The Age of Gunpowder

An Era of Technological, Tactical, Strategic, and Leadership Innovations

Volume V
Emory Endeavors in History 2013

Cover Art by Kevin Callahan
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Introduction: The Gunpowder Age and Global History

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When Chinese alchemists invented the “fire drug” in the 800s AD, they unleashed one of the most transformative technologies in world history. Early gunpowder was not the explosive that it later became. It took centuries of development before it became capable of propelling projectiles. The Chinese used the early gunpowder mixtures for weapons, of course, but they were conflagratives and fire spewers, used for burning structures and people. Proper guns emerged in the 1200s, and by the mid-1300s the new weapons had begun transforming warfare, used in huge numbers in the fierce battles that led, eventually, to the triumph of the Ming Dynasty, which has been rightly referred to as the world’s first gunpowder empire.¹

Guns and gunpowder quickly spread beyond China, and this issue of *Emory Endeavors in History* is devoted to exploring their effects – and other issues of military modernization and innovation – in world history.

China’s closest neighbors found themselves forced to adapt to gun warfare quickly, and one of the pioneers of early gunpowder history, historian Sun Laichen of California State University, Fullerton, has famously described this process for Vietnam and other parts of Southeast Asia.² Yet equally important, but much less well understood, is the adoption of guns by China’s northeastern neighbors, Korea and Japan. Although Japan is not usually considered an early gun adopter (it is known much more for its later adoption of Portuguese-style arquebuses in the

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¹ Sun Laichen, “Ming-Southeast Asian Overland Interactions, 1368-1644,” Ph.D.
1550s), in fact evidence suggests that Japanese at least were using guns by the early 1400s. Koreans, too, are not generally considered early adopters of the gun, but as Peter Kim’s article in this volume makes clear, Korean interest in firearms was quite significant in the 1300s and early 1400s, precisely the period in which they were transforming warfare in China. Kim shows how the adoption of guns in Korea was stimulated by the challenge of Japanese piracy and how guns and other gunpowder weapons helped the Koreans to defeat the pirates.

In Europe, the emergence of guns is said to have led to massive changes in state and society. The so-called “gunpowder revolution” supposedly destroyed feudalism and brought about the emergence of the centralized state. Historians have wondered to what extent similar processes occurred elsewhere, and June Park’s article in this volume explores this question by comparing the European case to that of Korea. The changes wrought by gunpowder were different in Korea, she argues, because the relationship between elites and the king was different. Whereas European states had rudimentary bureaucracies, Korea had a long standing professional bureaucracy, a centralized system similar to that of its huge and powerful neighbor, China. Yet the Korean bureaucracy was monopolized by its aristocracy. Whereas European state builders built political structures that in effect diminished the influence of landed aristocrats, in Korea the aristocrats were a priori part of the state structures. The king could not overcome them in the same way, despite the fact that he had cannons and they generally did not.

In China, too, gunpowder did not wreak such great changes as it is said to have wrought in late medieval Europe. This is partly, perhaps, due to the fact that China had had gunpowder weapons long before anyone else, but more importantly it is because China was already a bureaucratized, centralized state. When the Ming became the world’s first gunpowder empire, its officials could use administrative structures that had developed over centuries of imperial rule. Guns transformed armies and warfare, but they didn’t transform the state itself.

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Yet one great question is why guns were not able to help the Chinese overcome all of their enemies. Although they were enormously useful in land warfare against Vietnam and in mainland Southeast Asia (as in Yunnan), they appear not to have changed the power balance between the Chinese and their nomadic enemies, particularly the Mongols. Historian Kenneth Chase has suggested that the main reason is that military technology – and particularly guns – were less important in nomadic areas than was logistics, and non-nomadic armies couldn’t penetrate far into nomadic space because they needed to be supplied, whereas nomads, who often had several horses per fighter, could live off the land.4

Contributor Ben Sinvany in some senses builds on Kenneth Chase’s discussion by analyzing early Ming confrontations with the Mongols and asking why it was that the Ming switched from an early focus on offense to a later focus on defense. The building of the Great Wall, for example, is an expression of this Ming focus on defense as opposed to offense. The Ming, Sinvany suggests, lost the opportunity to destroy Mongol power and control the Ordos region, which gave the Mongols a geographic base from which to continue to threaten the Ming. But was the Ming failure a matter of will or a matter of capacity? Certainly, the early Ming emperors Hongwu (r. 1368-1398) and Yongle (r. 1402-1424) devoted considerable effort and treasure to fighting the Mongols. To dominate the warrior nomads was, as scholars have noted, an incredibly difficult logistical challenge.5 The later Qing Dynasty (1644-1911) managed to finally achieve it, but, arguably, the context had changed, and the Mongols were by then also facing considerable pressure from the Russians as well. Could the Ming have effectively destroyed the Mongol power base and controlled the Ordos?

Ultimately, it was logistics that would enable the Qing victory, and it is salutary to remember that, because it helps us keep in mind that military technology is not by any means the only factor in determining the success of an

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armed force. But what is intriguing is that in the age of European imperialism, tactics and technologies were much more fluid and ambiguous than one might imagine.

For example, when the British were trying to consolidate their hold over India, they met with great trouble in the Mysore Kingdom, in southern India. Mysore was a powerful state that thwarted the British for generations, and they did so in part thanks to their powerful technology. Contributor Arish Jamil explores one of the most intriguing technologies: Mysorean rockets. Mysorean rockets were the best in the world, and indeed they inspired the British themselves to build their own rockets, the famous Congreve Rocket of the late 1700s. As Jamil reminds us, the phrase “rocket’s red glare” in the national anthem of the USA comes from the flash of Congreve Rockets in the war of 1812, and thus has roots in the rockets of Mysore.

The British also had their hands full in North America, and two articles in this volume treat North American cases. Sam Bleiweis’s article treats the collapse of the Iroquois Confederacy during the American Revolutionary War, 1775-1783, showing us that geopolitics and diplomacy are key variables in understanding the war. Nicole Goetz’s article reminds us that tactics – fighting styles – were also of vital importance. In order to make 18th-century muskets effective on the battlefield, one had to drill soldiers to use them in concert, to take turns firing and loading, because loading took a long time. And so in Europe, armies were taught to march and move in formation, clockwork displays of brightly clad men. Yet when these tactics were brought to North America, they didn’t work as well. Native Americans and their European allies often fought in a much more “savage” way, disobeying the so-called civilized practices. This guerilla warfare seemed unfair to those who were raised on drilling-field tactics, but it was enormously effective. Goetz shows how some British commanders eventually acquiesced to adopting some guerilla tactics, forming a very effective hybrid style of “irregular warfare,” one that is still celebrated today the basis of Army Rangers’ training in the USA.
One of the great questions in global military history is why Asian societies eventually fell behind the West when it came to gunpowder technology. Kyle Johnson's article addresses this question by focusing on the Ottomans. Most scholars have long argued that in the 1400s and 1500s Ottoman artillery was less advanced than that of western Europeans, who had by the middle of the 1400s transcended their earlier reliance on huge bombards in favor of smaller, more mobile artillery, which, used in combination, could achieve the same devastating power as the older large guns. The Ottomans, it was believed, conservatively stuck with the older guns. Johnson examines two Ottoman-European sieges to determine to what extent this is true. The first, the famous Siege of Constantinople in 1453 seems to support the traditional view: the Ottomans did indeed deploy large guns in preference to smaller, more modern ones. There is evidence, though, of adaptation and adoption during that siege, and by the Siege of Rhodes in 1522, the Ottomans aimed smaller and more modern guns at the European walls. Indeed, although the Ottomans did bring to bear some huge guns, there was no significant difference between the rest of their artillery and that of the defenders.

What’s intriguing is that this corroborates evidence from East Asia, the birthplace of guns. By around 1500, European guns were markedly superior to those of China and its neighbors, but East Asians rapidly adopted and adapted European designs when they learned about them in the course of the 1500s. My own research has led me to believe that the 1500s and 1600s were thus an age of military parity when it comes to European and East Asian developments, a hypothesis that is supported not just by evidence of rapid adoption and innovation in China, Japan, and Korea, but also by the fact that when East Asian infantries met European forces in battle in the mid and late 1600s, they evinced no significant technological or technical disadvantages. Indeed, if anything, it was the Europeans who were disadvantaged, although in part this was because they were operating so
far from their metropolis.\(^6\) Still, Johnson’s article suggests, along with the work of other revisionists, that the age of parity may not have simply applied to East Asia.

Yet a military divergence did indeed open up between East Asian and western European societies, signaled most dramatically in the Opium War of 1839-42, when the Great Qing Dynasty was easily defeated by the advanced guns and ships of the British and forced to sign the first of a series of humiliating “unequal treaties.” A decade after the end of that war, a show of American military power persuaded the Japanese to acquiesce to unequal treaties as well. So how did these two states – each of which had once been a military superpower – find themselves so far behind? In both cases, one can argue that the answer may have more to do with an absence of warfare than with any cultural or institutional factors. Although the sixteenth and seventeenth centuries were enormously warlike in East Asia, by the mid-1600s, Japan, and by the mid 1700s, China, were relatively quiescent when it came to warfare. The Qing, by defeating the Mongols and extending their dominance far into central Asia, removed all significant challenges to their rule. The period from 1760 until the 1830s was, when measured by the number of wars per decade, the most peaceful in two millennia of Chinese history. Japan, too, saw unprecedented peace during the period from the 1600s through the 1700s.

Indeed, Japan has long been considered to have done something unique in the history of the Gunpowder Age: to give up the gun. The phrase “giving up the gun” is the title of a famous book by Noel Perrin.\(^7\) The book, first published in xysz (and based on a *New Yorker* article of 1965), has been criticized by many academic authors, but Alex Astroth, in his article in this volume, defends Perrin’s thesis. By carefully reviewing the historiography, Astroth suggests that Perrin was right to

\(^6\) On the sea and in sieges, Europeans may have had a slight advantage. See Tonio Andrade, “An Accelerating Divergence? The Revisionist Model of World History and the Question of Eurasian Military Parity: Data from East Asia,” *Canadian Journal of Sociology*, 36(2)[2011]: 185-208.

\(^7\) Noel Perrin, *Giving up the Gun: Japan’s Reversion to the Sword, 1543-1879* (Boston: Nonpareil Books, 1979).
argue that the government of Japan willingly chose to halt firearm manufacturing and innovation.

When, however, did the Great Military Divergence between western Europe and developed parts of Asia open up? Certainly, it seems that even in the age of high imperialism, of the 1800s and beyond, the extent of European dominance has been exaggerated. Take, for example, Napoleon’s victories in Egypt. George Granberry, in his contribution to this volume, examines battles between Napoleon and the Ottomans in the late 18th century. He contrasts one of Napoleon’s victories on land – achieved despite his land troops’ exhaustion – with Napoleon’s failure to achieve a similar victory at the same time at sea, in the Battle of Shubra Khit (1798). The Ottomans had been reforming their navy, and the Ottoman flotilla proved a match for Napoleon’s. Indeed, as Granberry shows, the two naval forces were remarkably evenly matched. This forces us to reexamine not only notions of Ottoman Decline, but also the standard narratives of European exceptionalism, which suggest that the military divergence was deeply-rooted and long-standing.

A far more famous Napoleonic setback occurred at Waterloo in 1815, a defeat that ended Napoleon’s dominance in Europe. Thousands upon thousands of pages have been written about this battle, which was, as the British commander the Duke of Wellington famously noted, “the nearest-run thing you ever saw in your life.” In his contribution to this volume, Eric Huh offers an analysis of this defeat that takes full account of one of the most important variables in warfare: chance. Sometimes, as they say, “shit happens.” We like to find meaning in hindsight, for it helps us feel that the universe makes sense. But in fact, Napoleon’s battle might have gone entirely differently.

The gunpowder age began in East Asia, so it is a mystery of history that China lost its great lead over the west, and it is curious that it seems to have taken China so long to scramble back to parity in the course of the nineteenth century. Kim Black, in her article in this volume, examines one of the traditional villains of China’s reform period: the empress dowager Cixi (in power from 1861-1908). She has long been held to have been one of the main reasons why China’s efforts at
technological and political reform failed in the late nineteenth century, but Black offers a revisionist account, suggesting that in fact the empress was more favorable to reform than standard accounts suggest, and that the reformers were, for their part, destabilizing and unstrategic in their actions. Black’s account corroborates to some extent new perspectives on the empress dowager that are emerging in the literature. The ever fascinating dowager is undergoing a historical rehabilitation.

Moreover, we mustn’t be too quick to condemn Chinese efforts at reform, which in many ways seemed to be proceeding effectively in the last part of the nineteenth century. China’s massive industrial arsenals and shipyards were producing effective weapons and battleships, and most observers felt that China’s armaments were superior to those of Japan. What a surprise, then, that the Chinese lost so badly to Japan in the Sino-Japanese War of 1894–5. Cathryn Morette’s fascinating article in this volume examines Japanese naval reforms in the years leading up to the war, arguing persuasively that Japan achieved success by eschewing the building of the huge armored vessels that seemed destined to rule the seas (the sorts of vessels that China was investing in), in favor of smaller vessels. The secret to Japan’s naval success was its development of innovative naval tactics, which allowed Japan to deploy smaller vessels in concert, concentrating their firepower. Morette traces the development of Japanese reform, showing how Japanese reforms resulted in the surprise victory of the Japanese in 1895.

The gunpowder age ended in the late nineteenth century, with the development of smokeless powder. Thenceforth, war became ever more technologically-determined, and ever more destructive. There are still many questions to resolve about gunpowder and its role in global history, but this volume will, we hope, stimulate further research. We welcome communications from readers.
Choe Mu-Seon and The Early Era of Wokou Piracy: Catalyst for the Development of Gunpowder in Korea, A precursor of Korea-Japan Diplomacy

Peter S. Kim

Abstract

This paper asserts that Korean engineer Choi Mu-Seon indirectly established the first case of formal interaction between Korea and Japan. This claim is supported through the proper consideration of three narratives: that of Choi Mu-Seon, of Wokou piracy, and of the Joseon-Tushima Treaties. Choi Mu-Seon’s pioneering efforts to develop gunpowder outside of China, further advancing weaponry in Korea, culminated in Joseon’s military victory over the Wokou Pirates’ stronghold on Tsushima Island during the Gihae Eastern Expedition in 1419. As a result, formal Japanese clans would manifest their new respect for Joseon by taking an obliging stance to Joseon terms of sovereignty, though the relationship would be more or less mutually beneficial with respect to trade and security. This assertion’s significance is one of constructive application by retrospectively analyzing historical context and tendencies to better set the landscape and quality of the future.

Introduction

The year is 1325 in the town of Yeong-Cheon in the Kyung Sang Book province, and in the private palace of Goryeo aristocrat Choi Dong-Soon, a baby boy is born and given the name Choi Mu-Seon. He would grow to be the region’s premier and archetype scientist, pioneering science in general but more precisely by means of developing gunpowder and weaponry.

His rise would come to fruition at the start of the first of two eras of abundant piracy. The great frequency and severity of attacks by predominantly Japanese bandits, expanding to include Chinese and other ethnic groups in the
later era, gave birth to the term ‘Wokou piracy.’ Wo is Chinese or Japanese for dwarves and Kou means bandit.⁸

Choi Mu-Seon is a man of his time in that he owes much of his productivity to the reactionary circumstance of first combating the monopoly and secrecy of Chinese gunpowder and later the threat of Wokou piracy. However, he is also a man in his own right, as he harbored a natural passion for gunpowder, stemming from firework shows he would watch as a child in his family’s palace.

Ultimately, these factors considered, Choi Mu-Seon, single-handedly pioneered the development of gunpowder outside of China, in Korea. Furthermore, this technological leap for Korea resulted in military prowess and allowed for an unprecedented diplomatic dynamic to emerge between Korea and Japan. This novel assertion is reasoned on the grounds that the case of treaties between Tsushima Island and Joseon Korea, an early example of any formally mutual contractual relationship between Japan and Korea, was made inevitable by Japan’s unavoidable acknowledgement and new respect of Joseon for its victory over the Wokou pirates during the Gihae Eastern Expedition, a direct result of Choi Mu-Seon’s efforts.

The Two Eras of Wokou Piracy: Background and Demographics

The early era of Wokou piracy, occurring from the 14th century, consisted of constant and brutal attacks on the coastlines along the peripheral islands of Japan including Iki, Tsushima, and the Goto Islands, meaning that China, Korea, and even Japan itself were all victims.⁹ The pirates of this early period were largely Japanese in ethnicity. However, some Goryeo records depict only 0.57% or 3 out of

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⁹ 太田弘毅「倭寇: 日本あふれ活動史」文芸社, p. 98.
529 of Wokou pirates as ethnically Japanese.\textsuperscript{10} Some exclaim that none of the early Wokou pirates were Japanese, but rather were of ethnicities of southern China and its trade partners. Despite the contradictory beliefs, the widely accepted view is that, while most were ethnically Japanese, the Wokou pirates of the early era consisted of a variety of ethnicities instead of a sole group.\textsuperscript{11} A Japanese scholar by the name of Shosuke Murai, saw the Wokou as marginal men who resided within politically distraught regions of no formal allegiances.\textsuperscript{12} An early Wokou leader, known as Ajibaldo, a Korean and Mongolian name, was considered Mongolian, Japanese, Korean, and a generic islander.\textsuperscript{13} The demographics of Wokou pirates in the second era during the 16\textsuperscript{th} century is less disputed, with an acknowledged account of only 20\% being Japanese while 70\% were Chinese and 10\% were of another ethnicity altogether.\textsuperscript{14}

**The Early Era of Wokou Piracy: Tsushima Island and the Gihae Expedition**

Lying in the center of the Tsushima Strait, which lies between the southernmost and third largest island of Japan, Kyushu, and the Korean peninsula, Tsushima island was a hub for the Wokou pirates of the early era as well as the governed domain of the So clan of Japan. Seeing that the island was the origin of piracy, a Goryeo general by the name of Pak Wi successfully exterminated Tsushima island of Wokou pirates in 1389. In doing so, he destroyed 300 naval

\textsuperscript{10} About imitation wokou, Chungcheong-maeil 그러나 우리 측 사료인 '고려사'에는 단 3 건의 가왜(假倭)기록이 있을 뿐이다. 1223 년부터 1392 년까지 169 년간 총 529 회의 침입에 겨우 3 번의 '가왜' 기록이 있을 뿐인데, 이를 보고 왜구의 주체를 고려인으로 본은 어불성설이고 침소봉대를 해도 너무 지나치다고 볼 수 있다. '조선왕조실록'에도 왜구침구 기사가 무려 312 건이 나오는데 이 기사 어디에도 조선인이 왜구라는 말은 없다.
\textsuperscript{11} C.R. Boxer, "Piracy in the South China Sea", *History Today* XXX, 12 (December), 40-44.
\textsuperscript{12} 村井章介『中世倭人伝』岩波新書、1993 年
\textsuperscript{14} Anthony Reid, "Violence at Sea", in Robert J Antony, ed., *Elusive Pirates, Pervasive Smugglers* (Hong Kong: Hong Kong University Press.), 18.
vessels and rescued more than 100 Korean hostages.\textsuperscript{15}

Still, the Joseon dynasty would order a reinforcement of Korean naval defenses as tactical insurance for the imminent risk of piracy. A Joseon official named Kim Sa-Hyeong, lead another expedition to the island in 1396. The Joseon dynasty requested that the Japanese officials of the Ashikaga Shogunate use their sovereignty and influence to bring about an end to the piracy that had its source in regions most closely associated with their domain. They asked this in hopes of facilitating the trade of real merchants.\textsuperscript{16} The two sides would agree on granting So Sadashige, the local governor, or daimyo, of Tsushima at the time, power over all vessels traveling to Korea from Japan.

When Sadashige passed away in 1418, Soda Saemontaro, a prominent pirate, seized power from Sadashige’s young son Sadamori. In 1419, amidst famine, Saemontaro and his pirates were pushed to invade Ming China. They stopped and requested food along the way in Bi-In and Haeju, both Joseon holdings. In both instances, Saemontaro and his men were denied and thus provoked into attacking. Joseon’s royal court received news of the attacks by Saemontaro and in response, initiated a general campaign against Tsushima.

Though the King of Joseon, Se Jong the Great, approached the situation as a whole with general laxness, his father, Tae Jong, who in 1418 had abdicated the throne, advocated a more proactive attitude in militarily extinguishing the Wokou. As an official military advisor to his son, Tae Jong officially declared war against Tsushima on the grounds that the island should exist under Joseon sovereignty. He would manifest his declaration in a campaign, which would come to be known as the Gihae Eastern Expedition.

And so, on June 9 of 1419, following Tae Jong’s declaration of war, Goryeo

\textsuperscript{15} Jurgis Elisonas, \textit{The Inseparable Trinity: Japan’s Relations with China and Korea} (Cambridge: Cambridge Press, 1991), 235-300.
launched an attack on pirate bases on the Japanese island of Tsushima. The invasion involved a fleet of 227 ships and 17,285 soldiers. It was lead by Korean General Yi Jongmu, who was born in 1360 and died in 1425.\textsuperscript{17} Waiting until June 19, when most of the Japanese fleet departed the island for Ming China on a campaign of their own, General Yi and his fleet departed from Geoje Island, an island off the southern coast of Korea, and headed toward Tsushima, where there was a Wokou stronghold.\textsuperscript{18} The navigators of the expedition were captive Japanese pirates. Upon arrival in Aso Bay, General Yi sent the hostage pirates to the Wokou stronghold as envoys to request surrender. Upon seeing there was no response, he ordered an attack, which ultimately annihilated the pirates and their settlements.

The success of General Yi’s campaign is best demonstrated by the numbers: a documented 1,939 houses and 129 boats were destroyed and 135 coastal residents were enslaved or killed.\textsuperscript{19} A notable 131 Korean and Chinese captives and 21 slaves were rescued from the island as well. Shortly after, the Japanese army attacked the Korean force at Nii. General Yi would lose 150 of his men at this Battle of Nukadake. Nevertheless, within the subsequent weeks, General Yi was able to negotiate a truce with the So clan, the ethnically Japanese ruling faction of Tsushima. Abiding by the terms of their agreement, on July 3, 1419, the Korean fleet disarmed and departed for Korea.\textsuperscript{20} Later, Joseon would grant Tsushima special trading privileges.\textsuperscript{21} In return, the Joseon government would expect Tsushima’s enforcement of stability and prevention of regional piracy. Following the success of General Yi’s raid on Tsushima, which is sometimes referred to as the Oei Invasion, the threat of Wokou piracy generally diminished in the region, at least until the 16\textsuperscript{th} century, when non-ethnic Japanese pirates would usher in a second era of piracy.

\textsuperscript{17} Louis-Frédéric Nussbaum, “Ōei no Gaikō” (2005): 735.
\textsuperscript{18} Stephen Turnbull, ‘Pirate of the Far East’: 811-1639
\textsuperscript{19} "朝鮮世宗實錄 4 卷 1 年 6 月 20 日" Annals of King Sejong Vol.4 June 20.
\textsuperscript{20} "朝鮮世宗實錄 4 卷 1 年 7 月 3 日" Annals of King Sejong Vol.4 July 3.
\textsuperscript{21} 月刊朝鮮 monthly.chosun.com
The Gihae Eastern Expedition and its triumph marks a historical crossroads in the subject of East Asian Wokou Piracy, where the Korean monarchy was able to effectively conquer the Wokou pirates by means of an all out offensive invasion, finding success even at the home bases of the pirates. The pirates were a lethal force, accustomed to raiding, pillaging, and looting. They would also have had an advantage in both numbers and strategic positioning, as they were fighting on their own turf. How, then, were General Yi and his attack force able to defeat the Wokou against such odds?

**Choi Mu Seon and Gunpowder**

About a century earlier, in 1308, the Goryeo Department of Arms Manufacture had closed down. This was due to the increased influence of civil officials. The result would see a general decline in Goryeo gunpowder technology and use. It was in this stagnant technological context that Choi grew up. Most importantly, he was able to acknowledge the technological vacuum in gunpowder use as well as the existence of an immediate application for the substrate in the form of Wokou threat.

Thus, he embarked for China in hopes of learning how to make gunpowder. Unfortunately, he met with no success due to China’s campaign of concealing gunpowder technology. Upon returning to Goryeo, he was determined to develop his own way of manufacturing gunpowder. In order to make gunpowder, three main ingredients are necessary: sulfur, willow charcoal powder, and yeom cho, which is Korean for a form of potassium nitrate or saltpeter. Where sulfur and willow charcoal powder are well-known, naturally occurring, and easy to come by, yeom cho must be made from other ingredients, which is very difficult. Indeed, the process of making yeom cho involves ratios of mixtures of compounds, all of which were unknown by Choi at the time.

Luckily, while at the trade harbor in Byuk Ran Do island of Goryeo, he met Lee-Won or Lee-Yuan, a wealthy Chinese merchant and engineer of yeom cho. Choi
treated Lee-Won graciously, eventually resorted to bribes, and learned the process of yielding *yeom cho*. After numerous subsequent trials, Choi successfully made *yeom cho* on his own, an act involving the extraction of potassium nitrate from the earth. With a stable supply of *yeom cho*, Choi was able to complete the technique of producing gunpowder. Shortly thereafter, he created the peninsula’s first native rocket, the Ju Hwa.

Until Choi’s actions, the technique of producing gunpowder from scratch was monopolized and kept secret by the Chinese, specifically the Won, or Yuan. The Won also prohibited the exportation of gunpowder to Joseon, on the grounds of national security. It is with Choi’s success from 1374 to 1376 in independently making gunpowder in Goryeo that such technology was first demonstrated outside of China. And his endeavors would not end there.

He went on to incessantly lobby the Goryeo government to incorporate his research through the manifestation of a new department—the *Hwatong Dogam*. This government institute would fund further experimentation with and better development of gunpowder as well as firearms. Finally in October of 1377, Choi received approval from the government for his armory institution, essentially the successor to Goryeo’s Department of Arms, but revitalized and more dynamic—a Stark Industries of sorts. He thereafter moved forward with his research and experiments on gunpowder as an official representative of the government, further developing gunpowder on an institutional level. With new government backing, Choi would organize and install a new special military unit equipped solely with new firearms exclusively designed by him.

Until then, gunpowder was not used for firearms in Korea. Rather, it was seen as a material for strictly non-military purposes such as fireworks during the celebration of certain events. Gunpowder of Chinese origin had been in use in Korea

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since the Silla period dating 57-935 AD. The Mongols brought cannons to Korea throughout their invasions from 1231 to 1259. However it would not be until Choi’s engineering efforts that the notion to start using gunpowder for firearms was first advocated and acknowledged on the peninsula. Thereafter, the Joseon would continue Choi’s legacy by developing an entire series of improved cannons, along with turtle ships created in the 16th century.

Choi’s early inventions with the Hwatong Dogam included the singijeon or hwajeon, Korean for magical machine arrow or fire arrow: hwatong, a fire barrel; jilyeopo, a mortar that fires shells: daejanggun, samjanggun, and ijanggun, a variety of cannons: juhwa, chokcheonhwma, and yuhwa rockets; and a shinpo, a signal gun. Hwajeon, the fire arrow, were in use by Joseon since the 1300s and alongside the hwatong, were very effective at combating Wokou pirates. Hwatong, and other early Joseon cannons of the late 14th century were very similar to their Chinese counterparts.

Singijeon, magical machine arrow, was the successor to the hwajeon and was used by means of the hwacha, a multiple rocket launcher. In addition to its use in defense against piracy, the Joseon would rely on singijeon in their campaign to expel the orangkae, Korean for barbarians, from along the northern borders. Most noticeable, however, was singijeon’s decisive role throughout the Imjin War. General Gwon Yul, a Joseon general of that war, would later exclaim his indebtedness to singijeon for successfully withstanding a Japanese faction of significantly greater number. In the book Gukyo Orye Seorye, the measurements and details of the singijeon are portrayed in the appendix.

These so called magical machine arrows were designed in three sizes and utilized black powder. The largest was a rocket spanning 52 cm in length. A fuse

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25 절대강국을 꿈꾼 세종의 비밀병기 <신기전>
based handheld gun would fire the rocket a distance of up to 1.2 km. The medium was only 13 cm long and so could fire a distance of no more than 150 m, but otherwise was similar in design and build to the 52 cm and still managed to leave sand craters of up to 30 cm deep.\textsuperscript{26} The smallest type of \textit{singijeon} was a single inexpensive arrow connected with a gunpowder case. \textit{Hwacha} would fire hundreds of these arrows at a time and to a distance of up to 100 m. Structurally, \textit{hwacha} involved a \textit{singijeon} loading board atop a two-wheeled cart. Although the \textit{hwacha} was not made until 1409 and thus was not directly produced by Choi, but rather by his son, Choi Hae-San, and another Joseon scientist, Yi Do, this multiple rocket launcher was undoubtedly the most immediate legacy of both Choi’s \textit{singijeon} and \textit{juhwa}. Overall, Choi would develop eighteen varieties of firearms, the first of which would see combat at the Battle of Jinpo.

In 1380, the first culmination of Choi’s developments as achievements and perhaps the precursor to the Gihae Expedition, was seen at the mouth of the Geum river in Goryeo. Using a variety of firearms, including \textit{hwajeon}, developed by Choi, which were equipped on 500 warships utilizing Choi’s technology and newly developed naval artillery, King Wu, of Goryeo’s 6\textsuperscript{th} year, achieved victory over Japanese intruders. Key victories such as this were owed largely to Choi’s endeavors in general, but especially to Choi’s development of fire arrows. The Japanese, including the Wokou pirates, would not use fire arrows, which they would come to call \textit{Bo Hiya}, until the 16\textsuperscript{th} century, marking the second era of Wokou piracy.\textsuperscript{27} \textit{Bo Hiya} were grand arrows, consisting of a shaft encircled by a flammable string.\textsuperscript{28} They were first fired using \textit{yumi}, Japanese for bows.\textsuperscript{29} Later, the Japanese would ignite \textit{Bo Hiya} and launch them using a \textit{Hiya Taihou}, a mortar based weapon, or a \textit{tanegashima}, a matchlock firearm that the Portuguese demonstrated

\textsuperscript{26} Gwahak Jilmoon QnA http://user.chol.com/~knuephy/answer/physics/p0006.htm.
\textsuperscript{27} Transactions of the Asiatic Society of Japan, 1885, Original from the University of Michigan p.121
\textsuperscript{28} Turnbull, \textit{Pirate of the Far East}, 811-1639, Osprey Publishing, Nov 20, 2007 p.34
to the Japanese in 1543.\textsuperscript{30} These advanced \textit{Bo Hiya} were larger and thick with fins, a metal tip, and a wood rod.\textsuperscript{31}

Still, such arrows would not be seen for two whole centuries, during which time the fire arrow would give the Joseon a critical advantage over the Wokou pirates and even the formal Japanese clans. In 1477, Choi was posthumously distinguished as an honorable head of the Office of Heavy Artillery and as a vice premier of Joseon, being remembered as the perfect role model for scientists and as a great patriot.

**A Precursor of Korea-Japan Diplomacy**

The earliest accounts of diplomacy between Korea and Japan manifest as a string of treaties between Joseon and Tsushima, occurring over the course of the 15\textsuperscript{th} century and into the 16\textsuperscript{th} century—the latent period before the second era of Wokou piracy began in the 17\textsuperscript{th} century.

Joseon’s military victory over Tsushima’s pirates in the Gihae Eastern Expedition, due in large part to Choi Mu-Seon’s gunpowder efforts, garnered new respect from local Japanese forces. The Japanese manifested their newfound respect for the Joseon by being overwhelmingly obliging to and abiding by Joseon’s requests and assertive terms. As is often the case in history, there are varying takes on how the period’s treaties were developed and on how they played out. Adding to the confusion, the series of events and exchanges are also laced with misrepresentation and poor communication. The two main viewpoints are, unsurprisingly, those of Japan and that of Korea. They do not necessarily contradict each other, but the distinctiveness of the accounts must be acknowledged. Despite the inconsistencies of the accounts, both cases involve parallel circumstances, revealing that Tsushima, under the authority of the So clan, developed a willingness to negotiate due to

\begin{footnotesize}
\end{footnotesize}
Joseon’s military victories.

It is unanimously accepted that on September 29, in 1419, the So clan and the Joseon government agreed to a treaty where the So clan would be granted limited trading rights and permission to dock in three coastal ports. The Joseon, in return, would be reassured that the So clan would continue the hindering of piracy.

However, the Japanese believe that on July 15th in 1419, the Joseon government wrote a letter to So Sadamori stating that the island of Tsushima rightfully be put under Joseon’s jurisdiction and ordering Sadamori into exile. In September of that year, a representative of Sadamori appears to have arrived in Joseon. However, his arguments were deemed unacceptable. King Tae Jong reissued the terms and in 1420, Sadamori’s representative finally accepted, giving Gyeongsang province of Joseon sovereignty over Tsushima.

In November of 1419, representatives of Ashikaga Yoshimochi, of the Ashikaga Shogunate, traveled to Joseon. Reciprocally, King Se Jong commanded Song Hui-Gyeong travel to Japan. During this journey, which embarked in 1420, Song met So Sadamori on Tsushima. Sadamori was known to reside in the Shoni clan of the Hizen province. Sadamori told Song that he had never agreed to the terms of Se Jong’s declaration of sovereignty over Tsushima and that he was misrepresented. Song would continue to Kyoto, and then Kyushu, before returning to Joseon. Thus, due to Song’s dialogue with the Japanese, the miscommunication between Joseon and Japan was cleared up. Learning from Song directly that the previous emissaries to Joseon were not rightly representative of the So, Joseon’s ambitions to rule Tsushima were set aside. While in Kyoto, Song had reassured the Shogunate that Joseon was not planning to invade Japan by any means. Still, Joseon would remain strict in dealing with Japan until Tae Jong’s death in May of

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On July 6th in 1422, a So clan ambassador asked the Joseon to release Japanese prisoners of war. As a token of gratitude, he presented the Joseon with sulfur and copper. On December 20th of that same year, the Joseon government freed all Japanese prisoners of war. Tae Jong's son, Se Jong, nullified his father's assertions of sovereignty over Tsushima, and instead rewarded the So clan with special economic rights as long as they maintained stability.

The Korean contingent believed that in July of 1419, Sadamori received a letter from Tae Jo, which asserted Gyeongsang's authority over Tsushima, as had been the case in the time of the Silla dynasty. Tae Jo also ordered that Tsushima pay tribute to Joseon. In September of 1419, Sadamori sent a representative to officially acknowledge allegiance to Joseon and to give the Joseon royal family various resources. Then in January of 1420, Japan asked for a copy of the Tripitaka Koreana, a sacred Buddhist text considered by Joseon as a national treasure. King Se Jong acquiesced, further strengthening the ties between the two parties.

Though the precise course of Joseon and Japan's earliest diplomatic encounters has been interpreted in many ways, by the middle of the 15th century the treaties had become less disputable. In 1443, So Sadamori, the reigning governor of Tsushima, proclaimed and initiated what was known as the Gyehae treaty. Also known as the Kakitsu treaty, it determined the amount of merchant vessels that would travel to Korea from Tsushima, thus helping the So to expand their economic interest with Korea. Specifically, the governor of the So would have the privilege of trading with Joseon at a rate of up to fifty ships annually. In return, the daimyo would both send resources to Joseon and maintain the prevention of Joseon ports being victimized by Wokou piracy.

