THE CHANGING EASTERN WINDS: DISPERSAL IN THE ASIA-PACIFIC

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ABOUT THE AUTHOR

Major Paul Morris is a native of Alabama/Georgia whose lineage traces from refugees fleeing from violence in China to safety in Korea. His family later escaped Japanese and Russian forces traversing the peninsula by foot to its southern most point at Pusan, Korea. His father, who passed at the time of this writing, is a decorated Airman who earned the Bronze Star while serving near the Ho Chi Minh Trail during the Vietnam War. His son, born at the time of this writing, is the pride of his life and carries a grandfather's love in his middle name as a living memory. Paul carries the legacy of service in the profession of arms as a family bond uniting past generations dating back to at least the First World War. He is a graduate of the United States Air Force Academy and distinguished graduate of Squadron Officer School and the Advanced Logistics Readiness Officer Course. Prior to attending SAASS, Major Morris graduated with honors from the Defense Language Institute and served as an exchange officer within the Peruvian Air Force. He is a senior logistician with over 6000 convoy miles on sequential short tours as Commander of the 70th Medium Truck Detachment and Air Advisor at Camp Arifjan, Kuwait and Camp Eggers, Afghanistan.

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ACKNOWLEDGMENTS

To my son: Psalm 127:4

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ABSTRACT

At the epic battle of Red Cliff in AD 208, Chinese strategist Kongming anticipated changing winds to defeat the concentrated forces of Cao Cao. In preparation for the preemptive attack, Kongming divulged, "All our forces are in place and ready, what we require now is the easterly wind." Cao Cao did not anticipate the change of winds and fire borne vessels were launched at his massive fleet. The fleet was destroyed due to an inability to maneuver and Cao Cao's overwhelming forces were defeated. Today, the Dong Feng (DF)-21D anti-ship ballistic missile may take its naming convention from the battle of Red Cliff. Dong Feng, or Eastern Wind, was the precondition of Kongming's strategy in defeating a superior naval force. Today, the potential to threaten US aircraft carriers and deploy MIRVs alters traditional geographic dispersal formulas of time and distance. US dependence on long-range strike to counter the DF-21D will necessitate a withdrawal from the region and perceptions of retrenchment. Finding the means to disperse and maneuver in place, within existing appropriations, is vital to preventing the reorientation of the status-quo in favor of China.

Land-based aviation dispersal is a vital complement to mobile sea basing for maritime security in the Asia-Pacific. The FY 2014 East Asia and Pacific request to Congress marks the first budget request since the President articulated a rebalance to the Asia-Pacific region in November 2011. With FMF funds, the US is to support regional and bilateral programs to strengthen maritime security in cooperation with partners in the Asia-Pacific. Preparing the battlefield for geopolitical aviation dispersal provides deterrence capability while multiplying the combat effectiveness of partner nation airpower. Fortifying ASEAN as the modern day Jingzhou and Kingdom of Shu, in Kongming's tri-polar balance of power model, is the key to breaking tit-for-tat behavior in the Asia Pacific, while creating an opportunity for a new status quo with mutually inclusive interests.

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Chapter 1

INTRODUCTION

> *When word of crisis breaks out in Washington, it is no accident the first question that comes to everyone's lips is: where is the nearest carrier?*
>
> - President William Clinton

China fields the world's first weapon system capable of long range targeting of a mobile Carrier Strike Group (CSG) from land-based mobile launchers.[1] The ripples from past United States (US) naval intervention in the Pacific, including the actions of the *Nimitz* CSG in the Taiwan Strait in 1995 and the subsequent deployment of both the *Independence* and *Nimitz* CSGs to the region in 1996, continue to be felt in the seas of international affairs. In a parallel to Chinese sentiment during the Century of Humiliation, feelings of helplessness against a foreign naval power permeated the Chinese political and military ranks. Once a powerful hegemon in the region, China endured a lengthy period of victimization by outside powers. Starting in 1840 with the Qing Dynasty and the failed negotiation to halt British imports of opium, China endured the destruction of its Emperor's palace, the annexation of Hong Kong, and the imposition of extraterritoriality by an occupation force for its foreign citizens. Finally, in 1949, coupled with the final expulsion of foreign invaders and a unified mainland China, Mao Zedong publically proclaimed the end of the Century of Humiliation. As a result of this experience, China perceives the actions of foreign powers as part of a historical pattern of intervention in its domestic affairs.

Chinese history sets the stage for specific acute sensitivity to action by foreign naval forces. The British naval imposition of rapacious treaties in the Opium Wars from 1839-1860, the gunboat diplomacy of

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[1] Andrew S. Erickson, *Chinese Anti-Ship Ballistic Missile (ASBM) Development: Drivers, Trajectories and Strategic Implications* (Washington, DC: The Jamestown Foundation, 2013), 1.

Commodore Matthew Perry in neighboring Japan in 1853, and the French destruction of the Chinese fleet in 1884 during the colonial land grab of the Sino-French War, all serve as points of sequential reference for Chinese leaders. In the military weakness of the Qing dynasty during the Century of Humiliation, territorial concessions were made in exchange for regime survival. A total of eight foreign powers occupied the Forbidden City during the Boxer Rebellion, seizing Chinese treasures as war trophies.[2] With a weak central government and eventual collapse of the Qing dynasty, regional powers emerged to fill the void. The vastness of China was divided up into fiefdoms, with a series of local warlords serving each locality and individual interests of foreign powers. The Chinese Nationalist Party, the KMT, looked to unify China.

In need of an army to defeat the warlords and unite the country, the KMT appealed to the Western powers for aid. The sole response was from the Soviet Union under the condition of allowing the newly formed Chinese Communist Party (CCP) to join the KMT. The Soviet Union assisted in the establishment of the Whampoa military academy in 1924, near Canton, which rallied countless patriotic youth to the call of a unified China. After a northern surge defeated numerous warlords, a permanent fissure erupted over ideological differences. Generalissimo Chiang Kai-Shek initiated a violent purge of the communists from the ranks of the KMT, setting the context for a civil war between the CCP and the KMT.

From October 1934 to October 1935, the CCP endured a retreat of over 6000 miles—the Long March. In the course of this epic march, Mao Zedong emerged as the undisputed leader. The memory of the struggle for survival is etched in history 68 years later on the *Long March 2F*

[2] China Central Television, "Eyewitnesses to History-Calamity in the Forbidden City", http://www.cctv.com/lm/176/71/71821.html (accessed 26 April 2015).

rocket which propelled China to become the third nation capable of manned space missions.[3]

Invasion by Japan in 1937 spurred Mao to offer an alliance with Chiang Kai-Shek to expel the foreign invaders. Chiang refused and elected not to directly engage the Japanese for fear of complete annihilation. After being kidnapped by his second-in-command due to his refusal to engage the Japanese, Chiang was released and agreed to confront the invaders in a united KMT and CCP front. The eventual defeat of Japan in 1945 reignited the Chinese civil war, in which the Communists rapidly prevailed. In defeat, Chiang and the KMT retreated to Taiwan in 1949 with the sustained goal of overthrow of the CCP. Today, leaders of the CCP continue to cite a desire for non-interference in domestic affairs and closure of their civil war through complete unification.[4] Though the Century of Humiliation has ended, the scars of foreign intervention have yet to heal.

The Dong Feng (DF)-21D Anti-Ship Ballistic Missile (ASBM) is the latest manifestation of Chinese leaders' instruction to the military industrial complex to solve the problem of foreign gunboat diplomacy.[5] According to a 2013 Department of Defense (DOD) report to Congress, China began fielding the DF-21D in 2010. The weapon system consists of a maneuverable warhead with a range of over 1,500 kilometers.[6] The report credits China with "the capability to attack large ships, including aircraft carriers, in the western Pacific Ocean."[7] China is contemplating improving the system with "over-the-horizon (OTH) targeting capability with sky wave and surface wave OTH radars, which can be used in conjunction with reconnaissance satellites to locate targets at great distances from China (thereby supporting long-range precision strikes,

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[3] Major Burton Catledge and LCDR Jeremy Powell, AU-18 Space Primer (Maxwell ADB, AL: Air University Press, 2009), 22.
[4] Erickson, *Chinese Anti-Ship Ballistic Missile (ASBM) Development*, 30.
[5] Erickson, *Chinese Anti-Ship Ballistic Missile (ASBM) Development*, 31.
[6] Erickson, *Chinese Anti-Ship Ballistic Missile (ASBM) Development*, 10.
[7] Erickson, *Chinese Anti-Ship Ballistic Missile (ASBM) Development*, 10.

including the employment of ASBMs)."[8] Chinese satellites, such as the BeiDou Navigation Satellite System, may serve as part of a system of seemingly disparate functions, to achieve this long range capability. The significance of the Beidou, or Big Dipper, to Chinese culture cannot be overstated. Seven stars are traditionally associated with the formation of the Big Dipper. The seven stars of the Big Dipper are also artifacts found on traditional Chinese swords.[9] Some martial arts techniques are even known to have the words "seven stars" as part of their nomenclature. The martial arts tradition with the Big Dipper conveys a belief that "an army that stands with its back to the Great Year was considered undefeatable."[10] The Great Year is "a visible phenomenon that refers to the direction to which the handle of the Big Dipper points when the new moon appears in the same zodiacal sign as the planet Jupiter."[11] The incremental fielding of the Big Dipper Navigation Satellite System coverage capabilities suggests parallels to an incremental approach of power consolidation found in the tri-polar balance of power model evident in Chinese history.

The naming convention of the DF-21D also offers a stark confirmation of the importance of the classics of Chinese literature in shaping the minds of Chinese strategists, and offers a foundational point of reference. Dong Feng, or Eastern Wind, carries distinct imagery from the Battle of Red Cliff in the historical novel *Three Kingdoms.* Attributed to Luo Guanzhong, the novel embellishes historical facts with elements of fiction.[12] In this case, the veracity of the account is not as significant as its role in the generation of ideas by Chinese strategists. Unpacking the *Three Kingdoms,* the Battle of Red Cliff, and the Chinese strategy behind

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[8] Erickson, *Chinese Anti-Ship Ballistic Missile (ASBM) Development*, 10.
[9] Thomas F. Aylward, *The Imperial Guide to Feng Shui and Chinese Astrology: The Only Authentic Translation from the Original Chinese* (London: Watkins Publishing, 2007), 50.
[10] Aylward, *The Imperial Guide to Feng Shui and Chinese Astrology,* 50.
[11] Aylward, *The Imperial Guide to Feng Shui and Chinese Astrology,* 48.
[12] Luo Guanzhong, *Three Kingdoms,* trans. Moss Roberts (1995; repr., Beijing, China: Foreign Language Press, 2013), 2.

the potential use of the Eastern Wind may offer an effective point of reference to guide US strategy in the Asia Pacific. In his immortal work *On War* Carl von Clausewitz echoes, "Nothing is more important in life than finding the right standpoint for seeing and judging events, and then adhering to it. One point and one only yields an integrated view of all phenomena; and only by holding to that point of view can one avoid inconsistency."[13] If true, US strategists must read well beyond the Western classics. They must be well read on the classics that influence the minds of other civilizations in order to discern acts of aggression from acts of prudence. In the case of China, the *Three Kingdoms* offers a rich contextual base to help Western strategists anticipate intentions.

Building upon this analysis, this thesis then identifies the importance of geopolitical dispersion and argues Foreign Military Financing (FMF) can play a vital role in developing immediate unobtrusive dispersal options, as part of a maritime strategy, in select partner nations. The method of dispersal must balance awareness of an acute Chinese sensitivity to foreign naval intervention with the need to provide rapid deterrence capability. Flexible deterrence options are possible within the current budgetary allocation. This thesis will look to prioritize within current FMF expenditures; the argument does not presume additional funding.

Chapter 2 provides an overview of *The Three Kingdoms* until the climactic Battle of Red Cliff. The novel examines events at the end of the Han Dynasty and the resulting struggle for power, drawing modern era parallels to the fall of the Qinq dynasty and the rise of the CCP. As the most famous Chinese case study of disunity and the resulting drive for reunification, the epic has been a common point of reference for leaders such as Mao Zedong. The Chinese classic may be more important to Chinese culture and Eastern civilization than the Homeric epics are to

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[13] Carl von Clausewitz, *On War,* ed and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1989), 606.

Western civilization. The impact on Chinese strategists of this event, in which military leaders may have employed an army of 830,000 men (by some accounts, a full million) is tremendous. Movements of such size were not seen in recorded history again until the great Napoleon Bonaparte over a millennium later. By unraveling the Chinese classic, chapter 2 explains why the narrative continues to resonate in eastern notions and perceptions of international relations today.

Chapter 3 delves into the details of the Battle of Red Cliff as it sets the stage as the reference point for a deeper understanding of the Eastern Wind and its employment in war. The battle pitted the overwhelming land and naval forces of Prime Minister Cao Cao against the allied forces of Warlords Liu Bei and Sun Quan on the shore of the Yangtze river. The entire battle hinges on the efforts of lead strategist Kongming, on the Altar of the Seven Stars, to call the Eastern Winds and destroy the concentration of enemy naval forces with the use of fire. Modern era parallels are the high density composition of ships in a CSG and the concentration of US forces in Japan and Korea. The climactic battle of Red Cliff continues to touch the daily lives of countless Chinese as a point of reference to generate ideas and influence strategy.

Chapter 4 briefly touches on the life and writings of Kongming, the architect behind the Battle of Red Cliff. The persona of Kongming continues to inspire countless Chinese through novels, movies, and even video games. If emulation is the greatest complement, then the DF-21D ASBM may pay homage to the mind of one of China's most revered strategists.

Chapter 5 reviews some basic tenets of Western thinking about warfare in the Pacific with logistics as a point of reference. From feeding the organic to the mechanical beast, strategy rarely knows freedom from the constraints of logistics. In tying logistics preparation of the battlefield to strategy, the challenge of "feeding the beast" finds modern forces inextricably linked to an insatiable appetite for fuel and the need for

extensive basing and infrastructure. The under appreciation of the collier and oiler highlight key bottlenecks of support for dispersal and force projection planning. Chapter 5 discusses fuel, basing, and construction materials as the anchor upon which all preparation of the battlefield depends to wage Western warfare under the geographic challenges of the Pacific.

The final chapter proposes a recommended course of action, within the constraints of FMF funding, under the context of a greater grand strategy. Chapter 6 assesses the largest recipient of FMF in the Asia Pacific AOR, the Philippines, and the geopolitics behind their relationship with China and the US. With FMF funds, the US is to support regional and bilateral programs to strengthen maritime security in cooperation with partners in the Asia-Pacific region.[14] Land based aviation dispersal is a vital complement to mobile sea basing for maritime security in the Asia-Pacific region. A case study at Eglin AFB of the type IV hydrant refueling system, for primary use with fighter aircraft such as the F-35, offers a near term example to expand dispersal options with select partner nations. Chapter 6 offers a focus on logistics, in the context of sensitivity to Chinese history and patterns in Western warfare, to provide an unobtrusive deterrence capability within existing FMF appropriations.

Failure to recognize the importance of certain events in Chinese history, as a point of reference for a likely political and military response, can only reduce long term deterrence capabilities through the creation of a security dilemma. Shows of force with naval power have the potential to reopen wounds over a century in the making. At times, something resembling old-style "gunboat diplomacy" may be necessary. However, the increasing vulnerability of our CSGs provides an opportunity to examine more flexible responses with the potential to reduce tensions with less risk to our armed forces. Geopolitical land dispersal options for

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[14] Department of State, *Congressional Budget Justification: Foreign Operations Annex: Regional Perspectives.* Fiscal Year 2014, 239.

the F-35 fleet provide the deterrence of an additional sovereign nation the high seas cannot provide. Though the capabilities of a few F-35s pale in comparison to those of an entire CSG, the potential impact of an additional sovereign nation more than offsets any concerns based on a lack of hardware. The CSG does allow unilateral action. However, acting unilaterally may play into the hands of our peer competitor and inadvertently bypasses the employment of our greatest strategic assets - regional partner nations. The support of partner nations is not guaranteed. However, their potential support cannot be dismissed. This paper seeks to suggest a strategy to actively engage our partner nations through the most effective use of FMF funds as a tool in uniting the deterrence capabilities of entire nations and create an opportunity for a mutually inclusive status quo.

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Chapter 2

THE THREE KINGDOMS

The empire, long divided, must unite; long united, must divide. Thus it has ever been.

