *National Strategy*, 1.

64. US Homeland Security Council, *National Strategy*, 2.

While COVID-19 seems unfamiliar, it is not a new problem for the Army. The nation has a strategy for dealing with pandemics and complex scenarios. Since the DoD pandemic plan was developed in 2006, the US military has held pandemic exercises in locations such as Germany, Hawaii, Indiana, and South Carolina, involving rapid vaccination of local communities, enactment of quarantines, and communication and coordination with multiple agencies and officials.⁶⁵ The challenge for the Department of Defense is training its leaders to manage complexity while in contact with an adversary. How can this be done? It is impossible to plan for every contingency, so leaders must remain adaptable. The following recommendations are intended for present and future leaders who will face these complex scenarios.

First, detailed planning against a known enemy is not always enough. First Army operations officer Marshall proved the AEF could outthink, outmaneuver, and out-resource the Germans. As First Army penetrated the German defense in the Saint-Mihiel offensive, planners simultaneously prepared for the Meuse-Argonne offensive. Both operations took place in unyielding and intensive trench warfare, which some epidemiologists believe enabled the influenza virus to evolve into a more lethal killer. But the plan did not consider the highly fatal second wave of influenza occurring during the decisive Meuse-Argonne offensive or the toll of disease and exhaustion on the AEF during the height of combat operations at all ranks. By October 11, 1918, the pneumonia mortality for the AEF was 43 percent.⁶⁶ For the American Army, the influenza overlapped almost completely with its wartime operations. The AEF was faced with the challenge of defeating both germs and Germans.⁶⁷

Marshall describes the combination of tired muscles, physical discomfort, and heavy casualties as causing officers of high ranks to lose their will and take on an exceedingly gloomy view of the situation.⁶⁸ Surely plans must be feasible and well thought out. But they also require leaders with *relentless determination* to face planning branches and sequels head on, inspiring confidence along the way. Pershing exemplified the leadership First Army needed to overcome complexity by pushing forward with the operational task at hand, despite the combination of influenza and widespread pessimism.

COVID-19 has already changed the lives of Americans and the world. A second or third wave may occur during our next decisive operation. Military leaders, therefore, must have the confidence and determination to face the unknown. Again, no plan survives first contact with the enemy, and in some cases the enemy will be invisible.

Second, military leaders must trust the experts while adapting quickly to the unknown. First Army staff, and all armies that fought in

65. Fargcy, "The Deadliest Enemy," 36.

66. Byerly "Fever of War," 98.

67. Byerly "Fever of War," 97.

68. Marshall, *Memoirs of My Services*, 175.

World War I, developed the wholly new and three-dimensional forms of combined arms tactics, adapting to the new operational environment.⁶⁹ Back home, medical officers and camp commanders also adapted, doing their best to learn and adjust to an invisible enemy. Leaders risked success by not trusting the experts. Army Chief of Staff Peyton March was reluctant to listen to the medical experts and had no intention of inhibiting US participation in the war.⁷⁰

Luckily by mid-October 1918, the practice of taking men from camps that had already weathered the epidemic gained traction and finally reduced the influenza rates on troopships and in the AEF.⁷¹ But failure to adapt could have significantly hindered mobilization across the Army camps. The war itself was a revolutionary change further complicated by the influenza pandemic of 1918–19. No military planner would have predicted a war of this scale or that an even more lethal global pandemic would ensue during their watch. Both occurred. And for those currently deployed in combat zones, the same scenario is happening again. In the case of COVID-19, as with the 1918–19 pandemic, military leaders must develop adaptable plans, listen to the experts, and be good improvisers.

Third, leaders must train physically and mentally for complexity. During World War I, Marshall recounts leaders who were in excellent physical condition maintained the will and optimism to conquer the enemy in the face of adversity.⁷² Similarly, leaders must remain mentally ready to conduct large-scale combat or asymmetric operations while simultaneously confronting a coordinated chemical and cyberattack following a natural disaster. There are no such things as far-fetched scenarios. The leader who says, “that would never happen” should be challenged. The impacts of the ill-timed influenza pandemic of 1918–19 and COVID-19 today are proof of the perils of this kind of thinking. At the same time, planners must direct their efforts. First Army planners focused efforts on developing plans to penetrate the German defense in trench warfare, trusting commanders would do their part in overcoming the additional challenges of exhaustion, pessimism, and influenza. In other words, planners must develop creative, tailorable solutions and count on mentally and physically fit operational and tactical leaders to do the rest.

On the surface, COVID-19 represents uncharted territory for the military. But the military has responded to similar complexity and adversity in the past. To see the current national emergency as creating a new normal for the military overlooks the lessons of history. The Army has and will continue to face multiple dilemmas often while in contact with an adversary. Complexity will only continue to grow. Despite the current pandemic, the enemy is still advancing.

69. MacGregor Knox and Williamson Murray, *The Dynamics of Military Revolution, 1300–2050* (Cambridge: Cambridge University Press, 2001), 145, Kindle.

70. Byerly, “Pandemic of 1918–1919,” 90.

71. Byerly, “Pandemic of 1918–1919,” 90.

72. Marshall, *Memoirs of My Services*, 175.

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