35 朝鮮世宗實錄 7 卷閏 1 月 10 日 " Annals of King Sejong 7 1st leap month 10
36 South Korea's current claims of sovereignty over Tsushima Islands is based on notes in the "Silla Bongi" [Silla section] (新羅本紀), in the Samguk Sagi [Chronicle of the Three Kingdoms] (三國史記, completed in Korea in 1145), and the Sejong Sillok [Annals of King Sejong] (世宗實錄, 1431).
All exchanges seemed amicable and mutually productive until 1510 when Japanese merchants began rioting due to the harsh trade protocol of the Joseon government, particularly those faced by Tsushima merchants attempting to trade in Ulsan, Jinhae, and Busan, of Joseon. Although the So clan initially backed the revolt, they were ultimately responsible for extinguishing it. As a result, King Jungong of Joseon declared a more limited agreement, known as the Treaty of Imsin. Under this treaty, the number of vessels allowed to travel from Tsushima to Joseon was restricted to 25 per year. This settlement would hold until 1544, when the Japanese again rioted, this time in Saryangjin. While the Joseon offered things such as hemp, rice, lacquerware, and Confucian texts, the So clan supplied tin, medicinal herbs, spices, sulfur, and copper.\textsuperscript{37}

Ultimately, Korea and Japan saw an unprecedented era of diplomatic relations along with the growth and maintenance of economic interaction between Joseon and the So clan of Tsushima. In addition to economic exchanges and benefits, an overall fraternal bond between Korea and the Tsushima locals was established and strengthened. Joseon sailors who would find themselves marooned on Tsushima would meet with local hospitality, and Tsushima natives would likewise receive exclusive benefits when in Joseon ports.\textsuperscript{38}

\textbf{Conclusion}

Choi’s development of gunpowder, coupled with successful Goryeo and Joseon application of this new technology, especially in battle with Wokou pirates around Tsushima Island during the Gihae Eastern Expedition, gained the attention and respect of the Japanese authorities. Consequently, a string of treaties throughout the 15\textsuperscript{th} and 16\textsuperscript{th} century between the Joseon and the So Clan were signed, providing what may be considered the earliest case of Korean-Japan formal diplomacy.

\textsuperscript{37} Korea, 1400–1600 A.D. | Timeline of Art History | The Metropolitan Museum of Art
\textsuperscript{38} 月刊朝鮮 monthly.chosun.com
The three narratives of Wokou Piracy, Choi Mu-Seon, and the Joseon-Tsushima treaties, when arranged thematically, depict logical interwoven points. What is initially an implication becomes inferential as the narratives are examined congruently rather than as relative.
Abstract

The military revolution model explains that the development of gunpowder weaponry helped to consolidate modern European states with centralized monarchical power through institutional and financial reforms. In order to examine this centralization of royal power, I suggest a model of aggrandizement of monarchical power that can be categorized into two mechanisms: strengthening of the relationship between the king and the nobles, and between the king and his people. Through the military revolution, European monarch allegedly bolstered the relationship with nobles and with the people. In this paper, I will study whether this military revolution model fits in the case of Chosŏn Korea. Chosŏn Korea, according to a military historian No Yonggu, experienced a military revolution during the seventeenth and eighteenth century. Chosŏn also went through massive financial and institutional reforms, which allegedly strengthened the power of King Sukchong. Unlike European monarchs, he could only centralize his power through one type of aggrandizement of monarchical power: the relationship between himself and his people. In order to ensure military conscription and collection of tax, King Sukchong bolstered the responsibilities of local magistrates. Secret royal inspectors were also sent to oversee the local magistrates and to observe the general provincial situations, and the function of Bibyunsu was bolstered in order to control local administration and financial management. Through these multiple levels of monitoring by the central government, King Sukchong’s power was strengthened with the consolidation of the relationship between himself and his people. However, because strong yangban elites frequently intersected his authority, he was often hindered from enacting his proposed reforms. In the conclusion, I suggest another factor, the geography of Korea, which influenced the difference in consolidation of royal power between Europe and Chosŏn, other than the strong yangban interest. Therefore, European military revolution model is not applicable to the case of Chosŏn.
Introduction

During the sixteenth and seventeenth centuries, the introduction and development of gunpowder initiated the military revolution. According to military historian Geoffrey Parker, gunpowder development, through political and social change, led to the consolidation of the modern European state. That is, the increase in army size, transformation in artillery and fortress design, innovative war tactics, and new military technology ignited waves of profound institutional and financial reforms that centralized monarchical power in Europe.\(^{39}\) The breakdown of the feudal relationship between nobility and peasants furthered this centralization of power. As a crucial element in instigating this change in the power dynamics of Europe, the change in warfare should be explored in order to question how the development of gunpowder influenced the politics of Chosŏn Korea (1392-1910) during the reign of King Sukchong (1674-1720).

Historiography

A military historian, No Yŏnggu, insisted that Chosŏn Korea, like Europe, experienced a military revolution after Imjin War of 1592-1598. The Chosŏn dynasty, having realized the backwardness of military technology, initiated the extensive development of gunpowder—revolutionizing war tactics and technology, thereby converting to a "musketry-based" style of warfare.\(^{40}\) In the seventeenth century the Chosŏn dynasty experienced the various social and political transformations of the Korean military revolution specifically the effect it had on state centralization. Both in Korea and in Europe, parallel military innovations allegedly triggered similar socio-political consequences, particularly the

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aggrandizement of monarchical power.\textsuperscript{41} Many military historians such as Geoffrey Parker and William McNeill argue that the introduction and development of gunpowder led to the consolidation of the modern European state.\textsuperscript{42} Michael Roberts emphasizes unavoidable centralized power of state by stating that, since only the state could provide “the administrative, technical and financial resources” necessary for large-scale warfare, the new form of war inevitably led to an increase in the state authority.\textsuperscript{43}

However, some scholars such as John Hale and Kelly DeVries disagree with the idea that European military revolution led to the “feudalistic decline/ central state rise pattern.”\textsuperscript{44} Hale claims that even though the development of gunpowder constrained an occasional rebellious magnate, the centralized governments of kings can be explicated without the role of gunpowder weaponry. DeVries explains that the role of gunpowder weaponry in confirming the centralization of royal power does not exactly match all the paradigms. That is, even though the cases of France and Burgundy demonstrate the pattern proposed by Parker and others, the case of England does not follow the pattern because the Kings of England already had absolute control.\textsuperscript{45}

Because no state is identical, generalization of the influence of gunpowder weaponry on the aggrandizement of royal power is impossible. Moreover, I agree that it is not just gunpowder weaponry that brought about the centralization of power in Europe. Decline in feudalism is also an important factor. However, referring back to the historical significance of battles in which weapon advancement

\textsuperscript{44} Kelly DeVries, ”Gunpowder Weaponry and the Rise of the Early Modern State.” \textit{War in History} 5.2 (1998): 129.
\textsuperscript{45} Ibid., 127-145.
changed the result of the war, the importance of gunpowder development cannot be reduced to a minor influence in the transition. Thus, regarding gunpowder weaponry as a significant factor that contributed to the aggrandizement of power in Europe proposed by Parker and others, I will examine whether the military revolution model fits the case of Chosŏn Korea. In this paper, I will address the interplay between military reform and monarchical power, and argue that the former reinforced the latter through a rigorous case study of King Sukchong's reign.

**Two Mechanisms of Aggrandizement of Monarchical Power**

Before the examination of the politics behind the development of firearms, it is necessary to explain how monarchical power can be bolstered. By demonstrating several requests from civil officials to Yeonsangun and King Jungjo—before the reign of Sukchong—about controlling aristocrats who constantly exploited commoners, Yi T'aejin insisted that ruling elites intercepted the relationship between the king and his people. 46 With the interpretation of his statement, I propose a model of centralization of royal power that can be categorized in two ways: strengthening the relationship between the king and the aristocrats, and between the king and his people. These two mechanisms help to explain whether or not the centralizations of royal power through the military revolution in Europe and Chosŏn were different. The idea of a military revolution in Europe states that this military innovation begot expanded royal power through both types of centralization mechanisms. The king, by interfering in local governance, could meddle in the lives of both his aristocrats and his people. Thus, through the close surveillance of the aristocrats, the distance between not only the king and the aristocrats, but also the king and his people grew smaller in Korea than it did before the military revolution in Europe.

Then comes the question, how did the development of gunpowder throughout the seventeenth and eighteenth centuries strengthen the power of King Sukchong?

46 T'aejin Yi, Chosŏn Hugi T'angpyŏng Ch'ôngch'i U'i Chaejomyŏng: "chosŏn Sidae Ch'ôngch'isa U'i Chaejomyŏng" Husokpyŏn (Kyŏnggi-do P'aju-si: T'aehaksa, 2011), 30.
Was his influence enlarged by diminishing the power of the aristocrats, similar to European crowns? I argue that the improvement of gunpowder influenced the political and social environment to help King Sukchong to aggrandize his power mainly through the reformations in taxation and bureaucratic administration. That is, the Korean military revolution theory supports the idea that these state-level reforms allowed the centralization of his power. However, unlike European monarchs, by restructuring institutions and bureaucracies, King Sukchong became powerful through only one type of centralization of monarchical power: the close relationship between the people and himself. Therefore, in contrast to the crystallization of the European state system through gradual decrease in noble power with the close supervision by the king, the empowerment of Chosŏn monarchy was established only through the relationship with the people—not with the nobility.

**Political Dynamics Between Kings and Nobles Before the Development of Gunpowder Weaponry in Europe and Chosŏn Korea**

In order to explore how the power of King Sukchong was strengthened in the midst of the development of gunpowder weaponry, an examination of the dynamics between the monarchy and the aristocrats before the development of gunpowder in the Chosŏn dynasty is fundamental in light of the medieval European state system of feudalism. A combination of “a rough balance between crown and nobility, decentralized military systems, and peasant property rights and reciprocal ties to the landlord” was exclusive to Western Europe. 47 The relationship between peasants and nobles was the core of feudalism, which was “a [decentralized] military system with a supportive manorial economy, the former bringing about the latter.” 48 Since warrior-aristocrats had jurisdictional and administrative prerogatives over their lands, they could control men and arms directly and

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48 Ibid, 23.
independently; this decisive influence of noble magnates over peasants distanced European kings from their people.\textsuperscript{49} With “feudal stone castles,” “the traditional curtain walls of towns,” and private armies, nobles enjoyed autonomy and control over the military.\textsuperscript{50} Also, medieval battles can largely be characterized as fights between “mounted and armored nobles,” which meant that individual courage and valor of warrior-aristocrats emphasized their prestigious status.\textsuperscript{51} Bert Hall emphasizes the importance of the self-image of aristocratic knights by stating that:

\begin{quote}
...but it is important to grasp that the ideal of a warrior-aristocrat was central to the self image of an elite group. The badge of membership in the class was skill in the use of the traditional arms of the knight. Virtually any member of the group, as well as any aspirant to membership, regarded these traditional weapons as essential, together, of course, with a horse capable of carrying man and weapons into battle.\textsuperscript{52}
\end{quote}

The practical power of warrior-aristocrats relative to the theoretical power of the Crown dramatized the breakdown of feudalism. The social and political situation of Chosŏn Korea was different from that of medieval Europe: the Chosŏn rulers already had a strong monarchy with centralized bureaucracy.

Unlike the noble-peasant relationship, which was essential in the social structure of medieval Europe, in Chosŏn, the interrelationship between the king and the aristocrats, the yangban elites, was more critical in structuring both

\textsuperscript{50} Ibid, 11.
\textsuperscript{52} Ibid, 11.
political and social environments because of Chosŏn’s unique political dynamics. The surprising stability of Chosŏn “was in large measure the result of a state of equilibrium produced by the interrelationship between a monarchical, bureaucratic, and centralized government structure and an aristocratic and hierarchical social system.”53 The yangban aristocrats, who were also bureaucrats and administrators, enjoyed legal and de facto social, political, and economic privileges. The king legitimized these yangban elites’ privileges, and the bureaucracy and social elites assured the perpetuation of the king.54 A stratified system of social classes drew a clear distinction between those who govern and those who are governed.55 The power dynamics between king and aristocrat emphasizes that both are “mutually antagonistic and mutually supporting.”56 That is, each side relied on the other in order to maintain a place in the political and social structure. Even though there were times when “the state of equilibrium [shifted from] relatively strong monarchy to aristocratic-bureaucratic domination of the throne,” the balance of power was never demolished.57 This stable social and political system contributed to the extraordinary longevity of Chosŏn Korea.

However, the power of the yangban tradition was one aspect that contributed to the relative weakness in the Korean monarchy. The interdependent relationship between king and aristocracy restrained both the decentralization of power and the aggrandizement of royal or central power.58 The king was in charge of a council of high officials not as an absolute governor, but as primus inter pares—first among equals.59 Even with the centralized and autocratic government structure, bureaucratic system was controlled by the yangban aristocrats, who were more

54 Ibid., 4-5.
56 Ibid., 5.
57 Ibid., 5.
58 Ibid., 5.
interested in maintaining the status quo relatively weak for the purpose of limiting monarchical power.\(^{60}\)

The *yangban* aristocrats maintained their positions throughout the Chosŏn dynasty and monopolized access to high-ranking position. The early Chosŏn kings never tried to challenge the property rights of the aristocrats, and the *yangban* elites always sought opportunities for personal gain by narrowing the pool of examination-taking candidates (individuals who passed state-sponsored civil service exam could acquire the *yangban* title) and preventing local clerks from being promoted to the central bureaucracy.\(^ {61}\) In provincial regions, some local magistrates regarded the people as objects of exploitation for their economic interests. Civil officials in the capital and local magistrates were often corrupt. The local governors abetted the civil officials in exploiting people, and the civil officials covered up the wrongdoings of the local magistrates when those misdeeds were discussed in the royal court. Hindered by such corrupt local magistrates and civil officials, the relationship between the king and his people was weak.\(^ {62}\) The symbiotic relationship between king and aristocracy was an essential element that contributed to the longevity of Chosŏn, but also a hindrance when Chosŏn needed to strengthen central power to organize resources for defense and development.\(^ {63}\) In contrast with European nobles who ruled autonomously during the Middle Ages, the *yangban* elites prevented the growth of feudalism or political decentralization in Chosŏn by “[identifying] with the centralized structure as bureaucrats and [using] it to maintain their privileges.”\(^ {64}\)

**Institutional and Bureaucratic Reforms in Western Europe and Chosŏn Korea**

The development of gunpowder caused reformations in taxation and

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\(^{60}\) Palais, *Politics and Policy in Traditional Korea*, 5.


\(^{62}\) Yi, *Chosŏn Hugi T'angp'yŏng Chŏngch'i U'i Chaemyŏng*, 29.


\(^{64}\) Ibid., 5.
bureaucratic administration in Western Europe. As the ever-increasing cost of producing, maintaining, and supplying gunpowder weapons overwhelmed the European states, their rulers needed to rapidly revolutionize taxation as well as administrative standards and methods. Supplies of arms and armaments, materials, goods, clothing, and transport were now supervised by the state. For example, the Spanish Netherlands monopolized the manufacture of gunpowder, and, furthermore, the Swedish Trading Company was formed in order to control copper production.⁶⁵ The kings developed “financial instruments and a structure of credit” while also resorting to “currency debasement, sale of monopolies, sale of crown lands, inflation of honours, and above all the sale of offices”.⁶⁶ In addition, centralized and royal administrations, such as secretaries of state for war and war offices, were created and flourished. With a centralized conscription method, which became widespread throughout Western Europe, state and royal armies and navies were built.⁶⁷ During the reign of King Sukchong, Chosŏn Korea also experienced the increase in military strength due to the extensive development of gunpowder during the seventeenth and eighteenth centuries. How then, compared to Western Europe, did the Chosŏn dynasty revolutionize its political and social system?

Chosŏn Korea during the reign of King Sukchong also experienced multiple reforms in taxation, institutions, and conscription methods with the substantial development of gunpowder. Unlike Europe, Chosŏn already had centralized government structure, and its economy was stimulated through the efforts of King Sukchong to institute wide range of financial, administrative, and institutional reforms.⁶⁸ He largely strengthened existing military institutions such as, Military Training Agency (訓鍊都監), the Imperial Battalion (御營聽), and the Imperial Defense Army (守禦聽) in the capital in order to bolster capital defense. The

⁶⁶ Ibid., 21-22.
⁶⁷ Ibid., 20.
Military Training Agency and the Imperial Battalion defended both the palace and the capital, and the Imperial Defense Army defended strategically important places on the outskirts of the capital.\textsuperscript{69} Due to the function of central military institutions as the base of political power and legitimacy, this intensification of these institutions also bolstered King Sukchong’s power.\textsuperscript{70} Thus, the garrison in the capital was a matter of primary interest to the ruler and central bureaucrats; the garrison, receiving concentrated financial support from the central government, formed institutions of military units in order to use firearms effectively.\textsuperscript{71} These institutions, the Military Training Agency, the Imperial Battalion, and the Imperial Defense Army, not only increased the size of the army but also replaced traditional units of cavalry and archers with musketeers.

Moreover, King Sukchong established the Royal Cavalry Guard (親騎衛), an elite military corps, in \textit{Hamgyŏng} province, the Forbidden Guards Army (禁衛營), and the Special Military Officers (別武士) in \textit{Pyongan} and \textit{Hwanghae} provinces, responding to the change in infantry tactics which focused on musketeers. The establishment of these special military institutions, the Royal Cavalry Guard and the Special Military Officers, was extended to major provinces of the whole country. These institutions gradually transformed into professional military units of firearms.\textsuperscript{72} Similar to Western Europe, Chosŏn also suffered from the financial burdens of maintaining these new and reformed military institutions, since the government paid salaries to the professional and permanent armies. Paying soldiers in the Military Training Agency alone “amounted to as much as two-thirds of the entire Ministry of Finance’s budget in the late seventeenth century.”\textsuperscript{73} Thus, in order to sustain larger central armies and newly formed standing armies, financial

\textsuperscript{69} Han'guk Yŏksa Yŏn'guhoe. 17-segi Chŏngch'isa Yŏn'guban, \textit{Chosŏn Chunggi Chŏngch'i Wa Chŏngch'aek \textasciitilde Politics and Policy in the Middle Chosun Period}.(Sŏul: Ak'anet), 150.
\textsuperscript{70} Ibid., 28.
\textsuperscript{71} Han'guk Yŏksa Yŏn'guhoe, \textit{Politics and Policy in the Middle Chosun Period}, 151.
\textsuperscript{72} No, “Kihoek nonmun” 43; Pak, Yŏng-gyu, \textit{Han’gwŏn Uro Ingnun Chosŏn Wangjo Sillok} (Sŏul-si: Ungjin Chisik Hausu, 2004), 379.
\textsuperscript{73} Kang, \textit{Big Heads, Bird Guns and Gunpowder Bellicosity}, 13.
and logistical resources were required.

**Tax Reforms and the Centralized Conscription Method in Chosŏn**

King Sukchong launched different types of tax reforms, one of them being the *Taedong* reform ("Law of Great Equity" 大同法). The extensive *Tea*dong reform began in 1608 by "replacing tribute with a surtax on land, province by province." However, it was during the reign of King Sukchong when the reform was enforced throughout the whole country.\(^7^4\) This reform "introduced a new uniform land surtax that allegedly reduced the burden of the commoner taxpayers as well as rectifying the existing inefficiencies of indirect payment and regional differences of taxing."\(^7^5\) He also actively attempted to implement a far-reaching census-taking *hopae-bup* (號牌法), *ogajaktong-bup* (五家作統法), and *yeojaipjuk-bup* (女子入籍法).\(^7^6\) *Hopae-bup*, the requirement of male commoners’ to carry identification tags, was bolstered not only to collect taxes, and thus enlarge the military institutions’ financial base, but also to improve conscription method.\(^7^7\) *Yeojaipjuk-bup* allowed names of women to be entered in family registers; King Sukchong consolidated this law in order to bolster census-taking, including all women, who were previously prohibited from placing their names in the registers.\(^7^8\) By tying five households into one group, *ogajaktong-bup* prevented people from running away in order to avoid paying military taxes.

\(^7^4\) Eugene Y. Park, *Between Dreams and Reality: The Military Examination in Late Chosŏn Korea, 1600-1894* (Cambridge: Harvard University Asia Center, 2007), 52.
\(^7^6\) Yi, *Chosŏn Hugi T'angpyŏng Chŏngch'i U'i Chaejomyŏng*, 104.
\(^7^7\) Kang, *Big Heads, Bird Guns and Gunpowder Bellicosity*, 13-14.
\(^7^8\) Yi, *Chosŏn Hugi T'angpyŏng Chŏngch'i U'i Chaejomyŏng*, 105.
Figure 1. Progress in the number of registered households and population in the seventeenth century shows an increasing trend in general. Kyungshin famine of 1670-1671 and Eulbyung famine of 1695-1696 greatly decreased the number of registered household and that of population.  

These reforms had specific purposes: increasing state revenue and fortifying

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<tr>
<th>Period</th>
<th>Dwelling unit (registered household)</th>
<th>Population</th>
<th>Population per dwelling unit (registered household)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1648 (the 26th year of the reign of Injo)</td>
<td>441,321</td>
<td>1,531,365</td>
<td>3.47</td>
</tr>
<tr>
<td>1657 (the 8th year of the reign of Hyojong)</td>
<td>658,771</td>
<td>2,290,083</td>
<td>3.48</td>
</tr>
<tr>
<td>1669 (the 10th reign of Hyunjong)</td>
<td>1,313,453</td>
<td>5,018,644</td>
<td>3.82</td>
</tr>
<tr>
<td>1672 (the 13th year of the reign of Hyunjong)</td>
<td>1,176,917</td>
<td>4,695,611</td>
<td>3.99</td>
</tr>
<tr>
<td>1678 (the 4th year of the reign of Sukchong)</td>
<td>1,342,428</td>
<td>5,246,972</td>
<td>3.91</td>
</tr>
<tr>
<td>1693 (the 19th year of the reign of Sukchong)</td>
<td>1,546,474</td>
<td>7,188,574</td>
<td>4.65</td>
</tr>
<tr>
<td>1699 (the 25th year of the reign of Sukchong)</td>
<td>1,293,083</td>
<td>5,722,300</td>
<td>4.46</td>
</tr>
</tbody>
</table>

\(^{79}\) Ibid., 105.
the national defense.\textsuperscript{80} King Sukchong, in order to reinforce the mechanisms of taxation, bolstered census taking, and his efforts resulted in an increase of registered households throughout the seventeenth century (see Figure 1). The active implementations of \textit{Hopae-bup}, \textit{ogajaktong-bup}, and \textit{yeojaipjuk-bup} demonstrated an increase of household registers that allowed more precise measurement of population per registered household up to 4.65 at the end of the seventeenth century.\textsuperscript{81} Also, the government could easily grasp the accurate number of casualties caused by natural disasters and great famines: \textit{Kyungshin} famine of 1670-1671 and \textit{Eulbyung} famine of 1695-1696 (see Figure 1).\textsuperscript{82} Thus, the development of gunpowder sparked the restructuring of institutions, bureaucratic administrations, and the central conscription method in order to organize bigger and professional armies capable of large-scale warfare. During the reign of King Sukchong, the promulgations of diverse tax reforms, census taking, and the heightened supervision of the conscription method certainly had social and political impacts on the Chosŏn state throughout the seventeenth and eighteenth century. As the bureaucratic and administrative level of changes strengthened the responsibilities of the central government, the question of how these changes affected the royal power of King Sukchong should be examined.

\textbf{Political Dynamics Between the King and Nobles After Various Tax Reforms and Centralized Conscription Methods in Europe and Chosŏn}

In both Western Europe and Chosŏn, the institutional and bureaucratic transformations made in order to support large armies with new weapons affected royal power. Gunpowder technology catalyzed the development of the sovereign territorial European state through mainly weakening the power of the noble magnates who used to rule their own lands from within stone castles. As firearms converted the pattern of battle from private warfare to centralized and

\begin{itemize}
\item \textsuperscript{80} Pak, \textit{Han'gwŏn Uro Ingnûn Chosŏn Wangjo Sillok}, 379-401.
\item \textsuperscript{81} No, “Kihoek nonmun,” 46.
\item \textsuperscript{82} Yi, \textit{Chosŏn Hugi T'angp'yŏng Chŏngch'i Uǐ Chaejomyŏng}, 104.
\end{itemize}
proletarianized warfare, gunpowder provided kings with the means to go beyond fortifications of the castles of the nobility. That is, the consolidated central power through royal armies and navies subjugated the nobles to royal authority; irregular and private armies of nobility gradually vanished with the fall of feudalism. Hence, through the introduction of gunpowder, this new pattern of war helped to shift the balance of power within each European state from the nobles to the king.83

The gradual procedure of the transformation in power from the nobility to the Crown was accomplished especially through extensive bureaucratic and financial reforms. As the cost of a large-scale warfare continuously escalated, the nobility, who could not afford this ever-increasing expenditure, gradually lost their power. Agreeing on the effect of firearms in diminishing the noble power, McNeil asserted that, “the balance of power between central and local authorities was thereby transformed, making whoever controlled the new siege cannon into a sovereign and reducing those who could not afford them to a subjection they had not previously experienced”.84 Thus, only centralized states were, through the monarch, able to restructure bureaucratic administration and taxation to support large-scale hostilities.

Through substantial fiscal, institutional, and bureaucratic reforms in centralized European states, feudalism, which in part was a devolved military system, collapsed. In place of the feudal relationship between nobility and peasants, a new relationship between Crown and peasants was established. In Medieval Europe, the Crown was a distant figure for the peasants, as they were bound by a strong feudal relationship with the nobility. However, with the state-level reforms required for military apparatus, monarchs began to intrude on the lives of the people. In order to mobilize growing fiscal and logistical military resources, monarchs needed to access the materials from urban workshops. This resulted in monarchs having greater influence in not only military enterprise but also

commercial enterprise.\textsuperscript{85} For example, in Sweden, the close inspection of a saltpetre-collector sent by a monarch aroused complaints among the people.\textsuperscript{86} Compulsory military service jumbled all “volunteers and felons, international brigades, local militiamen, vassals, lieges and conscripts from many lands” together to create a united national identity.\textsuperscript{87} Furthermore, through centralized military conscription, “relatively small feudal levies and militias,” so characteristic of Medieval Europe, were transformed into state and royal armies and navies.\textsuperscript{88} Therefore, the reforms in taxation and bureaucratic administration operated as the link between the monarch and his subjects in Western Europe.

What, then, were the aftereffects of the reformations in taxation and new administrative methods on the power of King Sukchong? The reforms and creations of various military institutions not only bolstered his power, but also signaled the need of enormous fiscal and logistical resources to maintain these institutions. Thus, similar to Europe, effective taxation methods and a centralized conscription method were required to sustain the revolutionized and new professional military organizations. Before the reign of King Sukchong, the attempts of previous kings to successfully perform census-taking had failed, mainly because of the financial regulatory institutions based at the provinces. By having controlled these institutions, local aristocrats had had authority over financial management and that of human resources; this had allowed these aristocrats to expand their basis for dominance through exploitation of taxes or labor from the people.\textsuperscript{89}

Furthermore, the Teadong reform was enacted not just in certain provinces—which was the case before the reign of Sukchong—but across the whole country. It intended to “make peasants pay a fixed amount of tax based on the productivity of land, [so that] the reform shifted some of the burden from peasants to large

\textsuperscript{85} Ibid., 10.
\textsuperscript{86} Ibid., 21.
\textsuperscript{87} Parker, \textit{The Military Revolution}, 52.
\textsuperscript{88} Downing, \textit{The Military Revolution and Political Change}, 56.
\textsuperscript{89} Han’guk Yǒksa Yŏng’guhoe Chosŏn Sigi Sahoesa Yŏn’gurban, \textit{Chosŏn Un Chibang Ul Ottŏk’e Chibae Haennu’n’ga} (Sŏul: Ak’anet, 2000), 184.
landlords, and government revenue increased.”

Unlike early Chosŏn, in which the government enacted strict oversight of household registers mainly for commoners, the period of the reign of King Sukchong took on a new aspect of control over the people. That is, the successful implementation of new bureaucratic systems, such as the inclusion of lowborns in household registers, meant that the government was preparing for effective military conscriptions. Hence, the ruler and the central bureaucracy acquired the unified perception of financial resources and then centralized financial management.

This attempt to grasp the most accurate measure of the number of registered households demonstrated that the central government weakened the authority of local institution that was previously used for local elites as the means of accumulation of wealth. Enacting these bureaucratic systems, King Sukchong consolidated the responsibilities of local magistrates and sent them to certain counties and districts in order to ensure military conscription and taxation. Then, he also sent secret royal inspectors who had the responsibilities not only of overseeing the local magistrates, but also of helping the king in understanding local situations. Even though this inspection system was firmly settled in the mid-eighteenth century, it was during the reign of King Sukchong that sending secret royal inspectors became more active and direct than before.

He also bolstered the function of Bibyunsa, the core national administration that controlled both internal and external affairs, which could also supervise the local magistrates. Bibyunsa was in charge of human resources for local magistrates. It also controlled local administration and financial management. Moreover, during the 39th year of King Sukchong’s reign, in order to tighten control of the local governance, a new government position called Provincial

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90 Park, *Between Dreams and Reality*, 52.
91 No, “Kihoek nonmun,” 46.
92 Han’guk Yŏksa Yŏng'uhoe Chosŏn Sigi Sahoesa Yŏng'uban, *Chosŏn Un Chibang Ul Ottŏk’e Chibae Haennu’n’ga*, 190-191.
93 Ibid., 189.
Kukwandangsang (八道句管堂) of Bibyunsa was created. This position was first introduced to control provincial military operations, but was expanded to govern local finance and administration.\textsuperscript{94} These multiple levels of supervision by the king and his central government indicate that the autonomy previously enjoyed by the local governors was systematically reduced by the national institutional reforms. Therefore, the financial and bureaucratic reformations, caused by the development of gunpowder, led to the extended and enhanced monitoring of local authorities.

During the reign of King Sukchong, the expansion of armaments and the increase in the number of soldiers ignited financial needs.\textsuperscript{95} This dire need of financial support resulted in several taxation reforms, in which the responsibility of local magistrates was strengthened under the greater supervision of the central government. With the strengthened role of local magistrates, the responsibilities of secret royal inspectors and Bibyunsa were also bolstered in order to further maintain public order. Thus, the power of King Sukchong was reinforced with the Korean military revolution; it allowed the king to monitor the local governance.\textsuperscript{96} That is, his efforts in inspecting local authorities strengthened the relationship between the king, the local governors, and the people; his relationship with his subjects certainly intensified. However, the question as to whether the military revolution also resulted in the other aspect of the power aggrandizement of King Sukchong, the strengthening of the crown-aristocrat relationship, should also be examined.

The Validity Behind the Power Aggrandizement Theory With Regard To King Sukchong

Military historians such as, Parker, McNeill, and Roberts, respond specifically to the aggrandizement of monarchical power in Europe. European

\textsuperscript{94} Yun-hong Pan, \textit{Chosŏn sidae Pibyo'nsa yŏn'gu} (Sŏul T'ukpyo'lsi: Kyŏngin Munhwasa, 2003), 37.
\textsuperscript{95} Han'guk Yŏksa Yŏn'guhoe. 17-segi Ch'ongch'isa Yŏn'guban, \textit{Chosŏn Chunggi Chŏngch'i Wa Chŏngch'aek = Politics and Policy in the Middle Chosun Period}, 171.
\textsuperscript{96} Yi, \textit{Chosŏn Hugi T'angp'yŏng Chŏngch'i U'i Chaejomyŏng}, 28.
monarchs accomplished centralization by weakening the authority of nobles, who enjoyed great autonomy during the age of feudalism, and by strengthening the relationship between himself and his subjects.  

However, as Chosŏn is renowned for maintaining political and social stability for more than five hundred years, King Sukchong experienced a different kind of centralized authority from the European crowns. That is, unlike European rulers, Sukchong could not aggrandize his power by weakening the power of yangban aristocrats. Thus, the relationship between kings of Chosŏn and aristocrats did not undergo any significant change. Similarly to Western Europe, Chosŏn was also pressured to maintain larger armies, creating an increased cost of warfare that triggered state-building and extensive fiscal and institutional reforms, according to Parker and McNeill. King Sukchong centralized his power and controlled Chosŏn's society, but he did not intensify his power through “the death of [nobility].”

One of the reasons for the dissimilarity in the mechanisms of aggrandizement of royal power between Chosŏn and Western Europe is the strong yangban interest. King Sukchong frequently confronted strong yangban aristocrats' opposition, which prevented the reforms from fully taking effect. For example, King Sukchong and the Board of Military Affairs discussed “the household tax (hop'o) ... which would have increased revenues both by broadening the tax base and by sealing obvious tax loopholes.” However, even though he actively pushed for the household tax, the aristocrats won the intense dispute, which lasted about a year. The debate on the issue of tax reform reopened in 1681, but it only produced a tentative negotiation. This dispute reemerged in early 1682 and in 1711. When his final effort to enact the household tax was discouraged, he proposed “a variation of the household tax—

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101 Ibid., 101.
one *p’il* of cloth levied equally on the entire population of taxable age.”¹⁰² This proposal, however, was also rejected. Throughout his reign, whenever a reform that could hurt the interest of *yangban* aristocrats was discussed, this same pattern of repeated rejections was frequently seen.¹⁰³ Thus, judging by their ability to frequently refuse reform measures, it is hard to assert that King Sukchong’s power was further centralized by the fall of nobility. Therefore, during the reign of King Sukchong, the distance between the king and the people grew smaller than it had been before the development of gunpowder, while the nobility remained influential.

**Conclusion**

In response to the Korean military revolution, different reforms in taxation and bureaucratic administrations did not strengthen the royal power of King Sukchong through breaking the authority of *yangban* aristocrats. In Europe, the crowns aggrandized their power through both types of centralization mechanisms: strengthening the relationship between the king and the nobles by weakening the power of the nobles to pose a threat, and between the king and the people mainly by the fall of nobility. On the other hand, Chosŏn, during the reign of King Sukchong, could only strengthen the relationship between the king and his subjects through heightened monitoring of local elites. This monitoring, however, did not help Sukchong overcome opposition from the *yangban* aristocrats in enacting reforms. Since the relationship between the king and the *yangban* bureaucrats is described in terms of “checks and balances,” it was hard for King Sukchong to draw a clearly defined boundary of royal authority.¹⁰⁴ Centralization of his power through strengthening of the relationship between himself and the *yangban* aristocrats was allegedly not achieved by the military revolution, but by his strong charismatic personality up to a certain point.

In the political history of Chosŏn, King Sukchong stands out because his

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¹⁰² Ibid., 102.
¹⁰³ Ibid., 102.
“divide-and-rule tactic” effectively attempted to control the *yangban* aristocrats during one of the worst times of conflict between political factions within the dynasty.\(^{105}\) His strong and charismatic personality greatly impacted his style of governance, as “he played faction against faction, deepening already formidable animosities,” in order to increase royal power.\(^ {106}\) Even though King Sukchong’s financial and institutional reforms were not able to subjugate the *yangban* aristocrats, his specific policy of using multiple *hwanguk* (turn of the state by factional purge) allowed him to restore royal authority. However, his efforts to overcome the factional fights had limitations. In spite of his will, because two dominant factions—*seoin* and *namin*—led violent political strife, King Sukchong’s attempt to push forward national policies based on strong centralized monarchical power ultimately failed in the end. Other than the strong *yangban* interests, I believe there are several factors that affected the difference in centralization of monarchical power between Europe and Chosŏn, one of them being the geographical factor.

I believe that the geography of Korea strongly impacted the difference in bolstering monarchical power between Europe and Chosŏn. As Korea was “confined to a small peninsula with a limited range of geographic and climactic differences,” centralization was relatively easy.\(^ {107}\) That is, the organization of the “centralization system [of Chosŏn]...around the interests of central bureaucratic aristocratic elites” is largely affected by geopolitical conditions.\(^ {108}\) On the other hand, before the development of firearms, European states in general did not have strong central bureaucracies. This “advantage of backwardness” of Europe allowed firearms to initiate massive institutional and bureaucratic revolutions in order to adapt to the


\(^{106}\) Ibid., 31.


\(^{108}\) Ibid., 283.
diverse changes in the scale and nature of war. Chosŏn, which already had a strong centralized bureaucracy, could not experience the growth of effective bureaucracy resulting from the development of firearms. On the contrary, European monarchs could enjoy aggrandizement of royal power by establishing centralized bureaucracies through the military revolution. Therefore, the military revolution theory proposed by Parker, Roberts, and McNeill, who argue that European military revolution ultimately led to the consolidation of European state through institutional and bureaucratic reforms, cannot be applied to the case of Chosŏn. This is not only because of the strong yangban interest but also because of Korea’s small geographic size.