- Luo Guanzhong

The *Three Kingdoms* is considered one of the four classics of Chinese literature.[1] In eastern civilization, the names of Cao Cao, Liu Bei, and Kongming resonate more than any of the western figures of the Homeric epics or the stratagems found in the works of Clausewitz and Jomini. The epic is a tale of the demise of the Han Dynasty during the second and third century and the resulting struggle for power spanning a period of 100 years. The first full length English translation was accomplished by C.H. Brewitt-Taylor in 1925 and reprinted in the US in 1959.[2] Moss Roberts, considered by some to be the most cited English translator in recent history, completed his latest unabridged version in 2004. Attributed to the storyteller Luo Guanzhong, the *Three Kingdoms* is based on the historical facts of the *Annals of the Three Kingdoms* incorporating fictional elements.[3] The *Annals of the Three Kingdoms,* documented in the 3rd century by Chen Shou, are considered the official historical records of the period. Immortalized by Luo Guanzhong in the fourteenth century, the mixture of history and myth continues to resonate deeply in the hearts of China's population. Mao Zedong is purported to have read the classic 120 times and cited it in the form of verbal ideas as a revolutionary until his final days as part of his written memoirs.[4] As a classic Chinese case study of disunity and the drive for

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[1] Check Teck Foo, "Cognitive strategy from the Romance of the Three Kingdoms," *Chinese Management Studies* 2, No. 3, (2008): 172.
[2] Guanzhong, *Three Kingdoms,* 19.
[3] Luo Guanzhong, *Three Kingdoms,* trans. Moss Roberts (1995; repr., Beijing, China: Foreign Language Press, 2013), 3.
[4] Dong Zhixin, *Mao Zedong Read The Romance of Three Kingdoms* (China: Volumes Publishing Company, 2011), 1.

reunification, the epic is a common point of reference for eastern leaders searching for inspiration.

The epic begins with an account of pervasive corruption within the Han Dynasty's ruling elite. For three generations, the ruling family has driven men of integrity and ability from office. Corrupt eunuchs fill the void and run the government, leaving countless peasants in a dire condition. The people revolt under the banner of the Yellow Scarves, a peasant rebel force numbering 500,000 men, led by the self-professed General of Heaven Zhang Jue to challenge the Han Dynasty.[5]

Prior to assuming command, a Taoist sage entrusts Zhang Jue with the sacred book *Essential Arts for the Millennium*.[6] The sage instructed Zhang Jue to spread the teachings, as Heaven's messenger to save the people, but to have no seditious thoughts. Through daily dedication, Zhang learns to summon the wind and rain. Zhang ignores the sage and capitalizes on the dissent of the people in an attempt to seize control of the corrupt Han Dynasty. Emperor Xian, the third consecutive Han emperor to yield power to the eunuchs, orders each province to defend itself. In a voluntary call to arms, three central figures unite to preserve the Han Dynasty.

In a chance encounter, Liu Bei meets Zhang Fei while reading a posting of the call to arms. Liu Bei, a distant relative to the fourth Han emperor, is distraught about his lack of resources to confront the Yellow Scarves rebellion. Zhang Fei offers to help gather others to fight. The two men recruit a warrior named Guan Yu to their cause. At Zhang Fei's farm, the three men make a pact known as the Peach Garden Oath.

> We three, though of separate ancestry, join in brotherhood here, combining strength and purpose, to relieve the present crisis. We will perform our duty to the Emperor and protect the common folks of the land. We dare not hope to be together always but hereby vow to die the same day. Let shining Heaven above and the

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[5] Guanzhong, *Three Kingdoms*, 5.
[6] Guanzhong, *Three Kingdoms,* 3.

> fruitful land below bear witness to our resolve. May Heaven and man scourge whosoever fails this vow.[7]

The development of each sworn brother personifies the virtue of loyalty in Chinese society which others look to emulate. Paintings of the three brothers today are often found in the offices of Chinese businessmen to demonstrate their trustworthiness.[8]

Liu Bei is characterized as a "man of heroic mettle…though no scholar, was gentle and generous by nature, taciturn and reserved. His one ambition was to cultivate the friendship of the boldest spirits of the empire."[9] Liu Bei's lack of academic prowess is offset by his keen eye for human talent. Mao Zedong complemented Liu Bei for his utilization of personnel but criticized him for being too emotional.[10] The father of Liu Bei serves in the court of the Han Dynasty as a reward for his devotion and integrity. After his father had died young and he was left poor, the orphan Liu Bei is reduced to making straw sandals and mats to survive. If the Han emperor falls, Liu Bei will be a legitimate successor. Liu Bei exemplifies the model of a humble aristocratic figure.

Zhang Fei, a pig butcher, is described as having "a blunt head like a panther's, huge round eyes, a swallow's heavy jowls, a tiger's whiskers, a thunderous voice, and a stance like a dashing horse."[11] Liu Bei first approaches Zhang Fei in both admiration and fear. An equivalent of a modern day linebacker, Zhang Fei's passion is balanced by the reason of Liu Bei. A pig butcher, with more thrust than vector, appeals to the peasant in a way the aristocratic lineage of Liu Bei cannot.

Mao Zedong viewed himself as most resembling Zhang Fei. On October 21 1935, facing overwhelming KMT forces, Mao cited Zhang Fei,

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[7] Guanzhong, *Three Kingdoms*, 11.
[8] Thiago Gomes, "A Surefire Way to Impress Chinese People-The Power of The Three Kingdoms," http://www.bricexpansion.com/impress-chinease-three-kingdoms/ (accessed 17 November 2014).
[9] Guanzhong, *Three Kingdoms*, 6.
[10] Zhixin, *Mao Zedong Read The Romance of Three Kingdoms*, 300.
[11] Guanzhong, *Three Kingdoms*, 7.

knowing his soldiers were all versed in the classic. Mao roared, "The roads are long, the mountains are high, my army is charging ahead. Who dares stand in my way except me General Zhang Fei!"[12] The powerful appeal to a common point of reference inspired the numerically inferior CCP forces to rout the KMT.

Guan Yu is the epitome of a classic warrior. Liu Bei observes him as "a man of enormous height, nine spans tall, with a two-foot long beard flowing from his rich, ruddy cheeks. He had glistening lips, eyes sweeping sharply back like those of the crimson-faced phoenix, and brows like nestling silk-worms. His stature was imposing, his bearing awesome."[13] Some Chinese today view Guan Yu in the likeness of a god of war. A defender of the weak, Guan Yu is a fugitive after killing a man who had been bullying his neighbors.

Liu Bei equips his newly sworn brothers with a pair of matching double-edged swords, setting their confrontation with the Yellow Scarves rebellion in motion. Zhang Fei wields an "eighteen span spear of tempered steel" and Guan Yu a "Green Dragon crescent-moon blade, also known as Frozen Glory."[14] Over a millennia later, in an enlightening exchange between Communist leaders Mao Zedong and Nikita Khrushchev, Mao brought the sword of Guan Yu into a discussion to subdue fears of a US atomic bomb. Mao reflected, "In World War I how many died? In World War II how many died? In the *Three Kingdoms* how many died? Between the atomic bomb and Guan Yu's long sword who has killed more?"[15] Mao was alluding to the proven success of exhausting an adversary in warfare versus the fear of decisiveness in a single blow. Even more revealing, Mao diminished the significance of modern weaponry in comparison to a rudimentary clash of human will.

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[12] Zhixin, *Mao Zedong Read The Romance of Three Kingdoms*, 415.
[13] Guanzhong, *Three Kingdoms*, 8.
[14] Guanzhong, *Three Kingdoms,* 12.
[15]Zhixin, *Mao Zedong Read The Romance of Three Kingdoms*, 216.

In reflection on Chinese history, Mao expounded "From the Han Dynasty to the Song Dynasty, China's population diminished from 50 million to 10 million people. Just by Guan Yu's long sword he has accounted for the death of 40 million people."[16] Of course, Guan Yu did not live throughout both periods and his example does not offer a disparity in technology of opposing forces. However, Mao's reference to the Chinese classic directly reveals to an outsider the power of waging a campaign of attrition. More importantly, he eased domestic fears by finding a common point of reference in the personal success of Guan Yu in opposing greater forces.

Liu Bei, with Zhang Fei and Guan Yu as his generals, leads five hundred men into their first combat against an opposing force of five thousand. Before a clash of forces, Liu Bei coaxes the rebel field commanders to charge in advance of their formation. Zhang Fei and Guan Yu slay the rebel commanders, creating panic and a retreat of the remaining forces.

The prominent antagonist of the epic, Cao Cao, first makes his appearance during the rebellion as a Han cavalry commander. Anchored in modern language as a villain, the Chinese translation of "speak of the devil" is, "Mention the name of Cao Cao and he will appear."[17] Easily demonized, Cao Cao is first introduced as "an able statesman in a time of peace or a treacherous villain in a time of chaos."[18] Childhood accounts reduce Cao Cao to a schemer. However, an objective Mao Zedong later credited Cao Cao with the greatest contribution of all the characters in the *Three Kingdoms* in uniting China.[19] Mao found commonality in a land beset by feudal separatism and peasant rebellion with a personal drive

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[16] Zhixin, *Mao Zedong Read The Romance of Three Kingdoms,* 219.
[17] Syndey Wen Jang Chu and Cheng-yu Lee, "Telling Greatness from Mediocrity: Cao Cao and Sun Tzu's The Art of War," *Whampoa – An Interdisciplinary Journal* 63, 2012, 156.
[18] Guanzhong, *Three Kingdoms*, 16.
[19] Zhixin, *Mao Zedong Read The Romance of Three Kingdoms*, 216.

for reunification. Former US ambassador to China, Karl Eikenberry, compared Cao Cao's ability to "the strategic acumen of Alexander the Great with Julius Caesar's leadership and emphasis on logistics."[20]

Physical artifacts of Cao Cao's remarkable ability as a strategist persist in the distribution of Sun Tzu's well known *Art of War*. During the Han Dynasty, the original 13 chapters of the *Art of War* morphed into additional commentaries totaling 82 chapters and 9 atlases due to its initial popularity amongst the ruling elite.[21] Chinese rulers feared the power of the work in the hands of the people and kept the book filed in imperial libraries and out of circulation. Counter to this vision, Cao Cao deletes the supplemental 69 chapters and gives exegesis on the original 13 chapters. Cao Cao strives to provide his soldiers an understanding of Sun Tzu and make it available to them in clear language for utilization on the battlefield.

Chinese scholars argue the importance of Cao Cao's work by highlighting the distribution of Sun Tzu's *The Art of War* into two periods: Cao Cao's *Concise Exegeses on Sun Tzu* and the period prior to its publication.[22] Since his commentary on Sun Tzu, 151 scholars followed suit and published 186 exegeses.[23] The current circulation of Sun Tzu's *The Art of War* is largely built upon Cao Cao's foundation. The impact of his work is further codified today in *An Unabridged Chinese Dictionary on Historical Principles.* Similar to the Oxford English Dictionary, editors from the largest Chinese dictionary quote Cao Cao's 20 times.[24]

Sun Jian, a descendent of military strategist Sun Tzu, appears during the Yellow Scarves rebellion as a deputy magistrate leading Han men into battle. Sun Jian is "a man of broad forehead and wide face,

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[20] Chu and Lee, "Telling Greatness from Mediocrity," 57.
[21] Chu and Lee, "Telling Greatness from Mediocrity," 157.
[22] Chu and Lee, "Telling Greatness from Mediocrity," 155.
[23] Chu and Lee, "Telling Greatness from Mediocrity," 158.
[24] Chu and Lee, "Telling Greatness from Mediocrity," 158.

with a body powerful as a tiger's and a torso thick as a bear's."[25] The allegiance with Sun Jian proves useful for Liu Bei in balancing against Cao Cao after the rebellion. Fighting alongside Sun Jian and Cao Cao, the sworn brothers of the Peach Garden Oath assist the Han Dynasty in prevailing over the Yellow Scarves rebellion.

The eunuchs ensure recognition and promotion go to the highest bidder. In his unwavering loyalty to the Han Emperor and an unwillingness to pay the eunuchs, Liu Bei goes through a cycle of neglect, reward, punishment, and again reward for his merits. The destitute condition of the population, igniting the rebellion of the Yellow Scarves, did not change. Appeals made to the Emperor are met with a murderous response for the messenger. The Emperor falls ill and concern for his succession sparks the eunuchs to plot for their survival. Speaking in a council advocating the decapitation of the eunuchs, Cao Cao advises on the infeasibility of the action. Their pervasive influence in state affairs prevents a decisive blow to remove them all. Cao Cao places priority on ensuring a favorable succession before dealing with the eunuchs. Prince Bian, as opposed to the eunuch choice of Prince Xie, is carefully put into power by the council as Emperor. In recognition of their imminent danger the eunuchs beg Empress He, Prince Bian's mother, for forgiveness and protection. The eunuchs survive and slowly regain their corrupting influence in state affairs.

Again, a council emerges with an abrupt plan to destroy the eunuchs. Cao Cao advises against the plan, which calls for bringing in the outside forces of General Dong Zhou. Fearing ambition and a power grab, Cao Cao recommends focusing on using existing forces within the capital against the eunuchs to avoid outside influences on state affairs. The eunuchs become aware of the dissention within the ranks and initiate an attack on members of the council. In the ensuing chaos,

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[25] Guanzhong, *Three Kingdoms*, 24.

Prince Bian flees and encounters General Zhou on the outskirts of the city.

In a ruse to gain power, General Zhou feigns rescue of Prince Bian only to replace him later with the malleable Prince Xie. Prince Xie, now known as Emperor Xian, is only nine years old. After poisoning Prince Bian to secure his base of power, General Zhou takes the position of Prime Minister and "began to indulge himself freely, debauching the imperial concubines and sleeping in the Emperor's bed."[26] Prime Minister Zhou controls the empire in all but name with Emperor Xian as his puppet. Zhou ransacks entire villages, beheads innocent men as bandits, and gives the women to the army. Countless men of honor and integrity flee from the disgraceful service of the Han Dynasty.

Cao Cao remains in service of Emperor Xian for the opportunity to assassinate Prime Minister Zhou. The attempt fails and he flees to his village. Cao Cao forges the Emperor's name on a decree requesting unified action from the lords of the realm against Prime Minister Zhou under the leadership of General Yuan Shao. Rallying to the counterfeit call of the Emperor, Liu Bei, Zhang Fei, Guan Yu, and Sun Jian join Cao Cao in the struggle. The empire falls into a state of civil war. Prime Minister Zhou is driven from the capital and killed.

Emperor Xian, fearful of his vulnerability without the protection of Prime Minister Zhou, sends messengers to request the aid of Cao Cao in preserving the Han Dynasty. The capital is in ruins and countless ambitious warlords are a short march away. Unbeknownst to Emperor Xian, Cao Cao's forces are already en route prior to receiving the message. In a precedent eight hundred years prior, "Lord-Patriarch Wen of the state of Jin protected King Xiang of the failing Zhou dynasty, and the lords of the realm accepted Wen's leadership."[27] Cao Cao looks to match the precedent to gain legitimacy in reuniting the empire from the

[26] Guanzhong, *Three Kingdoms*, 65.
[27] Guanzhong, *Three Kingdoms*, 226.

warlords. Emperor Xian appoints Cao Cao Prime Minister and the Commander of the Capital Districts, grants him power to conduct all military operations, and cedes control of the origination of all decrees. In order to further capitalize on his influence, Cao Cao cleverly requests the Emperor to move his power base from the capital of Luoyang to Xuchang under the guise of a grain shortage.[28] With great power in a time of chaos, Cao Cao transforms into a treacherous villain.

While in the new capital, a solitary Emperor Xian verifies the family lineage of Liu Bei and finds he is an Imperial Uncle. Ecstatic at the discovery of a new ally, the young nephew appoints his uncle a general and precinct master of Yi.[29] The Emperor reflects, "Cao Cao abuses his authority to the point that state affairs are out of our control. But now we may have a remedy in this heroic uncle of mine."[30]

As in the precedent of Lord Patriarch Wen 800 years earlier, Cao Cao shrewdly maneuvers to gain legitimacy and prestige by protecting Emperor Xian. Seeking absolute power, Cao Cao plots to observe the court reaction to a deliberate slight to the Emperor. Cao Cao proposes a hunt as a symbolic show of strength beyond the walls of the capital. A deer charges Emperor Xian who is unable to bring the animal down. Emperor Xian quickly requests the assistance of Cao Cao, who cunningly calls for the Emperor's bow and gold-tipped arrows. The Emperor's entourage approaches the deer and views a gold-tipped arrow in the animal, implying a kill by the Emperor. As the group begins their dutiful complements, Cao Cao steps in and claims credit to gauge the loyalty of the court. The court cringes but says nothing. In a rage, Guan Yu raises his sword and moves toward Cao Cao to cut him down. Liu Bei subtly calls off the attack of Guan Yu for fear of collateral damage to the Emperor. In explanation to his sworn brother, Liu Bei explains "If you

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[28] Guanzhong, *Three Kingdoms*, 230.
[29] Guanzhong, *Three Kingdoms,* 333.
[30] Guanzhong, *Three Kingdoms,* 333.

aim for the mouse, don't bring down the house!"[31] Guan Yu responds, "Spared today--a plague tomorrow."[32] Cao Cao returns to the capital with a clear path to the throne.