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Wrath of the Khans: Ming Border Policy, 1368-1574

Ben Sinvany

Abstract

This paper addresses the inability of the Ming Dynasty to maintain military dominance on the steppe and the subsequent shift to a defensive policy of wall building. The Hongwu Emperor failure to conquer the steppe and eliminate the descendants of Khubilai Khan, allowed for the survival of the Yuan court and of the legacy of Chinggis Khan challenged the legitimacy of the Ming state and allowed for the consolidation of Mongolian power beyond the border of the Ming Empire. The Hongwu Emperor's appointment of Mongols to control territories and lands along the northern border marked the furthest extent of the Ming Empire. Limited by economic restraints and inadequate infrastructure, the Ming were not able to exert their will upon the steppe. The Yongle Emperor retreated from specific fortified garrisons in the Ordos region because of those infrastructural and economic restraints, providing Mongolian leaders with the necessary bases to raid and invade China. Although the Ming and the Mongols were enemies, trade tied them together. Indeed, many Mongols lived within China serving the Ming government, forcing us to rethink the division between the Mongols and the Chinese and to reevaluate the role of the Great Wall as the marker of that division.

"attempting to stop water from boiling without knowing enough to remove the firewood"

Zeng Xian 1546

Altan Khan led his army from the steppe to the gates of Beijing in 1550 demanding the opening of border markets for the trade and barter of Mongol livestock and Chinese goods. He was rebuffed by the Ming
court and answered by razing the suburbs surrounding the capital and countryside on his way back to the steppe. Again in 1574 Altan Khan returned to Beijing. Altan Khan’s Mongols were able to reach Beijing because they controlled the Ordos region to the northwest. The Mongols on the steppe to the north were the largest threat to the legitimacy of the Ming dynasty. Periodic raiding and invasions challenged the Ming state’s legitimacy from proclamation in 1368 to collapse in 1644.

Ming response to the Mongolian threat to the north was a dynamic process that changed over the course of the dynasty. The process that led to Ming wall building began with Zhu Yuanzhang’s failure to conquer the steppe and destroy the descendants of the house of Kubilai Khan. When he founded the Ming dynasty remnants of the Yuan dynasty fled the Mongol capital to the steppe and re-established the Yuan court at Karakorum in outer Mongolia. The survival of the Yuan court and the legacy of Kubilai Khan, himself a descendant of Chinggis Khan, challenged the legitimacy of the Ming state and allowed for a space, beyond the border of the Ming empire, for a Mongolian power to form. The inability of the Ming to maintain military power on the steppe and the consolidation of Mongolian power around strong leaders set the tone for the relationship between Chinese empire and nomadic confederations, paving the road to the construction of walled fortifications, defining an arbitrary northern border that would later become known as the Great Wall.

Wall building was by no means an inevitable outcome of border tensions, but as the Ming became more inward looking and were unable to project military power onto the steppe, like their Yuan predecessors had, supporters of defensive wall building gained the upper hand in the Ming court. By the 1540s wall building was entrenched as Ming security policy. Why were the Ming unable to maintain military dominance on the steppe and instead resorted to wall building? It was precisely the Hongwu emperor granting Mongolian tribes land and territory along the northern

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border demarcating a northern border along two lines, an outer line for staging offensives and an inner defensive line, that set the stage for what became the Great Wall. While the defining of the northern border wasn’t the direct cause of wall building, granting Mongolian territories along the northern border region and contractions of Ming fortified garrisons in the Ordos region gave Mongolian leaders the bases from which to raid and invade China. The direct threat of the Mongolian raiders and invaders fueled the court debate that ultimately decided upon wall building.

When Zhu Yuanzhang proclaimed the Ming dynasty in 1368 there was no Great Wall, and the Ming’s defense strategy depended on military might. However, by 1550, the Ming had been building walls for almost a century. Arthur Waldron’s comprehensive study of the Great Wall claims that the entrenchment of wall building by the Ming was the product of a series of debates that lasted the length of the dynasty of how to deal with the Mongolian threat to the north. His study divides the process of entrenchment into three phases: 1368-1449, 1449-1540s, 1540s-1644. The first phase was one of Chinese military aggression and numerous campaigns conducted on the steppe. The rise of the Oiryad Mongol leader Essen, his defeat of the Ming at Tu’mu in 1449 and the capture of emperor Wang Zhen marked the end of Ming military dominance on the steppe. For the following century Ming strategy shifted from offensive military campaigns toward wall building campaigns along the northern border. The first fortifications were built in 1474. Wall building became the focus of the Ming after 1540 and the defeat of Zeng Xian’s proposition to the Ming court to recover the Ordos from the Mongols.

Julia Lovell’s book *The Great Wall* takes a much broader perspective of wall building throughout China’s history. Drawing on sources from as early as the Han dynasty (206 BC-220 AD) she challenges the idea that walls were used as purely defensive measures and presents evidence that they were also used as an aggressive
form of Chinese imperialism.\textsuperscript{111} This claim builds on Owen Lattimore’s thesis that China’s walls were as much a product of expansion as they were an attempt to limit that expansion: Chinese statesmen lacked confidence in their ability to maintain a rigid border that they could maintain and continue to expand beyond.\textsuperscript{112} But Lattimore’s thesis is founded on the premise that Chinese states were biased towards a rigid border. Lovell’s argument while presenting ideas of aggressive wall building as a tactic of expansion she, at the same time, is picking apart the misconception that the Great Wall ever meant a rigid northern border.

Her book goes further to show, in agreement with many other scholars, that there was anything but a rigid border in fact China’s frontier regions throughout Chinese history were places of intense commerce. Jagchid and Symons argue that war and peace between the nomadic peoples beyond China’s borders and China was dependant on that commerce. When commerce was interrupted, or viewed as too much or in most cases as too little by either side, conflict broke out along the border. Their model relies heavily on A. M. Khazanov’s work on the lifestyles and nature of nomadic and semi-nomadic peoples. Khazanov points out the dependency of nomadic peoples on a sedentary agricultural economy for many basic necessities. Following this model we begin to see Altan Khan’s invasions in 1550 and 1574, and earlier raids by Mongolian and nomadic tribes, as driven by necessity for trade. When Altan Khan arrived in Beijing and did not seek to conquer, but demanded trading rights the Mongols acknowledged their dependence on the Chinese for trade. His invasion in 1550 yielded limited results, but in 1571 he changed tactics. In a letter presented to the Ming court, Altan Khan requested trading rights in language that stresses the inferiority of the author:

\begin{quote}
We, your vassals, have suffered an increase of population and a
\end{quote}

\textsuperscript{112} Ibid. 44.
shortage of clothing…and none of the borders were markets permitted to open. There was no way to satisfy our needs for clothing. Our furs and felts wear poorly in the summer heat, but it has been impossible to get even a piece of cloth….We petition that the Imperial Decree should be sent to those border officials, ordering them to establish markets, and permit the barbarians [Mongols] and the Chinese to carry out our trade once a year…Thus both Chinese and Barbarians may enjoy a peaceful life. [I, your] vassal, with my brothers, nephews, sons, and grandsons will be grateful from generation to generation, and never rebel again. If there be any transgression, let Heaven punish us.113

Altan Khan’s letter in 1571 is reminiscent of his grandfather’s demands and the earlier Oriyad leader Essen’s demands for trade. But this letter was not a list of demands, rather it was a petition, referring to the Mongolians themselves as barbarians. Recognizing Chinese superiority in an effort to attain trading rights for very basic needs. “The insistence of the southern Mongol princes of the sixteenth century on having tribute and trade relations with China—with a threat of invasion as an alternative—shows how strongly the Mongols needed and wanted Chinese products.”114 In 1550 brute force had not worked, but in 1574 trade relations were normalized and there were peaceful relations between the Mongols and the Ming until the fall of the Ming and the rise of the Qing.

In this light, Lattimore’s argument of delimiting Chinese expansion is interesting because he focuses on the mixed nature of the frontiers, “the true difficulty was the stabilization of a frontier society adequately adapted to the

113 It is speculated that the letter was not written by Altan Khan himself, but rather his message was sent along to the court by way of Chinese middlemen who crafted the language of the letter in a way better suited to convince the Ming court. Jagchid, Sechin, and Van Jay Symons, Peace, War, and Trade Along the Great Wall: Nomadic-Chinese Interaction through Two Millennia, (Bloomington: Indiana University Press, 1989), 50-51.
margin of the steppe and yet auxiliary to Chinese interests.”115 If this were the case then it would seem that the simple answer to Ming border problems would be to grant trading rights. Evidence shows that times when border trade was regulated, instances of Mongolian invasion and hostility diminished sharply.116 Yet after 1500, with only a few exceptions, tribute was not accepted from Mongolians. Just looking at the evidence it would seem that the aim of the Ming was to exclude the Mongolians from Chinese society. And if Lovell’s argument of early Chinese wall building as a way to control more land not traditionally occupied by Chinese is to be believed then the goal was not only to exclude those beyond Chinese control, but to Sinicize, or make Chinese, those within the borders, or confines of Chinese walls. In this way Lattimore’s delimiting argument, which states that the sole purpose of Chinese walls was not for defense, but also as a way for the Chinese state to physically create a division between Chinese and barbarian where there was not one before, becomes more credible.

Waldron likens this idea of China’s northern border, as defined in the Ming, to Augustus choosing the eastern border of Europe to be on the Rhine and the question in modern France, between world wars, over the future of the Rhineland.117 The question of the northern border, like to the French and the Romans, was one of security, and the geographic location in question is the Ordos region in northwestern China.118 Cut off from the steppe by a bend in the Yellow river the Ordos is a semi-arid region with only a few places that could sustain agricultural production through intensive irrigation. The Ordos region was the center of Ming strategic debates and the dynasty repeatedly considered occupying

117 Waldron, The Great Wall of China, 55.
118 Arthur Waldron quotes Ku Tsu-yy (1631-1692) treatise on geography explaining the importance of the Ordos. “The Ordos lies just to the north of the modern province of Shensi, and thus commands the valley of the Wei river to the south, the location of early Chinese capitals such as Ch’ang-an; while the later imperial city of Peking lies not far to the east it is also easily accessible to horsemen dwelling there. Unless the territory is held the capitals become vulnerable.” in Waldron, The Great Wall of China, 56
the region, but ultimately never did.

The Ordos has a long history of Chinese occupation and interaction. Owen Lattimore claims that shortly after the founding of the Qin dynasty, “the entire Ordos plateau steppe was colonized by 30,000 Chinese families and the new frontier sector linked by road with the Ch’in capital, in the Wei Basin.”\textsuperscript{119} Lovell points out its strategic importance because of its frontier position between two types of society, agriculturalist and nomad, and because it contained both pastoral and farming land. “It thus offered an economic base for domination of the steppe by either nomads or Chinese.”\textsuperscript{120} For the Ming, the Ordos was no exception, and the first emperor, Hongwu, knew that the key to border security and further conquest of the steppe was control of the Ordos. Yet military campaigns were only successful in the short term. Wolfgang Franke notes “the successes of the victorious expeditions into Mongolia were not long lasting, at the most for a few decades, so that defensive measures against the Mongols constituted the determining factor for the external politics of the whole Ming period.”\textsuperscript{121} Waldron notes that “this defensive approach crystallized in the policy of the mid-Ming: namely the consolidation of the so-called ‘nine-borders’.”\textsuperscript{122} The ‘nine-borders’ refer to the key defense points—Ming garrisons and fortifications—along the northern border. Unable to occupy and control the Ordos permanently Zhu Yuanzhang maintained fortified garrisons from which Chinese power could be projected. Military reform under Yongle limited the extent of these garrisons and the Ming lost control of the Ordos.

\textsuperscript{119} While this claim to the whole of the Ordos being occupied by Chinese may be an exaggeration, he goes on to say that “the result [of colonization] was a failure. Within a century the barbarians, by then known politically as the Hsiungnu, had retaken the entire Ordos.” In the same article he says there were similar colonization attempts in the Han dynasty “Here 100,000 colonists were settled and border fortifications put in hand”, but to no avail and that attempt too failed. It continued to be a problem in the Ming and is one of the main reasons historians say the Ming abandoned the Ordos region in the first place. Lattimore, “Origins of the Great Wall of China,” 543.

\textsuperscript{120} Lovell, \textit{The Great Wall}, 34.

\textsuperscript{121} Wolfgang Franke, \textit{Yunglo’s Mongolei-Feldzüge} (Peking:Deutschland Institute, 1945), 1-2.

Many scholars point to the Ming’s inability to hold the Ordos as the main cause of wall building in Ming China. Waldron agrees with this view, but argues that it was more than geography that determined defense policy in the Ming, “to a very large degree...the origins of the ‘Great Wall of China’ of the Ming are found...in politics.” Influenced by pressures from the steppe and more directly by control over the Ordos region Ming state strategy shifted back and forth from offensive to defensive, from military campaigns deep into the steppe, led by courageous emperors at the head of large armies; to extensive static fortifications along an arbitrary northern border. The Ming began with an open frontier, but almost three hundred years later at the end of the dynasty, the Ming had the most carefully closed border in pre-modern Chinese history.\textsuperscript{123}

The complex process that led to the entrenchment of wall building in Ming defense strategy began in 1368: the failure of Zhu Yuanzhang to destroy the house of Kubilai Khan and the legacy of the Yuan dynasty. When Zhu Yuanzhang proclaimed the founding of the Ming dynasty in 1368 “both the destruction of the Yuan and the consolidation of the northern frontier were tasks that remained as yet unaccomplished.”\textsuperscript{124} The continued existence of the Yuan dynasty to the north was a challenge to the newly founded Ming dynasty’s legitimacy. Edward Dreyer’s chapter in the Cambridge History of China also points out that “against the Mongols the Ming were forced by defeat to accept a military stalemate and the need for a permanent frontier garrison system.”\textsuperscript{125} This garrison system was modified during the Yongle reign (1402-1424) and later became the rough line of the Great Wall. Dreyer further states that even with large-scale campaigns in 1387, there was no evidence to support the claim of a renewal of Ming desire to gain permanent control

\textsuperscript{123} Waldron, \textit{The Great Wall of China}, 55.
\textsuperscript{124} Waldron, “The Recovery of the Ordos a Ming Strategic Debate,” 89-90.
over Outer Mongolia. While the Ming may have had no plans for the control of Outer Mongolia, Inner Mongolia and lands directly bordering China proper were definitely debated over, even as late as the 1540s.  

Zhu’s military expedition to conquer and destroy the remnants of the Yuan dynasty in 1372 ultimately failed, but his campaigns set a precedent for how his successors would interact with the Mongol threat to the north. Ming military tactics at this time were similar to that of the Yuan dynasty, and the Hongwu Emperor was able to maintain a stable border region by projecting his power onto the steppe from strategically placed garrisons along the border. Arthur Waldron notes that by the end of Zhu’s reign (1368-1399) “an arc of Ming fortresses” stretched across the northern border from the northeast to the northwest. The most important of these was Dongsheng in the Ordos region between Gansu to the west and Liaodong to the east. After Zhu’s death “the northern defense system was neglected and became chaotic.” When the Yongle emperor usurped the throne in 1402 he conducted military campaigns and maintained an aggressive presence on the steppe, but he did not maintain the northern garrisons established by Zhu Yuanzhang. Yongle’s military reform of 1403 contracted the ring of outer fortifications put in place during the Hongwu leading to the loss of the Ordos.

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126 Quoted in Arthur Waldron, *The Great Wall of China* pg. 127 Tseng Hsien’s memorandum to the Ming court suggesting military action be taken to take the Ordos, “Their dens and nests are now firmly established. To drive them out will be difficult. But I fear the consequences [of their presence in the River loop] will daily grow more serious. Therefore, there is no better policy for dealing with them than the recovery of the Ordos area. Not to approve this plan, but rather out of fear choose the inferior policy of taking defensive measures only, may be compared to attempting to stop water from boiling without knowing enough to remove the firewood: it will not stop catastrophes along the border.”


128 Waldron, “The Recovery of the Ordos a Ming Strategic Debate,” 93.

129 Waldron, “The Recovery of the Ordos a Ming Strategic Debate,” 94.

130 For more on Yongle’s campaigns see the Cambridge history of China vol. 7 ch. 4, page 221.
region to the Mongols.\textsuperscript{131}

The legacy of Hongwu could be stated as a balance between alliances with steppe Mongolians that became auxiliary to the Ming state through appointment and tributary relationships and aggressive military campaigning to maintain Ming dominance on the steppe. The Yongle emperor conducted five major military campaigns during his reign maintaining the offensive militaristic stance of the Hongwu, but early in his reign Yongle reduced the guard size drastically at the fort garrison at Dongsheng. Reducing the garrison at Dongsheng, the Ming foothold in the Ordos, Yongle made his military campaigns more costly and less effective, weakening the border to future attacks. Without control over the Ordos questions of defense became the central debate in the Ming court,\textsuperscript{132} and the Ming were unable to maintain an offensive position on the steppe. With a lack of forward positions, defending attacks from the steppe became more important and viable than launching offenses.

Zhu was aware of “the problems that an unchastened Mongol power in the north could pose, and sought a decisive solution.”\textsuperscript{133} Franke Wolfgang stated the goal of Chinese policy during this period as, “the annihilation of Mongol Military power became the principal goal of chinese policy.”\textsuperscript{134} The aggressive military tactics employed by Hongwu in controlling the steppe reflect that attitude, and could have been successfully continued had subsequent emperors maintained an aggressive military position on the borders of the steppe. But due to economic limitations and

\begin{footnotes}
\item[131] In a footnote on page 216 Henry Serruys asks the question, “Were there Mongols in the Ordos in those days [14th century]?” and he answers his question saying there were “small Chinese populations in specific parts of the Ordos, namely the borders around the desert region, near Tung-sheng and along the line of the present day Great Wall from Yü-lin to Hua-ma-ch’ih on to Ning-hsia and along the Yellow river. The rest of the area no doubt had Mongols.” Henry Serruys, \textit{The Mongols in China During the Hung-wu Period, 1368-1398}, (Bruges: Impr. Sainte-Catherine, 1959).
\item[132] See Arthur Waldron’s book \textit{The Great Wall of China} chapters 6-8 for a detailed account of the wall building debate at different periods during the Ming dynasty.
\item[133] Waldron, “The Recovery of the Ordos a Ming Strategic Debate” 97.
\item[134] Ibid; Waldron quotes direct from Wolfgang Franke’s work, “Yunglo’s Mongolei-Feldzuge” pg. 2.
\end{footnotes}
the difficulty of maintaining isolated garrisons far away from Chinese centers of production, military outposts were abandoned.

Yet, even as Hongwu, and later Yongle, were waging war against the Mongols there is documented evidence of Mongols living within China proper, migrating into China, and working in the service of the Ming government. Henry Serruys’ study of Mongols residing in China during the Hongwu period challenges the preconceived notion that, with the fall of the Yuan, all Mongols simply returned to the lands from which they came or were murdered by the Chinese population. “By no means did all Mongols go back to Mongolia, and very few were killed”.

His study goes on to document the locations of Mongolian populations in China proper and he lists, extensively, the commanderies and chiliarchies that the Ming bestowed on the Mongols in the early years of the empire. These regions at the border under Mongol control seemed a logical result of Zhu Yuanzhang’s inability to successfully conquer and control the steppe. It also challenges the ideas that Lattimore put forth about the rigidity of a border region and a distinct separation between Chinese and non-Chinese. In times of peace and prosperity these Mongolian territories were a great resource to the Ming, providing horse flesh and soldiers, but when the Ming were unable to maintain dominance in the region and the tribute system was no longer as lucrative for the Mongols, Mongolian leaders—with promises of plunder and wealth—found support in these areas.

With a loose frontier region, what Waldron terms as the steppe transition zone, the presence of a string of Ming military garrisons created a line between the steppe and Ming China. Serruys says, “The organization of these Mongol

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135 The majority of Mongols in China during this period were in the service of the Ming state, mostly as soldiers. Henry Serruys, *The Mongols in China during the Hung-wu Period*, 20.
137 “The territories here called Mongol Commanderies and Chiliarchies formed a stretch of Mongol areas along the northwestern and northern borders between the Chinese and Mongol populations.” Serruys, *The Mongols in China during the Hung-wu Period*, 216.
commanderies and chiliarchies on the borders...represented a device employed by the Ming government to expand their control over tribes and territories that so far had remained outside control of the Ming empire.” Serruys notes that while these territories were never incorporated into the Ming empire they, nevertheless, were instrumental in the migration of Mongols into China. More than likely, they were also highly instrumental as staging grounds for Mongolian raids and invasions of China and vice versa. The autonomy and trust afforded the Mongols in this steppe transition zone was a fatal error that allowed for the success of Essen’s invasion in 1449 and facilitated the invasions of Dayan Khan and Altan Khan in the fifteenth and sixteenth century. The Ming government evidently figured that the advantage from a great influx of newly surrendered Mongols and Mongol troops would be far larger than the harm done by possible misunderstandings, friction between Mongols and Chinese, or even so-called “rebellions”. Because these territories were given to Mongols the border between China and the steppe was represented by where Ming military control ended and Mongol control began. Until 1449 this was not an issue, the Ming still exerted influence in the region based on the military legacy of the Hongwu and Yongle, but Essen’s invasion severely destabilized that structure.

Even though by the mid and late Ming period mounting an offensive onto the steppe was not a realistic option the debate still raged over the recovery of the Ordos region. Proponents of a Ming offensive argued it as the only way to solve the problem of the Mongolian threat definitively. But the cost of an offensive was prohibitive and supporters for building defensive fortifications more often than not won. In fact according to Arthur Waldron the most important Ordos debate was in

140 “The fact that the Mongols were allowed to settle in the northern provinces, even on the very borders, most clearly implies that the Chinese were not very much afraid of subversive elements among them.” Serruys, The Mongols in China during the Hung-wu Period, 20
141 Ibid., 246
the late 1540s. Zeng Xian, the commander of the Shensi three borders defense, proposed a massive offensive to drive the nomads from the Ordos once and for all. “He suggested two approaches: first, the renewal of fortifications, and second, a series of campaigns to establish a Ming presence in the Yellow river loop. He made these proposals for the first time in two memorials submitted on 8 January 1547.”

Zeng’s plan consisted of 8 points of action: it would be an attack by 300,000 or more men, combining land and water operations—taking advantage of Chinese military strengths including their knowledge of firearms. The campaign would cost more than 2,000,000 tan (133,000 tons) of grain, and about 3,000 liang (3,900 ounces) of silver. When it had been completed, Tseng advocated that an extensive program of fortification should be undertaken. His proposal concluded on a positive note, “If commanders were carefully chosen; if fodder and provisions were sufficient; and if discipline were strictly enforced; then success would be possible.”

The proposal was eventually defeated, like others before it, on the grounds that it was too expensive, Waldron points out a vital flaw in Zeng’s proposal, a gross underestimation of the comprehensive cost of the proposed offensive into the Ordos. Waldron proposes that the cost would be almost 4 times the amount of silver Zeng estimates in his memorial. Criticisms of the proposal extended beyond mere monetary issues however, Weng Wanda, one of the most persuasive advocates for peace with the Mongols through economic means, criticized the feasibility and shortsightedness of Zeng’s proposal. Weng argued that taking the Ordos would not be easy, Ming attack always favored the Mongols, and that Chinese nature was more suited to wall building and defensive measures.

The defeat of Zeng’s proposal marked the end of any realistic consideration of recovering the Ordos by the Ming court. For the rest of the dynasty wall building was the answer to the nomad problem. This defensive approach crystallized in the

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143 Ibid., 127-128.
144 Waldron has a great table on page 133 that details Zeng’s cost estimate, but Waldron’s own estimate is found on the following page: Waldron, *The Great Wall of China*, 134.
policy of the mid-Ming: namely the consolidation of the so-called “nine-borders”. The nine-borders were a series of nine regions that bordered the steppe. They were under the jurisdiction of different magistrates and generals at different times, but often times they were consolidated under a few generals. In this way the borders of the empire were managed and eventually walled off.\textsuperscript{145}

The Great Wall of China is the legacy of the Ming dynasty, but its founding emperors would have been shocked by the changes along the northern frontier. Hongwu and Yongle’s military strategy—offensive military campaigns into the steppe—was similar to the Yuan strategy of controlling the steppes. The Yuan were able to control the steppe by bringing “the wealth of China to bear on the steppe.”\textsuperscript{146} In the last years of Kubilai Khan’s reign he engaged in a war with a confederation of Mongols unhappy with his policies. This war, and the success of the Yuan dynasty in defeating and controlling the Mongols showed that projecting Chinese power onto the steppe was possible, it just took incredible efforts to shift China proper’s resources to the steppe.\textsuperscript{147} Yet Hongwu was unable to establish control over the steppe. At best, his campaigns delayed the rise of a nomadic power to challenge the Ming. From the first chilliarchy founded on August 1, 1370 in the area of the southern Ordos, Hongwu was creating a border to be policed by the Ming and the Mongols through trade agreements. The Ming needed horses and men and those Mongol tribes that surrendered to the Ming enjoyed the goods they received in return for their men and horses. Even without drawing a clear border, establishing tributary territories began the process of demarcating China’s northern border.

The walls the Ming eventually built were only as effective as the men guarding them, and they continued to need the horses from the Mongols to maintain defense. This was one of the main reasons that as Mongol tribes surrendered to the Ming, their forces were incorporated into the Ming military.

\textsuperscript{145} Waldron, “The recovery of the Ordos a Ming strategic debate,” 97.
\textsuperscript{146} Waldron, \textit{The Great Wall of China}, 70.
\textsuperscript{147} Ibid., 70.
Mongol commanderies and chiliarchies were an attempt to incorporate a Mongolian population into the Ming state in order to tap Mongolian cavalry as a resource.\textsuperscript{148} Serruys holds that “the avowed objective of the Ming emperors and government was to make Chinese of these foreigners.”\textsuperscript{149} Even if this were the case and the goal was to Sinicize the Mongols along the border a more immediate concern was maintaining border integrity and continuing to expand China’s borders further onto the steppe. For the Chinese the importance of trade from the steppe into China relied on horses for military purposes, and the Mongols depended on the necessary foodstuffs and other goods they received in exchange for good horses.

Serruys presents this relationship in his extensive study on the presence of Mongols in China during the Hongwu reign, he shows the important and at some times paradoxical nature of this relationship. In 1544 a Ming court official, Yang Zongqi, defended Mongolian troops in court, saying that “Mongol troops of Chen-ting and Pao-ting were China’s staunchest soldiers, who for two hundred years had proved themselves very useful.” This was also occurring at the same time that that the Jinong Gün-biligmergen of the Ordos and his younger brother Altan Khan had just invaded Shansi province.\textsuperscript{150} This defense of Mongolians at a time when the Mongolians were invading China shows the dual role they held in the Chinese empire, simultaneously the enemy and the ally.

When Altan Khan negotiated for trade in the 1570s sacrificing his dignity to the Ming tributary system he was continuing a legacy dating back to the founding of the Ming and Mongolian leaders surrendering to the Zhu Yuanzhang and the

\textsuperscript{148} Kenneth Chase acknowledges the inherent contradiction in Ming China’s reliance on Mongolian horses to defend from Mongolian raids. He addresses the importance of horses to the Ming military structure and outlines the four mechanisms the Ming used to acquire horses: the tea horse trade between the Ming and Tibet, the government breeding program, the private breeding program, and the horse border markets. The private breeding program supplied most of the Ming’s horses, but the most effective and sought after horses came from the Mongols. Kenneth Warren Chase. \textit{Firearms: a Global History to 1700} (Cambridge; New York: Cambridge University Press, 2003), 40.

\textsuperscript{149} Serruys, \textit{The Mongols in China during the Hongwu Reign}, 20.

\textsuperscript{150} Ibid., 246.
Ming. Many Mongols migrated into China proper and assimilated into Chinese society, “disappearing” into China’s large population. While Mongols beyond the borders of China, to the north, still maintained a cultural otherness, as the Ming exercised less and less control on the steppe, and emperors were less and less exposed to the world beyond the imperial palaces, the fear and hatred of the unknown had great influence on court opinion and trade with Mongols was often rejected. This vast misunderstanding of the Mongols of the steppe is at the root of Ming foreign policy and wall building.

From Serruys’ study it can be seen that while Mongols depended on the Ming for goods, the Ming was also dependent on the Mongols for border security. Earlier dynasties had addressed the security issue to the north with largely ineffective wall building, but the Yuan found the solution to controlling the steppe, although it was incredibly expensive, prohibitively so for the Ming. Even as the Ming began building walled fortifications supposedly separating, protecting, themselves from the steppe and the threat of the Mongols, invasions still ravaged the Chinese countryside and affected policy decisions in the Ming court.

In 1644 the Manchus overran the Ming dynasty and over the next 60 years were able to conquer and control the steppe that the Ming failed to. Peter Purdue’s book *China Marches West* shows that Manchu conquest was dependent on the effective infrastructure developed to deliver armies and supplies from one part of the empire to another. This was precisely where the Ming failed, unable to maintain garrisons on the steppe because they were too difficult to supply. Because the Qing embraced their Jurchen roots they also established a multi-ethnic empire that was able to draw effectively across cultures to solve the problems that faced the empire. This in large part was reflected in the famed Qing banner system that incorporated Mongolians, Chinese and Manchu into a cohesive military force.

The Ming also incorporated Mongols into their armies, but the lack of infrastructure needed to maintain a presence in the Ordos and on the steppe kept
many Mongols on the other side of a loose border. As wall building reached a frenzy in the mid-1500s Mongolians on the steppe began to see themselves physically on the outside and further alienated from the Ming state and Chinese culture. They maintained diplomatic relations and Altan Khan begged for the right to give tribute, but the Ming sought to maintain the difference between the Mongol and the Chinese. But this was futile, Serruys’ study sheds light on the relations between the Ming state and the Mongolian presence to the north and within China proper. And in this light arguments that the Great Wall was a “rigid border” that separated the civilized Chinese from the barbarian begin to crack. The frontier region of China was a multi-ethnic and diverse place, and even the interior was representative of China’s absorption and assimilation of other peoples. Serruys goes on to say “In fact all the Mongols, Uighurs, Persians, and others who remained in China at the time of the change of dynasty or entered China in later years, have since disappeared. This means that in the course of time they have become Chinese.”

The Qing succeeded where the Ming failed because of successful infrastructure, but how can one say that the Ming, lasting almost three centuries, truly failed? Frederick Mote says it is ironic that “the greatest failure of Ming statesmanship [the static border defense policy]” resulted in “the Great Wall of China...the very symbol [today] of Chinese historical greatness.” Yet it is still hard to call wall building a failure in statesmanship. The major campaigns of the first two emperors were effective in disrupting nomadic society, but did little more than delay the rise of a Mongolian leader to unite the steppe for a later Ming emperor to contend with. The economic state of the Ming empire, the inability to fund major expeditions into the Ordos, led to Ming wall building, but regardless of the presence of walls the fact remains that the Ming were only able to maintain peace through trade, the military might of the Ming ended with Zhu Yuanzhang’s failed campaigns onto the steppe, and the establishment of Mongolian chilliarchies and commanderies. It was not until the Qing were able to defeat the Zunghars in the far

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151 Serruys, *The Mongols in China during the Hongwu Reign*, 20-21
west, conquering the steppe and bringing it definitively under the control of the Chinese state system that the Mongolian threat to the north ceased to be a threat. In that regard the Ming state knew no such success and was plagued with raids and invasions until a tenuous peace was established through trade in 1574.
Why Mysore? The Idealistic and Materialistic Factors Behind Tipu Sultan’s War Rocket Success

Arish Jamil

Abstract

War rockets trace a long history in South Asia. The Kingdom of Mysore, under the leadership of Tipu Sultan, oversaw a revolution in war rocketry long before they had been popular in ‘the West.’ Mysore’s rockets later influenced the making of the Congreve rockets, which were used in the Napoleonic Wars and American War of 1812. How was it that Mysore was successful in catching the attention of the British instead of the countless other South Asian kingdoms which were also using rockets? Why were the Tipu Sultan’s rockets so unique? This paper seeks to analyze the idealistic and materialistic factors that went into the making and success of these rockets in order to answer these questions.

“And the rockets’ red glare, the bombs bursting in air,

Gave proof thro' the night that our flag was still there”

As American as anyone might claim it to be, the Star Spangled Banner cannot help but recall that terrifying day in Pollilur (in present day India) in September 1781. To say that the rockets had a “red glare (and) bursting in air” is an understatement. A shower of rockets attached to swords came swinging down into cavalry, slicing and blowing up whoever came in their way.

In the late eighteenth century, rockets much more advanced than those known to Europe were being used in South Asia, most notably in the state of Mysore. These rockets influenced the Congreve rockets, which were used in the British attack on Fort McHenry (in the United States) and inspired the writing of
the Star Spangled Banner.\textsuperscript{152}

Much of rocket history begins with a Eurocentric manner and is mostly from European sources. This is primarily because of a general lack of information and sources of South Asian history. Although it is true that a significant amount of modern rocket development took place in the ‘West,’ little credit is given to its ‘Eastern’ counterparts without which the technology would not have been developed in the way we know it, as shown in works by authors Ley and Werner. South Asia is known in the tradition of war rockets, but the Mysore rockets were revolutionary because they were able to extend their influence to the Western world and beyond. Although a decent amount of literature reports the presence of the rockets in South Asia, we still know little about the origin of these rockets in Mysore because of a large scatter of information. Within the historiography that does pertain to rockets in South Asia, most of the information is centered on specific events and European anecdotes of when the Mysoreans used their rockets. These include accounts from authors including Major Dirom, Quintin Crawford and Innes Munro. Some sources by authors such as Jaim, Winter and Naramsimha give a broad summary of rocket use in Mysore by delving into the design and usage. There are few sources that go into detail about the factors that might have led to these rockets. These factors are paid heed to in separate sources by authors Mohibbul Hassan, an author who writes about the French relationship with Tipu Sultan, and Nikhiles Guha, an author who writes about Iron Production in Mysore. The primary goal of this paper will be to delve into how Mysore was able to produce this technology and why Mysore was the only state to have inspired the Congreve missiles, despite the fact that South Asia had had rockets for decades, if not centuries, prior.

The crux of this paper is to highlight the factors that made the Mysore rockets revolutionary and able to influence the Congreve missiles of Britain. In doing so, it seeks to formulate a consensus between the materialistic and the

idealistic factors that might have influenced the revolutionary Mysore rockets. This encompasses subjects ranging from the production of iron in Mysore to Tipu Sultan’s ideology on warfare and science. This being said, rocket revolution in Mysore is not just limited to the factors listed here; rather, this paper seeks to spark discussion and shift the floor of world history towards a fine balance of idealism and materialism. Although this ‘fine balance’ is impossible in reality, the struggle towards it will allow us to understand and recognize that there is no single answer to the events that humans witness in history.

**Rockets in South Asia**

The history of rockets, like most topics in South Asian scientific history, is plagued with a lack of sources. The majority of sources about South Asian rocketry are European. Being accounts from European sources, many fail to examine their actual development and focus on the rockets’ effectiveness by means of first-hand accounts. Regardless of the challenges facing South Asian scientific historians, it is a fact that rocketry was commonplace in South Asia before the Mysoreans ever revolutionized it. Frank Winter is a well renowned author on the history of rocketry. In his book, *The Golden Age of Rocketry*, he mentions that it wasn’t until the start of the Congreve era that England actually started using rockets for war purposes. The use of war rockets in South Asia, however, stretches back further than the Congreve era.\(^{153}\) The concept of weapons of fire is written in *Vedic* hymns. The terms *vana* was mentioned in the text *Ramayana* from 300 BC. *Rama*, however, was a literary character and the earliest meaning of *vana* was probably an arrow. Although these weapons of fire were likely not rockets, it is not surprising that rockets found their place in South Asian history afterwards. The non-Sanskrit word *bana* appears in AD 1400; *bana* was often the term used for rockets by South Asian states.

> Later sources report items/weapons that are closer to actual rockets.

According to Winter, *ra’andazan*, or fire pots, were used by Sultan V against the Mongol Timurlane in 1399 AD. During this age, fireworks of burning pitch tipped with iron, or *atish bazi taksh-andazan*, were also popular. These weapons might have just been grenades or modified fire pots, but there is no evidence to prove this. Before war rockets, festive rockets appeared in the sixteenth century. Confirmed war rockets first appeared during reign of Mughal Emperor Akbar. These rockets appeared in such frequency that it is safe to say that South Asians were rocket warfare experts. These rockets, which were carried by infantrymen, were anti-cavalry. This included setting fire to arsenal and ammunition wagons.\(^{154}\) The eighteenth century was the peak of rocket use in South Asia, and this is when the British began taking note of their existence. Evidence shows that by this time, the Mughals, Adhdanagars, Mysoreans, Marathas, Polygers, Sikhs, Rajputs, Sikhs, Rajputs, Rohillas, Jaipur, Golcondans, Vijaynaranans, Naga Sannyasis and Vairagis all possessed rockets. They were, however, favored by the Mughals, Mysoreans and Marathas.\(^{155}\)

Rockets in Mysore of South Asia

I. The use of rockets

Like other states in South Asia, Mysore was not new to the use of war rockets. It was, however, under Tipu Sultan’s reign that the kingdom saw a dramatic improvement in rocketry, which caught the attention of the British. Tipu’s war rockets came into the British limelight during the Anglo Mysore Wars, which were fought during the period 1767-1799, between the British East India Company and Mysore’s Haider Ali and Tipu Sultan. The first of the Anglo Mysore Wars saw the crushing defeat of an allied army of the Marathas, British and the Nizam of Hyderabad at the hands of Hyder Ali from 1766 to 1769. The second, fought between 1780 and 1784, saw the ascent of Tipu Sultan after Haider Ali’s death in


\(^{155}\) Winter, “The Rocket in India from ‘Ancient Times’ to the 19th Century”, 467-468
1782. In the famous Battle of Pollilur or 1780, the British were defeated at the hands of Tipu’s forces that were armed with rockets. The major defeat in Pollilur was inflicted upon Colonel Bailey when his army’s ammunition was destroyed after being shot at by a barrage of rockets. Innes Munro, Captain in the late 73rd and Lord Macleod’s Regiment of Highlanders, gives an account of Pollilur:

Hyder’s means of intelligence were so multiplied and superior to ours, that nothing went on in either of our camps which he was not immediately informed of; and, finding that both our armies were in this perilous situation, he suddenly decamped about midnight, before it was possible for us to obtain the least knowledge of his intentions, and formed a junction with his son Tippo. The fires of his camp were left blazing; and two or three thousand horse and rocket-men kept hovering round our main army, in order to conceal his enterprise from us; and early that morning he laid his whole force in ambush behind the woods and village of Polliloore, a place that greatly favoured his design, being a commanding spot of ground, intersected by deep ravins and water-courses, and upon the only road for guns leading to Congeveram.156

Another account from the History of Mysoor by Rao narrates:

Colonel Wellesley, advancing at the height of his regiment, the 33rd, into the tope, was instantly attacked, in the darkness of the night, on every side, by a tremendous fire of musketry and rockets. The men gave way, were dispersed, and retreated in disorder. Several were killed, and twelve grenadiers (these men were all murdered a day or

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156 Innes Munro in A narrative of the military operations on the Coromandel Coast against the combined forces of the French, Dutch and Hyder Ally Cawn, From the year 1780 to the Peace 1784: in a series of letters (London: T. Bensley), 151-2.
The Age of Gunpowder

two before the storm) were taken prisoners.¹⁵⁷

The invasion of Travancore by Tipu Sultan initiated the third Anglo Mysore War and resulted in the Treaty of Seringapatam (after the siege of Seringapatam by the English). The fourth and last war saw the loss of the Mysore to the British and the death of Tipu Sultan in 1799. The third and fourth wars also saw the use of rockets but despite the fear and awe caused by them, the weapons were unable to tilt victory to Tipu’s forces.

Evidence suggests from accounts that the Mysore rockets served to instill fear into the hearts and minds of the opposing cavalry. This is further supported by Guedella’s autobiography of Lord Wellesley in which he describes the psychological toll inflicted on Wellesley because of the ‘Sultanpet’ incident that involved rockets, “Many a brave man, and I believe some very great men have been found a little terrified by such a battle as [Waterloo], and have behaved afterwards remarkably well.” However, the rockets were more effective in inciting fear than they were in causing destruction of the opposing army.¹⁵⁸

II. Rocket men

Carrying rocket sticks tied to triangular green, white, and red flags, rocket men of the Mysore kingdom would move in a unit similar to Western military unit pennants. The number of the rocket men increased from two thousand to five thousand between the reigns of Hyder Ali and his son Tipu Sultan. William Kirkpartrick’s translation of Select Letters of Tippoo Sultan, includes a section on the organizational structure of the army. Apart from being well organized, the rocket brigade was a significant portion of the army. Each of the twenty-seven khushoons, or brigades, had a jowk, or company, of rocketmen. Each jowk would further have thirty-nine soldiers, adding up to 1,026 rocketeers. The jowk comprised of the following divisions: one jowkdaar, “captain with horse;” two surkheel, “lieutenant;” four jumaadars, “sergeants;” thirty-two privates; and one ujm waleh, or “tent man who took care of the ammunition storage tent.”

Privates and jumaadaars carried two rockets each, making seventy-two rockets. Thus, Tipu’s army comprised of at least 1,944 rockets according to the source. Another source from Captain Charles Gold adds up to 3,200 rocketeers (sixteen khushoons with two hundred rocketeers each). According to Gold and Winter the confusion exists because of changes in wage distribution within Tipu’s army over the years. The rocketmen were removed from the records because they were counted as irregular infantry. On May 20, 1799, Tipu’s last stand, the British captured nine
thousand filled rockets and seven hundred empty ones. It is not known whether they were paper signal rockets or iron cased war type rockets. In all likelihood, they were war rockets. The extent of rocket usage was much more than anywhere else in South Asia.¹⁵⁹

III. Design

Perhaps the best description of the Mysore war rocket design was given by Alexander Dirom, the Deputy Adjutant General of His Majesty’s Force in India

Rocket: A missile weapon, consisting of an iron tube of about a foot long, and an inch in diameter, fixed to a bamboo rod of ten or twelve feet long. The tube being filled with combustible composition, is set fire to, and, directed by the hand, flies like an arrow, to the distance of upwards of a thousand yards. Some of the rockets have a chamber, and burst like a shell; others, called the ground rockets, have a serpentine motion, and on striking the ground, rise again, and bound along till their force be spent. The rockets make a great noise, and exceedingly annoy the native cavalry in India, who move in great bodies: but are easily avoided, or seldom take effect against our troops, who are formed in lines of great extent, and no great depth.¹⁶⁰

Quintin Crawford in *Sketches Chiefly Relating to History, Religion, Manners of the Hindoos* says:

It is certain, that even in these parts of Hindostan that were never

¹⁵⁹ Winter, *First Golden Age of Rocketry*, 7-9
¹⁶⁰ Alexander Dirom in *A narrative of the campaign in India, which terminated the war with Tippoo Sultan, in 1792. : With maps and plans illustrative of the subject, and a view of Seringapatam. By Major Dirom, deputy adjutant general of His Majesty's forces in India* (London: Bulmer and Co., 1793), 304.
frequented either by Mohammedans or Europeans, we have met with rockets, a weapon which the natives most universally employ in war. The rocket consists of tube of iron, about eight inches (20.3 cm), closed at one end. It is filled in the same manner as an ordinary sky rocket, and fastened towards the end of a piece of bamboo, scarcely as a walking cane, and about four feet (1.3 m) long, which is pointed with iron. At the opposite end of the tube from the iron point, or that towards the head of the shaft that is shod with iron, to the object to which he means to direct it: and, setting fire to the match it goes off with great velocity. By the irregularity of its motion, it is difficult to be avoided, and sometimes acts with considerable effect, especially the cavalry.\footnote{Quintin Crawford in Sketches Chiefly Relating to History, Religion, Manners of the Hindoos with A concise Account of the Present State of Native Powers of Hindostan (London: T. Cadell).}

The rocket included an iron casing that was tied to a long sword blade or a bamboo pole with strips of hide. The metal cylinder allowed the rocket to cover a marvelous range of 2.4 km. The rockets could be shot at either a wide territory (referring to Physics for ‘Projectile Motion’) or in a linear fashion. A wheeled rocket ramp allowed multiple launchings of the rockets and the range of the rocket was controlled by changing the angle of the rocket on the ramp (referring to Physics for ‘Projectile Motion’). The terrifying noise produced by the rockets caused a lot of panic within the British army.\footnote{Jaim and Jaim, “The Decisive Nature of the Indian War Rocket in the Anglo-Mysore Wars of the Eighteenth Century,” 131-137.} According to historian Amitabha Ghosh, the rockets were actually the first missiles because they carried destructive power of a sword with them. A rocket, on the other hand, is just a propellant and a stabilizing stick.\footnote{Amitabha Ghosh, “Rockets of the Tiger: Tipu Sultan” in Aniruddha Roy ed., Tipu Sultan and his Age: A collection of Seminar Papers (Kolkata, The Asiatic Society, 2002), 166-179.}

In addition to the swords in projectile motion, other factors related to the
gunpowder and its components added to the Mysorean rocket’s destructive capabilities. Gunpowder normally contains saltpeter (also known as potassium nitrate), sulphur and charcoal as its primary components, with saltpeter being the most important. Upon combustion, the sulphur within the gunpowder produced poisonous gases such as sulphur oxides and was very harmful to soldiers and cavalry on the battlefield. The gases would also rupture the order of the troops. Furthermore, the combustible charcoal in the rocket would act as an incendiary and would often set fire to the enemy’s camp.\(^{164}\)

**Geography and Climate**

It is certainly true that geography and climate played an immense role in the deployment of rockets by the Mysoreans against the British. The Mysore capital of Seringapatam was surrounded by hilly tracks, steep valleys, stone roads and marshes. These features created numerous problems for the British and allowed successful rocket use by Mysoreans. This geographical advantage is shown in an account by Innes Munro while speaking about Pollilur:

...early that morning he laid his whole force in ambush behind the woods and village of Polliloore, a place that greatly favoured his design, being a commanding spot of ground, intersected by deep ravins and water-courses..."\(^{165}\)

In a description of battle with Tipu, Major Dirom explains how the British were attacked from different heights by the rockets, “The Sultan, secure in the tope under the guns of the fort, continued to cannonade and rocket our line on the heights.”\(^{166}\) The sepoys of Tipu Sultan would attack in heavy masses, while the rocketeers would shower rockets attached to deadly bamboos and swords.


\(^{165}\) Munro in *A narrative of the military operations on the Coromandel Coast against the combined forces of the French, Dutch and Hyder Ally Cawn, From the year 1780 to the Peace 1784: in a series of letters*, 151-2.

\(^{166}\) Dirom, *A narrative of the campaign in India*, 213.
In addition to the geography, the climate was also favorable for the deployment of rockets. In the beginning of his book, Dirom mentions the temperate and healthy climate of Mysore. The monsoons, with a force broken by ‘the mountains,’ continue in the form of short, persistent showers. The British army was often forced to stay outside of their tents because of the scorching heat that was characteristic of the area when the rain wasn’t falling. The intermittent rain would cause the British to strike the Sultan in a series of campaigns as opposed to a single full force attack. Thus, the climatic conditions of Mysore greatly limited the British’s ability to fight the tiger of Mysore to the best of their capabilities. Tipu Sultan, however, was prepared for the changes in weather. The gunpowder that he had developed for the rockets was immune to the effects of moisture, rendering the use of rockets in Mysore virtually unstoppable.\footnote{Jaim and Jaim, “The Decisive Nature of the Indian War Rocket in the Anglo-Mysore Wars of the Eighteenth Century,” 134.} The existence of a bamboo forest in Mysore suggests that the climate was also favorable to growing bamboo, which was essential for the stability of rockets.\footnote{Roy Kaushik, “Rockets under Haider Ali and Tipu Sultan” \textit{Indian Journal of History of Science} 40.4 (2005): 645.} Also, the rockets were well adapted to work in the rain and sun alike. In humid and wet conditions or marshy grounds, the rockets would cover a distance of a mile and a half while being fairly stable. In contrast, under dry conditions, the rocket would move in random directions, which added to the fear and uncertainty of the opposing army as to where the rocket would eventually land.\footnote{Nikhiles Guha, “Iron and Steel Production in the Eighteenth Century Mysore” in Aniruddha Roy ed., \textit{Tipu Sultan and his Age: A collection of Seminar Papers} (Kolkata: The Asiatic Society, 2002), 163.}

\textbf{Iron Production in Mysore}

Iron and steel production was not a new concept in Mysore. The monsoon climate that allowed the current to carry black sand (raw material for iron production) and the presence of iron ore in Mysore created favorable conditions for the development of iron forges. Thus, it must not come as a surprise that an iron
innovation like the rocket was easily produced in Mysore.170

The two defining features of Mysorean rockets were their iron casings and swords. The iron casing gave the rockets their range and allowed the swords to inflict great harm upon the British forces. Therefore, the production of iron in Mysore is an important factor in understanding how Mysore obtained essential raw material for their rockets.

Indian historian Nikhiles Guha gives a good narrative of iron production in Mysore. South Asia has a rich history in the production and usage of iron. The word Ayas in the ancient sacred text *Rig Veda* means iron. Moving on to the medieval period, the Vijaynagar and Bahamani kingdom used iron. Babur of the Mughals used artillery constructed from iron at the Battle of Panipat. So it is no surprise that iron production was common in Mysore during the 18th century.171

The East India Company investigated the climate and natural resources of Mysore. One of these investigators, Francis Buchanan, reported on the iron forges present in Mysore. The iron for these forges was partly made of black sand collected from the channel torrents and an ore deposit at Ghattipura during the four months of the rainy season. The remaining eight months of the year were spent at the factory at Channapatna. The iron was smelted primarily from the black sand in areas including Madhugiri, Chennarayadurg, Hagalavadi, and Devarayadurg.172 From here it is assumed that iron would be taken to the karkhanas, or rocket factories, in Bangalore, Taramandalpet in Chickpet or Turkananhalli near Seringapatam. 173

Steel production was also occurring in Mysore. Guha claims that their production process was superior to the ‘cementation by charcoal’ method in Europe. The magnetic iron used for steel was present all over the beaches near Madras. Dr.

Benjamin Heyne, editor of *Statistical Fragment of Mysore* and a friend of the Governor of Madras (1803-07), published a letter from Mr. Stoddart saying, “The steel of India was decidedly the best I have yet met with.”

**Tipu Sultan’s ideology**

The central question of this paper is to analyze why the Mysore rockets were unique enough to inspire the Congreve missiles of Britain. Many scholars have studied the character of Tipu Sultan and his outlook towards the English. However, this information is given secondary importance or worse, is often ignored, when discussing the actual innovation of the rocket itself. It is important to realize that the idealistic is as important as the materialistic, if not more. Rockets existed in South Asia long before Tipu’s father Haider Ali became the ruler of Mysore. Despite their existence in South Asia, it wasn’t until the devastation caused by the Mysoreans in the Anglo-Mysore Wars that the British finally noticed what true capability of the rockets. This would have been impossible without the leadership of Tipu Sultan. It is, thus, of grave importance that the historians of Mysore rockets give due credit to the man behind the revolution and the beliefs that led him to this accomplishment.

Tipu Sultan acquired his father Haider Ali’s throne on December 29, 1782 at the age of thirty-two, and almost immediately, he was thrown into conflict with the British.\(^{174}\) The British considered Tipu a real threat. This is reflected in one of the first-hand accounts from Dirom’s book. Major Rennell, speaking of Tipu in his memoir, said:

> His general character is that of a man of high ambition, with great abilities for war and finance; cruel to an extreme degree, and

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obstinately attached to his own schemes. He is unquestionably the most powerful of all the native prince of Hindoostan.

Both Haider and Tipu were responsible for transforming Mysore into a unique state. Mysore was the first South Asian state to shift to European methods of warfare of firearms and infantry, and cavalry and militia as supporting arms. This is probably why Mysore was the primary target for the British for about three decades.\footnote{Irfan Habib, “The Eighteenth Century in Indian Economic History” in Seema Alvi, eds., \emph{The Eighteenth Century In India: Debates in Indian History and Society} (New Delhi: Oxford University Press, 2002), 68.} According to historian Irfan Habib, Tipu Sultan and Haider Ali transformed the traditional form of \textit{raj}, or rule. Habib goes on to say that Haider Ali, however, was content to base his title to supreme power off of a ‘mediocre office’ in a dying Mughal empire. His administration was highly influenced by Mughal traditions and institutions. The area in which he modernized the most was the military, which was passed onto his son and successor Tipu Sultan in mint condition The Islamically well versed Tipu Sultan, however, had higher goals in mind and on his accession to the throne of Mysore, separated himself from the Mughal administration’s ‘mediocre office.’ The incorporation of the \textit{Pashah} title for himself in 1786, marked this transition to an independent government.

Habib goes on to state that Tipu introduced his polity in a wave of religious militancy, an element that was lacking in Mughal rule. Rather than using his own name on the coinage, he invoked the religious fervor in his citizens by using names of God, the all-powerful sovereign, Muhammad, the Prophet of Islam, and Haider, who was not his father but of the same name, the cousin of the Prophet Muhammad, also known as Ali. The double rupee was known as the Haideri, after Ali, and the single rupee as \textit{Imami}, commemorating the twelve \textit{imams} of Islam after Ali. Tipu was trying to invoke a \textit{ghazwa}, or holy war, spirit in his followers, a mindset that is seen multiple times in his military manual the \textit{Fatah ul
Mujahiddin. The British were considered *kuffargi*, or infidels, and portrayed as the enemies of Islam. It is important to note the distinction between the non-Muslims and the English here; Tipu Sultan did not call for the destruction of non-Muslims in general but only the English. The Sultan justified his support for the French because of their opposition to the English. Similarly, the Marathas were considered infidels because of their association with the British. Habib points that despite many historians claiming that Tipu was a historical Islamic fundamentalist of sorts, non-Muslims enjoyed favorable conditions in his polity. This is evident in his attitude towards the Hindus of Mysore. Not only were Hindus an active part of the government, they were also respected by Tipu Sultan as shown in his correspondence with a prominent Hindu figure Swami Sringeri, in which he stated, “You are the *Jagadguru*, Preceptor of the World...in whatever country holy personages like you may reside, that country will prosper with good showers and crops.”

Tipu Sultan’s military manual the *Fatah ul Mujahiddin* is a prime example of his forward thinking and innovative character. The manual goes thoroughly over the details of his military organization. Apart from being a great historical achievement, it is a testament to what Tipu’s impression of military advancement and scientific development. The book highlights Tipu Sultan’s military organization clearly. The concept of *Jihad*, being very important in Tipu’s life, is mentioned oftentimes in the manual. His main priority was to free his country from foreign rule and bring glory to Islam. It also highlights the progressive outlook of Tipu concerning reform and experimentation. Tipu realized the impossibility of success unless outdated war methods were replaced by new methods. Additionally, he saw nothing wrong with adopting a foreign army organization. The book was significant for foreigners as well, and was therefore translated into English and printed in England. The importance of surprising the enemy was another element that was

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177 Ibid.,
highlighted in the *Fatah ul mujahideen.*\(^{178}\) In addition to this, the stress on military organization is reflective of how important it was to Tipu Sultan. Thus, minute details of promotions are stressed in the manual: *Dafadarship* to *Jamadarship* to *Sarkheelship* to *Juqdarship* to *Risaldarship* to *Sipahdarship* to *Sipahsalarship*. In an essay by Amitabha Ghosh, the author says how experimentation with technology distinguished Tipu from other rulers in South Asia. Tipu Sultan, indeed, was the pioneer of the revolutionary rockets of Mysore.

**The French-Mysore relationship**

When it comes to the discussion of rockets in Mysore, the question of French involvement is often asked. Although the French did half-heartedly assist Tipu in his quest for victory against the British, there is little doubt that none other than Mysore’s Tipu Sultan was responsible for the revolution. There is no evidence of the French sharing rocket technology with the Mysoreans. It is also important to point out again that rockets were common in South Asia in that day and age. Even if the French had the technology, the Mysoreans would have had it from before. The rocky and inconsistent relationship during the second and third Anglo-Mysore Wars lends credence to the fact that even if the French had rocket technology, it is very unlikely that they would have shared it with Mysore. It is, however, safe to say that their help might have inspired Tipu continue in his pursuit for military technology.

In *Rockets, Missiles and Space Travel*, science historian Willy Leys mentions how a French citizen tried to produce a rocket but had failed in the same time period.\(^{179}\) In *The History of Rocketry and Space Travel*, there is a mention of fireworks in Europe and a tradition of rockets in the fifteenth century, though no further details were given. However, it is also said that there was no monopoly in the rockets and European interest was only rekindled after the British saw the


rocket development in South Asia, especially under Tipu. Some evidence suggests that the French had been experimenting with rockets but this still has no bearing on whether the French provided assistance to the Mysoreans. Rocket technology, as described before, had been present in South Asia for centuries. It wasn’t a surprise that Mysoreans acquired it. However, the extent of rocket use highly increased during Tipu’s reign as Emperor, which rendered them inescapable from the British army’s notice.

Historian Amitabha Ghosh completely dismisses the notion of the Mysoreans receiving rocket technology from the French. He supports this claim by narrating the havoc wreaked by the Congreve missiles in the Napoleonic wars between the French and the British. According to him, if the French had access to the rocket technology, they would not have been surprised by the Congreve rockets and lost as dramatically. However, he still establishes a fine line between assistance and an exchange of military technology. Some form of technical assistance was given to Tipu but it was intended only to improve Mysore’s manufacturing capabilities. This expressed in a letter Tipu sent to Napoleon in 1798 in which the Sultan requests only for four founders of brass, four founders of iron cannons, four paper makes, twelve manufacturers of glass, two naval engineers and two good ship builders. This information, however, still does not suggest or prove any direct exchange of rocket technology since the raw materials of rocket production were already abundant in Mysore.

The argument that supports French involvement in the production of Mysore rockets falls apart when we analyze the turbulent relationship between the French and Mysoreans during the second and third Anglo-Mysore Wars. The tension between Haider Ali and the English escalated again between 1769 and 1776, after the end of the 1st Anglo Mysore War (1767–1769), and led Haider Ali into a position

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to ask for help from the French. Haider Ali communicated with the French at Pondicherry and they agreed to help Haider in his war against the English. This was the beginning of a turbulent alliance, which existed until the fall of Mysore in 1799. Soon enough, cracks began to form in their relationship. Initially, Duchemin, the leader of the French army in India, refused to help Haider against the British, claiming to have limited funds. Soon after, Duchemin decided to accompany Tipu and finally left Cuddalore on May 1, 1782 to besiege the fort of Permukkal. Despite having a combined advantage over the English, Duchemin refused to fight the English because he wasn’t willing to risk France’s prestige if they lost.

After his death, Duchemin was replaced with Court d’Hofflize but the situation still failed to improve. Waiting for French assistance that would lead to the defeat of the English, Haider Ali passed away in December of 1782. Tipu Sultan, now the leader of Mysore, was also not exempt from French inconsistencies. D’Hofflize refused to accompany Tipu to the Malabar Coast in 1783 because he was expecting the arrival of the French General Bussy. However, six hundred French troops still assisted Tipu. The relationship between Bussy and Tipu, however, was heading downhill already. Tipu saw Bussy’s approach as tactless and ‘pursuing a policy of national interest.’ Bussy later went on to stop his army from proceeding to the Malabar Coast to help Tipu. Despite receiving news of Tipu’s success on the Malabar, Bussy stayed in Cuddalore. Soon enough, on June 13, the English arrived to take siege of Cuddalore. The French and Mysoreans were, however, successful in saving the city.

On the June 23, 1783, the news of a peace treaty between the French and English in Versailles reached Tipu and was a blow to the Mysoreans. Bussy sent orders to the French in action to stop fighting, leaving Tipu infuriated at the treachery of the French. After several attempts, Bussy was able to convince Tipu to sign the treaty of Mangalore on August 2nd, 1783, which concluded the Second
Anglo-Mysore War. By the end of the Second Mysore War, it was obvious how trustworthy the French were. Still, this turbulent relationship continued to the next phase of the Anglo Mysore Wars.

French inconsistency is apparent in the accounts from the third Anglo-Mysore War. According to Governor Cossigny’s letters, the governor believed that Tipu had begun war at the wrong moment. In his own words, “The Prince is badly counseled but he will take profit to good advice that we will give him.” Ignoring assistance, Cossigny urged the Mysoreans to seek peace with the Nizam and Marathas. The French were skeptical to assist Tipu because they knew that the British would eventually succeed, an idea that is aptly reflected in Cossigny’s letter:

He is quite intelligent and knows quite a lot of things, but he is ambitious and longs for glory. He is quite gifted for war and takes his position in a country he knows very well. He works hard and detests pleasure. This is quite all right, but Cornwallis also is a big man and he has gathered at this instance the strength of four Presidencies. It is very much against the prince who has recently established his power, who is more feared than loved and who is of a different religion from most of his subjects. I think he must be afraid to commit his fort to the hazard of battle.

Congreve Missiles

Finally, the context to the development of the Congreve rockets might be another reason why Mysore, and not any other state, was able to inspire William


Congreve. The war rockets had left the British in awe and wonder. During the 1799 campaign, a man known as William Congreve was present as a subaltern. After Tipu’s death, Congreve was hired by the British to carry out experiments with these rockets. Congreve’s final rocket was of greater range and heavier than the Mysorean ones. The guide stick was shifted to the middle in order to give the rockets more accuracy (Tipu’s rockets’ guide stick were on the side). Unlike their Mysorean counterparts, the Congreve rockets were used for naval attacks. Later these rockets were used in the Napoleonic Wars and the War of 1812, which inspired the Star Spangled Banner.184

Historian Simon Werrett identifies that there were important ‘local and global contexts’ that led to the making of the Congreve rockets. During the period around 1800, the West was undergoing a great deal of industrialization and orientalism towards non-European cultures. In contrast to this, British imperialism was in fact very dependent on the skills and traditions of the areas ruled. As Werrett puts it, “India played host to British and French enmities, while Indian knowledge underwrote European efforts to map the subcontinent.” Werrett argues that the experimentation involving the Congreve rockets and copying the South Asian rockets were both oriental and disciplinary in nature. In order to prove the value of his rockets, Congreve did not to highlight the advances made by local British and distant kingdoms, like Mysore, which in reality made the Congreve rockets possible. Werrett also goes on to argue that the Congreve rockets emerged at a time when the European attitudes towards eastern pyrotechnics switched to disdain, thus lending justification to imperialism.

The background to the development of the Congreve rockets was a series of reforms led by Congreve’s father that would bring gunpowder and ordnance production under the Royal Artillery and also resulted in a reduction of labor costs. The Congreve rockets claimed to fulfill these projects also. Werret expands on this by saying,

184 Roy, “Rockets under Haider Ali and Tipu Sultan,” 646.
“Examining these reforms shows that artillery officers' attitudes to local artisans closely resembled emerging attitudes to distant eastern pyrotechnists, whose traditions were disdained as unprogressive, and whose practices should be imitated, subjected to rational management and orchestrated into a single system under centralized control. Congreve's rocket programme followed exactly this logic, designed as a 'system' under the inventor's control, which would discipline or remove the need for local trained labour and supposedly owed nothing to Indians' skills.” 185 Thus it comes as no surprise that the moment was ripe for the Mysore rockets to influence Congreve missiles.

Conclusion

The factors that were explored in this essay are by no means the only reasons as to why Mysore developed its own rockets and why it was the only state to have been able to influence the Congreve rockets. In summary, the purpose of this paper is merely to trace geographical factors and iron production in Mysore, working in conjunction to the ideology of Tipu Sultan and his relationship with the French, all of which finally resulted in the development of the Congreve rockets. From the iron factories to the Tipu's Jihadi tendencies, what is clear from all of this is that despite having many materialistic and idealistic factors that come into play while recounting history, there are still many forces that have not been accounted for. The final goal is to achieve a complete balance between the idealistic and materialistic factors that went into the making of Mysore rockets. Although much more work still has to be done, it is safe to say that this paper has moved one step closer to achieving that fine balance.

In order to move further and gain a better understanding of the Mysorean rockets, more research is needed into other South Asian leaders' and Tipu Sultan's ideology and how it affected their approach towards science and more specifically, rockets. More importantly, are there other more effective instances of rocket use

against the British that are lost in the annals of history? Or is Tipu truly the Sultan of rockets?
The Downfall of the Iroquois

Sam Bleiweis

Abstract

This paper will explore the founding of the Iroquois Confederacy before the arrival of the Europeans and the interactions of the Iroquois and the European peoples after their arrival. By focusing on texts by historians who studied the Iroquois during a period of both war and neutrality, the paper will argue that the combination of cultural predispositions that fell apart during the Revolutionary War along with the introduction of guns and the way it changed the Iroquois way of life resulted in their eventual downfall. The strength that the Iroquois held early on and the unity they had within their Confederation would cause one to think that they would carry this sense of unity throughout the Beaver Wars, neutrality, and the Revolutionary War. Unfortunately, this was not the case. This paper aims to take a chronological look at the narrative that unfolded during the period of the 17th and 18th centuries that led to the crumbling of the Confederation during the Revolutionary War, when certain groups allied themselves with the British and others with the American colonists in their fight for independence.

The Iroquois Confederation, starting as Five Nations and becoming Six Nations after 1722, was one of the largest and most powerful groups of combined Native Americans in pre-colonial and colonial North America. Situated in modern-day New York, the Confederacy initially was comprised of five groups: the Seneca, the Onondaga, the Oneida, the Cayuga and the Mohawk nations. The significance of this collaboration was not only to retain power, but also to prevent conflict between their respective groups. Each group had its own area of jurisdiction and its own culture and way of life.

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The phrase “The Longhouse” is most commonly used to describe the Iroquois Confederacy, and is merely a term that describes each group in the Confederacy’s geographical relationship to each other. Initially, the Confederacy spread from across Northern New York beyond Schenectady, which is northwest of modern day Albany, and all the way over to the Genessee River, which is even further west of Schenectady.\footnote{Ibid., 15.}

It is estimated that the Confederacy was founded within the 15th century before the arrival of Europeans, although no record can be found. The belief in “divine origin” of the league is based on the planting of the “Tree of Peace,” a great white pine tree rising upward towards the sun on the edge of the Onondaga Lake. This may simply be a story, but the sense of nationality behind it created a bond that was almost unbreakable: the tale bred patriotism that held all five nations together by means of two common leaders: Deganawidah and Hiawatha.\footnote{Ibid., 17.}

The strength that arose from within the Confederacy in the early years would cause one to believe that the trend would continue throughout the subsequent centuries. What actually transpired was a painful unraveling of the group in a few short, deliberate alliances and battles during the Revolutionary War. What caused this unraveling? Was it a lack of adequate weaponry and artillery? Or was the fact that the Iroquois had weapons adverse to their well-being? Was their downfall something intangible within the relationships that the Iroquois bred?

I will argue that it is true that guns and war were a large factor in the Iroquois involvement with European powers. The combination of guns and the cultural divide that resulted from the split of the Iroquois between the colonists and the British during the Revolutionary War brought down the Iroquois Confederacy. I will argue that the Beaver Wars solidified the Iroquois need for guns and that the resulting neutrality assisted them in the short run, but when it came time to pick sides during the Revolutionary War, it caused their split. This lack of unity was the
reason for their destruction—and it all began because of a need for the guns that the Europeans introduced.

Much attention in modern historical text is placed on the culture of neutrality among the Iroquois, French, and British in the 1700s—after guns were introduced to the Iroquois. Foreign weapons were introduced and became a part of the Iroquois way of war around the 1640s, and unlike many other indigenous populations, they had access to Dutch trading posts along the Hudson River. Keener argues that weapons like the iron axe and the musket were easily accessible to the Iroquois in contrast to other Native Americans, who were more remotely located and this gave them an advantage. Keener also argues for the trial and error system of Iroquois warfare against European settlements and posts in the Northeast, and Crawford also argues that Iroquois warfare is based on a cultural system of “blood revenge.” The assertion that warfare was already an innate part of the Iroquois Confederacy before the advent of guns in their society is well documented by many historians. Although it was part of the culture, Lee argues that although Native Americans were willing to “seek and destroy an enemy, including indiscriminate killing,” they also showed levels of restraint to reduce escalation and violence with European powers. It is incredibly important to analyze the way that the Iroquois approached war to understand their approach to the Revolutionary War, and I will briefly outline the role of warfare in Iroquois society. Lee argues that the Native Americans instigated escalation between 1500 and 1800, and argues that the lack of understanding between the British and the Native Americans during the period of the Revolutionary war about simple systems like prisoner exchange and parole caused serious violence between parties.

Graymont argues that understanding the Iroquois during the American

Revolution means truly examining the cultural foundations that they built. She focuses on the fact that the way of life and basis of government among the Iroquois were as important as their changing economy: primarily their new need to trade for weapons with the Europeans. She claims that the combination of both of these factors resulted in the eventual breakdown of the Confederacy, and I will agree with her throughout much of this paper. Grinde also echoes Graymont’s sentiments, and claims that little research has been done that assess the subtleties of Native American culture when dealing with the white man. He argues that many sources focus on the “white man’s burden” and that it is a misrepresentation of the actual events. He says that more emphasis must be placed on how the Iroquois approached these interactions and what cultural foundations predisposed them for responses to these altercations. He also claims that Native Americans had an incredibly positive influence on American history, whereas, he says, previous sources provide a negative connotation.

The presence of the Beaver Wars in the late 17th century and the reasons behind the conflict and neutrality in the 18th century shows that guns were incredibly important to Iroquois warfare once the Europeans had introduced them. It is also necessary to look at how the Iroquois handled the use of guns and military tactics in this period of neutrality to understand why guns were the catalyst that reacted with predisposed Iroquois culture and resulted in their destruction. The point I will aim to prove is that the pursuit of guns caused neutrality, which eventually resulted in a divide within the Iroquois themselves. Some Iroquois wanted to retain a position of “non-aggression”, while others saw the need to fight at the side of an ally. Guns caused the cultural break that shattered Iroquois unity by the end of the Revolutionary War.

Crawford argues that archaeological evidence supports the story that the Five Nations were in constant conflict with one another before the advent of the

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Confederacy. He goes on to describe that their wars were based primarily on what was known as “blood feuds” or “mourning wars” that were characterized by revenge killings, which left the tribes in a state of constant warfare. Boundary disputes were relatively rare, but the value that the Iroquois placed on taking captives and adopting of their enemies carried over even after the formation of the Confederacy.\textsuperscript{192}

While Crawford argues for the constant state of war in pre-Confederacy Iroquois life, Lee argues that war was not initially a part of the Native American code of ethics. He claims that Native Americans in pre-European North America had not “balanced war into harmony with their other cultural values, and thus scaled down warfare into some kind of ritualized, nonlethal nonentity.”\textsuperscript{193} But he admits that like any other group of humans given the right conditions and motive, eventually they adopted war as well.

Among all Native Americans, there were a few functions of war in society. The first cause was for political war, and the purpose was to enforce certain lessons about how relationships should be structured within groups.\textsuperscript{194} Another cause was for “blood revenge” and personal status gain. Relatives were mandated to take “blood revenge” in the killing of one of their own, and it was one of the biggest statues of Indian war culture.\textsuperscript{195} Indian war prior to European arrival was based upon using their range weapons, the bow and arrow, and then when closing in they took to hand to hand combat—where they used war clubs and knives.\textsuperscript{196}

Although they had access to guns and powder, the Iroquois were unable to trade their plentiful corn for guns and powder, which they had become reliant upon.