The young Emperor breaks down in tears upon return to his palace. The Emperor, now fully aware of his predicament, sums up his short reign as ruler of the Han Dynasty to Empress Fu.

> Since I first assumed the throne, treacherous pretenders have multiplied. First we suffered the disaster of Dong Zhou, followed immediately by the sedition of generals Li Jue and Guo Si. We have faced griefs unknown to most. Then came Cao Cao, whom we thought a loyal servant of the dynasty, never dreaming he would usurp the government and abuse his authority by arbitrary exercise of fear and power. I wince to see him. Today in the hunting field he impudently acknowledged the cheers meant for his sovereign. Before long there will be a usurpation, and you and I shall not die natural deaths.[33]

The disloyalty of the court is apparent and Emperor Xian looks for outside assistance to deal with the traitorous intentions of Cao Cao. Under the watchful eye of Cao Cao, the Emperor decides to write a secret decree in blood requesting a strategy to defeat his opponent. The decree reaches Liu Bei who vows to punish Cao Cao as a traitor to the Han Dynasty.

In order to reduce suspicion, Liu Bei takes to the humble task of gardening. His sworn brothers ask, "Brother, why have you lost interest in the great issues of the realm and given yourself to a commoner's toil?"[34] Liu Bei conceals his intentions to his own brothers and remarks, "This is something you might not appreciate."[35] While Zhang Fei and Guan Yu are away, Cao Cao sends soldiers to escort Liu Bei to his home. Cao Cao greets Liu Bei with an indirect comparison to a dragon.

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[31] Guanzhong, *Three Kingdoms*, 336.
[32] Guanzhong, *Three Kingdoms*, 336.
[33] Guanzhong, *Three Kingdoms*, 339.
[34] Guanzhong, *Three Kingdoms*, 350.
[35] Guanzhong, *Three Kingdoms,* 350.

> The dragon can enlarge and diminish itself, surge aloft or lie beneath the surface of the water. Enlarged, it creates clouds and spews mist. Diminished, it can veil its scaly form from view. Aloft, it prances triumphant in the upper realm of space. Under the surface, it lurks among the surging breakers. Now in the fullness of spring it mounts the season, like men who would fulfill an ambition to dominate the length and breadth of the land. In this respect the dragon can well be compared to the heroes of the age.[36]

Cao Cao prompts Liu Bei to cite heroes of the age. Reluctantly, Liu Bei lists prominent men of the time. Cao Cao dismisses each one and provides his definition of a hero as "a determination to conquer, a mind of marvelous schemes, an ability to encompass the realm, and the will to make it his."[37]

Liu Bei falls into the trap set by Cao Cao and questions the identity of the heroes. Cao Cao responds, "The heroes of the present day number but two-you, my lord, and myself."[38] In panic, Liu Bei drops his chopsticks but claims it was due to an unexpected clap of thunder. A poet of the times sums up the encounter,

> Xuande (Liu Bei) sheltered in the tiger's lair:
> Cao betrayed two names that made him quake.
> He seizes on the thunder as the cause-
> A perfect ploy negotiates the pause.[39]

Liu Bei later explains to Zhang Fei and Guan Yu, "I work in the garden to show Cao Cao I have no ambition. But he caught me off guard by calling me a hero, and the chopsticks slipped from my hand. I told him it was the thunder to put him off track."[40] Aware of the growing suspicion of Cao Cao, Liu Bei decides to take advantage of the pause in Cao Cao's suspicions and relocate from the capital.

Cao Cao, distracted by the northern power of General turned warlord Yuan Shao, grants the request of Liu Bei to meet the rebels in

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[36] Guanzhong, *Three Kingdoms,* 353.
[37] Guanzhong, *Three Kingdoms,* 355.
[38] Guanzhong, *Three Kingdoms,* 355.
[39] Guanzhong, *Three Kingdoms,* 355.
[40] Guanzhong, *Three Kingdoms*, 356.

the field. Prior to meeting the rebel force, Cao Cao establishes military agricultural communities on the routes of communication to supply the northern campaign and diagnoses command and control as the adversary's vulnerability.[41] With permission of a tearful Emperor, Cao Cao assigns Liu Bei 50,000 men and two general officers. Liu Bei explains his intentions to Zhang Fei and Guan Yu, "Here I am a caged bird, a trapped fish. With this move, I gain the sea, the lofty space, free of cage or net."[42] An advisor of Cao Cao admonishes, "Now by giving him troops, you have let the dragon into the sea, the tiger into the hills. You can never again dominate him."[43] Realizing the potential danger, Cao Cao sends a messenger with 500 men to return with Liu Bei. In a response indicative of Sun-Tzu's classic *Art of War*, Liu Bei answers "You know the custom. A general in the field may refuse his lord's command. I have appeared before the Emperor and have been duly assigned by His Excellency."[44] Zhang Fei, in a battle reminiscent of countless others, unleashes a roar that shakes the rebel forces and kills the leadership command and control vanguard. Liu Bei wins the battle and sends the generals back to Cao Cao while retaining the soldiers.

The duel between Liu Bei and Cao Cao is set in motion with the retention of soldiers and the return of the generals. Prior to their direct engagement of forces, Cao Cao attempts to assassinate Liu Bei at the city of Xuzhou. Liu Bei discovers the plot and Cao Cao consequently invades Xuzhou. In an ensuing battle marking the powerful Chinese context of loyalty, Cao Cao traps Guan Yu defending the family of Liu Bei. Cao Cao, in a similar manner as Liu Bei, is always in search of human talent and looks to recruit Guan Yu to his cause. Cao Cao sends a friend of Guan Yu to convince him that a solitary fight to the death, without his

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[41] Karl W. Eikenberry, "The Campaigns of Cao Cao," *Military Review* 74, Issue 8 (August 1994), 58.
[42] Guanzhong, *Three Kingdoms*, 358.
[43] Guanzhong, *Three Kingdoms,* 359.
[44] Guanzhong, *Three Kingdoms,* 359.

brothers, is a violation of the Peach Garden Oath. Guan Yu yields and temporarily submits to Cao Cao under three conditions. Guan Yu demands, "First, the imperial uncle Liu Xuande (Bei), and I have sworn to uphold the house of Han. I shall surrender to the Emperor, not to Cao Cao. Second, I request for my two sisters-in-law the consideration befitting an imperial uncle's wives. No one, however high his station, is to approach their gate. And third, the moment we learn of Imperial Uncle Liu's whereabouts, no matter how faraway he may be, I shall depart forthwith."[45] Cao Cao, in order to gain the talents of Guan Yu even temporarily, reluctantly agrees and treats him as a guest of honor.

Liu Bei's retreating force strikes an alliance with Yuan Shao to balance power. Yuan Shao, once chosen to lead the Han Dynasty against the Yellow Scarves, is reluctant to join forces with Liu Bei after recently engaging in battle with him. However, both sides recognize Cao Cao's growing strength under the cloak of Emperor Xian's authority. An alliance is the only way to free the empire from tyranny. Guan Yu, unaware of the new allegiance, slays the leadership of Yuan Shao's forces to turn the tide of battle in the northern campaign. After returning the hospitality of Cao Cao in battle, Guan Yu escapes with honor and rejoins Liu Bei in the Chinese folklore known as "Riding Alone for Thousands of Miles". In admiration of the loyalty to both his oath with Liu Bei and his temporary obligations, Cao Cao permits the legendary return unimpeded.

Yuan Shao quickly turns to an old friend in Sun Jian's son, Sun Ce of the southlands, in an attempt to rebalance against Cao Cao's growing strength. The balance quickly disappears once Sun Ce dies. Sun Quan, the younger brother of Sun Ce, turns Yuan Shao away and does not honor the alliance. In the end, Cao Cao defeats the larger forces of Yuan Shao by remaining "keenly aware of the dominant role of logistics played in warfare, vigorously defending his lines of communication while

[45] Guanzhong, *Three Kingdoms*, 416.

attacking those of the enemy."[46] Cao Cao draws comparisons to Julius Caesar, during the Ilerda Campaign, in defeating superior forces through concentrating on vulnerable lines of communication.[47] Eikenberry likens Cao Cao's employment of forces to military historian Archer Jones' terminology of "persisting, raiding, combat, and logistic warfare."[48] In his many campaigns, Cao Cao sets a pattern of severing enemy supply lines while securing his own. As many as 500,000 soldiers transfer to Cao Cao from Yuan Shao's defeat.[49]

Depressed from the defeats, Liu Bei encounters a wise man offering advice on his campaign. Answering to the Taoist name of Still Water, the wise man dissects Liu Bei's weakness, "It seems to me, General, that you have not found the right men to assist you…Each of the (your) warriors, it is true, is a match for ten thousand. The pity is you have no one to make good use of them. As for your civil officials, they are no more than pasty-faced bookworms, not of a caliber to unravel the complexities of the age and see our poor generation through these troubled times."[50] Still Water advises Liu Bei to search for "Sleeping Dragon."[51]

In search for the mysterious figure, Liu Bei encounters a useful tactician in Shan Fu. With the assistance of Shan Fu, Liu Bei defeats Cao Cao in a minor battle. Cao Cao accepts his defeat but questions the mastermind behind the battle plans. His aides quickly determine the identity of Liu Bei's new tactician. Cao Cao lures Shan Fu's mother into the capital with gifts and blackmails Shan Fu into service under the guise of caring for his mother. Shan Fu, aware of the plot, reluctantly leaves and serves under Cao Cao. Before departing, Shan Fu leaves the

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[46] Eikenberry, "The Campaigns of Cao Cao," 59.
[47] Eikenberry, "The Campaigns of Cao Cao," 59.
[48] Eikenberry, "The Campaigns of Cao Cao," 59.
[49] Estimates vary due to the exaggeration of Kongming to incite Sun Quan and the later underestimates of Zhou Yu to calm anxieties.
[50] Guanzhong, *Three Kingdoms*, 634.
[51] Guanzhong, *Three Kingdoms*, 634.

recommendation of a more capable replacement. He tells of an extraordinary scholar who is "perhaps the one man in the empire who can plot the interaction of the heavens and the earth…He is from Yangdu in Langye and bears the double surname Zhuge. His given name is Liang; his style, Kongming."[52] Liu Bei requests his location and is sent to the hills of Sleeping Dragon Ridge.

In excitement, Liu Bei sets out to find and recruit the services of Kongming. Liu Bei states his reasoning, "There is such disorder in the empire. The four quarters are as unsettled as the clouds. I would seek of Kongming the strategy to secure and stabilize the government and the country."[53] Kongming appears to live a life of seclusion and Liu Bei's fails in his multiple efforts to find the scholar. Zhang Fei demands to formally summon Kongming to preserve the prestige of Liu Bei's royal lineage. Guan Yu views the challenges of finding Kongming as evidence of a false reputation. In reality, Kongming most likely evades Liu Bei in a cognitive strategy to build a defensive buffer and gain a relative temporal advantage to understand the intentions of his pursuer.

Liu Bei ignores the pride of his brothers and persists in humbling himself in a letter to Kongming. Liu Bei writes, "I have enjoyed prestige and rank far beyond my merits…Whatever sincerity I may offer to the cause of delivering the Han is wasted for want of strategy."[54] Liu Bei's genuine concern for the people and the Han Dynasty touches the evasive Kongming and persuades him to come out of seclusion. Liu Bei first observes Kongming as "singularly tall, with a face like gleaming jade and a plaited silken band around his head. Cloaked in crane down (feathers), he had the buoyant air of a spiritual transcendent."[55] Kongming further examines the author's intentions in person and Liu Bei responds, "The house of Han teeters on ruin. Unscrupulous subjects have stolen the

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[52] Guanzhong, *Three Kingdoms,* 654.
[53] Guanzhong, *Three Kingdoms*, 665.
[54] Guanzhong, *Three Kingdoms*, 672.
[55] Guanzhong, *Three Kingdoms*, 677.

mandate of rule. Failing to recognize my limitations, I have tried to promote the great principle of true allegiance throughout the empire; but my superficial knowledge and inadequate methods have so far kept me from achieving anything."[56] Kongming responds to Liu Bei's plea with an assessment of the situation. Starting from Prime Minister Zhou's sedition, Kongming weighs the strength of Cao Cao's million man army to Sun Quan's independent strength in the southlands. The northern region of Cao Cao and the southern regions of Sun Quan are identified as unattainable in the short term.

Kongming directs Liu Bei's attention to the central region of Jingzhou. He identifies key lines of communication and sources of wealth to establish a near term power base. Kongming points to a map, "To establish your hegemony, let Cao Cao in the north have the advantage of timely circumstance, let Sun Quan in the south have his geographical advantages: you, my general, will have the allegiance of men. First take Jingzhou and make it your home base. Then move into the Riverlands (western area of Yizhou) and build your third of the triangle of power. Eventually, the northern heartland will become your objective."[57] Kongming, who purportedly never left his cottage, designs a tri-polar balance of power model to turn weakness into strength with a design for ultimate hegemony. Liu Bei, in tears, begs Kongming to join in the cause. Reluctantly, Kongming responds "If you will have me, then, General, I shall serve you like a hound or horse…When my work is done, I shall return to resume my life of seclusion."[58] Kongming never returns to a life of seclusion and surpasses Cao Cao as one of China's most revered strategists.

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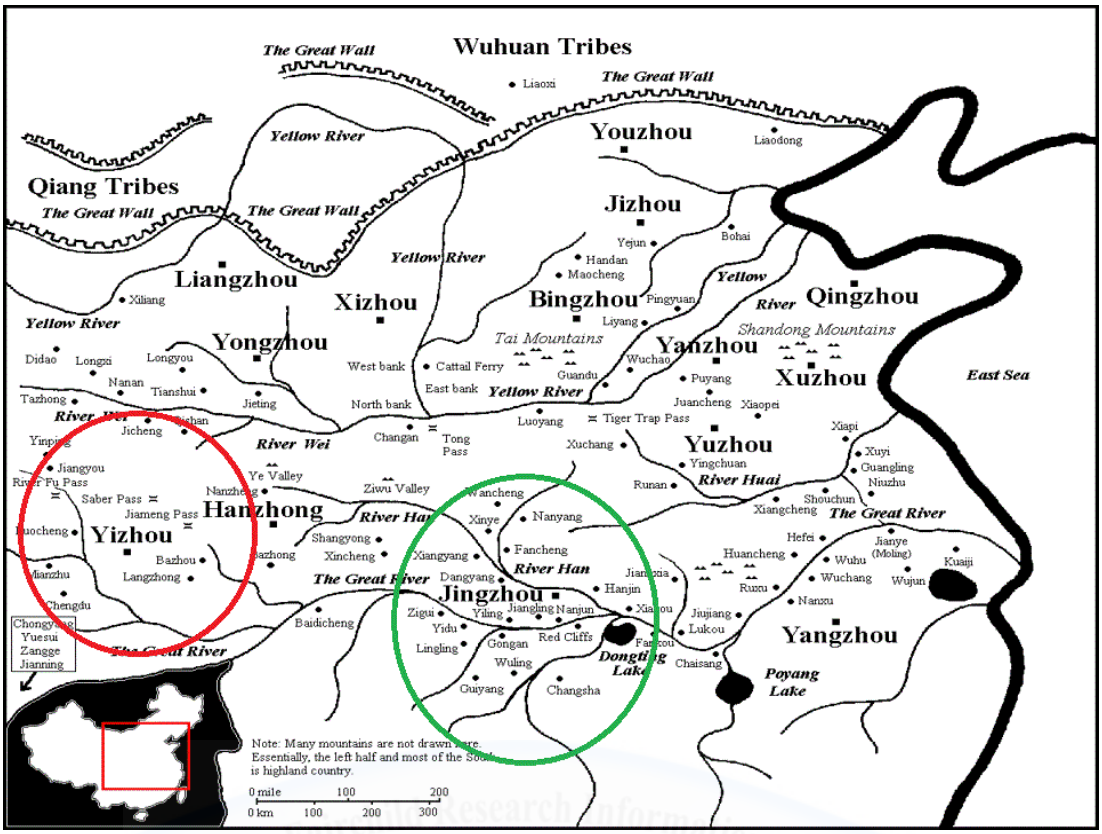
[56] Guanzhong, *Three Kingdoms,* 679.
[57] Guanzhong, *Three Kingdoms*, 680.
[58] Guanzhong, *Three Kingdoms,* 682.

Figure 1: Map of Jingzhou and Western Region with Yizhou



Source: China History SG, "Evaluation of the Long Zhong Plan," https://chinahistorysg.wordpress.com/2014/06/22/evaluation-of-the-long-zhong-plan/ (accessed 22 May 2015).

Liu Bei does not heed Kongming's advice and allows Jingzhou to fall to Cao Cao. Director John Woo's 2008 blockbuster movie *Red Cliff* picks up the epic with Liu Bei in retreat of Cao Cao's overwhelming forces. In the onslaught, Liu Bei finds his family on the opposite side of the battlefield. One of his generals, Zhao Zilong, returns to rescue the heir to the throne. Mao Zedong criticized Liu Bei for choosing to protect the fleeing civilian population vice returning to defend his own family.[59]

Cao Cao offers Sun Quan an opportunity to submit to his authority and destroy Liu Bei as an enemy to the Emperor. In the court of Sun Quan, Kongming attempts to persuade the court to unite with Liu Bei against the imminent advance of Cao Cao. In a clash of intellect, a member of the court challenges Kongming: "Kongming's rhetoric is bereft of reason. His distorted judgments are not worth consideration. I beg to

[59] Zhixin, *Mao Zedong Read The Romance of Three Kingdoms*, 300.

inquire, what classics have you mastered?"[60] Kongming responds, "How can the text-bound pedant revive our nation or further our cause…Do you really think they [mentioning ancient sages in service to prior kings] simply spent their days confined between the pen and the inkstone like schoolmen arguing over texts, flourishing words, wielding brushes?"[61] Kongming distinguishes scholars of noble character and identifies scholars with petty interests as "having no skill but that of trivial composition. Authors of grandiose odes in their youth, by old age they've digested the classics. In one sitting a thousand words may flow from their pens, but inside of them not one useful idea is to be found."[62] Kongming humbles his audience through powerful points of references to Chinese historical values, and demonstrates the power of ideas from the classics are more important than clinical knowledge.

Aware of his true audience in Sun Quan, Kongming dissects his target as "A man to be incited, not won over by argument."[63] Sun Quan's advisor, Lu Su, warns Kongming to avoid discussion of the size of Cao Cao's forces. Kongming takes the advice and uses it to incite Sun Quan through embellishing the actions of Liu Bei against overwhelming force. In response to Sun Quan's inquiry as to Cao Cao's military position, Kongming belligerently estimates one million men. In disbelief, Sun Quan questions how Liu Bei can confront such a force and charges Kongming with trickery. Kongming cites the accumulation of forces on Cao Cao's campaign and embellishes, "It adds up to one and a half million. I said 'one million' for fear of scaring off your warriors."[64] Angered at Kongming's insolence, a youthful Sun Quan exits to calm himself.

Upon return, Kongming relates Cao Cao's extended lines of communication and subsequent condition of his forces to a "spent arrow

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[60] Guanzhong, *Three Kingdoms*, 764.
[61] Guanzhong, *Three Kingdoms,* 765.
[62] Guanzhong, *Three Kingdoms,* 765.
[63] Guanzhong, *Three Kingdoms,* 767.
[64] Guanzhong, *Three Kingdoms,* 767.

unable to pierce fine silk."[65] In fact, Cao Cao dismisses the advice of his chief advisor to replenish his forces after the northern campaign and aggressively advances south in AD 208. Uncharacteristic in his dismissal of logistical concerns, his lust for southland General Zhou Yu's wife may offer partial explanation for his haste. Historians note few records of logistics preparation of the battlefield prior to the southern campaign.[66] Cao Cao's pattern of innovation suffers when he gains the pride accompanying the advantage of overwhelming force.[67]

Kongming further exposes Cao Cao's forces as amateurs in naval warfare whose soldiers fight under coercion rather than choice. Observing Sun Quan as eager to prove himself, Kongming offers the strategy of a tri-polar balance of power to counter Cao Cao's forces. Though war put all at risk to the numerically inferior force of the southlands, submission to Cao Cao meant personal insecurity to Sun Quan. Sun Quan entrusts General Zhou Yu, with Kongming as his strategist, to lead his campaign against the overwhelming forces of Cao Cao at the Battle of Red Cliff.

The narrative behind the Battle of Red Cliff evades the attention span of many western readers. Reflective of the interest, the international version of John Woo's film *Red Cliff* spans 288 minutes. The western theatrical version reaches only 148 minutes. Similar to the tragic Sicilian expedition and the subsequent fall of Athens, the demise of the Han Dynasty and the sequence of events up to the Battle of Red Cliff link the domestic narrative of internal corruption and civil strife into international relations. The tragedy of Athens is fueled by the passion and individual interest of the mob trumping the honor and collective interest of Nicias and his predecessor Pericles. Over a millennium later, the lessons aided in establishing representative democracy in the US to

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[65] Guanzhong, *Three Kingdoms,* 770.
[66] Eikenberry, "The Campaigns of Cao Cao," 62.
[67] Eikenberry, "The Campaigns of Cao Cao," 62.

check the passion of the people and separate branches of government to balance human ambition. The western notions of the danger of entangling alliances emanate from the foundational classic. In a similar fashion, the narrative behind the battle of Red Cliff establishes a stark point of reference for Chinese domestic governance and international relations. Corruption and the abuse of power sparks a cyclical understanding of division and reunification as an extension of nature. Chinese leaders today continue to be preoccupied with domestic problems and consistently reject internal pressures to overtly challenge the US.[68] The indicators of nature at the individual, state, and metaphysical level of analysis combine to form a holistic understanding of a situation to exploit at an opportune moment for an observant strategist.

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[68] CSIS, *US Force Posture Strategy in the Asia Pacific Region: An Independent Assessment*, (Washington, DC: Center for Strategic and International Studies, August 2012), 13.

Chapter 3

THE BATTLE OF RED CLIFF

In Red Cliffs' bitter trial, they fought with fire:
Fire's the perfect weapon, all agreed.
But it was Pang Tong's boat-connecting scheme
That let Zhou Yu accomplish his great deed.[1]

The immediate antecedents of the Battle of Red Cliff find Prime Minister Cao Cao with a force of 830,000 men near Red Cliff opposing the 60,000 men under the command of General Zhou Yu in AD 208. Warier of the intellect of an ally in the long term than the numerically superior forces of an enemy in the near term, General Zhou Yu observes "Kongming divined my lord's state of mind before I did! In strategy, too, he excels me. In the long run such brilliance bodes danger to our land; we would well be rid of him now."[2] After a few failed attempts to outwit and kill Kongming, General Zhou Yu temporarily tables his assassination efforts until after the immediate threat of Cao Cao is dealt with.

With the surrender of Jingzhou, Cao Cao absorbs the naval expertise of Cai Mao and Zhang Yun and appoints them his chief naval commanders.[3] Unaware of Cao Cao's newly acquired naval leadership, General Zhou Yu initiates contact to gauge his adversary. In the initial skirmish, General Zhou Yu defeats the vanguard of Cao Cao's massing northern fleet. Verifying Kongming's assessment, most of Cao Cao's soldiers are novices at naval warfare and lose their balance in battle. The volley of arrows coupled with the rocking of the ships proves too much for them. In dismay, Cai Mao and Zhang Yun establish a floating naval camp for training until their soldiers are fit for combat. The soldiers with the most experience position themselves in the largest ships on the

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[1] Luo Guanzhong, *Three Kingdoms,* trans. Moss Roberts (1995; repr., Beijing, China: Foreign Language Press, 2013), 834.
[2] Guanzhong, *Three Kingdoms,* 785.
[3] Historical records show Cao Cao absorbed 70000 troops and 1000 naval vessels. Ralph D. Sawyer, *Zhuge Liang: Strategy, Achievements, and Writings* (North Charleston, South Carolina: CreateSpace Independent Publishing Platform, 2014), 14.

exterior of the formation creating a wall-like effect. In the interior, rows of smaller boats make up 24 water lanes of communication to protect the novice soldiers and allow training activities. Along the shores, Cao Cao's remaining forces extend to about 100 miles to protect the flanks.

Figure 2: Battle of Red Cliff

Source: Wikipedia, "Battle of Red Cliffs," http://en.wikipedia.org/wiki/Battle_of_Red_Cliffs, (accessed 22 May 2015).

Shocked by this new formation, General Zhou Yu ascertains the identity of the naval commanders and marks Cai Mao and Zhang Yun for death. General Zhou Yu forges a letter from Cai Mao and Zhang Yun falsely pledging their allegiance to the southlands and cites overwhelming circumstance as the reason for their surrender at Jingzhou. In anticipation of Cao Cao infiltrating his court with a spy, General Zhou Yu feigns intoxication. In the ensuing exchange of pleasantries, General Zhou Yu subtlety discloses the false pledge. The spy is unable to

convince General Zhou Yu to surrender but hastily returns with the false information of traitors within the ranks. Cao Cao, already suspicious of his initial naval defeats and strange naval formation, immediately beheads Cai Mao and Zhang Yun. Upon receiving the heads of his former naval commanders, Cao Cao realizes his mistake. To the agony of the general officers, the inexperienced Mao Jie and Yu Jin succeed as the new chief naval commanders.

Despite outwitting Cao Cao, General Zhou Yu's preoccupation with lead strategist Kongming lingers over his immediate threat. General Zhou Yu sends Lu Su to determine Kongming's awareness of the clandestine ploy to remove the naval commanders. Kongming deliberately confides his awareness of the ploy and requests confidentiality to prevent further assassination attempts. Lu Su pledges discretion but is ultimately unable to resist the interrogation of General Zhou Yu. In a fit, General Zhou Yu recognizes Kongming as the greater threat and declares he must die.

General Zhou Yu lures Kongming to assist in planning against the massive forces of Cao Cao in a plot to bring his demise. General Zhou Yu and Kongming agree the best course of action is to engage the naval forces on the river with bow and arrow. General Zhou Yu then tasks Kongming, under martial law, with the improbable task of resolving the shortage of munitions with a requirement of 100,000 arrows in ten days. Now aware of his betrayal by Lu Su, Kongming shockingly responds to supply the requirement in a shorter timeline of three days under penalty of death. In eager anticipation of the imminent demise of Kongming, General Zhou Yu covertly orders the local artisans to delay deliveries of the necessary materials for arrow manufacture.

Kongming subverts Lu Su through guilt and tasks him to provide 20 ships, with a crew of 30 each, from General Zhou Yu's fleet. On the final day of the deadline, thick fog saturates the river reducing visibility to nearly zero. Kongming responds to the abrupt change in terrain and

sets sail, with a nervous Lu Su, for Cao Cao's fleet with straw bundles lining each ship. Advancing in a single file towards the flotilla with beating drums, Kongming relaxes with a cup of wine and a hysterical Lu Su as his companion.

In alarm, chief naval commanders Mao Jie and Yu Jin notify Cao Cao of the advancing forces. A suspicious Cao Cao commands, "The fog has made the river invisible. This sudden arrival of enemy forces must mean an ambush. I want absolutely no reckless movements. Let the archers, and crossbowmen, however, fire upon the enemy at random."[4] In an instant, from both shore and river, 10,000 men concentrate their shots on the sound of the drums. The straw bundles lining the ships welcome the scarce munitions. Cao Cao expends over 150,000 arrows through the perceived safety of long range strikes and contributes to the exhaustion of his own forces. Kongming orders each crew to shout, "Thanks to the prime minister for the arrows!"[5] In the literal fog of war, Kongming acquires strength from a position of weakness through clarity in the Heavens.[6]

In complete shock at the turn of events and waiting until the final day of the deadline, Lu Su inquires to Kongming's knowledge on the arrival of the fog. Kongming explains, "A military commander is a mediocrity unless he is versed in the patterns of the heavens, recognizes the advantages of the terrain, knows the interaction of prognostic signs, understands the changes in weather, examines the maps of deployment, and is clear about the balance of forces. Three days ago I calculated the fog…my fate is linked to heaven. How can Zhou Yu have succeeded?"[7] In humility, General Zhou Yu submits to the ability of his lead strategist and appeals for a unique stratagem to defeat Cao Cao's newly organized

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[4] Guanzhong, *Three Kingdoms*, 813.
[5] Guanzhong, *Three Kingdoms*, 813.
[6] Liu Bei first responds to Kongming's tri-polar balance of power strategy as rendering "everything so clear that clouds are swept aside and I see the clear sky". The western equivalent is the Coup D'Oeil of Clausewitz.
[7] Guanzhong, *Three Kingdoms*, 814.

and trained forces. General Zhou Yu assesses, "They are the epitome of strict order, all according to the book, invulnerable to any routine attack."[8] Kongming urges silence and requests they each write their idea on the palm of their hands to shield their thoughts from subordinate commanders. Revealing their hands together, the word "fire" appears to both.

In a rage for the transfer of arrows and the loss of his naval commanders, Cao Cao decides to plant spies in the southlands under the guise of surrender. Cao Cao selects the clansman of his former chief naval commander, Cai Mao, as natural turncoats to avoid suspicion. General Zhou Yu immediately recognizes the false surrender since their individual submission did not include their families. In Jingzhou, they remain within Cao Cao's sphere of influence. Despite the protest of his advisors, General Zhou Yu permits the spies entry to transmit false information. General Zhou Yu understands, "There is no end of deception in warfare."[9]

In an effort to match Cao Cao's game of espionage, General Zhou Yu requests his subordinate General Huang Gai to participate in a gruesome ruse. In the southland troop formation, General Huang Gai creates the illusion of insubordination and overtly advocates surrender. According to plan, General Huang Gai is beaten mercilessly to the dismay of the unsuspecting masses. In recovery, General Huang Gai feigns defection to Cao Cao's spies under the pretext of revenge. Cao Cao warily accepts General Gai's plan to surrender at the time of his choosing.

Working on concurrent lines of operations, General Zhou Yu develops an intricate plan to implant strategist Pang Tong within Cao Cao's camp. Pang Tong, a refugee from the north, offers a plausible cause for sedition under the guise of leadership dissatisfaction. Pang

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[8] Guanzhong, *Three Kingdoms,* 815.
[9] Guanzhong, *Three Kingdoms*, 818.

Tong concocts a boat connecting scheme to make the greatest use of fire against Cao Cao's massive flotilla. Pang Tong tells General Zhou Yu, "On the river if one boat burns, the others will scatter unless someone can convince Cao Cao to connect up his ships."[10] Once in Cao Cao's camp, Pang Tong observes sickness and death among the soldiers with symptoms of nausea and vomiting due to poor acclimation to the southern climate. Pang Tong disingenuously diagnoses the cause as the pitching and rolling of the ships. In admiration of Pang Tong's knowledge of the classics, Cao Cao welcomes his advice. Pang Tong proposes, "Reorganize your small and large vessels: marshal them in groups of thirty or fifty and make them fast with iron hoops, stem to stem and stern to stern. Then, if wide planks are laid so that horses as well as men can cross from ship to ship, however rough the waves or steep the swells, what will you have to fear?"[11] To avoid suspicion of treachery, Pang Tong requests a letter of amnesty to protect his family from the imminent invasion. Cao Cao immediately orders the binding of his ships to preserve the health of his men.

In preparation for battle, Cao Cao's advisors question the recent concentration of forces, highlighting the inability to disperse under attack from fire. Cao Cao retorts, "Any attack with fire must rely on the force of the wind. Now at winter's depth, there are only north winds and west winds-how could there be a south wind or an east wind? Our position is northwest; their troops are all on the southern shore. If they use fire, they will only burn out their own troops."[12] Cao Cao further cites the lack of naval experience of his men as justification for the concentration of forces.