\textsuperscript{193} Lee, “Peace Chiefs and Blood Revenge: Patterns of Restraint in Native American Warfare, 1500-1800,” 702.
\textsuperscript{194} Ibid., 713.
\textsuperscript{195} Ibid., 713-714.
\textsuperscript{196} Keener, “An Ethnohistorical Analysis of Iroquois Assault Tactics Used against Fortified Settlements of the Northeast in the Seventeenth Century,” 787.
The Europeans only had one item that the Native Americans could provide them that would satisfy the trade—fur. The Iroquois began to shift more towards hunting to provide hides, forcing them to break into the territories of New France. This was made difficult due to the fact that the government of New France held a monopoly on the northern fur trade. Additionally, competition with other Native American peoples in New France—the Hurons and the Ottawa—made this incredibly difficult. As a result of this conflict, the Iroquois mounted direct assaults on Huron villages and French trading posts.

While some scholars have debated whether the bow and arrow or the musket was more effective, Keener found that muskets actually provided two big advantages over the bow and arrow: shock value and penetrating power. When the Iroquois introduced the musket into their arsenal, the shock value of the noise, smoke, and devastating firepower proved intimidating to their Native American enemies. The penetrating power of muskets was also a huge factor in their success, because although wooden armor could protect someone from an arrow, the lead ball could easily pierce wooden armor, making the target much more vulnerable.

Keener argues that direct attacks were dependent upon the element of surprise as well as the speed of the attacks themselves. The assaults that the Iroquois carried out in the 1640s while they were just learning how to use these weapons involved numerous casualties. But, one of the many reasons that the Iroquois became a dominant power was their resilience and ability to adapt to new conditions. As a result of their high number of casualties, the Iroquois developed new devices for battle, such as movable barriers or walls and protective shields to defend against large numbers of armed men approaching the outer wall of a camp or fort. Though the Iroquois were not the first to use shields, they were the first group of Native Americans to reintroduce hand-held shields made of bigger and thicker pieces of wood, which could withstand musket fire, unlike their older

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counterparts. Keener also argues that indirect assaults were also successful for the Iroquois. Whereas a direct assault may break down walls or penetrate bastions, an indirect assault was more of a “hit and run.” These hit and runs could include sieges, encirclement, raiding of crops and agriculture, settlements, animals and disruption of supply lines to the fort or village they were attacking.

From 1649-1670, the Iroquois attempted to establish themselves as middlemen, but when they were not successful, they turned to piracy of fur fleets coming to Montreal after 1656. The Beaver Wars grew out of this conflict—and out of the conflict the Iroquois became the dominant power. During this time, they ambushed French ships, blockaded rivers and then seized the furs on board. The Huron and Ottawa had successful trading relationships with the French, so they were the primary groups that the Iroquois attacked in their attempt to gain control of the trade. At this point, the English supplied the Iroquois and encouraged their efforts because of their rivalry with the French in colonizing North America. The French, while protecting their Huron-Ottawa trade, attacked the Iroquois.

The French desperately attempted to prevent an Iroquois-Huron-Ottawa alliance, because it would divert most of the fur into the Albany market, which would primarily benefit the English. In 1673, the Iroquois and the Ottawa negotiated a treaty for an exchange of goods between them. However, Frontenac, Governor of New France, undermined the deal. Despite his best efforts the Iroquois and the Huron secretly kept negotiations moving forward, and this put the French into direct confrontation with the Iroquois. A conspiracy formed, led by the newly formed pack of Iroquois, Huron, and Ottawa peoples, meant to annihilate the French from these territories. The French threatened to attack the Huron and Ottawa peoples if they did not fight the Iroquois, and secretly all three groups came

199 Ibid. 791.
200 Ibid., 796.
to the agreement that some raids would inevitably take place, but that both parties would spare the lives of the captives that they took.\textsuperscript{203} This was a shining example of the qualities of patriotism and nationality that the Iroquois held so deeply within their culture that Wallace highlights.

Despite the best efforts by the Native Americans to work in secret concert, by 1698 the Iroquois were struggling to hunt successfully and were suffering a serious number of casualties. They finally decided that it was in their best interest to make peace with the French. \textsuperscript{204} The Montreal settlement of 1701 represented compromises on both the French and the Iroquois side. Not only had the French failed to defeat the Iroquois for over fifty years, but the Iroquois also threatened the welfare and trade relationships of New France. The Iroquois side had suffered so many casualties, and during the negotiations the French relinquished lands west of the Maumee River and Detroit to the Iroquois for hunting grounds. They recognized Iroquois rights to the lands east of this line.\textsuperscript{205}

What would have happened if the Iroquois had never acquired muskets? The traditional bow and arrow technique was well known in the Native American realm, and had guns never come to the forefront of the Native American arsenal, the dominance of the Iroquois may not have been so prevalent. They would never have needed to trade to acquire muskets, and therefore would not have needed to engage with the French in the Beaver Wars. Although the Native Americans attempted to conspire against the French in a small makeshift alliance, they were unsuccessful because of their need for furs to acquire guns and they couldn’t seem to hold the united front long enough to force the French hand. This caused them to settle with the French and enter a period of “neutrality,” foreshadowing the divide of the Iroquois during the Revolutionary War, when they could not seem to stand on united ground. As Graymont argues, this divide led to their defeat.

\textsuperscript{203} Ibid., 227.
\textsuperscript{204} Ibid., 229.
\textsuperscript{205} Ibid., 234.
During the entirety of the Beaver Wars, the British had unanimously supported the Iroquois Five Nations, but with the Treaty of 1701, the Iroquois realized that they could not be completely allied with the British while maintaining peace with the French. Therefore, the Iroquois devised a strategic plan to play off both sides in order to protect themselves from intrusion by both the British and the French. By doing this, they secured their freedom from intrusion by the Europeans, and at times of war, could offer their services to the “highest bidder.”206 In return for neutrality and the openness to ally themselves with either side, the French looked to appease, and gave the Iroquois a large portion of land. “...in regard to beaver country, in 1701, the French agreed to Iroquois possession of it and agreed not to invade Iroquois lands in case of a war with the English, as long as the Iroquois remained neutral; and at the same time the English contracted to protect this country from intrusion by the French.”207

Part of this fear from both the British and French had to do with the evolution and success of Iroquois warfare in the late seventeenth century. Iroquois warfare progressed significantly from 1640 until 1700. Keener reports that out of 237 reported attacks made by the Iroquois during these years, 100 were hit-and-run attacks on enemies along water trade routes or unspecified places. The remaining 137 attacks were made on or in villages. Keener continues to say that out of all of these sieges, 86 percent were indirect assaults on people, buildings and livestock outside of village defenses. The 14 percent remainder quantifies the direct assaults that were with the intention of taking over a fort or village.208 Various indirect assault tactics made the Iroquois incredibly unpredictable and dangerous, and unlike European fortifications, the Iroquois were incredibly mobile. Traditional indigenous village defenses for the Iroquois moved to spread out communities without a single “lodge” or “blockhouse” to attack, allowing the Iroquois to leave

206 Ibid., 235.
207 Ibid., 235.
behind a village at a moment’s notice.  

Neutrality served as a way for the Iroquois to operate towards their own best interests; they were able to divert military activity away from Five Nations territory while they offered intelligence gathering to their allies (whether French or British). By being an insider with valuable information, the Iroquois secured themselves a regular supply of arms, money, ammunition, transportation, food, and other supplies. All of these things circled back to actually enhance the military reputation of the Iroquois, even though they were doing minimal fighting during this period. Another facet of the logic behind neutrality was that the Iroquois recognized that the Europeans were superior. The Montreal Treaty of 1701 was forged not only because they had been battling the Beaver Wars, but also came as a direct result of the Iroquois uneasiness about the colonization and expansion of the English. This was part of the reason that they made peace with the French and agreed to trade with them at Detroit. In return for trading privileges, the Five Nations pledged neutrality in the case of a Franco-British war.

Throughout the next sixty years, the Iroquois were involved in the rivalry between the French and the British during the three inter-colonial wars: Queen Anne’s War (1754-1763), King George’s War (1744-1748), and the French and Indian War (1754-1763). They held their strategic position as middleman to keep the balance of power and to secure their right to their beaver hunting territory. When tensions began to rise between the colonies and England between 1774 and 1775, Superintendent of Indian Affairs Sir William Johnson worked tirelessly to keep the Iroquois loyal to the English. The Iroquois felt conflicted because both the colonists and the English were of the same land and blood. Because the colonists and the Loyalists came from the same point of origin, it was hard for the Iroquois to

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209 Ibid., 801.
210 Parmenter, “After the Mourning Wars: The Iroquois as Allies,” 52.
212 Graymont, The Iroquois in the American Revolution, 29.
213 Ibid., 48.
choose which group to ally themselves with. Johnson’s death coincided with the unfortunate movement of white colonists into Native American territory. Graymont argues that white colonists encroaching into Iroquois territory spurred misunderstanding and eventually broke kinship between Iroquois groups.\textsuperscript{214}

Because of this encroachment, some Iroquois began to “take up the hatchet,” and talk war after a 1774 incident between the Shawnee Indians and a group of Virginians.\textsuperscript{215} After Johnson’s death, Guy Johnson assumed his role as Superintendent during a council meeting with the Iroquois. A loyal people—even while being cheated out of their lands and grieving over the murders of their Shawnee brethren by white settlers—the Iroquois were nonetheless trusting in their “father the king.”\textsuperscript{216} Iroquois diplomacy changed dramatically after Superintendent Guy Johnson and English educated Iroquois leader Joseph Brant joined forces. By 1776, there was undeclared war between the colonies and England. While the Iroquois were content to sit back and stay neutral, Joseph Brant did not share the same attitude. Brant’s highly tenacious and aggressive attachment to the English crown was compounded by his worry about the possibility of American colonists obtaining a victory spurred his next moves.

To most Iroquois, Brant was a hero; he embodied the “revenge killing” attitude of pre-Confederacy and pre-neutrality, and he tried to incite the same fervor in his people. When Brant told his people that they were in danger from the Rebels and that their own liberty was at stake, many of them did not hesitate in raising the hatchet, but some did.

This was where the Iroquois started to split between Joseph Brant’s camp and those who were not so intent upon following his ideals and his mission. This split was the beginning of the end for the Iroquois as a united front, even though it had appeared that Brant could have been a unifying leader. This is where war

\begin{footnotes}
\item \textsuperscript{214} Ibid., viii.
\item \textsuperscript{215} Ibid., 49.
\item \textsuperscript{216} Ibid., 52.
\end{footnotes}
began to cause a divide between the culture of non-aggression and the attitude of “taking up the hatchet” and defending land and sovereignty. This was the beginning of two different camps of Iroquois. The fact that the Iroquois were unable to stick together behind one leader was detrimental, and the system collapsed when they raised guns against one another.

The Oneida and the Tuscarora Indians were particularly opposed to fighting, claiming their simultaneous friendship for the king and the Americans. Eventually, they would take up arms with the Americans against Brant’s camp. Councils were held during 1777 to persuade the now Six Nations of the Iroquois to join forces with the British crown to bring down the rebels, but initially many claimed that they could not break neutrality and their treaty with the Americans for peace.217

But, as the war waged on, the Iroquois split between the Continental Army and the British army. Brant stationed himself at Onoquaga and increased his army and supply arsenal. The entire Mohawk Valley at this point was under Brant’s control. Americans flocked towards Cherry Valley and Schenectady to find safety.218 General George Washington of the Americans decided that it was time to destroy the capabilities, including villages, food sources, and supplies, of the Cayuga and Seneca Indians. And once this occurred, he then resolved that they would take the Indians hostage as a warning to other Indians not to test the power of the Continental Army, and to subdue them for good. I argue with Graymont here, where she claims that this is the point where Deganawida’s and Hiawatha’s work truly became unraveled: “...The League of the Iroquois, founded by the ancients to preserve the Great Peace among the brethren, had at last succumbed to the persuasions of an intrepid warrior at the Eastern Door and to rum and trinkets at the Western Door.”219

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217 Ibid., 123.
218 Grinde, “The Iroquois and the Founding of the American Nation,” 104.
219 Graymont, The Iroquois in the American Revolution, 128.
Pennsylvania’s Wyoming Valley was home to a death-ridden clash of Loyalists and Patriots on July 3rd 1778. After a loss at Niagara for Butler and Johnson, they brought their group of Tories down to Pennsylvania, and picked up a group of Seneca Indians along the way to confront the Americans in Wyoming Valley. Both sides assembled themselves in a “skirmish line,” but the Iroquois warriors outflanked the American troops. As the Americans were forced to backtrack, the retreat quickly became a massacre. 340 of the 400 Rebels were killed, while the Seneca lost about five men. On July 4, 1778, the Fort surrendered to the Iroquois. As promised by the British at the beginning of the alliance, the Senecas received monetary rewards for their services and went home.\textsuperscript{220} This urged Brant forward and he continued to raid the Mohawk Valley, attacking other Indians, specifically the Oneida. The Oneida and Tuscarora knew that they could not persuade the Cayuga and Seneca Indians to remain neutral, so they instead chose to fight Brant’s encroachment.\textsuperscript{221} Graymont argues that this would not have been permissible under the ideals of the founders of the Confederacy—a group of Iroquois attacking another group of Iroquois for the gain of an ally would have been unheard of.

In retaliation, Brant’s men attacked Cherry Valley. Loyalist militiamen, Seneca Indians, and British soldiers, led by Tory Captain Walter Butler and Joseph Brant, surprise ambushed a small fort in Cherry Valley, New York.\textsuperscript{222} As a direct assault, this tactic was dependent upon the surprise element that the Iroquois were accustomed to, and as a result, a multitude of women and children were killed along with approximately sixteen soldiers. This was one of the first times that Brant and Butler were truly unable to restrain their men in their raid, and the atrocities caused an atmosphere of hatred for the Iroquois and the Tories.\textsuperscript{223} Before this raid, noncombatants previously had not been harmed or attacked, but now the infamous

\textsuperscript{220} Grinde, “The Iroquois and the Founding of the American Nation,” 103-106.
\textsuperscript{221} Ibid., 106-108.
\textsuperscript{222} Ron Soodalter, “Massacre and Retribution,” \textit{Military History} (Jul., 2011).
\textsuperscript{223} Grinde, “The Iroquois and the Founding of the American Nation,” 107.
Indian warfare that seemed to be more rumor than fact was becoming a reality. I would argue that Cherry Valley was one of the most significant events, as it signified when Iroquois officially began attacking other Iroquois. This is where the true split became noticeable and the ideals of the Confederation slipped between two very divided camps.

Sullivan’s campaign was a carefully planned raid and organized attack on the Iroquois. During the spring and summer of 1779, several American invasions into Iroquois heartland convinced still neutral Native Americans to side with the British. Sullivan’s campaign was planned for that summer, and following Clinton’s invasion of the then neutral Onondagas, Sullivan and Clinton completely annihilated whole Iroquois villages and took several prisoners.

The battle at Newtown was the major battle of the campaign, and since the Iroquois were not expecting such an enormous campaign by the Americans. After the Iroquois’ past year of success in the Mohawk Valley, Sullivan had the element of surprise. On the Chemung River in Newtown on August 29, 1779, Brant, Butler and the Johnsons fought Americans from “foxholes and hastily constructed breastworks.” Sullivan had superior artillery as well as greater numbers than the Iroquois, the numbers are estimated to have been three to one. In the coming days, Sullivan destroyed all the surviving towns of the Susquehanna River and pillaged Cayuga and Seneca strongholds. Sullivan destroyed entire villages, just as Brant and the Seneca had done to New York and Pennsylvania just that prior year.

Brant answered with the 1780 Schoharie Valley expedition, where Sir John Johnson, Brant, and a group of Senecas raided white settlements up the Mohawk River, and settlements west of Schenectady. Raids along the frontier continued through 1781 and 1782. After a turnover of power in England, new Prime

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224 Graymont, _The Iroquois in the American Revolution_, 201-203.
225 Grinde, “The Iroquois and the Founding of the American Nation,” 111.
226 Ibid., 111.
227 Ibid., 115-117.
Minister Shelburne ordered a halt of the hostilities. In June of 1782, without receiving word of this order, Brant arrived at Oswego for a raid and found no war supplies, and they were incredibly displeased by the lack of war to fight. Towards 1783, westward expansion grew, and the Iroquois found themselves increasingly displaced by their British allies. At the Peace of Paris between the Americans and the British, there was no talk of Iroquois participation.\footnote{Ibid., 117-119.}

The founding of the Confederacy was to promote peace and end the cycle of vengeful killing for vengeful killing, eye for an eye mentality. The split of the Iroquois in the Revolutionary War led back to that mentality, causing them to break from within themselves. I believe that Brant represented the “new Iroquois,” the European man-made, manufactured goods driven type of Iroquois individual that was intent upon serving the European machine. In contrast, the Iroquois who sided with the Americans more closely resembled the “old Iroquois,” who felt that non-aggression was the best way to live, and that co-existing with the Americans in harmony was possible. The ultimate destruction of the Iroquois was not necessarily a matter of American or British superiority, but rather the divide amongst the “old” and “new” Iroquois during the Revolutionary War. Unfortunately for both sides, the British abandoned their Mohawk, Onondaga, Cayuga, and Seneca allies and the Americans did the same when they abandoned of their Tuscarora and Oneida allies.

The major reason that the Iroquois eventually “lost” in the grand scheme was because they broke from their cultural ideals that the Confederacy was founded to take up arms with two separate allies. More research needs to be placed on questions such as: what would have happened had the Iroquois never acquired guns in the first place? Would their economy have changed without the need to acquire furs for the purpose of bartering with Europeans for guns? They may never have needed to put themselves in a neutral position with the British and the French so that they could capitalize on their fur trading opportunities. Much more can be done to link the cultural beginnings of the Iroquois to the “invasion” of European goods.
The Age of Gunpowder

into their very stable culture.

The Iroquois’ biggest downfall was not retaining their pursuit of non-aggression that their Constitution laid out for them. By succumbing to European goods, letting in Brant and the British, and eventually taking up arms against white colonists, they secured their own downfall. The Iroquois attempted to rebuild their Confederacy after this serious split and loss in the Revolutionary War, but they never reaffirmed their once dominant presence.
A Country Dangerous for Discipline: 
The Clash and Combination of Regular and Irregular Warfare during the French and Indian War
Nicole Goetz

Abstract

This article argues that the reason that the British were victorious in the French and Indian War in the North American theatre was not due to their having superior military technology or deeper pockets than the French, but due to their leadership and military tactics on the battlefield. While both the French and British campaigns engaged in irregular, or guerrilla, and regular warfare, the British combined both tactics into a hybrid way of war that proved superior on the battlefield. Meanwhile, the inability of the French to combine these two strategies made them the weaker, despite being more skilled at irregular warfare. The guerrilla warfare tactics developed during this war would prove to be timeless, reappearing later in America’s military history in the Revolutionary War, the Vietnam War, and more recently in the Afghanistan and Iraq wars.

Introduction

Guerrilla warfare became a highly important topic of discussion during the Vietnam War. The United States and South Vietnam without a doubt had more firepower and weapons than North Vietnam, yet the Americans and South Vietnamese struggled to stay afloat against the North Vietnamese. More recently, in the past decade, U.S. troops were again challenged by guerrilla warfare tactics used by the Iraqi insurgency in Iraq and the Taliban in Afghanistan. These conflicts proved that it not only mattered which side possessed better firearms technology, but also which side better executed guerrilla warfare tactics. The impact of guerrilla warfare tactics and the decisive role it
played in war is engraved in American history. Guerrilla warfare, at the time referred to as irregular warfare, was significant in the outcome of the French and Indian War from 1754-1763. While both of the French and British campaigns did incorporate guerrilla tactics into their military operations, it would be the British forces and the American colonists’ hybrid implementation of such irregular tactics combined with the “regular,” traditional European tactics that would result in a decisive victory on the North American front of this war.

What is guerrilla warfare? The etymology of the word originates from the Spanish term “guerrilla” which means little war. Although the term was coined during the Spanish resistance to French occupation in the early 1800’s, the strategy itself is ancient. In today’s United States military, guerrilla warfare is classified as unconventional warfare. This “little war” consists of light infantry that moves swiftly and employs hit-and-run tactics. These same tactics are used by modern-day U.S. Special Forces, specifically the Army Rangers. North American guerilla tactics were first developed during the French and Indian War by a colonial solider, Major Robert Rogers, founder of the Rangers. However, during this time, such military tactics were referred to as ‘uncivilized,’ ‘savage,’ ‘mountain,’ ‘frontier,’ ‘indian,’ and ‘irregular’ warfare. No matter the name, guerrilla warfare was an extremely important tactic to both sides of the war and, arguably, one of the deciding factors of Great Britain’s victory.

**Historiography**

Max Boot, a modern military historian, argues against the preeminent American myth that, “independence from Great Britain was won by plucky Yankees armed with rifles who picked off befuddled redcoats too dense to deviate from the ritualistic parade-ground warfare of Europe.” He calls it an exaggeration because

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229 This paper will refer to guerrilla warfare as irregular warfare and the traditional European tactics as regular warfare for the sake of organization and consistency purposes.

by the time of the American Revolution, Great Britain had several experiences in irregular warfare. Boot mentions Great Britain’s battles with the Scottish Highlanders and Austrian pandours in Europe, with the Jamaican maroons in the Caribbean, and with the Native Americans in North America. It was not that the British forces did not know how to combat irregular warfare, but it was simply not a lasting military strategy. This reveals the British forces’ hesitation to use such tactics in both the Revolutionary War and the French and Indian War. The ambushes and methods were considered uncivilized by Great Britain’s military leadership as such tactics went against conventional warfare and the internationally accepted Laws of War.

‘Laws of War’ was the term used to identify various conventions that placed a restraint on certain types of warfare. It would slowly gain recognition in Europe beginning a century and a half before 1700. Laws of War included the protection of civilians and humane treatment of the wounded and prisoners. These laws also include the conduct of belligerent actors, as those in combat must meet certain requirements, such as wearing a distinctive uniform so one can identify the soldier versus the harmless civilian. These were considered ‘honors of war,’ which the British forces held in the highest regard. However, those who used guerrilla tactics in the war did not abide by these standards. The Native Americans in the French and Indian War would show no mercy towards captured colonists and soldiers. The most horrendous example is the massacre of Fort William Henry in 1757. Here, against French orders, the Native American forces brutally killed and tortured all of hostages in the fort. For this, and many other similar atrocities committed by the Native Americans during this conflict, the American colonists and the British soldiers showed them no mercy during and after the war. Those who used guerrilla tactics, such as the American colonists, did not dress in the conventional uniforms of the British armies, so it was harder for the enemy to identify them before the ambushes. This was also considered dishonorable to the British, but dishonorable or

not, European tactics alone were not enough to win a war in the New World. Elliot A. Cohen asserts, “If the British could win the war by storming the citadel at Quebec with a conventional army and doing nothing else, they could defeat the French without mastering the arts of wilderness warfare. But such a campaign would be hazardous in the extreme.”

By this time, both the Canadian and American colonists were accustomed to irregular warfare. Such tactics had become common practice when fighting the Native Americans. The British had to acknowledge this aspect of New World warfare in order to succeed. The fact that the American colonists adapted guerrilla tactics made them far superior soldiers than the British troops during the French and Indian War. If it were not for the change of leadership, early failures of British failures on the battlefield, and the fact that the colonists were already utilizing guerrilla tactics, Great Britain would have been less likely to adapt the guerrilla tactics as successfully as they did towards the end of the war. In a way, Boot is right in his assertion that Great Britain was not oblivious to guerrilla tactics. Such tactics were not disregarded during the Revolutionary War, but rather the British were hesitant to use them and that hesitation would cost them the war and their North American empire.

Many historians have touched on the adoption of guerrilla warfare by the imperial powers, France and Great Britain, but no one has yet truly analyzed why one side’s adoption of the tactics worked better than the other—specifically Great Britain’s over France’s in their use of a hybrid military system that combined both irregular and regular warfare successfully.

The Beginnings of War

The French and Indian War was a power struggle between two of the world’s largest and most powerful empires, France and Great Britain. The New World was

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full of rich, abundant resources that were invaluable to both empires. Globally, this conflict included many other countries, with Prussia, Hanover, and Portugal on the side of Great Britain and Austria, Russia, Spain, and Sweden on the side of France. These actors were involved in the war’s other fronts in Europe, South America, Africa, India, and the Philippines. During seven years of war, Great Britain and its allies would nearly eliminate the French Navy, making it almost impossible for France to send supplies to its troops and its colonists in New France, or rather, the French holdings in the New World. At this time, France was not experiencing the same financial success as Great Britain and the annihilation of its navy while fighting on multiple fronts would exhaust the French military, giving the British and American troops in the New World an extreme advantage.

Despite mixed loyalties among the Native Americans, each actor in the New World theatre was fighting for a different cause. France wanted control of the Ohio River Valley for its fur trade and so they built forts that extended from the Gulf of St Lawrence to the Mississippi River Delta. The presence of French colonists so close in proximity to the American colonists would naturally cause disputes in between the two. There was another actor present in the Ohio River Valley: the Iroquois Confederation was also well-established in the area. While the Iroquois wanted to remain neutral throughout the early stages of the conflict, they also wanted to protect their land. To this end, they played France and Great Britain off one another in a strategy that historians such as Fred Anderson have referred to as “aggressive neutrality.”233 The American colonists wanted to expand past the Ohio River Valley and the Mississippi Delta, but both the presence of the French and Iroquois hindered them from doing so. Although Great Britain did not find the land past the Appalachian Mountains valuable, Parliament still sent a minimal number of troops and supplies to help aid the American colonists. Essentially this dispute over land would escalate from a regional conflict to a global conflict.

The Native Americans

Native Americans were the masters of wilderness warfare. Irregular tactics were already habitual to them, and they also became more refined as Native Americans learned to defend themselves against the new European settlers. Because native technologies were no match to European gunpowder technology, the Native Americans’ best weapon was the element of surprise. For years, the Native Americans would terrorize the colonists with their surprise ambushes and attacks.

They come like foxes through the woods, which afford them concealment and serve them as an impregnable fortress. They attack like lions, and, as their surprises are made when they are least expected, they meet with not resistance. They take flight like birds, disappearing before they have really appeared.\textsuperscript{234}

By the time of the French and Indian War, both the British and French realized what an invaluable ally the Native Americans would be for their own campaigns. Both sides quickly sought out an alliance with the respected regional tribes. Although the skillset of the Native Americans would be indispensable, they would prove to be the French and British’s best and worst allies. The Native Americans were not loyal to any one campaign instead they made alliances with whoever was convenient for them at the time. Also, the tribes were vastly fragmented amongst themselves. With so many significant divisions between all of the tribes, it would be impossible for them to survive without European allies. At the beginning of the war, the French had many diplomatic victories against the British in terms of gaining Native American allies. But as the French’s military

\textsuperscript{234} Ruben Gold Thwaites, ed., \textit{The Jesuit Relations and Allied Documents: Travels and Explorations of the Jesuit Missionaries in New France, 1610-1791} (Cleveland, Ohio: Burrows Brothers, 1896-1901).
leadership started to flounder, the Native Americans quickly changed alliances and fought for the British campaign. The British, historically known for making promises they did not intend to keep, promised the Native Americans that if they allied themselves with the British, the American colonists would not settle past certain points so the Native Americans could live in peace. New-France Governor Vaudreuil wrote in a letter about the Native Americans, “We shall never be able to make those Indians move according to our desires.” Throughout the seven years of the war, tribes were constantly jumping back and forth between sides. Despite this, “Canadians were certain that their strongest weapon against the encroachments of the far more populous British settlers from the south had always been their Native American Allies.” Perhaps this reliance on the fickle Native Americans was a large part why the French would ultimately fail in the New World theatre against the British. The British knew that while the Native Americans were powerful allies, they could not rely solely on their ally’s skill at wilderness warfare. In order to be successful, the British would need their own wilderness combat force. Despite these obvious hesitations, if the alliance with the Native American tribe was kept, which was seldom, it would normally prove to be fruitful due to Native Americans’ role as masters of irregular warfare.

**The French Campaign**

During the early years of the war, the French displayed superior battle tactics on the frontier of North America. While both the British and the French had Indian allies, the French still had more allies than the British. The Canadian colonists were largely outnumbered by the American colonists so their alliances with the Native American tribes became a key advantage in the early stages of the war. The native raids could push back the American colonists towards the coastal cities in New York, Pennsylvania, and Virginia. Meanwhile, the Canadian colonists

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235 Vaudreuil to Berryer, 30 March 1759, Montreal, in O'Callaghan and Fernow, Documents, X:951.
would supply the Native Americans with muskets, powder, knives, food and paid them in brandy and gold. Many Canadian military officers even learned the native languages and dressed and painted themselves like the Native Americans so that it would be hard to tell the difference between the two. This willingness to adapt the other’s culture instilled a trust between the two sides.

This alliance would prove to be truly threatening to the British colonists because the Canadian colonists had no problems adapting the warfare tactics of the Native Americans: “For generations Canada had defended herself from Native Americans and British settlers alike by adopting the former [savage warfare].” The Canadian colonists also adopted scalping the British enemies as tokens and gifts for their Native American counterparts. The Native Americans accepted the French forts as a necessary evil to ensure, in exchange for fur, the flow of gunpowder, muskets, and metal from the French. However, they did not view the French as a superior power, nor did they view them as long-term neighbors. The Native Americans’ view on the French Canadian colonists was that any rivalry could wait until they defeated their ultimate enemy, the British. Since the French and the British were both against sending massive amounts of regular troops at the beginning of this war, the guerrilla tactics and the alliances between the Canadian colonists and the Native Americans performed together proved to be detrimental for the British campaign.

This way of fighting changed in 1756 when the French sent Louis-Joseph de Montcalm as the new commander of the North American forces. He was shocked at the difference of the country and warfare saying, “everything is so different from European practice.” The practice of guerrilla, or as he describes it, irregular, warfare was not at all glorious or honorable to the French military. Montcalm was unable to escape the European war mindset and adapt to the American one, which

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237 Ibid., 48.
238 Ibid., 47.
239 Ibid., 53.
240 Eccles, Dictionary of Canadian Biography, 459.
he thought was barbaric. He was worried about the effect this type of warfare would have on his regiment. “Soldiers, by the example of the Indians and Canadians breathing an air permeated with independence...this country is dangerous for discipline.”\textsuperscript{241} The raids, ambushes, massacres, and farm burnings were normal practices for the Native Americans the Canadian colonists, but horrified a French military used to fighting in a ‘civilized’ manner and abiding by the Laws of War. Montcalm pushed for a new era of warfare away from these barbaric practices: “The Canadians thought they were making war, and were making, so as to speak, hunting excursions. Indians formed the basis: now the accessory.”\textsuperscript{242} Montcalm had no intention of using guerrilla warfare as he thought it to be worthless and below his dignity.

Montcalm underestimated irregular warfare. He overlooked the utility of irregular warfare tactics, such as raids and surprise attacks, in two ways. Firstly, he believed in the inflated accounts of British strength and did not give irregular warfare enough credit for its attritional effect. Secondly, he ignored the psychological impact of the attacks. The terror instilled in the British soldiers who experienced the French’s surprise attacks. This was perhaps Montcalm’s most potent weapon, but he did little to exploit it. Historian Dan Snow critiqued Montcalm’s leadership, “A more adaptable, free thinking commander would have spent time considering how to use the techniques of ambush and raiding to inflict greater casualties on the British and grind down their morale.”\textsuperscript{243}

His conservatism on the battlefield would clash with Canadian-born Pierre de Rigaud de Vaudreuil de Cavagnal, Marquis de Vaudreuil, Governor and Lieutenant General of New France. Vaudreuil had very positive and strong relations with the local Native tribes and encouraged irregular warfare, much to the dissatisfaction of French officers. For this, many French officers, including

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\item[241] E.P. Hamilton, ed., \textit{Adventure de Bougainville, 1756-1760}, (Norman, OK, 1990), 102.
\item[242] E.B. O’Callaghan and Berthold Fernow, \textit{Documents}, X:959; Montcam to Le Normand, 12 April 1759, ibid., X:966
\item[243] Dan Snow, \textit{Death or Victory}, 160-161.
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Montcalm, wrote him off for being ‘too Canadian’ and did not take his leadership seriously. Vaudreuil’s bold policy of raids and ambushes into British held-territories were remarkably successful in the early stages of the war. He would bribe the Native Americans with gold, goods, and brandy to push back into vulnerable British settlements. These ambushes of the Canadians and Natives would push American colonists hundreds of miles back towards the coast. Due to the hands-off approach of France in the early years of the war, the Canadians’ method of irregular warfare dominated the North American theatre. It would be the influx of more leaders and troops from France that would cause the downfall of the French campaign.

The massacre at Fort William Henry effectively illustrates the difference in thinking between the French colonists and the French army under Montcalm. Fort William Henry was a highly strategic outpost for the British and provincial armies. It was the northernmost outpost and a tremendous threat to the French. “The question was not ‘if the French would attack’, but rather, ‘when.’” In January of 1757, Montcalm ordered Vaudreuil to burn, “at least, the outer parts of the fort,” using 800 troops under a regular officer, Colonel Francois-Charles de Bourlamaque. Vaudreuil, who often clashed with Montcalm’s leadership, decided on a much larger attack that was led by his brother. This included a 1,600 man force consisting of 200-250 French regulars, 300 Troupes de la Marine, 650 Canadian militia, and 400 Indians (The Indians were recruited from various tribes). He would also provide the force with the appropriate equipment and insights of the eighteenth-century wilderness warfare. So although this operation was on a much larger scale than the average lighter infantry missions, the customs were still very similar. The French were successful in seizing Fort William Henry as

the British quickly surrendered to prevent the possibility of high casualties. The French and the British made an agreement that the French would escort the British troops home, but before this was set in stone, Montcalm wanted to be sure that their Native American allies understood. The Native Americans were furious that they were not going to be able to kill and collect the British scalps as they were promised. The Native Americans were hungry for blood so while the French were away, they marched into the fort, killing and injuring about 200 British soldiers who remained. Montcalm quickly responded to prevent more deaths, but by this time, it was too late. This massacre further strained the trust between the French and the Native Americans and the relations were forever poisoned between the French and the British. It would be this massacre and other failures on the British’s side of the fight that would call for a new strategy and leadership in the North American theatre.

**The British Campaign**

In 1756, the Earl of Loundoun was appointed as the commander-in-chief of the British forces. Loundoun was the blame for many of the devastating failures for the British. He refused to cooperate with the American colonists and military and, just like his French counterparts, despised irregular warfare. In December of 1756, Loundoun was called back to England for poor performance and replaced with William Pitt. Pitt would change the strategies of the British navy and the war strategies on the frontier. His goal was to capture Quebec, which would ultimately lead to victory in the war. He was controversial because, unlike the other European military officers, he strongly encouraged the British forces to field as many rangers as possible.\(^{247}\) By 1759, there were more rangers in British pay than ever before.\(^{248}\)

Much like the Canadian colonists, the American colonists had many years of

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\(^{247}\) The Rangers was a light infantry unit that was quickly deployable and tasked mainly with intelligence operations. The rangers were founded under Major Robert Rogers and later adopted as its own unit in the British Army during the French and Indian War.

experience with irregular warfare. The adaption of irregular warfare was the only way they could defend themselves against the Native Americans in the fight over territory. Prior to this war, the American colonists had engaged in and practiced irregular warfare tactics in the three other conflicts: King William’s War from 1688-1697, Queen Anne’s War from 1702-1713, and finally King George’s War from 1744-1748. It is important to note that this seven year conflict was not the only French and Indian war, as it is often referred to, but the fourth and final intercolonial conflict which all together spanned a little over a century. By the time of the fourth French and Indian War, both the Canadian and American colonists had more than enough time and experience to adapt to wilderness fighting, unlike the imperial powers presiding over them.

At the start of the French and Indian War however, the British officers discouraged the American colonists from using the ‘uncivilized’ tactics. By this time, tensions were already high between the British and the American colonists due to political reasons. The American colonists were enraged that they could not control their own armies the way they preferred and by the fact that the British barely paid them.