General Zhou Yu impatiently awaits the eastern winds and feints with the arrival of stronger western winds. Unaware of the cause of his

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[10] Guanzhong, *Three Kingdoms,* 829.
[11] Guanzhong, *Three Kingdoms*, 833.
[12] Guanzhong, *Three Kingdoms,* 846.

illness and the elaborate plan for the defense of the southlands, the court advisors call for Kongming's assistance. Kongming secretly passes a note identifying the lack of eastern winds as the source of illness. In disbelief, General Zhou Yu pleads for a cure to the imminent crisis. Kongming prescribes, "Though I myself have no talent, I once came upon an extraordinary man who handed on to me occult texts for reading the numerology of the heavens. Their method can be used to call forth the winds and rains. If the chief commander wants a southeast wind, erect a platform on the Southern Screen Hills, call it the Altar of the Seven Stars…On the platform I will work certain charms to borrow three days and three nights of southeast wind to assist you in your operations."[13] General Zhou Yu eagerly complies. Representations of various star constellations, to include the Southern Dipper, are found along each side of the structure. Unbeknownst to General Zhou Yu, the construction is most likely a ruse to occupy his mind and facilitate Kongming's escape from a future assassination attempt upon arrival of the eastern winds.

General Zhou Yu recovers from his illness and begins preparations for initiating the offensive. General Huang Gai packs 20 boats with flammable materials and tacks nails to the bows, preparing for his false defection. At the signal of the southeast winds, General Huang Gai is to set sail for Cao Cao's flotilla as part of his sham surrender and ram the unsuspecting invaders with fire. An impatient General Zhou Yu observes no changes to the winds and proclaims Kongming's forecast as absurd. At that moment, the winds arrive from the southeast. A poem of the times describes the event,

> Sleeping Dragon stood on the Seven Star Altar.
> As all night eastern winds rolled the Jiang.
> Had Kongming not devised this artiface,
> Could Zhou Yu have played the strategist?[14]

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[13] Guanzhong, *Three Kingdoms,* 852.
[14] Guanzhong, *Three Kingdoms,* 856.

In both elation and dismay, General Zhou Yu orders the attack on Cao Cao's forces, the decapitation of Cao Cao's spies, and the decapitation of Kongming. General Zhou Yu explains, "This man has snatched some method from the creative force of Heaven and earth, some unfathomable technic from the world of the departed spirits. Why allow him to remain among us and cause trouble, when his elimination would save such great grief?"[15] In ample anticipation of treachery, Kongming escapes to the protection of Liu Bei and positions allied forces to cut off the routes of Cao Cao's retreat.

General Huang Gai hastily sets sail with the favoring wind towards Red Cliffs. In anticipation of the defection, Cao Cao initially welcomes the absorption of additional forces. However, an advisor frantically points out the strong eastern winds and the high riding characteristics of the ships rapidly skimming the surface of the river. If facing a trap, Cao Cao realizes he could not evade attack. Cao Cao dispatches his patrol ships to halt the advance in vain. General Huang Gai lights his ships on fire and rams into the concentrated naval formation. The fire leaps forward in advance of the charging ships, with the eastern winds pushing at their stern, and ignites the entire fleet. A humbled Cao Cao escapes by appealing to the honor of Guan Yu to allow him passage in return for past hospitality. China enters the era of the Three Kingdoms in a tri-polar balance of power between the Kingdoms of Wei (Cao Cao), Wu (Sun Quan), and Shu (Liu Bei).[16]

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[15] Guanzhong, *Three Kingdoms,* 856.
[16] Karl W. Eikenberry, "The Campaigns of Cao Cao," *Military Review* 74, Issue 8 (August 1994), 57.

Figure 3: The Three Kingdoms

Source: China History SG, "Evaluation of the Long Zhong Plan," https://chinahistorysg.wordpress.com/2014/06/22/evaluation-of-the-long-zhong-plan/ (accessed 22 May 2015).

The veracity of the novel is not as valuable as understanding the generation of ideas and the influence it continues to have on eastern thoughts on strategy. In western civilization, the works of Clausewitz and Jomini are often cited but rarely read by the masses. In contrast, the widespread Chinese availability of *Three Kingdoms* in print, DVD, audio, cartoon, video games, and film form a subconscious foundation for the

masses to approach and discuss strategy.[17] Mao Zedong makes a direct correlation to the masses and Proletariat with Kongming, emphasizing he does not need individual genius since collective wisdom can overcome anything.[18] Indeed, the classic may support such a claim as it educates all levels of society from children to adults. In 1987, China Central Television constructed a Three Kingdoms theme park for both locals and tourists to relive the epic.[19] The park attracts over 2 million visitors a year with the climactic Battle of Red Cliff as a main attraction. Further contributing to the collective wisdom, China Central Television produced an 84-episode series recounting the cyclical tales of division and reunification. Loyalty to the throne is a powerful message the government can embrace while corruption within the court as a causal factor of political decline is an equally attractive theme for the populace. At the 2014 Tokyo Game Show, video game maker Koei Tecmo announced the release of the 30th anniversary edition of *Romance of the Three Kingdoms* ensuring future generations will be familiar with heroes of the classic.[20] Touching even the elite in periphery nations, Japanese CEOs are known to recount their favorite episodes on competitive strategy in the business world.[21] From the amateur virtual gamer to the professional practitioner of strategy, eastern civilization participates in retelling the story of the *Three Kingdoms* in daily life and relies upon it for the generation of innovative ideas. If the Chinese dictum of "Consider the past and you will know the present" is an accurate perspective for

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[17] Check Teck Foo, "Cognitive strategy from the Romance of the Three Kingdoms," *Chinese Management Studies* 2, No. 3 (2008), 173.
[18] Dong Zhixin, *Mao Zedong Read The Romance of Three Kingdoms* (China: Volumes Publishing Company, 2011), 99.
[19] China Central Television, "Three Kingdoms Town," http://www.ctvwx.com/eng_ver/introduce.html (accessed 26 April 2015).
[20] Sal Romano, "New Romance of the Three Kingdoms coming in 2015," Gematsu, Sep 2014. http://gematsu.com/2014/09/new-romance-three-kingdoms-coming-2015 (accessed 26 April 2015).
[21] Foo, "Cognitive strategy from the Romance of the Three Kingdoms," 171.

eastern civilization, then the *Three Kingdoms* and the Battle of Red Cliff are important points of reference to shape their behavior.[22]

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[22] Li Yan and Taieb Hafsi, *Understanding Chinese Business Behaviour: A historical perspective from three kingdoms to modern China*, (Montreal, Quebec: HEC Montreal, Jan 2007), 4.

Chapter 4

KONGMING

Only through austerity and quiescence can one's purpose shine forth; only through concentration and self-control can one's distant goal be reached.

- Kongming couplet to his son

The famous cloak of crane feathers continues to perpetuate a surface understanding of Kongming. In the *Annals of the Three Kingdoms*, Chen Shou identifies a separate work of 24 sections containing the best writings of Kongming. In Chen Shou's words,

> By nature, Liang excelled in clever thoughts. The improvement of the repeating crossbow and the (creation) of the "wooden oxen" and "fluid horses" all came out of his ideas. He investigated and extended the methods of war and created the diagram of the eight formations, all of which express the essence of his discussions. Many of Liang's instructional works and memorials can be still seen and I have compiled them in a separate work.[1]

This work, along with a definitive historical perspective of Kongming, is lost for all time.[2] Though the titles of Kongming's works survive and offer speculation, only letters and memorials remain from this transcendent figure.[3]

Artifacts to his genius in the singe-wheel wheelbarrow, known as the "wooden ox", and repeating ten-shot crossbow reflect technological innovations to meet the requirements of overwhelming circumstances.[4] After Liu Bei's death, Kongming leads five northern campaigns against

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[1] Ralph D. Sawyer, *Zhuge Liang: Strategy, Achievements, and Writings* (North Charleston, South Carolina: CreateSpace Independent Publishing Platform, 2014), XX?
[2] Sawyer, *Zhuge Liang*, vi.
[3] The surviving 24 sections are organized into the following 18 titles: "The Administrative Office of Provincial Governor," "Authoritative Governing," "Southern Expeditionary Campaign," "Going Northward," "Assessments and Calculations," "Instructing and Disciplining," "General Investigations," "Miscellaneous Words," "Esteeming Harmony," "Military Essentials," "Communication and Transportation," "Missive to Sun Ch'uan," "Missive to Chu-ko Chin," "Missive to Meng Ta," "Dismissing Li P'ing," "Judicial Investigation," "Categorized Orders," and "Army Orders." T'ang Dynasty Commander Li Ching claimed to base his formations on Kongming's eight formations but the original documents remain lost. Sawyer, *Zhuge Liang*, 152-154.
[4] Sawyer, *Zhuge Liang,* 21.

Cao Cao and the Kingdom of Wei in his unsuccessful attempts to reunite the Han Empire. Fighting against a numerically superior force, Kongming preserves the dream of uniting the empire until the indifferent leadership of Liu Bei's son proves too much to overcome. In mortal sickness while on the northern campaign, Kongming left the young ruler his last will and testament.

> I humbly pray that the ruler will purify his heart, restrain himself and love the common people, convey respect to the former ruler, spread humanness through the land, promote conscientious individuals in order to get wise and good people into positions of responsibility, and throw out traitors and calumniators in order to make the manners of the people more substantial…When I die, do not let there be any extra cotton on the corpse, or any special burial objects, for which I would be indebted to the nation.[5]

Lesser known for his failures, he "was constrained by limited resources, impossible terrain, occasionally incompetent and obstreperous commanders, and a youthful, ignorant ruler."[6] The logistic challenges of projecting force over great distances with an inferior force and poor leadership prove too much for the technological innovations of a humble Kongming.

Kongming's failures in command may also reflect leadership inexperience in the conduct of battles. Despite his impressive reputation as a strategist and advisor, Kongming is not historically credited with formulating any tactics or commanding soldiers prior to Liu Bei's demise.[7] In contrast, his record in public office suggests a different skill set. In the surviving works of Chen Shou, Kongming's role as a public administrator offers a revealing appraisal.

> In his role as prime minister for the state Chu-ko Liang nurtured the hundred surnames, displayed the rites and regulations, constrained the bureaucratic offices, and governed through the application of authority. He opened the path of sincerity and

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[5] Zhuge Liang and Liu Ji, *Mastering the Art of War* trans. Thomas Cleary (Boston, Massachusetts: Shambhala Publications), 56.
[6] Sawyer, *Zhuge Liang,* 108.
[7] Sawyer, *Zhuge Liang,* 54.

> implemented the Tao of public service…Those who acknowledged their offenses and confessed the truth would be released even if their offenses were severe but those who prevaricated and made pretenses would be executed, however slight the offense…In the end everyone within the state both feared and loved him…He can be termed an outstanding talent who understood administration, someone comparable to Kuan Chung and Su Ho.[8]

Historians speculate the content of Kongming's probable writings reflect his administrative concerns of training the army and restructuring the government.[9] Kongming further explains his priorities, "Sun-Tzu and Wu-Tzu were able to be victorious throughout the realm because their employment of the laws was clear. Now when the land within the four seas is sundered and the armies are just beginning to clash, if we abandon the laws, how will we be able to conduct punitive expeditions against the brigands?"[10] The comments are revealing in emphasizing an internal framework of order and discipline vice a military strategy for victory.

The value of rigorous study, vice stereotypes of supernatural insight, is not lost on Kongming. In his "Letter of Admonishment to his Son", a father passes his lessons on the complexities of patience as an active yet fleeting endeavor.

> In his conduct the perfected man is tranquil in order to cultivate himself and frugal in order to nurture his Virtue. Apart from calm equanimity he has no way to make his will enlightened, apart from quiet tranquility no means to achieve distant (objectives). Now study requires tranquility and talent requires study. Without study there is no way to broaden talent, without will no way to complete study. If you are licentious and dilatory you will not be able to forge the essence, if you are hasty and rash you will not be able to control your nature. The years will race away with the time, thoughts will go with the days, and you will become a withered tree that has lost its fruit. Having little intercourse with the world and mournfully cleaving to an impoverished hut, how will you then revert?[11]

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[8] Sawyer, *Zhuge Liang,* 47.
[9] Sawyer, Zhuge Liang, 54.
[10] Sawyer, *Zhuge Liang,* 152.
[11] Sawyer, *Zhuge Liang,* 148.

In a similar fashion, Liu Bei passes his final missive to his children to read the *Han Shu, Li Chi, Six Secret Teachings,* and Shang Yang's *Shang-chun Shu* to increase their wisdom.[12] In no coincidence, Liu Bei selects Kongming to both author and deliver the lasting message. The prioritization of internal affairs, in both the order of the state and education of the family, dominate the Chinese context of relationships.

Like the novel, the veracity of Kongming's actual thoughts and talents are not as important as the ideas he continues to generate today. The naming convention of the Eastern Wind DF-21D ASBM may pay homage to the imagined mind of one of China's most revered strategists. The legendary persona of Kongming expands beyond historical documentation, due to the probable exaggeration of exploits from stories passed from generation to generation and their publication by Luo Guanzhong more than a millennia later. Today, his strategic prowess is further embellished in comic books and movies. Chinese fans, such as film director John Woo, grew up with the classic and project their own personal imagery of the hero through mass media. In the most expensive Asian film in history, east meets west with his 2008 blockbuster film *Red Cliff*. The film is the highest grossing Chinese film ever and surpassed overall record holder *Titanic* in Chinese box office sales. The epic film utilizes actual Chinese soldiers as extras in the battle scenes and glorifies the humble Kongming as the greatest strategist of the era.

In *Three Kingdoms,* Kongming establishes a key role of the strategist as a highly aware observer of both man and nature. One of his tasks is "to listen and watch the behavior, especially the body language, facial expressions and tone of voice of the key players…(the strategist) is trying to decipher true intent, motivations and ambitions of the other contenders to the throne."[13] Unlike realist theories of international

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[12] Sawyer, *Zhuge Liang,* 148.
[13] Check Teck Foo, "Cognitive strategy from the Romance of the Three Kingdoms," *Chinese Management Studies* 2, No. 3 (2008), 179.

relations in western society, the intentions of actors are paramount. Kongming demonstrates expertise in the task from his deliberate elusiveness with newcomer Liu Bei, to the incitement of a passionate Sun Quan, and the anticipation of the treacherous Zhou Yu.

Through a western perspective, the temptation to reduce Chinese thoughts on strategy to the single idea of deception is prevalent, as it conforms to Western stereotypes of "inscrutable" Asian cultures. However, this reductionist conclusion is not consistent with Chinese core values and behavioral norms.[14] In framing his life motto, Kongming teaches "Opportunistic relationships can hardly be kept constant. The acquaintance of honorable people…continues unfading through the four seasons, becomes increasingly stable as it passes through ease and danger."[15] In separating opportunistic relationships from honorable people, Kongming devalues the western norm of networking as a positive endeavor. Deception is a tactic, not a strategy, to initially test the sincerity and honor of others. In interfacing with their eastern counterparts, western business leaders are taught "tactics and deceptive behavior have three functions: first, test others' sincerity, screening allies from competitors; second, protect, concealing strengths and weaknesses; third, deliver misleading information to rivals, "confusing and exhausting" them."[16] The effects of deception build a cognitive buffer zone to offer time to understand intentions of human interactions while shaping relative disadvantage or a condition of greater uncertainty to adversaries. If an unknown actor can overcome the initial buffer zone of deceptive behavior and demonstrate sincerity, a mutually beneficial relationship is possible.

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[14] Li Yan and Taieb Hafsi, *Understanding Chinese Business Behaviour: A historical perspective from three kingdoms to modern China*, (Montreal, Quebec: HEC Montreal, Jan 2007), 7.
[15] Liang and Ji, *Mastering the Art of War*, 58.
[16] Yan and Hafsi, *Understanding Chinese Business Behaviour*, 1.

US challenges to demonstrating sincerity persist with the labeling of China as a peer competitor and a relative short attention span of opportunistic interactions dating from the Century of Humiliation. Furthermore, the overt ambition of western multinational corporations to dominate the Chinese market are seen in the same light as Cao Cao's greed and vicious will.[17] Cao Cao's association with evil is "just because he constantly and explicitly demonstrated his ambition for the imperial throne."[18] The blatant unilateral intervention in regional disputes to maintain the status quo of US hegemony may be seen through a similar lens. Finding Liu Bei's equivalent of gardening, as a pragmatic strategy to disguise ambition, may not be in the lexicon of US foreign policy. His unobtrusive approach is a virtuous model in Chinese society, worthy of emulation.

Kongming's most well-known exploits anchor Chinese strategy with the characteristics of imagination and the unorthodox. Prior to the battle of Red Cliff, Kongming turns a shortage of arrows into a surplus by absorbing the strength of his adversary. Kongming certainly incorporates deception by mimicking a large force, but his unorthodox knowledge of the imminent change in terrain fascinates the aspiring strategist to this day. Even more astounding, his actions to reduce his own deadline to deliver the arrows and acting on the final day of the deadline resonates with the most selective of audiences. In a cognitive challenge from a treacherous ally, Kongming continuously spars to continue the game of relative appraisal until exiting at the time of his choosing.