William Pitt recognized that if the British were going to win the war, their campaign must incorporate both irregular and regular tactics and capture Quebec. There was the possibility of solely using a conventional army and there being no need to master the arts of wilderness/irregular warfare, but it would extremely hazardous. It would depend,

Not merely on the navigation of St. Lawrence, but on the ability to throw a substantial army ashore, sustain it, and complete the siege of a fortified city in the short campaigning window assured by a wintry climate. Instead, British strategy called for concerted, multi-thrust campaign against Canada. And such advances would require
operations in the forests not just dying on campaigning season, but over several. For armies to survive such campaigns the British need woodland warriors of their own.\textsuperscript{249}

Despite major reluctance by the British army and its officers, the development of light infantry in the British army is traced back to the French and Indian War in North America.\textsuperscript{250} In regular European style warfare, the role of the infantry units was to deliver mass fire from close enemy lines. They had to be disciplined in order to work under the extreme stresses of combat. The importance of raids, skirmishers, the ability to seize villages, and anything that would delay the enemy’s advance was valuable to the campaign. The formations and linear warfare that were so popular in European warfare had become less significant in the North American theatre and had given rise to independence for junior officers and the individual soldiers, forcing superiors to rely on them to make sound and successful choices in battle. However, at the height of the French and Indian War, the regular British army had few officers and men that were suitable for light infantry.

Early on, the British army viewed the provincial, or American, troops, as more effective but poorly disciplined, more expensive than regular troops, and sticklers for their contractual rights. Despite this, the British army viewed the American troops as better in the woods than the English regulars. Robert Rogers, who was in charge of ranger units, was not at all like the British officers’ disappointing descriptions of American colonial wilderness fighters. While both the British and the French militaries complained that their irregular warfare soldiers were undisciplined and disorganized, Rogers’ Rangers proved their claims to be innaccurate. Although the French’s wilderness tactics seemed more effective than the British’s, mainly due to the fact that they had more Native Americans on their

\textsuperscript{249} Eliot A. Cohen, \textit{Conquered into Liberty: Two Centuries of Battles Along the Great Warpath That Made the American Way of War}, 86.
\textsuperscript{250} Ibid., 87.
side helping and guiding them, what Rogers instilled in his rangers would be instrumental in the wilderness tactics of the French and Indian War and are still relevant in the training of the United States Army Rangers today.

After the Battle on Snowshoes, which preluded France’s siege on Fort William Henry, Rogers wrote Rogers’ Rules of Ranging, a short manual full of tactical common sense. Unlike the French with the Native Americans, Rogers urged his rangers not to rely on his or his men’s untrained instance or accumulated experience, but on rules and practices that could formally be communicated, standard operation features that could be conveyed and reinforced in training. Rogers’ ranging rules took the focus away from linear, large military operations to smaller, light infantry operations that were able to spy and collect intelligence that would be vital for future counterinsurgency missions. His manual was revolutionary because he attempted to render the art of wilderness warfare as a skill that one could teach and something that was as transmittable as a military doctrine. \(^{251}\) While the rangers were not viewed as the ultimate fighting or counter-insurgency force at the time, the foundation laid by Rogers would prove to be vital in the American Revolution for the Americans and for hundreds of years to come in the United States military and its special operations.

Another outlet for the British in their adaptation of wilderness warfare was the creation of the Royal American Regiment. This was four battalions made up of provincial soldiers led by British and foreign officers. The British recruited Americans and foreign Protestants from Germany and Switzerland who were specialized woodsmen. These soldiers, the Germans from Pennsylvania, the frontiersmen from New York and Albany, and the British command would make up the rank and file. \(^{252}\) The Royal Americans were very large, but they were only one regiment. Individually, neither the Royal Americans nor the rangers and light

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\(^{251}\) Eliot A. Cohen, *Conquered into Liberty: Two Centuries of Battles Along the Great Warpath That Made the American Way of War*, 91.

infantry ever fully managed to match the French and the Native Americans level of irregular warfare. Indeed, alone, the rangers, the Royal Americans, and the light infantry stood absolutely no chance in competing with the French’s guerrilla warfare tactics. Together, although the three forces were not elite, they possessed the capability to survive in woodland warfare. When combined with regular warfare tactics, this irregular form of warfare would prove dominant. That capability would prove influential in the British victory. The French, on the other hand, failed to capitalize on this capability due to the clash of leadership in the French military. Of course, the British did not merely win this war on the frontier, but in its naval battles and other battles abroad as well. The key factor in this is that if the British military had not maintained or defended its ground in the North American theatre, than the results of the war could have been extremely different.

Conclusion

Guerrilla, irregular, wilderness, or savage warfare, however one refers to it, such tactics were essential in the British victory in the French and Indian War. While it is true that this was a global war, and that events abroad affected the British ability to defeat the French in the North American theatre, such events were not enough for the British to capture Quebec and win the war. Such operations involved coordination between irregular and regular soldiers, intelligence, and sound leadership. At the beginning of the war, the French had all the advantages because of their alliances with the Native Americans and the wilderness warfare capabilities of their Canadian colonists. The British did possess some Native American alliances and American colonists capable of wilderness combat, but they were at a clear disadvantage compared to the French. As the war progressed however, changes in leadership and attitudes towards the use of guerrilla tactics changed. The French military was horrified by such tactics and was hesitant in combining regular and irregular warfare. As Montcalm put it, once he held the leadership, it was time for the barbaric ways of fighting to end. His constant power struggle with his counter-part, Vaudreuil, would lead to severe fragmentation in
France’s later military tactics in the war. Meanwhile, after the many failures and upsets under Lord Loundon for the British, William Pitt took over. It is not enough for one side to have better wilderness tactics and skills than the other. Leaders had to be able to use those skills effectively. Pitt’s leadership and decision to combine irregular and regular warfare were monumental for the British. Despite being considered controversial and unconventional by traditionalists, Pitt recognized that the implementation of wilderness warfare was vital to the success of the British campaign in the North American theatre. A New frontier called for new military tactics.

Irregular tactics would serve the American troops better than the British soldiers in the end. As the French and Indian War ended and the tensions between the Americans and the British parliament peaked, conflict broke out about two decades later. The fighting and leadership skills the American colonists learned in this war would be used against the British in the American Revolution. The use of guerrilla tactics and intelligence would also prove to be instrumental in the defeat of the British. Boot argues that the British forgot such tactics when it came time to the American Revolution, but I would argue they, like the French, hesitated to use such warfare because they wanted to be civil. Additionally, they were fighting their country’s colonists, among whom much of Britain’s former guerrilla skill was concentrated. However, this misconception would turn out to be a grave mistake for the empire. Meanwhile, this victory and the use of such tactics was only the beginning for what would become the world’s strongest military.
Surpassing Xerxes: The Advent of Ottoman Gunpowder Technology in the Fifteenth and Sixteenth Centuries

Kyle Johnson

Abstract

The purpose of this paper is to evaluate the advancement of Ottoman Turkish gunpowder technology in comparison to that of the West during the mid to late fifteenth and early sixteenth centuries, the early years and height of the Ottoman Empire. To achieve this, two seminal battles are examined, the Siege of Constantinople in 1453 and the Siege of Rhodes in 1522. By recounting military tactics and arsenals during these two conflicts, this paper shows that Ottoman gunpowder technology developed slowly at first, but was quickly adapted to the techniques they encountered as the empire expanded into Europe, eventually coming to rival European technology.

Introduction

Spring, 1453. Artillery surrounds the city of Constantinople, so precariously perched on the edge of Europe. An engineer surveys his work: a mighty bombard that can scarcely be moved by one hundred and fifty oxen. For the Ottoman besiegers, this is the means to reduce the city walls to rubble and remove the troublesome inhabitants of the city from their side once and for all. For the besieged Byzantines, this gun represents their doom, sapping their resolve before ever it makes a sound. Suddenly, a loud explosion fills the air. The bombard, along with its maker, the great engineer Orban, are no
Many modern historians believe this scenario to be factual, asserting that Orban was killed when his own gun exploded during the siege. The accuracy of this story is unsubstantiated, but the story still sheds light on a central issue in the history of the region. This anecdote serves to illustrate the magnificent inefficiency that characterized gunpowder technology in the early Ottoman Empire. At the Siege of Constantinople in April and May of 1453, the Ottomans presented an impressive spectacle, with their grand bombards and siege machines. But these guns, long since abandoned in Europe in favor of smaller and more efficient designs, only serve to highlight the lack of progress in gunpowder technology that seems to characterize not only the Ottomans, but the whole of the contemporary Islamic World. If it can be established that Ottoman technology lagged behind Europe at this time, then what was the trend going forward? By the sixteenth century, the Ottoman Empire, rising from the ashes of Byzantium, was the specter of Europe, and arguably more than a match for the European powers. How is it then, that the technology of this ‘gunpowder empire’ remained stagnant?

Was Ottoman gunpowder technology during the empire’s early years in the late fifteenth and early sixteenth centuries truly inferior to that of the European West? The Ottoman Turks were able to overcome European armies and holdouts throughout the Balkans and the eastern Mediterranean in the early years of their empire, culminating in iconic successes such as the fall of Constantinople in 1453 and the Siege of Rhodes in 1522. Keeping in mind obvious factors such as religious divides, leadership, and geography, this paper will examine the gunpowder technology of the Ottoman Turks at Constantinople in 1453 and Rhodes in 1522 to determine whether it really lagged behind that of Europe, or for how long, during its early years. In the end, the evidence suggests that while Ottoman gunpowder

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254 Philippides and Hanak, *The Siege and the Fall of Constantinople*, 396.
technology was not initially the equal of that of Europe, it became more than a match over time as the Ottomans pushed farther into Europe, coming into contact with new technology.

**Historiographical Debate**

In truth, this is by no means a new question. In fact, a number of ideas on the subject are already widely disseminated, leaving little doubt as to the general scholarly consensus on the matter. The established, traditional view on Ottoman gunpowder technology is that it was simply imperfect. The underlying idea is that the Ottomans not only adopted gunpowder weapons comparatively late with regard to Europe, but also failed to set aside older and larger guns, such as those used at Constantinople, in favor of the smaller, more maneuverable European counterparts being developed.\(^{255}\) Those who argue for an Ottoman failure to reach Europe’s level of technological superiority in gunpowder technology explain it largely by logistics. Some, such as Geoffrey Parker, suggest that the Ottoman Empire failed to maintain the capacity for creating a surplus of artillery units, thus relying more on a smaller amount of large heavy artillery than a larger amount of smaller artillery, which would have been harder to maintain.\(^{256}\) This quality over quantity mindset would explain the tendency toward larger weapons. Many argue that this damaging tendency continued through to the seventeenth and eighteenth centuries.\(^{257}\)

There are many explanations for gunpowder’s failure to secure an early foothold. The initial reluctance of the Ottomans to embrace or advance gunpowder technology is often attributed to the fact that theirs was an Islamic empire. Some historians extend to the Ottomans an assumption of religious conservatism within Islamic empires that was hostile to new military innovations. Many Muslims felt that innovative European military technology existed in tension with Islam because

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\(^{256}\) Ibid., 126.

\(^{257}\) Ibid., 126-8.
it did not exist at the time of Prophet Muhammad.\textsuperscript{258} Alternatively, the failure of very early firearms to compete with the archaic efficiency of bows and crossbows has been put forth as a factor in the late introduction of gunpowder.\textsuperscript{259} An analysis of military tactics common throughout the Islamic World reveals that in many cases, warfare was unsuited for the introduction and adoption of early firearms. Swift-moving, mobile cavalry strategies were generally held aloft as the standard for Muslim militaries.\textsuperscript{260} European armies were shifting away from feudal cavalry styles to Early Modern infantry tactics. Most interestingly, the lack of early development in gunpowder technology is also traced to insufficiently prescient leadership so common in Europe, characterized by men such as Henry V of England, Ferdinand of Aragon, Philip the Bold, and Louis XI of France, all of whom recognized the early potential of gunpowder technology and did much to further develop it.\textsuperscript{261}

Where Parker and many of those who argue against Ottoman gunpowder prowess emphasize the delayed advent of the technology and the failure to adapt to European technological norms, others insist that the traditionalists are wrong and that the Ottomans did, in fact, come to match the Europeans in gunpowder technology, at least for a time during the height of the Ottoman Empire. Gábor Ágoston champions this argument, rejecting assertions of Ottoman technological inferiority where artillery is concerned and combatting the assertion that the


\textsuperscript{260} Stephen Christensen, "European-Ottoman Military Acculturation in the Late Middle Ages," in \textit{War and Peace in the Middle Ages}, ed. B.P. McGuire (Copenhagen, Denmark: C. A. Reitzels Forlag, 1987), 234.

Ottomans tended toward large artillery pieces. In fact, he attributes the apparent inaccuracies of opposing arguments to three central problems: one, a failure to comprehend the complex terminology of Ottoman artillery, two, a failure to directly compare European and Ottoman guns, and three, the failure to take advantage of the Ottoman archives, which contain technical descriptions of individual pieces of artillery. The implications of Ágoston’s work suggest that the Ottomans did not, after all, merely favor large artillery such as bombards, but that they also incorporated numerous smaller guns in their arsenals. In fact, he argues that such large artillery comprised no more than ten percent of the Ottoman artillery train at any given siege, a figure applying even to early sieges in the fifteenth century.

The two points of view are not, in the end, mutually exclusive. Is it possible that while traditional scholars are partially right, that in the mid-fifteenth century Ottoman guns were no match for those of Europe, but that as time progressed, so too did Ottoman technology, thus shifting the argument toward the other side? The purpose of this paper is to document the trends in Ottoman gunpowder during the early years of the empire, utilizing the empire’s bookends of the Sieges of Constantinople and Rhodes to arrive at a conclusion. In truth, the evidence marshaled suggests that, with relevance only to this period of Ottoman history, Ágoston’s argument is substantiated. Specifically, it seems that while the Ottomans continued to utilize the outmoded bombard to great effect at Constantinople, by 1522 the power of the Ottoman arsenal had expanded dramatically, presenting more than a match for the European artillery wielded by the Knights Hospitaller. While many scholars who align themselves with the conservative narrative point to Ottoman failures later in the sixteenth and seventeenth centuries for support, it seems that during the golden age of the empire, the level of Ottoman gunpowder technology had risen to European standards.

263 Ágoston, Guns for the Sultan, 62.
264 Ibid., 93.
The West and its Standards

Recognizable gunpowder weapons are believed to have become common in Europe in the 1320s and 30s. Western European entities such as France and Burgundy, long embroiled in conflicts on all sides, began to develop the most advanced military technology which was swiftly revolutionizing siege warfare. DeVries argues that the main distinction between European and Turkish guns was the new tendency in Europe toward smaller guns by the mid fifteenth century. Bombards were almost completely obsolete in Europe, with many being set aside or given as diplomatic gifts to less advanced kingdoms. While the Ottomans also developed smaller guns, the European versions facilitated more efficient reloading and aiming, rivaling the great bombards despite the difference in size. This capability might be traced to the introduction of corned powder around 1410, which could not be used by larger weapons. While the high standards in the development of European gunpowder are clear, the inability of the Turks to adapt to these standards remains in doubt.

The Turks and the Initial Adoption of Gunpowder Technology

The Ottomans were but a single entity within a wider group of peoples: the Turks. These peoples may have appeared on the borders of the Abbasid Caliphate in the ninth century, and Islam soon became the predominant religion held by these newcomers. The weakened state of the Caliphate, along with threats to orthodox Sunni Islam from the Shia Fatimid leaders of Egypt, allowed one group of Turks, the Seljuks, to rise to prominence in Iran and serve the Caliph in Baghdad as a new fighting force. In this capacity, the Turks first reached Anatolia and the

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265 Ágoston, Guns for the Sultan, 15-16.
269 Ibid., 9-10.
Byzantine Empire, raiding in the name of Islam. In 1071, the Byzantine Empire suffered one of the worst defeats in its history at the hands of the Seljuks at Manzikert, an event which subsequently allowed for Turkish incursion into former Byzantine lands.\textsuperscript{270} Settling on former Byzantine lands, the Seljuks in Anatolia called their empire \textit{Rum}, the Turkish variation of ‘Rome,’ a legacy that would be carried on by the Ottomans.\textsuperscript{271} With the coming of the Mongols in the thirteenth century, the Seljuks ceased to exist as a viable political force and, by the mid fourteenth century, were replaced by various smaller Turkish states in Anatolia, one of which would go on to form the Ottoman Empire.\textsuperscript{272} In a few short decades, the small principality founded by Osman expanded at the expense of both Byzantines and fellow Turks, eventually encompassing much of western Anatolia and former Byzantine lands in the Balkans. As they swiftly fought their way into Christian lands, the Ottomans were seen by the Europeans as the successors of older enemies from the East, succeeding where kings like Xerxes of Persia had failed in subjugating Europe.\textsuperscript{273}

The Ottomans were establishing their empire around the time that gunpowder was becoming a recognized and effective force in warfare. The Mongols are recognized as having contributed to the spread of extremely primitive gunpowder weapons throughout the Islamic world, but the use of such technology in a way reminiscent of later trends, such as recognizable cannons and firearms, would not become common in the Middle East and the Islamic world until the late fourteenth century, while in Europe they are believed to have become common in the 1320s and 30s.\textsuperscript{274} Early examples of the utilization of gunpowder weapons by the Ottomans in the 1380s roughly coincide with the rest of the Islamic world, but

\textsuperscript{271} McCarthy, \textit{The Ottoman Turks}, 21.
\textsuperscript{272} Ibid., 30-32.
\textsuperscript{273} Michael Ducas, \textit{The Siege of Constantinople 1453: Seven Contemporary Accounts} (Amsterdam: A. M. Hakkert, 1972), 86.
\textsuperscript{274} Ágoston, \textit{Guns for the Sultan}, 15-16.
the Ottomans adapted quickly.Ágoston suggests that the possibility exists that gunpowder technology spread to the Ottomans from the east, but states that it is more likely that it was acquired through warfare in the Balkans, which allowed the Ottomans to integrate European warfare techniques for the first time. This solidifies the assertion that the Ottomans were slow to adopt gunpowder initially but readily adapted to European trends, perhaps for reasons similar to those supplied by Cook and Christensen, namely that Middle Eastern military tactics were not easily adapted to gunpowder weapons. Taken together, these ideas suggest that the Ottomans only adopted gunpowder weapons and artillery as a significant military technology when they were confronted with the strategic need to do so. From this point, the Ottomans display an impressive ability not only to adapt their tactics to artillery style warfare, but also to adapt artillery style warfare to their tactics. One such instance is the adoption of the wagon fortress technique from the Hungarians in the early fifteenth century. This involved chaining the wheels of war wagons together to form a defensive wooden barrier and defending it with ranged weaponry that included handguns. This tactic was not entirely dissimilar from Central Asian traditions from which Ottoman warfare evolved. This tactic later spread to the Mughals and the Safavids, Islam’s other ‘gunpowder empires,’ providing insight into the ability of these empires to adapt to gunpowder technology while modifying it in turn.

The Ottomans failed to develop gunpowder technology independently of Europe and thus experienced a delay in the rise of gunpowder technology. It has been established that once this technology was forced upon the Ottomans out of the necessity of conflict, which forced them to adapt in order to combat the Europeans effectively in the Balkans, they were able to utilize it ingeniously and even apply it to their traditional tactics. The extent to which this ability applied is in question,

275 ibid., 17.
276 ibid., 17.
277 Cook, The Hundred Years War, 66; Christensen, “European-Ottoman Military Acculturation in the Late Middle Ages,” 234.
278 Ágoston, Guns for the Sultan, 18-19.
however, as is whether or not the Ottomans were capable of catching up to European standards of gunpowder technology.

**Constantinople: Gunpowder at the Rise and Fall of Empires**

To explore the extent of Ottoman military technology around the middle of the fifteenth century, this paper applies the lens of the siege and fall of Constantinople. This was a seminal point not only in the history of two empires, but also in that of Europe and the Middle East generally. It has also come to be known as one of the best examples of early artillery power.

One cannot truly understand the story of the Ottomans without first understanding the history of the Byzantines. Although the terms are used in this paper, the words ‘Byzantium’ and ‘Byzantine’ are in many ways anachronisms, because the entity they represent, in its own view, were not Byzantine, but Roman. Byzantium was the Eastern Roman Empire, and after the fall of the Western Roman Empire, traditionally dated to 476 CE, the Greek-speaking lands to the east remained in Roman hands. The empire’s lands radiated outward from the resplendent capital of Constantinople. Founded by Constantine I ‘the Great’ in 324 CE as a new Christian capital for the ever-changing Roman Empire, Constantinople’s position was one of the most advantageous of any city. It lay at a crossroads of world trade, an intersection between East and West, and its strategic location on the easternmost flank of Europe made the city both economically and militarily significant.\(^{279}\) The magnificence of the city dwindled after events in the thirteenth and fourteenth centuries, such as the Fourth Crusade’s infamous sacking of the city in 1204, but even in 1453 the city, a shadow of its former self more than one thousand years after its founding, was still looked to as the eastern bulwark of Christianity against Islam.\(^{280}\) By 1453, Constantinople had been surrounded by the Ottoman-held land for decades. The city was one of only a few remaining bastions of the ailing empire.

\(^{279}\) Crowley, *Constantinople*, 16.

\(^{280}\) Ibid., 27-28, 15-16.
Geography and Fortifications of the Queen of Cities

In the Spring of 1453, Sultan Mehmet II resolved to attempt the impossible: the capture of the city that had defied Islam for eight hundred years. Constantinople was thought to be impregnable. Positioned on a large promontory in Thrace, the city was surrounded on three sides by the sea. To the north, the Golden Horn separated the Latin city of Galata, or Pera, from the city proper. According to Leonard of Chios, a Greek Catholic bishop who served the Papacy in Byzantium and was an eyewitness to the siege, a great chain was used to block off the Golden Horn and its harbors from the Bosporus Strait, across which lay the vast expanse of Asia.\(^{281}\) To the south lay the Sea of Marmara. Sea walls surrounded the northern, southern, and eastern flanks of the city, but it was against the land walls that the Sultan would direct the power of his artillery. Throughout its history, only from the west did Constantinople face land-based sieges. Fortunately, this fact was compensated for by one of the greatest fortifications in the West, the Theodosian Walls. Originally constructed under Emperor Theodosius II (r. 408-450) around 413 CE, the walls complemented the pre-existing Constantinian Wall.\(^{282}\) An earthquake in 447 CE necessitated the renovation and improvement of the fortifications, and the finished product was legendary.\(^{283}\) Philippides describes the walls as being between five and seven kilometers in length, although estimates vary. Ninety-six towers lined the length of the inner walls.\(^{284}\) The fortifications consisted of three defensive layers. The outermost layer was the fosse, a brick-lined moat twenty meters wide and seven meters deep, which had to be overcome in order for attackers to assail the walls behind it. Behind that lay the walls themselves: a smaller outer wall, nine meters high and one to two meters thick, and behind it, the last defense of the ‘City of the World’s Desire,’ stood the inner wall of Theodosius’s


\(^{282}\) Philippides, The Siege and the Fall of Constantinople in 1453, 297.

\(^{283}\) Ibid., 302.

\(^{284}\) Ibid., 306-307.
fortifications.\textsuperscript{285} The inner wall averaged between fifteen and twenty meters tall and 4.5 to six meters wide.\textsuperscript{286} Together these two walls were lined with 192 towers and comprised part of a defense system consisting of five zones.\textsuperscript{287} These impressive fortifications, however, were designed for and suited to an age before the advent of gunpowder.

\textbf{The Leaders and Logistics of Conquest}

Leadership on both sides of the struggle surrounding the fall of Byzantium can be characterized as effective. The Ottomans were led by their Sultan, Mehmet II, a young man of insurmountable vigor with a cruel streak that made him an inexorable conqueror. Mehmet’s skilled leadership and military insight led him to recognize the value of gunpowder weapons and to learn how to apply them effectively in battle. The Byzantine Emperor, Constantine XI, was an older man, but one of fortitude and wisdom who recognized the precarious placement of his city. Neither man would back down from what they considered to be their destinies. To help to lead his forces, Constantine secured the aid of a Genoese soldier, Giovanni Giustiniani Longo, who would lead the Byzantine and Latin defenders and do his utmost to protect the Emperor’s city and render the Ottoman siege machines useless. The numbers present during the Siege of Constantinople are difficult to determine due to conflicting accounts. Giacomo Tedaldi, an Italian soldier and eyewitness, suggests a total number of about 200,000 combatants altogether at the siege.\textsuperscript{288} His estimate of more than forty thousand for the number of defenders, however, seems inflated. The Emperor’s friend and ally, George Sphrantzes, estimates that there were about eight thousand defenders, composed of Greeks and Latins both, which would place the Turkish numbers around 190,000. The ability of the defenses to withstand traditional medieval tactics would theoretically counteract any numerical advantage the Ottomans had if not for the

\textsuperscript{285} Ibid., 308-309; Crowley, \textit{Constantinople}, 17.
\textsuperscript{286} Philippides and Hanak, \textit{The Siege and the Fall of Constantinople in 1453}, 308.
\textsuperscript{287} Crowley, \textit{Constantinople}, 82.
\textsuperscript{288} Crowley, \textit{Constantinople}, 102.
intervention of gunpowder. As for the number of artillery weapons present at the siege, estimates vary. The Byzantines certainly possessed some strength in firepower, consisting mostly of medium-sized guns with a smaller number of large bombards. It is believed that economic and fiscal difficulties impeded Byzantine advancement and investment within the sphere of gunpowder technology. Eyewitness Leonard of Chios describes extensive utilization of guns among the defenders, but cites a shortage of powder and shot as crippling such efforts. Tedaldi describes several large cannons and a large number of smaller guns such as culverins. Leonard of Chios emphasizes the presence of two massive bombards, one of which burst early in the siege. The other, he describes as being used to lethal effect against the city. Modern scholarly assertions seem to support these claims. Saul S. Friedman places the number of large cannons, such as bombards at fourteen and the number of smaller weapons at about forty. The larger guns were truly gargantuan in size: Philippides estimates a length between twenty and 26.6 feet for the largest bombard, and a circumference of six to eight feet. The presence of so many smaller pieces of weaponry presents a challenge to the idea that European gunpowder had surpassed Ottoman technology by developing smaller guns still capable of mounting successful sieges. The capability of the smaller artillery is thus called into question. To discern whether these smaller guns were capable enough to play a large role during the battle, an understanding of the role of gunpowder in the siege is necessary.

The Siege of Constantinople

The Siege of Constantinople began on April 5, 1453, as the Ottoman armies of

292 Leonard of Chios, The Siege of Constantinople, 16.
294 Philippides and Hanak, The Siege and the Fall of Constantinople in 1453, 418.
Sultan Mehmet II surrounded the land walls of the city. The Turkish fleet took up its position around the Constantinopolitan promontory, forcing the city’s Christian defenders to combat the enemy on both land and sea. Slowly, the Turkish guns were brought to the siege camps. The great guns of the renowned gunsmith Orban were positioned at various key placements along the wall. At Constantinople, it was these guns that were most brought to bear against their Byzantine enemies. One of the Orban’s guns was placed near the Caligaria Gate at Blachernae, a second at a joint between two walls, and another at the Gate of the Spring. The largest of the guns was trained on the Gate of St. Romanus. The bombardment that ensued sapped the strength and morale of the city. Crowley describes the failure of the bombards to work quickly, citing inefficient aiming and a slow rate of fire. This reveals the impact of the Ottomans’ lack of corned powder technology, which may have been the force behind moving Europe toward smaller, more efficient guns. According to the firsthand account of Giacomo Tedaldi, the guns typically launched about 120 shots a day, continuing unabated for days on end. Despite their weaknesses, the guns wrought havoc upon the Byzantine fortifications, so that crisis was only averted due to the efforts of Constantine and Giustiniani to repair the damage swiftly. In late April, the Bactatinian Tower collapsed as a result of the bombardment’s concentration on a single target, bringing down part of the wall with it. Delays and a lack of ingenuity on the part of the Ottoman command soldiery kept the breach from compromising the city, and sufficient repairs were made to the area to sustain it through the siege. Following an ingenious strategic maneuver in which Mehmet moved his ships overland, thus circumventing the great chain blocking access to the Golden Horn, conflict erupted on the water. In order to alleviate the threat of enemy ships, the Ottomans developed cannons that closely resembled the

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295 Crowley, *Constantinople*, 112.
296 Ibid., 118.
299 Crowley, *Constantinople*, 143-44.
later mortar.\textsuperscript{300} The siege continued in cycles of bombardment, attack, and repair, interrupted by eventful periods such as the naval maneuvers. Finally, on May 27, the most intense bombardment yet was leveled against the Byzantines, enlarging the damages to the wall in the hopes of creating an opportunity for an assault. The process of repairing the walls became more difficult.\textsuperscript{301} Two days later, on May 29, 1453, the Ottomans breached the city of Constantinople. The assault came quickly, hammering the ragged defenses. In the fray, Giovanni Giustiniani, who, together with the Emperor was the guiding light of the defense, was wounded and withdrew to seek medical attention. Panic broke out amongst the soldiers, who fled or were massacred by the oncoming Turks. Emperor Constantine XI, 88\textsuperscript{th} Emperor of the Byzantine Empire, fell in the chaos of the city’s sack.\textsuperscript{302} The Byzantine Empire had fallen. In its place arose the Ottoman Empire. Turkish and Muslim Istanbul replaced the Greek and Christian Constantinople. The symbolic and political ramifications of the siege are many, as are the implications for the level of development in Ottoman gunpowder.

**Analysis**

Constantinople provides a scintillating glimpse into the development of Ottoman warfare and stands out as the pinnacle of Ottoman technology as of the mid-fifteenth century. Many historians believe the heavy bombards constructed by Western experts such as Orban played an invaluable role in the course of the conflict, allowing the Turks not only to inflict immense damage upon the impressive but antiquated fortifications and eventually breach the city, but also to sap the morale of the defenders and keep the city under constant bombardment, ideas that are supported by available firsthand accounts. Despite the presence of smaller guns at the siege, they appear to have been incapable of impacting the battle, which suggests that they were not capable of equaling the force of a bombard in the way

\textsuperscript{300} Ibid., 158.  
\textsuperscript{301} Ibid., 88.  
that smaller, more advanced forms of guns in Europe were able to. Another point to make is that European specialists such as Orban crafted many of the great gunpowder weapons used at Constantinople. Indeed, foreign experts represented a major source for the influx of technology into Ottoman military spheres, a process Ágoston calls military acculturation. At this early stage, military acculturation reveals a way that the Ottomans acquired gunpowder technology, but suggests that it was not yet as advanced as that of Europe. With the capture of Constantinople, however, the Ottoman Empire was invigorated and with its glory years ahead, there was still time to match Western technology.

**Rhodes: Gunpowder at the Fall of the Holy Order**

Over the next six decades the Ottoman Empire swiftly took shape, consolidating control over its eastern lands and eventually, by the sixteenth century, coming to threaten the powers of Europe. By the end of the reign of Suleiman the Magnificent, who ruled from 1520 to 1566, the empire stretched from Egypt and the Hedjaz in the south to Hungary in the north. The Ottomans under the House of Osmanli had established the region’s only great Islamic empire. As ever, the Christian West looked on with suspicion as the Turkish threat grew, using whatever means lay at their disposal to curb the power of the Turks. One particularly troublesome thorn in the side of Istanbul was a small island that lay dangerously close to the Ottoman heartlands. The island of Rhodes was the last outpost of the Knights of the Order of the Hospital of St. John, the Hospitaller Knights. Founded by the Blessed Gerard before 1113 CE, the Hospitallers formed a monastic military order that was and is a legacy of the Crusades. Answerable to the Pope in Rome, by 1522 the Knights had weathered four hundred years of turbulent holy war. The loss of Acre in 1291 forced the order to seek a new headquarters, and

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304 McCarthy, *The Ottoman Turks*, 95-99.

**Geography and Defenses of Rhodes**

The location of Rhodes reveals much about its significance to the Ottomans. Positioned off of the southern coast of Asia Minor, the island lay in the middle of the Eastern Mediterranean, making it an ideal location from which to launch raids on Ottoman sea lanes and providing a stepping stone into the Ottoman heartlands for any army. The Knights had fortified the island well over the course of their two hundred year presence, however. By 1522, Rhodes had a thoroughly advanced defense system. The ramparts of Rhodes were interspersed with bastions and towers, with ditches and ravelins before them to cover any weak spots in the bastions' angles.\footnote{Brockman, *The Two Sieges of Rhodes*, 52.} After the Siege of 1480, Grandmaster d'Aubusson initiated a series of renovations to the defenses in preparation for another Turkish attack. The ultimate aim was to keep the Turks away from walls while also making the walls more resistant to artillery bombardment. To achieve this, the moat was widened and *tenailles*, additional defensive-works that lay before the main fortifications and were made of packed earth, were constructed, providing increased protection from gunpowder weapons.\footnote{Smith and DeVries, *Rhodes Besieged*, 75.} Despite its smaller-scale defenses and significance, when compared to Constantinople Rhodes provided a much more advanced set of fortifications against which Ottoman firepower would be set.

**Leaders and Logistics in 1522**

Much like the situation at Constantinople, the leadership at Rhodes was highly effective on both sides. Indeed, Suleiman the Magnificent, who is widely
regarded as the one of the greatest of the Sultans, led the Ottomans. At Rhodes Suleiman was a young man, much like Mehmet at Constantinople decades before. During his strong leadership, the Ottoman Empire experienced what is often regarded as a golden age. The Hospitaller Grandmaster in 1522 was Philippe Villiers de L’Isle Adam, a man of great tenacity, courage, and faith who understood how best to use Rhodes’s defenses as well as Suleiman knew how to assault them. Estimates for the Turkish numbers during the siege vary wildly. Eyewitness Jacques de Bourbon claims that the initial fleet consisted of about two hundred ships. After the initial arrival of the fleet several dozen other ships arrived, bringing the estimated number to about 250 vessels. Some historians argue that the origin of the ships is more significant. Suleiman combined his Turkish and Syrian fleets, which left other parts of his empire disproportionately unprotected, reflecting the importance affixed to this campaign. Eyewitnesses generally place the number of Ottomans on the field at about 165,000 to 200,000, but many modern historians believe this to reflect the massive numbers of enemies rather than a specific number. L’Isle Adam’s figures for his own men reveal that he had a mere 16,000, many of which were likely untrained in soldiery.

Bourbon describes seventy-four pieces of larger artillery along with a great number of smaller guns, sakers, and passevolans, both of which were smaller guns commonly used in Europe, along with an untold amount of handguns. The larger guns consisted of cannon perriers, bombards of various sizes, basilisks, double cannons, and mortars, along with the less clearly defined ‘pieces of iron and bronze.’ Robert Douglas Smith and Kelly DeVries suggest that the larger and smaller pieces of artillery were mixed at the batteries. This wide arrange of artillery types already presents a change from the bombard-centric artillery of Constantinople. The artillery power of the Knights, not inconsiderable, was made up partially of weapons from Europe and partially of guns cast by the knights themselves.

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310 Ibid., 95-99.
providing an excellent case study of Ottoman and European guns in use against each other. Some guns had origins in France or the Holy Roman Empire, while the Hospitallers cast others following European technological norms. Smith and DeVries argue that the guns used by the Knights within the city were very similar to those being used against them. Like the Ottomans, the Hospitallers had at their disposal cannon perriers, basilisk guns, and many smaller artillery pieces. Some of these guns were cast as early as the 1470s and 80s, but many were also made later, with origins in the first two decades of the sixteenth century. The efficiency of the Ottoman war machine with this technology may be observed in the siege.