The Battle of Red Cliff may epitomize modern thoughts on Chinese strategy in one point of reference. Through a web of deception, Cao Cao links his fleet through Pang Tong's boat connecting scheme. An industrious General Zhou Yu then provides a false defection allowing access to the concentrated forces. Yet, it is Kongming's ability to

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[17] Yan and Hafsi, *Understanding Chinese Business Behaviour*, 10.
[18] Yan and Hafsi, *Understanding Chinese Business Behaviour,* 10.

seemingly call the eastern winds that overshadows the tactic of deception and captures the imagination of the masses.

A literal interpretation of Kongming's ability to forecast the changing eastern winds brings thoughts of witchcraft and mysticism. A more useful analog is to frame the actions in the monitoring of indicators. Variables such as the US deficit, currency exchange rates, and even the forecast of a solar flare's effect on space systems offers a modern day parallel for Chinese strategists to work in harmony within the existing winds. The ancient Chinese strategist "integrated the universal, holistic and intuitive with the factual, data-knowledge driven, logic rational processes when formulating strategy."[19] A lesser strategist than Kongming may not know the exact timing for a changing eastern wind, but situational awareness of indicators and prudent preparation can have forces in position should a hegemon fall.

The Eastern Wind DF-21D anticipates when Heaven offers the desired opportunity in a Taoist truth of understanding hegemony as a cycle. The *Three Kingdoms* opens the same manner as it closes, "The empire, long divided, must unite; long united, must divide. Thus it has ever been."[20] In this cyclical context of balance, China may be prudently posturing for what it deems as the inevitable fall of one hegemon and the rise of another. Furthermore, it aids in explaining Chinese desires to reclaim vast territories lost centuries ago in the natural unification of their divided empire. The challenge for US strategists is to discern the act of prudence from aggression and prepare the Asia-Pacific region to perpetuate US strength and postpone decision for conflict indefinitely.

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[19] Guanzhong, *Three Kingdoms*, 180.
[20] Guanzhong, *Three Kingdoms*, 1 and 2175.

Chapter 5

FEEDING THE BEAST

My logisticians are a humorless lot…they know if my campaign fails, they are the first ones I will slay.

- Alexander the Great

Prioritizing the dietary requirements of the Western war machine brings to light biases stemming from individual experiences, occupational influence, and service rivalries. There is rarely consensus, and satisfying the insatiable appetite of the beast of warfare is a task without end. To claim there is a uniquely Western way of war is not an attempt to fight the war of yesterday. It is an attempt to find commonalities in order to define and prioritize the requirements. Historian Martin van Creveld echoes, "The first prerequisite for any regular logistics system is, of course, an exact definition of requirements."[1] When everything is a priority, nothing is a priority and nothing gets done well. Accounting for the items most difficult to supply and highest in demand help shape the discussion. The case study of US Pacific operations in World War II, and their genesis in War Plan Orange, provides a modern point of reference for western warfare incorporating the terrain specific challenges of fighting in the Pacific against a peer competitor. Fuel, basing, and construction materials emerge as the primary priorities for waging western-style warfare in the Pacific.

War Plan Orange was the secret plan to defeat Japan in isolation. Initiated in 1906, naval strategists proceeded under the assumption that the US would serve as "a nebulous restraining force that Japan would assail someday to unblock its ambitions."[2] The assumption was mirrored in Japan with the identification of the US as a principal enemy as early

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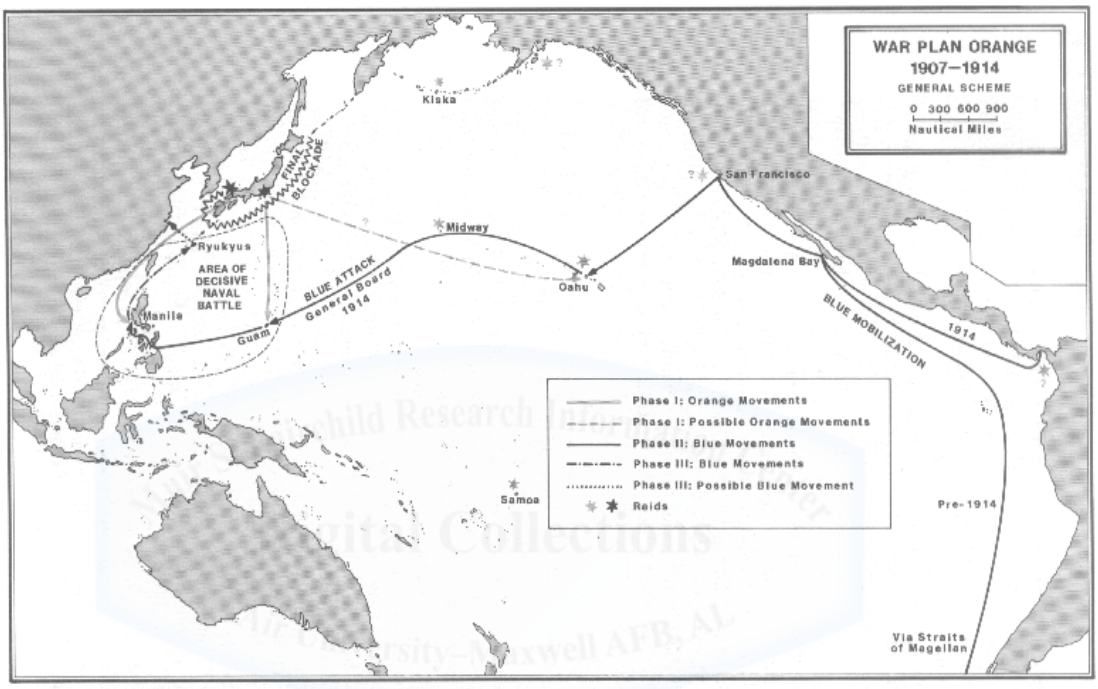
[1] Martin Van Creveld. *Supplying War: Logistics from Wallenstein to Patton* (New York, NY: Cambridge University Press, 2013), 18.
[2] Edward. S. Miller, *War Plan Orange: The US Strategy to Defeat Japan, 1897-1945*, (Annapolis, Maryland: Naval Institute Press, 1991), 25.

as 1909.[3] The projected Japanese initiation of the conflict was assumed to occur under the political context of US restraint in the forward deployment of forces combined with a sudden moment of relative disadvantage for the US.

Figure 4: War Plan Orange



MAP 4.1

Source: Eric Toldi, "75th Anniversary History of NASA Ames Research Center, Part I," American Institute of Aeronautics and Astronautics, http://www.aiaa-sf.org/75th-anniversary-history-of-nasa-ames-research-center-part-1/ (accessed 22 May 2015).

The maritime strategy had a continental objective, culminating in the surrender of Japan, in a geographically dictated three phase war. US outposts in the western Pacific, to include the Philippines and Guam, were deemed indefensible in the face of overwhelming Japanese force. Phase I is initiated by Japanese attack, with the seizure of US territories in the western Pacific, and mobilization of US forces in the eastern Pacific. In Phase II, US forces are planned to steam westward and shorten lines of communication through an incremental establishment of

[3] Patrick H. Donovan, "Oil Logistics in the Pacific War," *Air Force Journal of Logistics* Volume 28, No. 1 (Spring 2004), 33.

littoral naval and air bases to retake the Philippines. The final phase isolated mainland Japan by advancing northward from the Philippines to establish bases of economic warfare. Japan is to be blockaded with maritime forces and (in later iterations of the plan) bombarded by air into submission.

In 1907, President Theodore Roosevelt deployed sixteen battleships around the world as a political demonstration of the global reach of Big Stick diplomacy. The Great White Fleet, with its imposing gleaming painted white hulls and gold crested bows, steamed 46,000 miles in 434 days.[4] To logistical planners, the voyage revealed vulnerability in en route fuel support and uncertain access to neutral ports for refueling. Dependency on foreign colliers, supplying inferior coal, plagued the journey.[5] The fortuitous revelation reflected a logistics weakness in the professed political victory. The omission of an organic coaling capability and assured access to ports forced planners to focus on logistics to feed the beast in War Plan Orange.

In 1908, the navy allocated 59 percent of its ship appropriations to building colliers in order to remedy the hunger for coal.[6] Phase II of War Plan Orange initially required the fleet to break through Japanese defenses in the central Pacific to a refuge near the Philippines, with organic support ships intact, carrying a total of 125,000 to 225,000 tons of coal for two months of operations.[7] The initial production of colliers did little to inspire confidence in logistics planners' ability to overcome the tyranny of distance. The first six colliers from the shipyards were limited to a hand-load process of 120 tons per hour. By 1910, with the addition of a "veritable forest of derricks and kingposts rigged with high-speed winches and grab-buckets for direct dumping", the colliers reached a coal transfer capability of 1,000 tons per hour filling the appetite of a

[4] Miller, *War Plan Orange*, 89.
[5] Miller, *War Plan Orange,* 90.
[6] Miller, *War Plan Orange*, 91.
[7] Miller, *War Plan Orange,* 94.

battleship in two hours.[8] In an 8-fold transformation in capability, a few men replaced an entire brigade armed with shovels. In 1917, the refueling capability aggregated to a capacity of 2 million tons and 494 colliers and tankers.[9] The focus on logistics liberated dependence on foreign colliers along with concerns of inferior coal supply.

Despite the advances, planners faced a litany of obstacles. The 11,000 man garrison in the Philippines faced a projected Japanese force of 300,000 soldiers within the first month of war.[10] The fleet did not have the range to traverse to the Philippines from Hawaii without refueling en route and experiments at refueling the ships on the high seas failed. The calm waters of a port or harbor were required to feed the beasts of warfare. In the 1920s, the fuel problem was reduced with the conversion of the fleet from coal to oil. Cruising ranges increased 40 to 50 percent and industrial refining ensured uniform quality of the oil.[11] More importantly, fuel transfer through flexible hoses sped replenishment in harbors, multiplying the available combat power. However, the transition to oil made the collier obsolete in favor of the oiler. A severe shortage of oilers offset the gains in cruising ranges and, at least temporarily, crippled the operational radius of the fleet.[12]

A lack of basing in the Pacific extended vulnerable lines of communication with continued reliance on powerful foreign neutrals for ports. To mitigate risk to the potential Japanese incursion of supply lines, the Phase II offensive is planned to advance by jumping at moderate distances at a flexible pace within organic logistical means.[13] Subsequently, Pearl Harbor is ranked first in development priority. It could hold three battleships until a dredging program increased its

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[8] Miller, *War Plan Orange,* 94.
[9] Miller, *War Plan Orange,* 98.
[10] Ronald H. Spector, *Eagle Against The Sun* (New York: Vintage Books, 1985), 56.
[11] Miller, *War Plan Orange*, 99.
[12] Donovan, "Oil Logistics in the Pacific War," 35.
[13] Miller, *War Plan Orange,* 116.

capacity to 15.[14] Even with the basing, Japan's superior position of interior lines pushed the seizure of western Pacific territories to its advantage. Planners recognized the advance across the Pacific might take years vice months.[15]

In 1934, the Japanese withdrew from the agreement to limit the number of capital ships and bases outlined in the Washington Accords. Concerned with the withdrawal, the Navy planned for the strengthening of the western defenses of Hawaii. In a parallel to modern challenges of funding a costly dispersed Pacific force posture, the Navy proposals to Congress were dismissed.[16] As the only major naval base in the Pacific, Pearl Harbor housed all major logistics capabilities of the fleet to include repair facilities (drydocks) and bulk storage of fuel.[17] In 1937, Japanese aggression in China resulted in the deliberate destruction of the US gunboat *Panay* on the Yangtze river with only a timid response of US cooperation with the British in the event of war.[18]

By 1939, the realities of Hitler's expansion in Europe reduced the probability the US would only engage Japan in isolation. Planners adjusted via the Rainbow series of plans which envisioned the US at war with a coalition of enemies.[19] With a perceived free hand after the German defeat of the French in June 1940, the Japanese advanced into northern French Indochina. In response to a challenge of the status quo, the US placed an embargo on shipment of aviation fuel, iron, and scrap steel to Japan.[20] The Japanese countered in September by signing the Tripartite Pact between Germany, Italy and Japan which recognized "the leadership of Germany and Italy in the establishment of a new world

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[14] Miller, *War Plan Orange*, 99.
[15] Spector, *Eagle Against The Sun*, 57.
[16] Donovan, "Oil Logistics in the Pacific War," 34.
[17] Donovan, "Oil Logistics in the Pacific War," 35.
[18] Spector, *Eagle Against The Sun*, 64.
[19] Spector, *Eagle Against The Sun*, 59.
[19] Donovan, "Oil Logistics in the Pacific War," 32.
[20] Donovan, "Oil Logistics in the Pacific War," 30.

order in Europe" aimed at the US.[21] Japan then seized southern French Indochina, in part, to pressure the Netherlands East Indies into favorable trade agreements to offset the embargo.[22] The tit for tat responses reached a breaking point when President Roosevelt froze all Japanese assets on 25 July 1941. His intention "was to allow a limited amount of oil and gas to be exported under the arrangement so as to forestall a crisis."[23] However, his intentions were not clear to his subordinates or the Japanese, and bureaucratic friction backed Japan into a corner. The action forced an embargo of all oil products into Japan and isolated them from 90 percent of their annual requirements.[24] By the time the President was aware of the predicament, it was too late to change course due to fears of communicating a lack of US resolve.[25] A subsequent Japanese Imperial Conference in September concluded the mutually exclusive policies of the status quo favored by the US and the aspirations of Japan made conflict inevitable.[26]

History validated many of the assumptions in War Plan Orange and Rainbow. The Japanese, trained in the Western premise of decisive battle, attacked Pearl Harbor on 7 December 1941 and created the anticipated moment of US relative disadvantage. Due to limited oil reserves and oilers, more than half of the US fleet was concentrated in port as a fleet in being. Only one ship in Battleship Row, the oiler *USS Neosho*, received no battle damage.[27] The *USS Neosho* later returned to haunt the Japanese in its valiant effort to defend Port Moresby through

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[21] Spector, *Eagle Against The Sun*, 64.
[22] Akira Iriye, *Pearl Harbor and the Coming of the Pacific War* (Boston: Bedford/St Martin's, 1999), 134.
[23] Spector, *Eagle Against The Sun*, 68.
[24] Donovan, "Oil Logistics in the Pacific War," 32.
[25] Spector, *Eagle Against The Sun*, 32.
[26] *The International Political Roots of Pearl Harbor: The United States-Japanese Dyad; Translations of the Records of Liaison Conferences 19 Through 75 and Four Imperial Conferences,* ed. and trans. Nobutaka Ike (Stanford, California: Stanford University Press, 1965), 33-34.
[27] Vice Admiral Homer N. Wallin, *Pearl Harbor: Why, How, Fleet Salvage and Final Appraisal,* (Washington, DC: Navy History Division, 1968), 103-104.

resupply of the carrier *USS Yorktown* at the Battle of the Coral Sea. Only after its misidentification as a carrier did 80 Japanese aircraft cripple the oiler.[28] In a targeting oversight of even greater proportion, the Pearl Harbor bulk storage tanks with 4.5 million barrels fuel were left unscathed.[29] Destruction would have temporarily immobilized every ship at Pearl Harbor in a single blow. Admiral Nimitz concluded, "Had the Japanese destroyed the oil, it would have prolonged the war another two years."[30] The Japanese plan emphasized attacking fielded forces almost exclusively with logistics functions omitted from the target list. The Japanese failed to understand logistics as a decisive element in warfare.

In a sense, the US also failed to appreciate the less stimulating requirements of warfare. Had the US received no damage during the attack, the lack of oilers would have prevented the fleet from exercising its apportioned ships in the primary war plan. In the first 9 days after Pearl Harbor, the attrited fleet burned 750,000 barrels of the 760,000 barrel total capacity of the oiler fleet.[31] The US was tied to Pearl Harbor's bulk storage tanks as a fleet in being as much as it was to its oilers for force projection.

In 1942, as assumed in War Plan Orange, the Philippines fell to Japanese occupation. Consistent with Phase II of War Plan Orange, the US began a successful island hopping campaign on the outskirts of Japanese control starting with the Gilbert Islands in 1943. The littoral areas gained in the campaign proved more easily defended than blue waters in part because of shore-based air support. The US incrementally pushed to the Marianas and were on the verge of bringing war to mainland Japan. Consensus emerged from the Joint Chiefs of Staff (JCS) of the prerequisite to bombard Japan from airfields in eastern China

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[28] Spector, *Eagle Against The Sun,* 160.
[29] Donovan, "Oil Logistics in the Pacific War," 37.
[30] Donovan, "Oil Logistics in the Pacific War," 37.
[31] Donovan, "Oil Logistics in the Pacific War," 37.

prior to a potential invasion.[32] The massive requirements of a bombardment operation required the seizure of a major port on the south China coast to sustain the airfield.[33]

The tonnage limitations of intra-theater LOCs, from the jungle roads of Burma and the Indian air bridge over the Himalayas, solidified the need for a proximate Seaport of Debarkation (SPOD) with massive Reception, Staging, and Onward Movement and Integration (RSOI) capability. In a backwards timeline of objectives, the JCS determined it must first gain control of the South China Sea.[34] Control of the South China Sea "involved the seizure and development of large air, naval, and logistical bases in the strategic triangle formed by the south China coast, Formosa, and Luzon."[35] The pivotal decision arrived on whether to first advance to Formosa or Luzon to gain control of the South China Sea.

Often portrayed as an individual contest between General MacArthur versus Admirals King and Nimitz, the decision to advance to the Philippines vice modern day Taiwan was based largely on logistics feasibility. General MacArthur, serving as the Supreme Commander of the Southwest Pacific Area (SWPA), had an organizational interest to advance to the Philippines as part of his area of operations. Further, he had an individual interest to burnish his own legacy. On 11 March, 1942, General MacArthur was forced to escape the Philippines just as Japanese forces were about to overrun it or risk capture. Upon arrival in Australia, history records his dramatic defiance of the Japanese, "I came through and I shall return." Bypassing the Philippines, en route to Japan, would open the door to questioning General MacArthur's credibility and the overall prestige of the US. If Formosa was chosen for the advance to Japan, then Admiral King would benefit in organizational

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[32] Robert Ross Smith, "Luzon vs Formosa," *Triumph in the Philippines,* 463, http://www.history.army.mil/books/70-7_21.htm (accessed 26 April 2015).
[33] Smith, "Luzon vs Formosa," 463.
[34] Smith, "Luzon vs Formosa," 463.
[35] Smith, "Luzon vs Formosa," 463.

terms. As Chief of Naval Operations, the majority of his blue water forces were in the Central Pacific. As historian John A. Lynn points out, "The literature of warfare is full of the triumphs and tragedies of common soldiers or the brilliance and blundering of generals, but the tedious tasks of supply attract few readers."[36] The tedious task of supply proved the unbiased arbiter for decision between Luzon and Formosa.[37]

Lieutenant General Brehon Somervell, commander of the Army Service Forces (ASF) and chief logistician, preferred occupation of the entirety of the Philippines prior to any advance towards Formosa or China.[38] From 1942—1943, the battles were fought for atolls, coastal fringes, or larger islands suited for airfield and port construction.[39] The result was an island hopping campaign to maintain interior lines. General Wood of the ASF plans division told Somervell the risks of the extended LOCs in a Formosa operation,

> Bases from which supplies will have to be transported to support the landings are so far distant that movement will be slow and supplies will have to be transported in freighters and transferred at sea to small craft to put ashore instead of being moved directly in small craft by a close base. The line of communication will be much more exposed to raider, air and submarine attack than would the line of communication from SWPA…The easy success that has been enjoyed against the Gilberts and Marshalls is an outpost action which does not adequately justify any assumption that landing operations closer in to the Japanese inner zone can be executed with equal facility.

Leaping to Formosa would be a break from a successful precedent.

The Japanese offensive in mainland China tipped the balance of the debate toward an advance on Luzon. In 1944, Generalissimo Chiang Kai-Shek reported the loss of the last air bases from which the US

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[36] John A. Lynn, *Feeding Mars: Logistics in Western Warfare from the Middle Ages to the Present* (Boulder, CO: Westview Press, 1993), vii.
[37] Richard W. Coakley and Richard M. Leighton, *Global Logistics and Strategy: 1943-1945*, (Washington, DC: US Government Printing Office, 1968), 406.
[38] Smith, "Luzon vs Formosa," *Triumph in the Philippines,* 465.
[39] Coakley and Leighton, *Global Logistics and Strategy,* 417.

Fourteenth Air Force could support the bombardment of Japan.[40] With a lack of air bases in China to bombard Japan, the catalyst for the seizure of a SPOD to supply an air campaign diminished along with the need to take Formosa. In October of 1944, the dominant personality of General MacArthur returned to fulfill his personal guarantee to the Philippines and overshadowed the primacy of basing on interior lines of communication in the decision.

The insatiable demands of feeding the beast in the Pacific resulted in fuel becoming the commodity highest in demand. Dependence on the internal combustion engine accounted for the addiction. From 1943-1945, an average of 67.4 pounds of supplies per day were required to support a single man.[41] Of the daily dietary requirements, fuel accounted for 32 percent of the beast's consumption. The oft forgotten category of construction materials, including tons of pierced steel planking for makeshift runways, followed second at 18 percent.[42] The identification of construction materials echoed the lack of suitable airfields and ports required for Western warfare to be waged effectively. The construction effort of airfields and ports were key to the pace of advance in the island hopping campaign. Land-based aircraft "were necessary to neutralize Japanese strongholds and isolate Japanese garrisons in the next target areas."[43] Ports serviced as the prime mover of transport, funneling the massive resources of the US industrial base to the user via both large ships and small.

The requirements for western warfare in the Pacific were fuel, basing, and construction materials. Colliers and oilers served as the vital complement to project a concentrated force in port into the vastness of the Pacific. Defensive plans, with logistics as their centerpiece, are rarely interesting. War Plan Orange breaks the mold. By understanding time

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[40] Smith, "Luzon vs Formosa," 473.
[41] Lynn, *Feeding Mars*, 22.
[42] Lynn, *Feeding Mars*, 22.
[43] Coakley and Leighton, *Global Logistics and Strategy*, 418.

and distance as part of strength in the defensive, maritime planners turned weakness into strength and constructed an effective counteroffensive to win the war. The nature of the terrain in the Pacific theater generates distinct logistics challenges making it difficult to supply and an inherent challenge to defend. The inter-theater lines of communication (LOCs) are immense and the intra-theater LOCs continue to pale in comparison to Europe or the US. The tyranny of distance combined with a continued dependence on the internal combustion engine produce an insatiable appetite for fuel. The need for prioritization is amplified in such an unforgiving environment. War Plan Orange, and the debate of Formosa vs Luzon, demonstrates the impact of interior LOCs on basing considerations while emphasizing fuel distribution in the art of the feasible as a vital component of strategy.

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Chapter 6

RECOMMENDATIONS

Logistics comprises the means and arrangements which work out the plans of strategy and tactics. Strategy decides where to act; logistics brings the troops to this point.

- Jomini

In November 2011, President Obama directed a strategic "rebalance" to the Asia-Pacific region. One could say the US is attempting to fortify the modern day Jingzhou and mirror the role of Liu Bei by "cultivating the friendship of the boldest spirits"[1] in the region. The FY 2014 East Asia and Pacific Foreign Military Financing (FMF) request to Congress marks the first budget request since the announcement.[2] The request totals 72.5 million dollars marking an increase of annual funding of over 24 million dollars since 2012.[3] Globally, FMF funding is projected to decrease by 355 million dollars with the reduction in funding to Iraq accounting for 591 million dollars.[4] With FMF funds, the US will "support regional and bilateral programs to strengthen maritime security" in cooperation with allies and partners."[5] A vital component to maritime security is land-based aviation dispersal.

The US force posture in the Asia-Pacific somewhat resembles Pang Tong's boat connecting scheme with forces heavily concentrated toward Northeast Asia. Of the non-CONUS PACOM military and civilian personnel, over 60 percent are based in the relatively tiny land masses of Japan and Korea, relying on the sustained western winds of US

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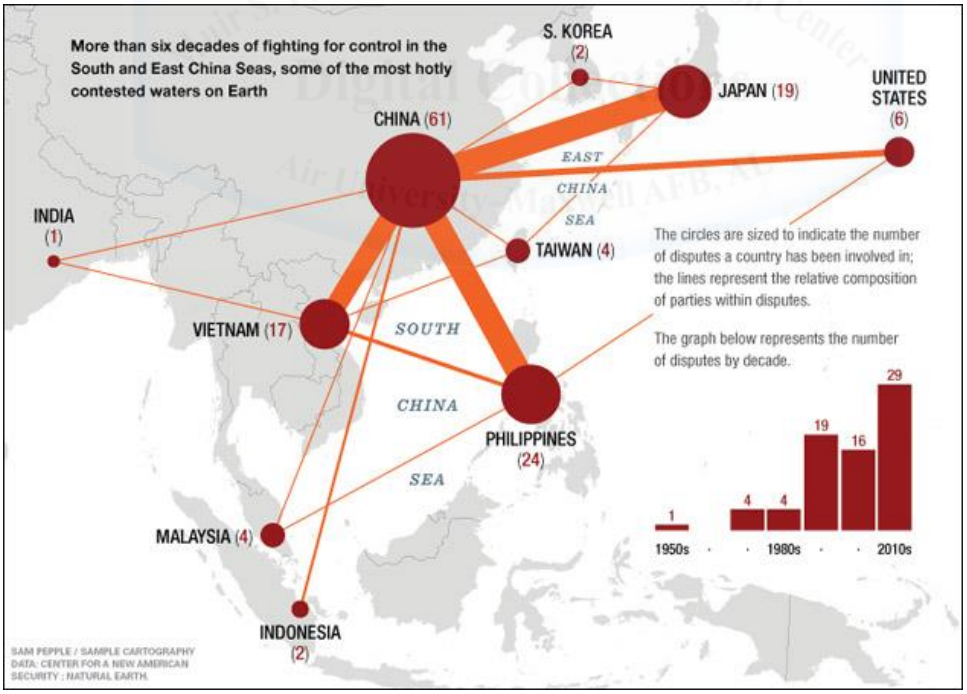
[1] Luo Guanzhong, *Three Kingdoms,* trans. Moss Roberts (1995; repr., Beijing, China: Foreign Language Press, 2013), 6.
[2] Department of State, *Congressional Budget Justification: Foreign Operations Annex: Regional Perspectives Fiscal Year 2014*, 236.
[3] Department of State, *Congressional Budget Justification,* 236.
[4] Department of State, *Congressional Budget Justification Volume 2: Foreign Operations Fiscal Year 2014,* 182.
[5] Department of State, *Congressional Budget Justification,* 239.

economic might.[6] The historical legacy of WWII, echoes of the Cold War, and ongoing fear of Chinese ambitions of forceful reunification, heavily bind the concentration of forces. Further adding to the inertia in a fluctuating security environment is an impasse between the DoD and Congress over force realignment proposals due to scope and cost uncertainties.[7] Reminiscent of Congressional refusal to fortify western Hawaii prior to WWII, the seeds of vulnerability are blooming. The western winds of US regional hegemony are flickering towards an eastern wind permitting unilateral Chinese action in the power vacuum of the South and East China Sea. FMF offers an immediate and unobtrusive dispersal option to complicate possible Chinese hegemonic aspirations and shape the geopolitical environment to raise the cost of unilateral conflict initiation.

Figure 5: Chinese Territorial Conflicts in South and East China Seas



Source: Sam Pepple, *Foreign Affairs*, https://www.foreignaffairs.com/map-conflicts-south-and-east-china-seas (accessed 22 May 2015).

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[6] CSIS, *US Force Posture Strategy in the Asia Pacific Region: An Independent Assessment*, (Washington, DC: Center for Strategic and International Studies, August 2012), 48.

[7] CSIS, *US Force Posture Strategy in the Asia Pacific Region*, 6.

The FMF program consists of congressionally appropriated grants and loans administered by the Defense Security Cooperation Agency (DSCA) enabling foreign governments to purchase US goods and services through Foreign Military Sales (FMS) or Direct Commercial Sales (DCS).[8] The vast majority of the program is administered as grants vice loans through a Security Cooperation Officer serving at a given US embassy. The mission of DSCA is to "lead, resource, and educate the Defense Security Cooperation community to shape, refine, and execute innovative security solutions for partners in support of US interests."[9] In the Asia-Pacific region, innovative security solutions must take into account the cognitive influence of the *Three Kingdoms* and the prioritized requirement of fuel and its distribution to feed the beast of western warfare.

Instruments such as the Eastern Wind DF-21D ASBM complement an incremental strategy of regional power consolidation designed to counter the historical intervention of US balancing behavior and place concentrated forces at risk. The Eastern Wind DF-21D is the world's first weapon system capable of long range targeting of a mobile Carrier Strike Group (CSG) from land-based mobile launchers.[10] The potential development of a Multiple Independently Targetable Reentry Vehicle (MIRV) variant of the DF-21D is not far from the realm of the possible and complicates ideas of an expansive and cost prohibitive geographic dispersion model.[11] Desired effects of aircraft dispersal, though tactical in nature, must account for the strategic requirement to rebalance in the

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[8] Defense Institute for Security Assistance Management, *The Management of Security Cooperation,* 33rd ed. (Ohio: Wright-Patterson AFB, April 2014), 1-2.
[9] JA Wieringa, *Strategic Plan 2009-2014*. Defense Security Cooperation Agency, 2009.

[10] Andrew S. Erickson, *Chinese Anti-Ship Ballistic Missile (ASBM) Development: Drivers, Trajectories and Strategic Implications* (Washington, DC: The Jamestown Foundation, 2013), 1.
[11] Harry Kazianas, "Lifting the Veil on China's 'Carrier Killer'," *The Diplomat*, 23 October 2013. http://thediplomat.com/2013/10/lifting-the-veil-on-chinas-carrier-killer/ (accessed 26 April 2015).

region. How the US rebalances its forces may be more important than the act of dispersal in itself.

Chinese satellites, such as the BeiDou Navigation Satellite System, may serve as part of a system of seemingly disparate functions, to achieve a long-range capability. The significance of the BeiDou, or Big Dipper, to Chinese culture cannot be overstated. Seven stars are traditionally associated with the formation of the Big Dipper. The seven stars of the Big Dipper are artifacts found on traditional Chinese swords.[12] Furthermore, some martial arts techniques are known to have the words "seven stars" as part of their nomenclature. In the Battle of Red Cliff, lead strategist Kongming calls the eastern winds, standing atop the Altar of the Seven Stars, to turn the tide of battle with the use of fire.

Figure 6: BeiDou Navigation Satellite System

Source: BeiDou Navigation Satellite System, http://www.beidou.gov.cn/2012/12/27/20121227cb6fdaf3f36d4de6afc3d1249be232ae.html (accessed 22 May 2015).

[12] Thomas F. Aylward, *The Imperial Guide to Feng Shui and Chinese Astrology: The Only Authentic Translation from the Original Chinese* (London: Watkins Publishing, 2007), 50.

Today, the use of fire may correlate to the warheads carried by the Eastern Wind DF-21D. The martial arts tradition with the Big Dipper further conveys a belief that "an army that stands with its back to the Great Year was considered undefeatable".[13] The Great Year is "a visible phenomenon that refers to the direction to which the handle of the Big Dipper points when the new moon appears in the same zodiacal sign as the planet Jupiter."[14] The position of the Big Dipper dictates the timing of the Great Year and is the indicator for the advance of an undefeatable army. The incremental fielding of seemingly benign coverage capabilities for the Big Dipper Navigation Satellite System may echo Cao Cao's metaphorical dragon, an attempt to hide ambition and become a hero, or hegemon, of the age.

Cognizant of Kongming's tri-polar balance of power model, China aims to isolate and leverage less powerful members of the Association of South-East Asian Nations (ASEAN) through bilateral communications in individual territorial disputes. By engaging in multi-lateral communications, China creates the effect of greater legitimacy and leverage for ASEAN in security affairs. Similar to Liu Bei's central kingdom of Shu, a third power of a united ASEAN is central to stability in the region. If isolated as states, the members of ASEAN may find themselves in a similar fate as the hapless captives of Jingzhou on Cao Cao's hegemonic march to Red Cliff.