The Siege of Rhodes

The Siege of Rhodes began on June 26, 1522. After the arrival of the fleet, the Ottomans dug a series of trenches around the city to enable their gunners to be protected while being as close as possible to the city walls. From here and from higher ground, the Turks began an artillery barrage on the city. The Hospitallers returned fire on the batteries to devastating effect, but not enough to permanently cripple them due to Ottoman repairs during the night. Eventually, significant breaches were made in the walls at the bastions of Spain, England, Provence, and Italy, a testament to Ottoman artillery skill when one considers the extent of the fortifications. Military engineers within the city swiftly repaired these, however. The Ottomans then turned to mines to supplement their artillery power. On September 4, sappers greatly damaged the wall around the bastion of England. For the first time the Turks assaulted the wall, although they were held back by the Knights. On September 24, the largest attack yet was made possible due to the damage wrought by artillery fire and mines. The Turks penetrated into the city, but were again pushed back by the valor of the defenders and the fire of Hospitaller guns. Ottoman assaults on the walls continued to fail through November. By the

312 Ibid., 133-166.
313 Ibid., 104.
end of the month, both sides were stretched thin. The breaches in the defenses were becoming large, especially at key junctures such as the Tower of Spain. The Knights were reduced to defending the breaches with their last strength. In December, Suleiman agreed to terms proposed by the Hospitaller Grandmaster, and the last of the Knights of St. John withdrew from the eastern Mediterranean.\footnote{Smith and DeVries, \textit{Rhodes Besieged}, 106-119.}

\textbf{Analysis}

Unlike the course of events at Constantinople seventy years earlier, at the Siege of Rhodes the Ottoman Empire was able to bring to bear the full glory of their arsenal, the legacy of seven decades of empire-building and technological diffusion. At Rhodes, a variety of gunpowder weapons, both large and small, were used to great effect, breaching walls that, unlike the fortifications of Theodosius, were designed to withstand fire from enemy artillery. What is more, the guns used by the Turks here are believed to be of the same sort used by the Hospitaller Knights within the city, which themselves were examples of contemporary European gunsmithing.\footnote{Ibid., 104.} The fact that there are similar guns of Turkish origin suggests that the Turks were not so far behind European technology as previously thought, if at all.

\textbf{Conclusion}

Ottoman gunpowder technology is often considered to have lagged behind that of Europe, in that it failed to progress to the smaller variety of guns that became prominent in the West. This gap did exist. The Ottomans developed gunpowder technology only after coming into contact with European styles of warfare that made it a necessity. By 1453, great bombards were produced that could inspire fear in the Sultan’s enemies and breach what were once the greatest fortifications in the world. Even these lagged behind Europe’s own developments, which featured smaller guns and corned powder. By 1522, however, at the height of
the empire, Suleiman the Magnificent was able to field a vast assortment of artillery weapons, ranging in size and age and more than matching the enemies’ European firepower. The Turkish preference for larger guns such as bombards remained, but this was clearly not at the expense of smaller guns more similar to those of Europe. It seems that at least for a time during the golden age of the Turks, Ottoman gunpowder technology was a match for that of Europe. The idea that a non-Western culture was capable of adopting Western technology so quickly and effectively is an uncommon one that may be mirrored in other places and other times, a question that bears further examination. The Ottoman Empire was a centerpiece of the historical narrative of the East versus the West, but the truth is not that simple. Cultures are fluid and often inclusive, incorporating what avails them, be it ideas or technologies. As the Ottoman adoption of gunpowder reveals, the ideas of East and West are ideological concepts, but need not be ideological barriers.
The Decline of Japanese Firearm Manufacturing and Proliferation in the Seventeenth Century

Alexander Astroth

Abstract

In November 1965 an article titled “Giving Up the Gun” by Noel Perrin appeared in The New Yorker. A decade and a half later the article was expanded into a book of the same name. Giving Up the Gun was and remains a significant work, in that it is the only English text devoted exclusively to why Japan, a country that had rapidly adopted and produced firearms in the second half of the sixteenth century, suddenly stopped firearm manufacturing and innovation in the seventeenth century. Noel Perrin’s theories for this regression received heavy criticism and were largely dismissed, with many citing that Japan did not willing give up firearms but rather that firearms became irrelevant due to the end of warfare in Japan. This work explores the historiography of the subject, as well as addresses other works regarding the period, to determine the validity of Perrin’s claims and why firearms declined in Japan. The findings of this narrative indicate that while some of Perrin’s theories are unsubstantiated, his main argument that Japan willing chose to halt firearm manufacturing and innovation is merited.

Introduction

In the mid-sixteenth century, following the introduction of the arquebus by the Portuguese in the 1540s, firearm development and innovation began in Japan. Within decades of their arrival, thousands of firearms were being produced annually. The proliferation of firearms occurred at such a rate that by 1575 over 3,000 of Oda Nobunaga’s men possessed firearms.316 By the time of the first Japanese invasion of Korea in the 1592, it is estimated that thirty percent of

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316 Louis G. Perez, Japan at War: An Encyclopedia (Santa Barbara, CA: ABC-CLIO, 2013), 87.
Toyotomi Hideyoshi’s initial fighting force was equipped with personal firearms.\textsuperscript{317} During the seventeenth century, in the decades following the rise of the Tokugawa bakufu in 1603, however, the manufacturing of firearms ceased. There are a number of theories for why this occurred, including one that states firearms became irrelevant as a result of the Sengoku, or “Warring States”, Period's end. This paper argues that firearm innovation and manufacturing did not become irrelevant, but rather that it was deliberately ended by the Edo bakufu in order to weaken the daimyo and consolidate their political hegemony.

\textbf{Historiography}

The decline of Japanese firearm innovation and manufacturing following the Battle of Sekigahara in 1600 has been given very little attention among historians. To my knowledge only one work, \textit{Giving Up the Gun: Japan’s Reversion to the Sword, 1543-1879} by Noel Perrin, has been strictly devoted to the subject. In his foreword Perrin states, “A civilized country, possessing high technology, voluntarily chose to give up an advanced military weapon and to return to a more primitive one. It chose to do this, and it succeeded.”\textsuperscript{318} Perrin gives five reasons for why Japan willingly stopped firearm development and innovation. The first reason he provides is that the number of samurai who could possess firearms made the bakufu distain their widespread proliferation and accessibility. “The warrior class in Japan,” Perrin explains, “was very much larger than in any European country, amounting to somewhere between 7 and 10 percent of the entire population...In no European country did the warrior class much exceed one percent”\textsuperscript{319} Taking conservative population estimates into account, this would equate to no less than half a million individuals having the potential to possess firearms. The extent of the bakufu’s fear that the daimyo would arm these vast numbers of warriors and threaten the

\begin{footnotesize}
\begin{enumerate}
\item[\textsuperscript{317}] Samuel Jay Hawley, \textit{The Imjin War: Japan’s Sixteenth-century Invasion of Korea and Attempt to Conquer China} (Seoul: Royal Asiatic Society, Korea Branch, 2005), 102.
\item[\textsuperscript{318}] Noel Perrin, \textit{Giving up the Gun: Japan’s Reversion to the Sword, 1543-1879} (Boston: David R. Godine, 1979), ix.
\item[\textsuperscript{319}] Ibid., 35.
\end{enumerate}
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bakufu’s hegemony, Perrin argues, is evident in the gun controls that came following the Battle of Sekigahara in 1600. Gun manufactures, he explains, were forced to live in the city of Nagahama, while a series of edicts and provisions, such as the ban on building ocean going vessels in 1605, were initiated.320

The second reason Perrin gives concerns the geopolitical state of the period. Perrin argues that major quantities of firearms were given up as Japan had forgoned plans to invade any country following the Imjin War and that “the Japanese were such formidable fighters, and islands are by nature so hard to invade, that territorial integrity could be maintained even with conventional weapons”321 The third theory Perrin provides is that the “symbolic value” placed on the sword by the Japanese was greater than in any European nation. In Japan, the sword indicated social status. “You couldn’t even have a family name” Perrin explains, “unless you also had the right to wear a sword”322 The fourth theory he gives is that the “de-emphasis of the gun took place as part of a general reaction against foreign ideas—particularly Christianity and the Western attitude toward business”323 The fifth and final reason Perrin gives is that the Japanese, he asserts, prefered swords over firearms due to the aesthetic value of the body movements associated with a sword. “In Japanese aesthetic theory,” Perrin explains, “there are some fairly precise rules about how a person of breeding should move his body...it is better if his elbows are not out at awkward angles....A man using a sword, especially a Japanese two-handed katana, is naturally going to move his body in accordance with many of these rules. But a man firing an arquebus is not.”324

Perrin’s first theory, which states that the bakufu feared that firearms would reach the vast number of daimyo and the men under them and threaten its authority is agreed on by other historians. According to Thomas D. Conlan in

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320 Perrin, Giving up the Gun, 58.
321 Ibid., 35.
322 Ibid., 36.
323 Ibid. 41.
324 Ibid., 43.
Weapons & Fighting Techniques of the Samurai Warrior 1200-1877 AD, “After the Tokugawa had achieved a position of political hegemony, they deemed it unnecessary to continue to be innovative in weaponry. Instead the Tokugawa forced smiths to congregate in easily supervised areas, and they prohibited other daimyo from manufacturing cannon or learning how to produce these weapons, or for that matter, acquiring the best gunpowder recipes...The Tokugawa strove to limit knowledge of important military technologies, and monopolize the access to these weapons.”

Still, other historians provide that it was the cessation of war and ultimately peace that ended firearm production and innovation in Japan. Stephen Turnbull in Samurai: The Story of Japan’s Noble Warriors states that it was “the establishment of the Tokugawa Peace” that led firearms and artillery to be “neglected.” Peter A. Lorge in The Asian Military Revolution: From Gunpowder to the Bomb, directly challenges Perrin stating, “Perrin’s view was simply wrong; the Japanese did not give up guns...The gunpowder revolution in Japan that was founded upon the changing nature of warfare in the late fifteenth and early sixteenth century was not so much halted or reversed as rendered irrelevant by peace.”

Conrad Totman, in a review of Perrin’s work, takes a similar position, stating, “The decline in production and use of guns was a byproduct of other developments, not an end in itself. Guns went out of style because war ended. Had it continued, the use of guns would have continued” Totman then argues that it was the disarming of the general population that accompanied the peace that led firearms to go into disuse. “This enabled the samurai rulers,” he explains, “to suppress, even without resort[ing] to firearms, the riots and local eruptions that

proliferated as the Tokugawa period advanced. With the public rendered defenseless, guns became an unnecessarily expensive and cumbersome instrument of deterrence once intra-samurai fighting had ceased and the samurai rulers had settled in their in their castle towns. Peacekeeping became a matter of urban patrol, which required dependable weapons that could be used swiftly, quietly, and in close quarters—swords and pikes, not matchlocks.”

In *Japan at War: An Encyclopedia*, William Johnston holds an identical position, stating, “Despite the role that firearms played on the battlefield during the 16th century, once peace was established following the rise of the Edo bakufu in 1603, firearms fell into disuse. Samurai needed little more than their swords to claim their monopoly on the use of coercive violence in society.”

While Lorge, Conrad, and Johnson’s theories that it was the “peace” that brought an end to gun production are sound, they fail to address that the Tokugawa bakufu took an active effort to halt gun production in Japan. While it is true that gun production drastically decreased during the “peace,” it was not the “peace” that caused firearm manufacturing to end. Rather, firearm production and innovation was systematically controlled and ultimately ceased because the Tokugawa bakufu wished to do so. Because of firearm regulations and strong enforcement by the bakufu, the daimyo simply could not produce and develop new firearms as they had throughout the sixteenth century. Consequently, the bakufu themselves had no need to produce firearms in great quantities and funds were diverted elsewhere. It was the bakufu’s regulations and edicts that occurred at the start and during the peace, not the peace in and of itself, that led to the decline of firearm manufacturing throughout Japan. With this in mind, I only accept some of Perrin’s theories, in particular the bakufu’s distrust of the warrior class/daimyo and the geopolitical situation of the period. The idea that guns were given up because of symbolic or aesthetic purposes, or because they went against an innate Japanese hatred toward

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western culture, has no historical basis. The Japanese rapidly adopted guns as soon as they arrived in the mid-sixteenth century and continued to be produced and improved for over six decades. It was only when the Tokugawa bakufu directly stepped in and limited gun production and innovation that it came to an end.

**Gun Control 1570-1630’s**

In 1603, three years following the Battle of Sekigahara, the Tokugawa shogunate or Edo bakufu, was established. At that time the major gun manufacturing centers in Japan were Nagahama and Sakai. There were however a vast number of gunsmiths outside these centers working independently for daimyo and local lords throughout Japan. Fearing opposition, the bakufu set out almost immediately to limit the production of guns in Japan, namely that occurring under the daimyo. In 1607, the bakufu declared that all firearm and gunpowder production was to be restricted to Nagahama, while all orders for firearms in the city had to first be processed through Edo. Tokugawa Ieyasu, Perrin states, “admonished them not make any weapons for other daimyo.” Gunsmiths were also prohibited from traveling to the other provinces and ordered not to inform anyone of the proper recipe for gunpowder or to teach techniques of gun manufacturing to anyone save for officials of the Tokugawa bakufu. To ensure the enforcement of this edict, a new position, the Commissioner of Guns (Teppo Bugyo), was created. “In short,” Perrin explains, “starting in 1607, guns could be made only under license from the central government.” With virtually no orders being approved or asked for by the government, many gunsmiths and powder makers switched to sword making or other various occupations. In the following decades, with few gun makers remaining, the price of firearms rose immensely, thus further limiting their accessibility.

By the 1620s, the government had a well-established monopoly over all

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331 Conlan, *Weapons & Fighting Techniques*, 157
332 Perrin, *Giving up the Gun*, 62.
333 Ibid., 58.
firearm production in Japan. According to Perrin, production dropped to such an extent, that by 1706, “the production at Nagahama amounted to 35 large matchlocks in even years, and 250 small ones in odd years.”334 As there were over a million individuals in the warrior class, such a small amount was negligible. The final nail in the coffin came in 1632, when the bakufu created a bureau to control the dissemination of ammunition and powder.335 While the government had gained control of firearms production in Japan by the 1620s and bullet and gunpowder production a decade later, they could not as readily control the influx of firearm imports to Japan. However, the edicts passed in 1630s, collectively known as the “seclusion edicts,” enabled them to control this as well.

**Firearm Control and Trade Regulations in the 1630s, Seclusion Edicts**

Provisions that inhibited the daimyo from obtaining guns from abroad began nearly four decades before the seclusion edicts were introduced. In the 1590s, Toyotomi Hideyoshi attempted to limit trade that occurred between daimyo and foreigners in the western domains. According to Michael S. Laver in *The Sakoku Edicts and the Politics of Tokugawa Hegemony*, “Because Hideyoshi could not be sure of the absolute loyalty of these daimyo, a sound military and economic strategy was to control the institutions that provided potential rivals with a large amount of revenue and possible foreign allies. In that context, Hideyoshi not only moved licensed foreign trade through a rudimentary shuinsen system but also placed Nagasaki itself under his own personal control.”336 When the Tokugawa bakufu rose to power, measures to limit the daimyos’ access to foreign goods became a top priority. This can be seen as early as 1605, when the bakufu prohibited any Japanese from building ocean-going vessels. Ronald P. Toby in *State and Diplomacy in Early Modern Japan*, explains the bakufu’s intentions behind this, stating:

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334 Perrin, *Giving up the Gun*, 63.
“Until this time, both daimyo and the great merchant houses possessed ships that rivaled even European ships in size and seaworthiness. This edict [the seclusion edict]—though ostensibly valid for the entire country—was aimed primarily at the western daimyo[s], most of whom had fought against the Tokugawa at the Battle of Sekigahara in 1603. It was no secret that the Tokugawa did not entirely trust these daimyo, who had sworn allegiance only after being defeated in battle. That Ieyasu implemented such a restriction should come as no surprise. It is easy to imagine the power and wealth the western daimyo stood to gain by having a fleet of large ships operating in the China Sea and Indian Ocean regions. The Tokugawa house, still trying to bolster a politically precarious position was eager to stamp out all possible sources of opposition...The act of curtailing the Kyushu daimyo’s ability to profit from foreign trade was similar to the ulterior motive behind the Sankin-kōtai measure (“the alternative attendance,” the institution that required daimyo to spend half of their time attending the shogun in Edo and the other half in their home domains; their wives and children were required to remain in Edo full time as “hostages”-to deprive the daimyo of excess funds that might be put to rebellious uses”\textsuperscript{337}

With the daimyo unable to legally build ships for foreign trade, the bakufu’s next move was to control the flow of foreign imports into the country. A major step toward this occurred in 1614, when Tokugawa Hidetada restricted Dutch and English ships to Hirado while the Portuguese were confined to Nagasaki. Further steps toward achieving this goal came in 1624, when all Spanish were deported, while a year prior the English East India Company closed operations in Japan.

The final step towards halting any future proliferation of firearms in Japan and limiting their accessibility to the daimyo came with the seclusion edicts in the 1630s, namely the Sakoku Edict of 1635. According to Toby, the sakoku system was conceived in order to “eliminate any potential challenges to the Tokugawa, whether they be foreign or Japanese” and thus “establish unquestioned political, military, and economic control throughout the country.”

The first three edicts read: 1. The sending of Japanese ships to foreign countries is strictly forbidden. 2. The travel of Japanese people to foreign countries is forbidden. If a person secretly travels abroad, that person will be punished with death, and the ships along with their captains [owners] must be detained while the incident is reported to the authorities. 3. Japanese who return after having crossed over to and lived in foreign countries will be punished by death. Japanese living abroad, especially in areas with European settlement such as the Philippines, Batavia, or Macao, could no longer provide information or bring advanced weaponry back to Japan. Even more important, the edicts made it impossible for the daimyo to send ships abroad or travel themselves in order to obtain firearms. As Conlan states, “These tight controls and other surveillance precluded daimyo from procuring weapons from abroad.”

To ensure firearms were not brought to the daimyo, the bakufu tightened regulations on foreigners trading in Japan. In 1639, four years following the Shimabara rebellion, Tokugawa Iemitsu banned Macao-Nagasaki trade and forbade all Portuguese from entering Japan. The strict enforcement of this policy became clear when, a year following the ban sixty Portuguese, emissaries from Macao were executed. Two years later, in 1641, the Dutch were forced out of Hirado and confined to Deshima Island in Nagasaki harbor while the Chinese were restricted to a walled segment of Nagasaki port. With the closing of unprofitable English East India Company trading posts and a ban on Iberians, the Dutch, Chinese, Koreans, and Ryukyuans were the only substantial foreign trade partners

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remaining. Official diplomatic relations were only established with the Yi Dynasty, as the Dutch. Chinese and Ryukyuans were not seen to have adequate status in accord with Tokugawa interpretations of hierarchy. Consequently, no arms deal would ever be made between a European power and the Tokugawa bakufu. With foreign trade and travel abroad, as well as firearm production, being strictly regulated, the bakufu had effectively ended the “threat” of firearm proliferation in Japan.

Post 1630s

Following the 1630s the bakufu strove to maintain their monopolization on firearm proliferation for two centuries. Consequently, the concealment of foreign firearm technology was a major priority of the government. “Even when they were aware of new inventions,” Conlan states, “they did not allow this knowledge to spread. For example, we can document flintlocks first appearing in Japan in 1643, and a Dutch captain gave another example to the eighth Tokugawa shogun, Yoshimune, in 1721, but these weapons did not achieve widespread popularity, or use in Japan. ...The tokugawa strove to limit knowledge of important military technologies, and monopolize the access to these weapons.”

When a censorship bureau was established to review Dutch texts entering the country, one of its primary objectives was to ensure that the documents did not hold any information regarding firearm technology. The monopoly on firearms was further protected by rejecting offers from foreign expeditions and nations wishing to establish diplomatic relations or trade in firearms. In 1673 when the British ship Return entered Nagasaki harbor and applied for the reopening of Anglo-Japanese trade it was rejected.

Over a century later little changed. For example, in 1792 the bakufu dismissed a petition from Adam Laxman to open Russo-Japanese trade, as well as

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another from Count Rezanov. The bakufu was so successful in its anti-foreign relations/trade propaganda that many Japanese began to view voluntary isolation from the west as “ancestral law.” For instance, Hayahi Junsai wrote “It is the law of our ancestors to not permit trade with nations other than China and Holland.” According to Constantine Nomikos Vaporis in *Voices of Early Modern Japan*, ‘with the force of time, the restrictions imposed induced a state of mind, or mentality, in which the ideal state for Japan was one of isolation.”\(^{343}\) Toby further sheds light on the subject, stating, Diplomacy became less intense: two-thirds of the embassies from Korea, for example, came in the first third of the Tokugawa period. Trade declined as well, and diplomatic issues became both less frequent less strongly felt. Over the course of the eighteenth century this atrophied state of foreign relations came to be viewed as the norm, to be interpreted as ancestral law, attributed to the decisions of the first three shoguns.”\(^{344}\) Consequently, when progressive writings seeking to increase trade with foreign nations, such as those of Honda Toshiaki (1744-1821), were released, they were largely ignored or dismissed.

With the bakufu actively maintaining their monopoly, the edicts and regulations against firearm manufacturing and trade went relatively uncontested for two centuries. Into the mid-nineteenth century, however, many, including the shogun, began to realize Japan’s inferiority in firearm technology and feared exploitation or even colonization. In 1825, Aizawa Seishisai wrote in his book *New Proposals* (*Shinron*) that the only way to resist western powers was to adopt western weapons. During the 1830s and 40s both Aizawa Hakumin and Hashimoto Sanai suggested forming an alliance with one of the Western powers to defend Japan. Otsuki Bankei suggested forming trade relations with Russia and Russia alone in order to shield itself from Western powers. Sakuma Shozan stated that “Japan could not avoid the same fate as China unless she could quickly discover and


\(^{344}\) Toby, *State and Diplomacy*, 240.
put to use the secret of Western warfare and firearms”

According to Toby, “He devoted himself to studying modern Western works on weaponry and warfare through the medium of the Dutch language in order to understand the sources of Western strength and learn how to use them to make Japan strong enough to defer Western encroachment.” In 1845, Fujita Toko (1806-55) in *Hitachi-obi* proposed three solutions to countering foreign encroachment, which include “1. Repel the ‘barbarians’ and stop them from reaching the ‘lands of the gods. 2. Establish relations with the West in order to study and adopt those elements of its civilization that would enable it to demand equality with it. 3. Allow the barbarians’ to trade with Japan temporarily to appease them until Japan became strong enough to expel them.”

The shogun was so weak by this period, however, that when Tokugawa Nariaki attempted to secure funds for rearmament, he was unable to do so. According to William McOmie in *The Opening of Japan, 1853-1855*, “Due to economic changes that had undermined the feudal base, the shogunate and many of the fiefs were bankrupt and could not purchase or manufacture the weapons required to defend Japanese shores from modern warships. Moreover, the traditional bakufu-first policy meant that the bakufu would not allow the fiefs to become stronger than himself.”

The bakufu was so weak by the mid-nineteenth century that it finally gave up on its effort to monopolize gun proliferation and “urged the daimyo to build cannons and ships to expel foreign intruders.”

**Conclusion**

Japanese firearm manufacturing and innovation ceased in the seventeenth century because it was deliberately put an end to by the Tokugawa bakufu, not

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345 Ibid, 32.
346 Ibid., 32.
347 Ibid, 51.
349 McOmie, *The Opening of Japan*, 53.
because of the irrelevance of firearms due to the peace that followed the Sengoku Period. The bakufu introduced a number of edicts, including the consolidation of gunsmiths into Nagahama, as well a number of trade regulations that ultimately inhibited the daimyo from obtaining both domestic or foreign firearms. With the daimyo unable to access firearms, the Tokugawa government had no need to produce firearms itself. It was not until the nineteenth century that the regulations and edicts became contested, as many feared foreign encroachment. By the time an active call to rearm became prevalent; the Tokugawa government did not have the financial means to do so. By the nineteenth century, Japan was devoid of firearm manufacturing and innovation and it was not until after the arrival of Perry in 1854 that it resumed.
The Naval Component of the Battle of Shubra Khit

George Granberry

Abstract

As a result of long-standing theories of Ottoman Decline and strings of major military defeats throughout the 18th century, the Ottoman Empire as a whole is often looked upon as a military non-factor in the age of Napoleon. In the case of the Ottoman Navy, Napoleon's brilliant victories over the Egyptian Mamluks often overshadow the fact that the Ottomans were capable of fighting on even if not advantageous terms against Napoleon's own naval forces. To investigate this misunderstanding, both sides of the historiographical debate on the decline of the Ottoman Empire will be examined with a focus on the Ottoman Navy. With the historiography laid out, the main focus of this paper is on the Battle of Shubra Khit, a battle waged between the French Expedition to Egypt under Napoleon and the Ottoman Egyptians residing there. While there are a handful of different accounts of what happened at the Battle of Shubra Khit, it becomes clear that the Ottoman Navy had vessels of remarkable similarity to the French flotilla and that the French Flotilla was only able survive as a result of backup from infantry on the banks of the Nile. The paper then concludes that the Ottoman Empire's navy does not fit into the frame of the Ottoman Decline.

The French troops under Napoleon described the Mamluk cavalry as one of the most graceful forces they had ever seen. Dressed in fine clothing and wielding decadent weapons, the Mamluks of Egypt were raised to fight on horseback on the banks of the Nile. In comparison, the French expedition was a group of exhausted foreigners with rampant dehydration and cases of dysentery in its ranks. Sentenced by Napoleon to a brutal march though the deserts of Egypt, the marching infantry of the French expedition could not have been more out of their element. Some members of the French expedition to Egypt
undoubtedly considered leaving their field artillery behind to decrease their burden. In fact, some members did choose to decrease their burden by throwing away food supplies. Others chose to end their own lives. However, when the graceful and powerful Mamluk cavalry and the French expedition's land forces finally met at what is now known as the Battle of the Pyramids, the outcome of the battle could not have been clearer. The Mamluk forces under Murad Bey were completely crushed by the French expedition, barely leaving a scratch on Napoleon's infantry.

If an expedition of sick, starving, and overheated infantrymen was to completely defeat the Mamluk cavalry in their own territory, it seems natural that the naval battles against the Ottoman-Egyptians would be an equally victorious endeavor. However, the naval battles between the French flotilla on the Nile and the Ottoman-Mamluk flotilla were of a completely different nature. Looking specifically at the battle of Shubra Khit preceding the Battle of the Pyramids, the naval battles between the French and Ottoman-Egyptian forces actually favored the Ottoman-Egyptians to the point where Napoleon was called to support his naval forces at the cost of letting the Mamluk ground forces escape to fight another day.

With land battles ending in such resounding success, it seems strange that the French expedition's resounding victories did not follow them into the naval battles of the Nile. While the French flotilla was technically never defeated on the Nile by Ottomans, they did require assistance from Napoleon's ground forces in order to fend off the Ottoman flotilla. Why would the Ottoman Navy, which had a reputation for weakness among the powers of the Mediterranean in the 18th century, be able to fight on equal if not advantageous terms with the French expedition's powerful naval crafts? To answer this question, we must first ask, was the Ottoman Navy actually weak? In this paper, I argue that by the end of the 18th Century, the Ottoman Navy was modernized enough to fight on nearly equal terms with the navies of Western Europe. Using the Battle of Shubra Khit as an example of conflict between the Ottoman Navy and Western Europe, I argue that

the Ottoman Navy would have defeated Napoleon’s flotilla if his infantry had not arrived on the banks of the Nile as reinforcement.

To support this claim, our first objective is to take a closer look at the state of the Ottoman navy in the late 18th century. Simply comparing their record against the Venetians and Russians, it does seem that the Ottomans were falling behind their competitors in naval warfare after suffering a string of defeats during the 18th century culminating in the Battle of Chesme in 1770. While historians tend to agree that prominent European powers such as the British Royal Navy and the French Navy held an advantage over Ottoman Navy through the 18th century, the degree of separation between the two is debated as a part of the “Decline of the Ottoman Empire” subject.

On one side of the debate, historians such as Bernard Lewis, Norman Itzkowitz, and Paul Holt all agree that the Ottoman Empire “reached its peak in the sixteenth century under Suleyman the Magnificent, and thereafter began an inexorable stagnation and decline lasting until the twentieth century.” Supporters of this view are sometimes referred to as “declinists.” Lewis explains that “The Ottomans found it more and more difficult to keep up with the rapidly advancing Western technological innovations, and in the course of the eighteenth century the Ottoman Empire, itself far ahead of the rest of the Islamic word, fell decisively behind Europe in virtually all arts of war.” This view of a stagnating Ottoman Navy that was unable to adapt to battle in the age of sail is a commonly held view by many historians studying the Napoleonic era. Looking in the Dictionary of Napoleon, the entry for the Ottoman Navy sums up its entire

352 Lewis, The Muslim discovery of Europe, 226.
existence as “Unable to compete with European navies.”

It seems only natural to assume that a nation with outdated military technology and a continuous string of defeats throughout the 18th century would be experiencing a steady “decline”. In addition, Europe's overall triumph over in the Ottoman Empire in the 19th and 20th centuries also seems to support the notion of an overall decline. However, the key word that separates the “declinists” and their revisionist counterparts is the concept of an “inexorable” decline that proceeded at a steady pace. Instead of assuming that the Ottomans were doomed to failure based on their competition with European competitors, the revisionist approach inspects primary sources in the Ottoman Empire's extensive archives.

To be sure, some primary documents, such as Joost Fredric Tor's records, also support the declinist position in their description of the state of the Ottoman military. Tor, the secretary to the Dutch Ambassador Van Den Dedem, reported on the “deplorable state” of the Ottoman Navy in 1785. In his description, he lists inefficient docks, poorly defined vessels, and decrepit fortresses as examples of the stagnation of the Ottoman navy. However, revisionist historian Tuncay Zorlu's investigation of Tor's claim concludes with a dubious note. According to Zorlu “Although these comments might have been true to some extent, when compared with the Ottoman and other European sources it is clear that they were biased and inaccurate.” He then proceeds to cite information from M. Bonneval's report from April 22, 1784, which contains a detailed report of the true condition of the Ottoman fleet. In truth, the number of ships in good, operating condition outnumbered ships in bad condition and ships in repair by a significant amount.

The revisionist historians of Ottoman military history such as Jonathan Grant and Tuncay Zorlu believe that while the Ottoman Navy was somewhat behind the technological advancements of parts of Western Europe, overall their

embrace of new technology and enthusiastic naval reforms allowed the Ottoman Navy to stay competitive in the world arena. In a response to Lewis' description of the Ottoman stagnation, Jonathan Grants explains that “Once the effects [of new technology] became apparent to the Ottomans, especially after the Russian conquest of Crimea, the Turks followed suit, with the result that by the beginning of the nineteenth century Ottoman war technology was again competitive with that of its rivals, especially Russia.” The extent of the Ottoman's transformation during the late 18th century can be seen in the research conducted by Grant and Zorlu.

In Zorlu's *Innovation and Empire in Turkey: Sultan Selim III and the Modernisation of the Ottoman Navy*, the reign of Selim III and its effects on the Ottoman Navy are characterized as a modernizing force in which the Ottoman Navy once again becomes competitive with European powers. Among the main changes to the Ottoman navy were a complete restructuring of the naval hierarchy and the enlistment of European shipbuilders to help build modernized ships.

Despite the relative closeness in naval technology between the Ottoman and Russian navies, the decisive Russian victory at The Battle of Chesme served as a wake-up call to the Ottoman Empire and spurred on Naval reforms from 1770 until the death of Selim III. One of the first reforms was to upgrade the Ottoman Fleet. While the Ottoman Navy had been experiencing a gradual change from galleys to galleons throughout the first half of the 18th century, the Battle of Chesme and the effectiveness of European ships of sail convinced the Ottoman Empire that the best way to catch up in naval technology was to enlist the help of the people whose technology they wanted to imitate and to greatly increase the size of their modern fleet.

By “modern fleet”, I am mostly referring to the Ottoman Empire's switch to ships of sail. In the 18th century, naval tactics swung towards favoring mobility over

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356 Grant, *Rethinking the Ottoman “Decline”*, 184.
357 Ibid., 194.
358 Ibid., 194.
close range power. As a result, the Ottoman galleys, which had been successful for the past century, had trouble competing with modern galleons. A galley, which relied on oars rather than sails did most of its damage by ramming its opponent with the goal of either sinking or boarding the vessel. However, with the increase of foreign galleons in the Mediterranean, Ottoman galleys grew increasingly less useful as galleons could easily outrun galleys with the right wind conditions. In addition, the much larger galleons could carry much heavier cannons than the much lighter galleys. As a result, artillery from galleons generally had a much longer range than that of galleys. In summary, the new galleons favored by European powers in the Mediterranean could decimate the Ottoman's galleys before close contact could even be made.

Selim III and his predecessors in the second half of the 18th century were well aware of the deficiencies of galleys and the need for a modernized fleet. Selim III's policies also spoke volumes about the actions and direction of the Ottoman navy during his reign. By 1807, Zorlu explains that “... it is seen that except for a few classical galleys scattered here and there, they had almost completely disappeared. On the reports and observations, they do not appear on the tables and lists concerning the Ottoman navy.”

Even with new and improved galleons, the Ottoman navy would still be operating at a disadvantage had they not improved other aspects, such as gunpowder and cannons. Without proper cannons, even a well-built galleon with a seasoned crew would be operating at a serious disadvantage because of their shorter range. Revisionists such as Grant freely admit that in the first half of the 18th century, the Ottoman Navy was using antiquated gunpowder formulas and cannon designs. However, Grant argues that the Ottoman Empire was able to at first import foreign gunpowder and cannons and then eventually emulate the production of these products themselves. Their adoption of these techniques was so successful

360 Ibid., 119.
that the Ottoman Empire became completely independent in their gunpowder supply by the end of the 18th century.

Along with improving the technology of their navy, the Ottoman Empire also increased the size of their fleet throughout the last quarter of the 18th century. Historian Digby Smith (also known as Otto von Pivka) estimates that in the year 1790, the Turkish fleet consisted of 30 ships of the line with 50-74 guns; 50 frigates with approximately to 50 guns; and 100 galliots, a type of riverboat. Overall, there is significant evidence that by the end of the 18th century, the Ottoman navy was not nearly as outdated as the declinists would think. However, the declinists and revisionists both agree that the Ottoman military was incapable of escaping their technological doldrums without outside help.

Of all the European countries enlisted by the Ottoman Empire to bring modern ship crafting to Istanbul, France was by far the most successful. Having mostly built only galleys and early galleons at this point, the French approach to ship architecture was a completely new and much more scientific approach than the Ottoman Empire had previously encountered. The French galleon itself was a marvel on the sea during the 18th century. These large vessels earned French shipwrights fame all throughout Europe and cost France a large sum of money. With the help of these French shipwrights, the building of ships in the Ottoman Empire turned into a semi-scientific craft.361

Shipwrights such as Jaques Balthasar Le Brun both educated future shipwrights in Istanbul on the construction and maintenance of modern galleons as well as corrected many of the structural flaws in Ottoman vessels. The flaws ranged anywhere from improper use of cannons to decks being raised too high to allow for decorative hats. In addition, technological improvements such as the copper sheathed rudder helped Ottoman vessels to last much longer. In many cases, boat designs were imported directly from Europe, as was the case with the French

361 Ibid., 160.
gunboat being adopted by the Ottomans. While missions from other European powers contributed to the Ottoman navy, the ships and education contributed to the reformation took on a decisively French flavor.362

Along with transforming the fleet, Selim III's strategy for revitalizing the navy included plans to purge the navy of the poor leadership that was largely responsible for the loss at Chesme.363 With this reform, Selim III aimed to remove from the navy all the officers who had paid for their position hoping to make a profit from skimming off the top of naval funds. By doing away with nepotism in the navy, Selim hoped to have a fresh force able to take on the challenges of early modern naval warfare.

However, the Ottoman navy ran into similar problems to the French navy during the French Revolution. In both cases, the thorough purge of Aristocracy from the ranks of the navy succeeded in remedying corruption, but left a vacuum of experienced officers. In addition, the new galleons built by the Ottomans had few crews that knew how to man them when they were first built. To remedy this issue, Selim III took advantage of the foreign missions to Istanbul and set up schools for naval training as well as ship architecture. While the setting up of schools and re-manning the navy took considerable effort, the end-result was a better-trained navy capable of manning the modern galleons.