Established in 1967 as a forum for economic and social cooperation, ASEAN has only recently "emerged as the central actor in creating a regional security architecture by implementing a sustainable web of ASEAN-centric multilayered security dialogues throughout the region."[15] In 2006, ASEAN hosted the first Defense Ministers Meeting outlining the roles and responsibilities of its members. In 2010, ASEAN

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[13] Aylward, *The Imperial Guide to Feng Shui and Chinese Astrology*, 50.
[14] Aylward, *The Imperial Guide to Feng Shui and Chinese Astrology*,48.
[15] Vanarith Chheang, "ASEAN Defense Ministers Meeting-Plus: The 'ASEAN Way'," *Asia Pacific Bulletin*, no. 75 (18 Oct 2010), 1.

hosted a "Plus" variant of the meeting marking the "first multilateral meeting that included US Secretary of Defense Robert Gates and Chinese Defense Minister Liang Guanglie at the same venue."[16] Secretary Gates regards ADMM-Plus as a "most useful innovation" to shape regional security challenges.[17] More importantly, the 18 defense leaders collectively agreed ADMM-Plus to be a "useful and effective platform for cooperation on defense and security issues that is able to make useful contributions to regional peace and security."[18] As recently as 2014, the US hosted ten ASEAN defense ministers in Hawaii to discuss humanitarian assistance and disaster response (HA/DR) and other security issues in the region.[19] Of note, Typhoon Haiyan in the Philippines and the search for Malaysia Airlines Flight 370 "demonstrated the lack of capacity of individual ASEAN countries or ASEAN as a bloc to immediately respond to a crisis" and "highlighted the need for the participation of other states particularly in terms of sharing expertise, technology, and information."[20] ASEAN has a consensus on HA/DR assistance and is in the nascent stages of transitioning into a security organization.

The largest recipients of FMF funds in region are the ASEAN members of the Philippines, Indonesia, and Vietnam respectively. Of the 72.5 million dollars requested, the Philippines are projected to account for the vast majority of the investment with 50 million dollars.[21] In no surprise to the planners of War Plan Orange, the Philippines are again central to maritime security and stability in the Eastern and South China Sea. Indonesia follows second at 14 million dollars and Vietnam

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[16] Chheang, "ASEAN Defense Ministers Meeting-Plus: The 'ASEAN Way'," 1.
[17] Chheang, "ASEAN Defense Ministers Meeting-Plus: The 'ASEAN Way'," 2.
[18] Vannarith Chheang, "ASEAN Defense Ministers Meeting-Plus: The 'ASEAN Way'," 2.
[19] Mary Fides Quintos and Joycee Teodoro, "Moving ASEAN-US Security Relations to a New Level?," *Asia Pacific Bulletin,* no. 256 (15 April 2014), 1.
[20] Quintos and Teodoro, "Moving ASEAN-US Security Relations to a New Level?," 2.
[21] Department of State, *Congressional Budget Justification: Foreign Assistance Summary Tables Fiscal Year 2014*, 14.

third at 3 million dollars. Emphasizing the art of the bureaucratically and logistically feasible, immediate dispersal effects can be achieved in the Philippines with a minimal footprint of forces.

The Philippines are one of two US treaty allies in the region with expanding defense cooperation and access arrangements.[22] Seeking rotational exercises with the US and other allies, the Philippines generally favors temporal access and may allow the long term storage of prepositioned equipment.[23] Despite the positive trend, the US is prohibited from maintaining permanent bases and its access is based on the 1998 Visiting Forces Agreement and the 2002 Mutual Logistics Support Agreement.[24] Fear of impacting Chinese economic relations inhibits further support. Preparing the terrain to receive rotational forces on exercise meets the intent of building geographic dispersion capability while complying with current political restraints.

An independent assessment of US force posture strategy in the region identifies nearly 50 locations under consideration for dispersal with each requiring minimal construction.[25] Holding to the precedent of fuel, basing, and construction materials as the prioritized requirements for western warfare in the Pacific, an optimal expenditure of FMF funds will account for each factor in feeding the beast. The hydrant refueling system provides a means to offer the most efficient use of scarce resources and emulate the effectiveness of the collier and oiler for land based aviation dispersal requirements. The hydrant system also provides an unobtrusive dual-use capability increasing HA/DR capability and may increase the sortie generation and radius of operation for aviation assets.

A near term case study for the effectiveness of a hydrant system is the type IV smart hydrant system at Eglin AFB. In designating Eglin AFB

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[22] CSIS, *US Force Posture Strategy in the Asia Pacific Region*, 18.
[23] CSIS, *US Force Posture Strategy in the Asia Pacific Region,* 36.
[24] CSIS, *US Force Posture Strategy in the Asia Pacific Region*, 36.
[25] CSIS, *US Force Posture Strategy in the Asia Pacific Region*, 75.

as the home of the first F-35, the Base Realignment and Closure Committee designated $19 million dollars to renovate two bulk storage tanks and install a type IV smart hydrant system to bolster refueling capability.[26] During the three years of construction, eight R-11 refueling trucks transited 10,000 miles to the west side of the base to meet refueling requirements. The installation of four direct fueling hot pit pantograph stations off the taxiway eliminated the need for such distant travel and improved aircraft quick-turn capability. The fleet of eight R-11s, with nine personnel, can refill 320 F-35 aircraft in a 24-hour period.[27] In comparison, the hydrant system with only four refueling pantograph stations and five personnel can refill 288 F-35 aircraft in the same period.[28]

The increase in refueling point capability draws comparison to the collier in its transition from a hand-loaded coal transfer process requiring an entire brigade with shovels to its later mechanical rope-and-pulley system requiring only a few men. The direct fueling hot pit pantograph station offers an improvement in refueling capability by a factor of 1.8 while reducing personnel on-station by almost 50 percent. Challenges exist in adjusting the system's pressurization for refueling different platforms in succession.[29] However, these technological challenges are manageable with rotational exercises. With the continued presence of sequestration as well as host nation political concerns of foreign personnel, the hydrant system offers a bureaucratically feasible option within political restraints at an economical cost.

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[26] Lois Walsh, "Fuels flight key to mission success," 14 May 2014, http://www.eglin.af.mil/news/story.asp?id=123408586 (accessed 10 May 1015).
[27] Lt Col Brandon Maroon, 2nd Lt Rachel Lyons, CMSgt Francis Harrington, and SMSgt Jerry Wright (96th Logistics Readiness Squadron), interview by author, 27 January 2015.
[28] Maroon, Lyons, Harrington, and Wright, interview by author, 27 January 2015.
[29] In the case study at Eglin AFB, the USAF variant of the F35 requires a lower pressure (35 psi) to reach full fuel capacity. The Navy/USMC variant of the F35 can handle a higher pressure (45 psi) and supports faster fueling. Total time to adjust the system pressurization is 1-3 hours per pantograph station.

An unobtrusive deterrence capability can be provided within existing FMF appropriations. The hydrant system offers a focus on logistics, in the context of sensitivity to Chinese history and patterns in Western warfare, to meet the strategic requirement to rebalance and disperse capabilities in the Asia Pacific. However, a technological solution in isolation of a grand strategy will be fruitless in the long term. A geographic dispersion model may degrade the effectiveness of US airpower into a fleet-in-being and perpetuate a tit-for-tat relationship. China's most likely response is fielding a greater MIRV capability at a fraction of the cost of geographic dispersal and decreasing security to the region.

A Third Kingdom is needed to balance the status quo between the US and the aspirations of a rising China. The status quo is not stable in the Asia Pacific region, and its propagation places China in a similar historical position as pre-WWII Japan with mutually exclusive interests. Indicators of US economic decline and continued global force reductions engender skepticism of staying power in the region and embolden challengers. Irrespective of the outcome of sequestration in the Budget Control Act of 2011, most observers project defense budgets cuts will continue over the next ten years.[30] Security cooperation expenditures can achieve optimal effects in the short term with a focus on logistics and capabilities-based planning to prepare the battlespace. However, security cooperation expenditures are decreasing globally and relative gains in the Asia-Pacific may come at the expense of other regions in the future.

The overt identification of China as a peer competitor, combined with a relative short attention span emphasizing opportunistic interaction, is not conducive to building a mutually inclusive relationship. As outside actors rooted in memories of the Century of Humiliation and naval intervention, the US and other western powers are

[30] CSIS, *US Force Posture Strategy in the Asia Pacific Region*, 90.

unlikely to pass the Chinese test of sincerity in their cognitive buffer zone. The US must capitalize on the moment of calmer winds and strengthen the legitimacy of ASEAN, as a regional security organization with inherent geographic and cultural staying power, through a collective allocation of FMF funding.

The surest means to strengthen the legitimacy of a nascent security organization is to allow it greater opportunities within its consensus to exercise security interactions. Providing grants for hydrant systems to improve HA/DR capabilities supports the ASEAN consensus and will provide dual-use dispersal options for US forces. The geographic dispersal model of a fleet-in-being has the capability to transform into a geopolitical dispersal model with the opportunity to unite nations and leverage collective force in disputes. Building upon the consensus of HA/DR capabilities provides a positive reference point to incrementally build momentum and credibility to engage more challenging regional issues. As a pragmatic strategy disguising ambition, the US adds the gardening of Liu Bei to its lexicon of foreign policy. The unobtrusive approach to consolidate power within ASEAN comes through an increase in defense cooperation at the existing investment of 72.5 million dollars. ASEAN could construct three hydrant stations, at an estimated cost of 57 million dollars, within the next three years in such a format. The ASEAN exercise of selecting hydrant station locations is a worthwhile endeavor, with no increase in financial risk to the US, and balances against stagnation on more complex territorial disputes. Bilateral FMF funding to individual ASEAN states mirrors the Chinese model of isolating and separating the members in security affairs and may limit construction efforts to the Philippines. A multilateral format for FMF funding of the hydrant system provides an innovative solution to strengthen ASEAN as a regional security organization and is respective of Chinese influences on strategy and commonalities in western warfare.

If the naming convention of the Eastern Winds DF-21D reflects a point of reference for strategy found in *Three Kingdoms,* then the Chinese are consolidating power and awaiting the right opportunity to establish hegemony. Kongming tells Liu Bei to consolidate his forces in Jingzhou and wait for "when Heaven shall offer you the desired opportunity."[31] The positioning of forces in the Eastern and South China Sea correlates to the consolidation of forces in a resource rich area and allows for greater leverage when technology permits economic access to the ocean basin. The US must fortify the modern day Jingzhou of ASEAN, and assist in its transformation into the kingdom of Shu for greater leverage in negotiations, before Cao Cao absorbs it on his hegemonic march to confrontation at Red Cliff. If we fail to recognize Kongming's stratagem in the *Three Kingdoms* as a point of reference, the US may find itself facing the eastern winds.

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[31] Check Teck Foo, "Cognitive strategy from the Romance of the Three Kingdoms," *Chinese Management Studies* 2, No. 3 (2008), 175.

BIBLIOGRAPHY

Aylward, Thomas F. *The Imperial Guide to Feng Shui & Chinese Astrology: The Only Authentic Translation From The Original Chinese.* London: Watkins Publishing, 2007.

Catledge, Burton and Jeremy Powell. *AU-18 Space Primer.* Maxwell AFB, AL: Air University Press, 2009.

Chheang, Vanarith. "ASEAN Defense Ministers Meeting-Plus: The 'ASEAN Way'." *Asia Pacific Bulletin*, no. 75 (18 Oct 2010). http://www.eastwestcenter.org/publications/asean-defense-ministers-meeting-plus-asean-way (accessed 26 April 2015).

China Central Television. "Eyewitnesses to History-Calamity in the Forbidden City." http://www.cctv.com/lm/176/71/71821.html (accessed 26 April 2015).

China Central Television. "Three Kingdoms Town." http://www.ctvwx.com/eng_ver/introduce.html (accessed 26 April 2015).

Creveld, Martin Van. *Supplying War: Logistics from Wallenstein to Patton.* New York, NY: Cambridge University Press, 2013.

Clausewitz, Carl von. *On War.* Edited and translated by Michael Howard and Peter Paret. Princeton, NJ: Princeton University Press, 1989.

Coakley, Richard W. and Richard M. Leighton. *Global Logistics and Strategy: 1943-1945.* Washington, DC: US Government Printing Office, 1968.

Defense Institute for Security Assistance Management. *The Management of Security Cooperation.* 33rd ed. Ohio: Wright-Patterson AFB, April 2014.

Department of State. *Congressional Budget Justification Volume 2: Foreign Operations.* Fiscal Year 2014.

Department of State. *Congressional Budget Justification: Foreign Operations Annex: Regional Perspectives.* Fiscal Year 2014.

Donovan, Patrick H. "Oil Logistics in the Pacific War." *Air Force Journal of Logistics* 28, Issue 1 (Spring 2004): [29-44].

Eikenberry, Karl W. "The Campaigns of Cao Cao." *Military Review* 74, Issue 8 (August 1994): [56-64].

Erickson, Andrew S. *Chinese Anti-Ship Ballistic Missile (ASBM) Development: Drivers, Trajectories and Strategic Implications.* Washington, DC: The Jamestown Foundation, 2013.

Feeding Mars: Logistics in Western Warfare from the Middle Ages to the Present. Edited by John A. Lynn. Boulder, Colorado: Westview Press, 1993.

Foo, Check Teck. "Cognitive strategy from the Romance of the Three Kingdoms." *Chinese Management Studies,* Vol. 2 No. 3 (2008): [171-182].

Gomes, Thiago. "A Surefire Way to Impress Chinese People-The Power of The Three Kingdoms," http://www.bricexpansion.com/impress-chinease-three-kingdoms/ (accessed 17 November 2014).

Guanzhong, Luo. *Three Kingdoms.* Translated by Moss Roberts, 1995. Reprint, Beijing, China: Foreign Language Press, 2013.

Iriye, Akira. *Pearl Harbor and the Coming of the Pacific War.* Boston: Bedford/St Martin's, 1999.

Kazianas, Harry. "Lifting the Veil on China's 'Carrier Killer.'" *The Diplomat*, 23 October 2013. http://thediplomat.com/2013/10/lifting-the-veil-on-chinas-carrier-killer/ (accessed 26 April 2015).

Lee, Cheng-Yu and Syndey Wen Jang Chu. "Telling Greatness from Mediocrity: Cao Cao and Sun Tzu's The Art of War." *Whampoa – An Interdisciplinary Journal* 63, (2012): [155-170].

Liang, Zhuge and Liu Ji. *Mastering the Art of War.* Edited and translated by Thomas Cleary. Boston, Massachusetts: Shambhala Publications, 2005.

Lynn, John A. *Feeding Mars: Logistics in Western Warfare from the Middle Ages to the Present.* Boulder, CO: Westview Press, 1993.

Miller, Edward. S. *War Plan Orange: The US Strategy to Defeat Japan, 1897-1945*. Annapolis, Maryland: Naval Institute Press, 1991.

Quintos, Mary Fides and Joycee Teodoro. "Moving ASEAN-US Security Relations to a New Level?" *Asia Pacific Bulletin,* no. 256 (15 April 2014). http://www.eastwestcenter.org/publications/moving-asean-us-security-relations-new-level (accessed 26 April 2015).

Romano, Sal. "New Romance of the Three Kingdoms coming in 2015." Gematsu, Sep 2014. http://gematsu.com/2014/09/new-romance-three-kingdoms-coming-2015 (accessed 26 April 2015).

Sawyer, Ralph D. *Zhuge Liang: Strategy, Achievements, and Writings.* North Charleston, South Carolina: CreateSpace Independent Publishing Platform, 2014.

Smith, Robert Ross. "Luzon vs Formosa." In *Triumph in the Philippines.* US Army Center for Military History. http://www.history.army.mil/books/70-7_21.htm (accessed 26 April 2015).

Spector, Ronald H. *Eagle Against the Sun.* New York: Vintage Books, 1985.

The International Political Roots of Pearl Harbor: The United States-Japanese Dyad; Translations of the Records of Liaison Conferences 19 Through 75 and Four Imperial Conferences. Edited and translated by Nobutaka Ike. Stanford, California: Stanford University Press, 1965.

US Force Posture Strategy in the Asia Pacific Region: An Independent Assessment. Washington, DC: Center for Strategic and International Studies, August 2012.

Wallin, VADM Homer N. *Pearl Harbor: Why, How, Fleet Salvage and Final Appraisal.* Washington, DC: Navy History Division, 1968.

Walsh, Lois. "Fuels flight key to mission success." 14 May 2014. http://www.eglin.af.mil/news/story.asp?id=123408586 (accessed 10 May 2015).

Wieringa, JA. *Strategic Plan 2009-2014.* Defense Security Cooperation Agency, 2009.

Yan, Li and Taieb Hafsi. "Understanding Chinese Business Behaviour: A

historical perspective from three kingdoms to modern China." HEC Montreal, Jan 2007. http://neumann.hec.ca/chairemsi/pdfcahiersrech/07_32_03.pdf (accessed 26 April 2015).

Zhixin, Dong. *Mao Zedong Read The Romance of Three Kingdoms*. China: Volumes Publishing Company, 2011.

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