With the Historiography laid out, the declinist portrait of the Ottoman Empire, while accurate in regard to some aspects of the Ottoman Empire's overall state, does not match up with the actual state of the Ottoman Navy in the late 18th Century. By looking at the battle of Shubra Khit, we will be able to examine the state of the updated Ottoman Navy in their battle against Napoleon's flotilla. As there are diverging opinions and details about the actual events at the battle of Shubra Khit, I will examine the battle in chronological order to try and reconstruct

\[362\] Ibid., 178-179.
\[363\] Ibid., 189.
Before jumping straight into the stretch between Alexandria and Cairo, I will give a short background on how Napoleon even ended up in Egypt for any readers not familiar with his early campaigns. After Napoleon's immensely successful campaigns in what is now Italy, an idea was presented to the leaders of the French Republic that would involve Napoleon leading an expedition to Egypt. There is a fair amount of historiography in the reasons for this expedition. Some scholars believe that the entire campaign came about as a result of Napoleon's ego and obsession with emulating Alexander the great. Other slightly more materialistic theories explain that the Egyptian campaign was a risky endeavor to cut off Great Britain's contact with India. In any case, Napoleon arrived on the coasts of Egypt with his expedition in 1798 and quickly captured Alexandria. From this point, Napoleon's next target was the largest city in Egypt, Cairo.

Starting with the French expedition's march from Alexandria to Cairo, the battle of Shubra Khit began on July 13th 1798 and lasted for about twelve hours. As Napoleon and his troops were marching up the side of the Nile, the French flotilla had kept pace with them holding all of the so called 'savants,' a group of artists and scientists accompanying the expedition, along with the sickly and anyone else incapable of combat. According to Christopher Herold in *Bonaparte in Egypt*, the offensive force of the French flotilla, not including transport ships consisted of three gunboats, one galley, and one chebek. However, other historians such as P.G Elgood give a slightly different account of the makeup of the French Flotilla. According to Elgood, “Perree a naval officer, would sail from Alexandria with a little fleet of gunboats and sloops drawing less than 5ft of water.” While this seems to be a picky point, Herold's inclusion of a galley in the advance flotilla makes little sense in the context of the Battle of Shubra Khit. However, this point will be re-

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Napoleon knew that an Ottoman Flotilla had been sent from Cairo, and he needed his own naval forces to protect his flank from Ottoman naval fire. In addition, having a flotilla would allow the expedition to switch to the other side of the Nile River if it gave them a strategic advantage. What Napoleon did not know, however, was that the Nile would be difficult to navigate. Elgood describes their troubles from a nautical perspective, explaining that “Navigation above Rosetta had been difficult. The Nile was at its lowest, and the channel not always easy to find. The sloops in the van had the hardest task. They drew more water; they were less easy to steer. At every bend of the river one or other would run aground, and the convoy behind had to wait patiently.” This brings up an interesting point when applying this problem to Herold's version of the French Flotilla. If the ships with the most trouble navigating the Nile were sloops, which ships in his version would that include?

The definition of a sloop-of-war, which describes a small square rigged warship with two or three masts, covers a large range of ships of sail.\textsuperscript{366} This definition encompasses the chebek that Herold described. However, the definition of a sloop does not cover a galley, which is also included in Herold's list of boats in the French Flotilla. Unlike a sloop-of-war, a galley is mainly propelled by oars and is very maneuverable in rivers. So, while the chebek described by Herold could easily be included within Elgood's description, the galley seems far-fetched.

Picking up from the trouble with navigation on the Nile and switching back to the land force, Napoleon's forces finally met their Mamluk adversaries on July 13\textsuperscript{th}, 1798. However, before any confrontation started, Napoleon received unexpected news in the form of cannon fire. This cannon fire signaled that the French flotilla had met with the Ottoman-Egyptian flotilla in combat ahead of schedule. By the account of Elgood,

His [Napoleon's] instructions to that officer [Perree] had been very precise: the flotilla was to keep in touch with the division marching on the bank, and to conform with its movements. But the command[er]‘in-chief had not taken into account the difficulty of river navigation in a high following wind. That morning it blew hard from the north, and the sloops had either to run before the breeze or drag ashore. Perree chose the first as the lesser of the two evils and the three leading vessels sailed headlong into an ambush. Off Shubrakhit lay a hostile flotilla commanded by one Nikola, a Greek. Nikola was the naval adviser of Murad Bey, the leader of the Mamluk forces in Egypt. He knew the rig and cut of every native boat on the Nile, their capacity, and rate of sailing, and collecting a dozen of the largest and fastest he manned them with crews of stout-hearted Arabs and negroes and sailed down to Shubra Khit.\footnote{Elgood, \textit{Bonaparte's adventure in Egypt}, 109-110.}

Like the details of the makeup of the French flotilla, the details of the battle between Nikola's flotilla and the French flotilla are riddled with inconsistency. Returning to the question as to why some accounts include more fighting vessels in the French flotilla, Elgood's account states “Perree's foremost sloop walked into the trap. The land batteries swept its decks. Nikola's vessels surrounded the wreck, and a boarding party killed or flung into the river the survivors. Leaving the victims to float helplessly downstream.”\footnote{Ibid., 109.} Going back to Herold's version of this account, this would only leave one “sloop” to fall into the Ottoman trap. The only boat that meets this criterion is the chebek known as Le Cerf.\footnote{Ibid., 110.} However, looking back at this account, the sloop that was ambushed was completely defeated and captured before...
the rest of the French flotilla could respond. The weakness of Le Cerf as a candidate rests on the fact that Peree was known to have been on board Le Cerf. In addition, Le Cerf is known to have played an active role in the later stages of the engagement, surviving the ordeal.

Taking this into account, the chance of the French flotilla including a galley is rather low. One possible explanation for this confusion is that the “galley” described by Herold was actually another chebek. As Paul Strathern points out, chebeks could sometimes be operated by oars as well as strong sails. Tuncay Zorlu also supports this description saying that “Although the sebek was characterized by oars and oar-benches, its great reputation was for its qualities as a sailing vessel, usually lateen rigged in full, but often after about 1750, incorporating square rig.”

Moving back to the actual battle, after the ambush occurred, the French flotilla quickly readied for an engagement after losing one of their ships. Elgood notes that Nikola, confident in his ambush, rushed ahead of his cover fire from the side of the Nile and fought the French flotilla on equal terms. Before the ambush, the ship count between the forces added up to 7 gunboats in Nikola's fleet versus 3 gunboats and two cebeks in the French Flotilla. With one French sloop already sunk, their Flotilla was dangerously outnumbered.

The battle quickly escalated into hand-to-hand combat among members of the French flotilla that were boarded by Nikola's crew. Due to the nature of naval warfare during the Napoleonic era, sinking ships was more difficult and less rewarding than killing its occupants and capturing the ship. In order to sink a ship, artillery needed to pierce the hull below the waterline. This kind of shot was very hard to hit compared to striking the part above water or the masts. Instead, the general tactics varied from firing upon the mast to immobilize and board a ship to firing upon the hull to injure crew members with showers of splinters. In the case of the ambushed ship, it was most likely immobilized by enemy fire and ravaged on

the deck. Once boarded, the assailants proceeded to fight all survivors inside the hull in hand-to-hand combat.\textsuperscript{371}

With the battle commenced, accounts vary as to how dire of a situation the French flotilla was in. In all accounts, Perree sends a message to Napoleon requesting immediate backup, implying that they felt outmatched. However, a disagreement again arises as to how much the flotilla actually needed reinforcements. According to Elgood, due to a number of cavalry soldiers being held in the flotilla, the French flotilla actually had an advantage in hand-to-hand combat over the invading Ottoman sailors. Going even further, Elgood describes the battle as “already clear when Nikola's powder barge caught on fire and blew up.”\textsuperscript{372}

Another account of this event comes from Herold who describes the battle through the eyes of Citizen Berthollet, an eminent chemist aboard the French flotilla. Berthollet had just been about to fill his pockets with heavy metals in order to drown himself when “Le Cerf scored a hit on the Mameluke flagship, which carried some ammunition.”\textsuperscript{373} As a result of the explosion, Herold describes both Nikola's flotilla and the Mamluk's cavalry as running away in panic at the sound. Like Elgood, Herold also proclaims the nautical battle of Shubra Khit as an underdog victory for the French Flotilla without any assistance from Napoleon's ground forces.

On the other side of the spectrum, Louis Antoine Faivelet de Bourrienne's description of the event is completely different. Like the previous descriptions, the French flotilla starts the battle by being ambushed and boarded. However, unlike the previous two accounts, Bourrienne never describes any sort of turn around event for the French flotilla. In fact his description that “the Turks were doing us more harm than we were doing them” and that “if it did not make a move to the left,

\textsuperscript{372} Elgood, Bonaparte's adventure in Egypt, 110.
\textsuperscript{373} Herold Bonaparte in Egypt, 93.
there would be no hope for us” seems to indicate little hope for the flotilla to overcome its adversaries.\(^{374}\) Bourrienne’s account of the explosion also differs from Herold and Elgood’s. According the Bourrienne, the main significance of the explosion among the Turkish ammunition supply was that it alarmed Napoleon enough to make haste towards the bank of the Nile. Upon seeing that the flotilla was being relieved, Nikola’s fleet wisely turned around retreated up the Nile.

Having reviewed the chronology and context of the Battle of Shubra Khit, we can now go back to the original questions: was the battle of Shubra Khit really a decisive French victory if the French flotilla suffered greater losses than the Ottoman fleet? Taking into account that the Mamluk cavalry fled the battlefield before a decisive engagement could be made on land, the bulk of the battle of Shubra Khit was the French Flotilla struggling to fend off an impressive ambush by the Ottoman navy. So, why was the Ottoman navy so successful?

Looking back at the state of the Ottoman Navy, they had no significant disadvantage in terms of technology against the French Flotilla. In fact, the gunboats that the Ottomans were using were built from French design plans during the beginning of Selim III’s reign in 1790, just 8 years before the battle.\(^{375}\) Besides having similar vessels, the Ottomans also had a numerical advantage in terms of boats. With one sloop being captured before a full engagement started, the Ottoman flotilla was twice the size of the French Flotilla’s.

From another viewpoint, it is important not to ignore the importance of tactics and luck in naval battles during the age of sail. Nelson’s complete victory against the main French fleet shortly after the battle of Shubra Khit emphasizes the power of surprise and superior tactics against greater numbers and technology. In the case of the Battle of Shubra Khit the French flotilla floated right into a trap giving the Ottoman flotilla an immediate advantage. Instead of waiting for support

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\(^{375}\) Zorlu, *Innovation and empire in Turkey*, 129.
from Napoleon, the soldiers, scientists, and doctors aboard the Flotilla were forced into fierce hand-to-hand combat against a group of trained Ottoman sailors.

We do not know which of the varying accounts of the retreat of the Ottoman Flotilla is true, but Bourrienne's seems the most plausible. The idea of a highly trained Ottoman gunboat crew being so terrified of an explosion that they immediately flee an advantageous situation seems highly doubtful. Over 1500 artillery shots were fired during the battle of Shubra Khit one big explosion would most likely not scare thousands of highly trained warriors and sailors away.

In conclusion, the battle of Shubra Khit is often considered the first of many one-sided battles against the Egyptians and their Ottoman neighbors, and the outdated tactics and complete defeat of the Mamluk cavalry charge often overshadows the strength of the Ottoman Navy. In reality, the Ottoman Empire had gone to great lengths to keep up with its European counterparts during the 18th century after having lost territory to both the Venetians and Russians. The Ottomans had a significant advantage over the French Flotilla mainly due to their greater numbers and successful ambush due to the French Flotilla's carelessness.

While it is tempting to label an entire nation as being in decline for multiple centuries, it is important to realize that the Ottoman Empire was as diverse in its ideology as it was in its culture. Rulers such a Selim III serve as a reminder that the course of an empire can change dramatically with one eccentric or passionate leader. The same can be said for weak rulers. The easy view of Ottoman history will say that they never had a chance at competing with France and Great Britain at sea. However, the battle of Shubra Khit is a reminder that the Ottoman Empire was still alive and an active competitor in world affairs.
The Causes of Napoleon Bonaparte’s Loss at Waterloo 1815

Eric Huh

Abstract

There is much controversy surrounding the Battle of Waterloo, specifically how Napoleon came to be defeated. I argue that the main cause of Napoleon’s loss was not solely due to any strategic or tactical failure on his part, but by outside elements that severely harmed his ability to wage war. The purpose of this paper is not to present a play by play account of the Waterloo Campaign or to claim that I myself am an expert in military affairs. Instead, this paper seeks to understand the causes of Napoleon’s loss at Waterloo by analyzing the battle’s key moments and applying my thesis of the influence external factors had on these said specific moments and how they affected Napoleon’s army the most. I do not attempt to note every significant moment of the battle, but rather I use important events as examples to support my argument that outside elements had much to do with Napoleon’s defeat (This is done also to avoid redundancy of stating the same supporting argument over again). Thus, this paper will primarily examine the battle from the French perspective. By doing so, I hope to paint a clearer picture regarding this historic battle.

Introduction

Lead balls and canister shots fly through the air, viciously ripping apart the French Imperial Guard infantry. With a raise of the hat, Wellington signals his entire army to advance. The Imperial Guard, the elite of the French Grande Armée, was trained to stand their ground no matter the cost. Then the unthinkable occurs: the Imperial Guard panics and retreats. Napoleon’s heart sinks. His more than a decade long campaign to conquer Europe was now at a decisive end brought by his defeat at Waterloo, Belgium. The
combined efforts of Wellington’s Anglo-Allied and Blücher’s Prussian forces were just enough to break the ambitious Emperor’s army. In examining such a legendary battle, one must ask, what actions and series of events led to such a historic outcome? How did a military titan such as Napoleon fall? I argue that the major causes for his defeat at the Battle of Waterloo were not solely due to his faults as a leader but largely from outside forces that considerably influenced the outcome.

The importance of strategy and tactics cannot be understated when studying the Battle of Waterloo. As military historian Jonathon Riley states, “Strategy is the science of war: it produces the overall plans and it assumes responsibility for the general course of military enterprises ... Tactics is the art of war: it teaches the way in which major military projects should be put into execution.”376 In the case of Napoleon Bonaparte, he excelled in both fields. There is little wonder as to why the name “Napoleonic Wars” exists. Throughout the majority of the early nineteenth-century, Napoleon ruled the battlefield, using superior strategic and tactical planning over his enemies. The most notable of these examples include the Battle of Austerlitz 1805 in which Napoleon decimated Austrian and Russian forces at Pratzen Heights, by deception and flanking maneuvers.377 However, by 1815, Napoleon’s military prowess alone would prove to be insufficient to win the final battle of his campaign. Despite his skillful use of both strategy and tactics, Napoleon would still lose the Battle of Waterloo, due in large part to elements outside of his control.

Perhaps even more significant than strategic and tactical planning is the wide variety of external factors that influence the setting of battles. A commander could have superior numbers in his forces, possess the latest technology, and formulate the best battle plan, yet this could all be made inconsequential by the dominating influence of outside forces. This became especially apparent at the

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Battle of Waterloo. Environmental factors often have a heavy hand to play in any combat scenario, as they dictate the physical obstacles for military forces. This includes the effects of weather and terrain on the mobility and cover of the combatants. Additionally, the competence and leadership skills of the commanding officers impact how and when military engagements take place. A general may have the perfect plan, but ultimately it is up to his officers to execute the plan. He cannot be in all places at once. Also, the overall status of the military force itself determines its capabilities in combat. For instance, lack of sleep or hunger will make soldiers less likely to carry out orders in a cohesive manner. Lastly, the tactics, strategies, and positions of enemy forces determine the exact approach a general must take to ensure victory. At times, an enemy’s advantageous position or superior tactics can tip the balance in his favor.

When these factors are combined, the realities of warfare become clearer. Strategy and tactics must work under the circumstances of external forces. A shift in one outside element can have drastic results on the field of battle, forcing even the most well laid plans to adapt. However, questions still remain. Which key outside forces had the most impact at the Battle of Waterloo? Were Napoleon’s tactics and strategies weak?

**Historiographical Debate**

Few events in world history are surrounded by the same level of debate and controversy as the factors that led to the Battle of Waterloo's outcome. Historians from all over the world offer different, often conflicting perspectives and theories. There exist three main schools of thought concerning Waterloo’s conclusion. In the first view, historians claim that the French loss at Waterloo was a direct result of Napoleon’s own leadership blunder and inferior methods of warfare. The second argument claims that Napoleon was defeated mainly due to the superior strategy and tactics of his enemies, the Prussians and Anglo-Allies. Lastly, the third perspective asserts the notion that Napoleon’s loss at Waterloo resulted chiefly not
from his own faults, but from outside forces that heavily influenced his ability to
defeat Napoleon at Waterloo.

For some historians, Napoleon’s own incompetence in combat, namely errors
in tactical and strategic ability, was what led to his downfall in the Battle of
Waterloo. In *The Battle of Waterloo*, Jeremy Black states his belief that “the French
did not display any learning curve in dealing with the British.” He goes on to
claim, “Napoleon’s situational awareness was very poor. This weakness not only
was due to poor intelligence but was a product of a more serious failure in his
understanding, namely his inability to appreciate the strengths of both the British
and the Prussians”. Historian Owen Connelly agrees with this notion, overtly
criticizing Napoleon as having skill in “scrambling, not in carrying out a
preconceived plan”. While these claims are argued well and provide much insight
in Napoleon’s tactical mindset, they are largely inaccurate in the context of
Waterloo. When examining the events of the battle, it becomes clear that Napoleon’s
strategies and tactics were generally sound. Napoleon had proven himself quite the
skillful commander in 1815, the most notable example being the early stages of the
Waterloo Campaign in which he forced both Anglo-Allied and Prussian forces to
retreat at Quatre Bras and Ligny. The majority of his military failures at Waterloo
stemmed from his officers’ inability to achieve his goals. If the major faults in
Napoleon’s methods did not bring about his loss, what did? A closer study of the
Battle of Waterloo reveals that Napoleon performed to the best of his ability given
the circumstances, but eventually lost due to the unforeseen contingencies that
hindered his war fighting capabilities such as incompetent officers and
environmental conditions.

Many historians argue that Napoleon was defeated almost entirely by the

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380 Owen Connelly, *Blundering to Glory: Napoleon’s Military Campaigns* (Wilmington,
superb strategies and tactics of his enemies, either by the Anglo-Allied or Prussian forces. The majority of these assertions are heavily biased and take stances based upon strong nationalistic backgrounds. For instance, Peter Hofschrorer is famous for his claim that Waterloo was a Prussian victory, not a British one. Had the Prussians not arrived at the critical time to provide reinforcements for the battered British, the Battle of Waterloo could have easily gone to Napoleon.\textsuperscript{381} In contrast to this, Jeremy Black claims it as a primarily British victory, citing Wellington’s higher troop quality and superior tactics. Specifically, Black notes in \textit{The Battle of Waterloo} that the well-disciplined British infantry and the brilliantly executed defensive tactics of Wellington were what won the day, while downplaying the roles of the allied forces such as the Prussians and Dutch.\textsuperscript{382} Perhaps David Chandler summarized this nationalistic debate perfectly,

\begin{quote}
In Great Britain, many a history book vastly exaggerates the British role in the campaign and battle: Belgians, Dutch and Hanoverians – who accounted for almost two-thirds of the Allied manpower – often go unmentioned, and the Prussian intervention is played down in importance. Germans, on the other hand, sometimes represent the whole campaign as having been borne on the backs of the Prussian army, Wellington being accused of failing to come to Blücher’s aid at Ligny on the 16\textsuperscript{th} ….\textsuperscript{383}
\end{quote}

Both sides can correctly argue that Napoleon’s enemies during Waterloo, to a degree, had greater tactics, however to say that this alone lead to his downfall is an inaccurate claim. As later elaborated in this essay, the circumstances at Waterloo

\begin{footnotesize}
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\item \textsuperscript{381} Peter Hofschrorer, \textit{1815 The Waterloo Campaign: The German Victory} (London: Greenhill Books, 1999).
\item \textsuperscript{382} Black, \textit{The Battle of Waterloo}, 43-44, 153.
\end{itemize}
\end{footnotesize}
favored the tactics and strategies of Napoleon’s enemies while proving to be detrimental to his own.

In the third Waterloo argument, historians affirm that outside forces were the chief cause of Napoleon’s loss, not in his faults as a commander or in the supposed, inherent superiority of tactics by the Coalition forces. S.G. Rosenbaum concludes that “Waterloo was not lost because of errors in military technique. It is, therefore, quite possible for a layman to examine the elements that entered into Napoleon’s great disaster and to estimate their relative force.” Watson supports this notion, stating that the physical disadvantages the French army suffered such as the lack of food and hilly terrain placed many difficulties on their ability to fight. Even the extreme critic of Napoleon’s methods, Owen Connelly, cites that Napoleon lost due to being outnumbered, having his army staffed by incompetent officers, and that on perhaps that day, Wellington was the better general. Jac Weller further reinforces this argument, stating, “The Emperor in taking the offensive against superior forces well commanded needed not only a good plan, but nearly flawless execution at all levels ... The French plan was good, but the execution was far from perfect.” Simply put, Napoleon’s dramatic defeat at Waterloo cannot be attributed to his tactical and strategic errors alone. This view on the battle is perhaps the most accurate and appropriate explanation as it takes into account not only the capabilities of the participants at Waterloo but also how contingencies affect these capabilities.

In reality, no one factor is the sole cause of Napoleon’s downfall at Waterloo. All of the above arguments hold some merit. In regards to the nationalistic arguments between the British and German perspectives, both are correct. Wellington’s superb defensive tactics and use of terrain combined with the arrival of

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Blücher’s reinforcements at a critical moment of the battle are what eventually defeated the French army. Had either one party faltered in their role, Napoleon may very well have been the victor that day. In terms of tactics and strategy, Napoleon did indeed have his faults. His errors in decision making and use of frontal attacks on the Allied forces would prove fatal for him. But to chiefly place blame on Napoleon’s ability to formulate effective battle plans or to claim that the military skill of his enemies alone led to his downfall is just as flawed. Those that oppose these views are correct in recognizing the physical obstacles, the inferior numbers of troops, the circumstances that aided in the Coalition’s tactical abilities, and the mistakes of commanding officers all affected how Napoleon’s Grande Armée fought. Clearly, the primary factors that lead to Napoleon Bonaparte’s decisive defeat at the Battle of Waterloo were not a major error in either his tactics or strategy, but rather the external forces that were beyond his control. The adverse environmental conditions, the weak state of his army, the incompetence of his officers, and the superior tactics of his enemies all forced Napoleon to wage war from a disadvantageous position and eventually led to his demise.

An Overview of the Battle of Waterloo

Prior to the events of Waterloo, Napoleon had been defeated in 1814, forced to renounce the thrones of France and Italy to the armies of the Coalition and sent to exile on the island of Elba. After a year, Napoleon would escape his prison in February 1815 with about a thousand of his loyal men. Upon reaching Paris, Napoleon quickly rallied his forces and retook power over France. The whole of Europe became alarmed as Napoleon now sought to reconquer the continent once more. Thus, the Coalition forces declared war, not on the nation of France, but on Napoleon himself. As events unfolded, the French Grande Armée would meet the Coalition’s forces at Waterloo, Belgium on June 18th 1815, where the fate of Europe would be determined by one last Napoleonic battle.

The battle consisted of three armies clashing in one of history's most iconic military engagements. The belligerents consisted of the French army and the Coalition forces of the Anglo-Allies and Prussians. The French, led by the self-proclaimed Emperor Napoleon Bonaparte, wielded a well-balanced military force. The Grande Armée consisted of three main corps (the Imperial Guard, I, II), each with their own battalions of infantry, cavalry, and artillery. These were supported by a reserve corps (VI) and two reserve heavy cavalry corps (III, IV). At the time of Waterloo, Napoleon's forces totaled approximately 107,500 men, this included infantry, cavalry, artillery, and support staff. However, nearly a third of Napoleon's entire army (30,000) was with his subordinate officer, Marshall Grouchy, at Wavre attempting to stop the Prussians from regrouping with the British. This left Napoleon 77,500 troops to deal with the British at Waterloo. The Anglo-Allied forces, under the British Commander Arthur Wellesley, (better known as the Duke of Wellington) numbered at 73,200, slightly less than Napoleon's numbers. Wellington's army consisted of a mixture of greenhorn and veteran soldiers, all of different nationalities including Dutch, German, Nassau, Brunswick, Henoverian, and Belgian ethnicities. The Prussian forces under Gebhard Leberecht von Blücher was comprised of three corps (I, II, IV) and numbered at a mere 49,000. However, this combined with the Anglo-Allied forces easily put Napoleon's army at a numerical disadvantage, something he attempted to prevent from happening throughout the Waterloo Campaign.

On June 16th, 1815, Napoleon would engage in two major battles with the Anglo-Allied and Prussian forces that would largely influence the outcome of Waterloo. His forces were split into two, one half at Ligny under his own command and the other at Quatre Bras under the command of Marshall Ney. While Napoleon was able to hold off both Coalition armies, he did not achieve a decisive blow to

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390 Ibid., 53.
391 Ibid., 37-38.
392 Ibid., 65.
either Wellington or Blücher. Instead, Ney managed to fight Wellington’s army to a standstill at Quatre Bras while Napoleon defeated Blücher at Ligny, forcing the Prussians into a desperate retreat. This allowed for Wellington’s forces to establish a strong defense at Waterloo and for Blücher’s forces to fight another day.

The Battle of Waterloo would commence midday on June 18th 1815. Napoleon now faced Wellington’s Anglo-Allied army at Waterloo itself, in an all out display of artillery, infantry, and cavalry combat. The remainder of the French forces under Marshall Grouchy was tasked to hunt down Blücher’s Prussian forces at Wavre in order to prevent them from reinforcing Wellington’s army. For much of the battle, Napoleon would employ a strategy of direct and aggressive attacks through the use of heavy artillery and frontal attacks. However, fate would be against him on this day. Marshall Ney would impulsively order an unsupported cavalry charge into the center of Wellington’s infantry, causing many French casualties. This, coupled with Prince Jerome’s (Napoleon’s youngest brother) costly diversion attack at the British held farmhouse of Hougoumont, would deplete much of the French army’s numbers. When Blücher’s forces, not Grouchy’s, arrived to the scene of Waterloo, Napoleon’s forces were now at a numerical disadvantage. At this moment, Napoleon became desperate, lying to his men that Grouchy’s troops had arrived in order to boost morale and ordering his elite Imperial Guard Corps to make a frontal attack in a last ditch effort to break Wellington’s lines. Using the tall, hilly ridge to his advantage, Wellington ordered the majority of his forces to lie prone, effectively hiding them from the French. When the time came, Wellington waved his hat to signal his troops to stand up and surprise attack the Imperial Guard, forcing an unheard of retreat. The advancing Anglo-Allied forces, the attacks from the Prussian army to the French right flank, and the lack of support from Grouchy’s men in combination compelled Napoleon to

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395 Ibid., 336.
396 Ibid., 391-392.
retreat. As a result, he would lose the Battle of Waterloo and his once powerful grip on Europe forever.

An Overview of Napoleon’s Strategy and Tactics

For Napoleon Bonaparte, offense was everything. He always sought to crush his enemies in a constant barrage of attacks. This allowed him to seize the initiative, set the tempo in battle and force his opponents to fight on his terms. Jonathon Riley notes that “Napoleon’s foremost strategic objective was to destroy the enemy’s army in battle, and thus break his opponent’s will to resist.”[^397] In practice, this was often achieved by pinning an enemy force and using another body of his army to flank an exposed area, all through the use of a “massive combination of artillery fire, infantry attack, and cavalry exploitation.”[^398] Such offensive movements were achieved by the rapid mobility of his troops, which forced his enemies to react to his actions.[^399] This display of constant attack is reflected further in Napoleon’s tactics in the field.

The infantry is the essential backbone of any army. While the artillery and cavalry could attack objectives, only the infantry could take and hold objectives. Common infantry tactics used at Waterloo were the column, line, and square formations. The column placed the marching infantry units in long lines, greater in length than width. This provided the tactical value of increased mobility in attacking and increased flexibility in switching to other formations. When firing upon enemy forces, the infantry could easily change into a line formation, which presented the units in a wide arrangement with the troops being placed longer in width than length. This allowed for the maximum firepower of the muskets to be employed all at once. If presented by a cavalry attack, the infantry could just as easily switch into a square defensive formation.[^400]

[^398]: Ibid., 58.
[^399]: Ibid., 59.
The cavalry in Napoleon’s army consisted of both heavy and light variants. The heavy were made up of cuirassiers, lancers, dragoons, horse grenadiers, and carabineers. Armed with lances and sabres, they were tasked with breaking the lines of infantrymen through mass charges.\textsuperscript{401} In the case of the light cavalry — hussars, light dragoons, and \textit{chasseurs} — the objective was to scout, pursue, and secure the rear.\textsuperscript{402} Cavalry units were also effective against retreating infantry.\textsuperscript{403}

The artillery was Napoleon’s pride and joy of the entire army. The main purpose was to soften up targets with a variety of devastating ammunition in order to allow infantry and cavalry to attack with greater ease. Artillery pieces in the French army consisted of 6-pounders, 12-pounders, 6-inch howitzers, and 5.5-inch howitzers, all of which drew from round shot, canister, and shell ammunition.\textsuperscript{404} Round shot, a large lead ball, was fired out of cannons primarily to destroy fortifications and personnel at longer ranges. The ball could ricochet off the ground, creating even more carnage.\textsuperscript{405} Canister shot was also fired from cannon and was used against close range infantry. Since this ammunition was made up of a tin can filled with musket balls, it functioned like a “shotgun”, spreading out lead balls in order to inflict multiple causalities.\textsuperscript{406} Lastly, shell ammunition was fired by howitzers and targeted formations of troops as well as structures. It comprised of a hollowed out cast-iron shell, filled with black powder, and attached to a fuse. If fired correctly, the shell would explode.\textsuperscript{407}

The correct use of these strategies and tactics were what often allowed Napoleon to win his battles throughout the Napoleonic Wars. At the Battle of Waterloo, however, this was simply not enough to win the day. Errors in both

\textsuperscript{401} Riley, \textit{Napoleon as a General}, 83.
\textsuperscript{402} Ibid., 83.
\textsuperscript{404} Adkin, \textit{The Waterloo Companion}, 296.
\textsuperscript{406} Ibid., 94.
\textsuperscript{407} Ibid., 94.
categories were made, but not solely by Napoleon’s doing. As stated before, when campaign strategies and battlefield tactics are put under the stress of external factors, terrible mistakes inevitably occur.

**The Lack of a Decisive Victory at Ligny and Quarte Bras**

While the Battle of Waterloo itself took place in June 18\(^\text{th}\) 1815, the events that occurred two days prior drastically influenced the result. Napoleon’s army was drastically outnumbered by the combined might of the Anglo-Allied and Prussian forces. Knowing this, Napoleon realized he must attack first and with speed. The option of playing defense was suicide, as it would merely delay the inevitable. Thus, Napoleon employed his strategy of central position, which was a maneuver “designed to separate the various enemy forces and destroy them by producing local superiority in a series of strikes against scattered adversaries, rather than one crushing blow.”\(^408\) He split his forces between Marshal Ney commanding the left wing to confront Wellington’s Anglo-Allied forces at Quatre Bras and Marshal Grouchy to confront Blücher’s Prussian forces at Ligny.\(^409\) Under Grouchy’s command were the infantry corps of Vandamme and Gerard and cavalry corps of Pajol and Exelmans. Ney’s command, meanwhile, contained the infantry corps of Reille and d’Erlon and the cavalry corps of Kellermann.\(^410\)

Ney was given a direct order from Napoleon to “unite the corps of Counts Reille and d’Erlon, and that of the Count of Valmy [Kellermann] ... with these forces you ought to be able to beat and destroy any force of the enemy which you may meet” and later order added that he was to take position at Quatre Bras.\(^411\) However, Ney did neither. Instead he did the exact opposite of what was expected of him by “ordering Reille’s corps to proceed to Quatre Bras, three divisions of

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\(^408\) Riley, *Napoleon as a General*, 61.
\(^410\) Peter Hofschröer, *Waterloo, 1815 : Quatre Bras & Ligny* (Barnsley : Pen & Sword Military, 2005), 44.
d’Erlon’s corps to take position at Frasnes, and two divisions of Valmy’s corps to do the same at Frasnes and Liberchies.” Ney thought it to be inadvisable to place all of his forces in one area, but to have d’Erlon’s infantry back at Frasnes as a reserve while Reille’s infantry progressed to Quatre Bras. This would have harmful consequences once the battle with Wellington’s forces began. Initially, the battle tipped to Ney, but as time progressed, Wellington’s forces grew in numbers from reinforcements. The roles became reversed, Ney’s single infantry corps was now forced to fight a defensive battle — again, the exact opposite of what Napoleon intended. It was at this moment that Marshal Ney needed the support of d’Erlon’s corps the most.

Meanwhile at Ligny, Napoleon and Grouchy were fairing much better with the Prussians. While doing battle with Blücher, Napoleon devised a plan. Realizing the futility of a partial victory over the Anglo-Allies or Prussians, Napoleon decided then that Ney should keep Wellington’s forces at bay long enough for his own army to crush Blücher for good. However, he lacked the sufficient manpower to do so. Napoleon too, required the assistance of Marshal d’Erlon.

It is at this point that conflicting historical accounts regarding the communication mishap between Ney, Napoleon, and d’Erlon appear. Whichever version is correct, the same basic events occurred: both Ney and Napoleon requested d’Erlon’s immediate assistance at varying times. Neither Napoleon nor Ney knew of each other’s orders. Due to this, d’Erlon aimlessly meandered between Ligny and Quarte Bras without his forces firing a shot. This error in communication would prevent d’Erlon from giving aid to either battle. Rosenbaum correctly concludes that, if the 20,000 men under [d’Erlon’s] command had been thrown against Blücher’s wavering line, it would be impossible for the Prussians to rally in time to join Wellington at Waterloo … Napoleon could then have turned upon Wellington

413 Ibid., 23.
414 Ibid., 26.
415 Ibid., 31-32.
and completed his triumph. On the other hand, if d’Erlon had employed his corps against Wellington, Ney would have been able to score a decisive victory at Quatre Bras, which would have placed Blücher at Napoleon’s mercy. Either way, Napoleon would have conquered and there would have been no battle at Waterloo.416

The lack of a decisive victory at Ligny and Quatre Bras effectively eliminated Napoleon’s best chance to win Waterloo. While his strategy and tactics were sound, it was the incompetence of his subordinate officer, Marshal Ney and the unfortunate communication error with Marshal d’Erlon that ruined the execution. The blame can squarely be fixed on Ney, for disobeying Napoleon’s orders to unite his forces, which in turn weakened his hold at Quatre Bras and placed d’Erlon too far away for a direct line of communication to Napoleon. While the Prussians were defeated at Ligny, they were allowed to link up with Wellington’s army in the final moments of Waterloo, eventually crushing Napoleon’s forces.

Inability to Begin Attack on Wellington’s Forces Earlier

It is the morning of June 18\textsuperscript{th} 1815 in Waterloo, Belgium. On one side, Wellington’s Anglo-Allied army stands at the ready and the other, Napoleon’s Grande Armée sits idly by. Hours pass before the battle finally commences. Napoleon, originally intending to begin the assault on the Anglo-Allies early in the morning, initiates the attack at approximately 11:00 to 11:30 am.417 Why was there such a delay in Napoleon’s attack? Surely, he knew the consequences of allowing more time for the Prussians to regroup with the Allied army. This action also goes completely against Napoleon’s doctrine of constantly being on the offensive. The answers lie not with Napoleon decision making, but in the factors that affected it.

The common misconception (that to this day is still taught to the general audience) for the delay in Napoleon’s attack is that the weather and environmental conditions alone prevented him from doing so. The argument goes that the rain

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\textsuperscript{416} Ibid., 34.
\textsuperscript{417} Ibid., 81, 83-84.
\end{flushleft}
from the night before the battle caused the ground to become thick with mud, severely decreasing the mobility of Napoleon’s artillery and cavalry. Because his tactics relied heavily on fast moving and rapidly attacking units, Napoleon waited several hours until the mud dried in order to allow for this. Were it not for the rain, Napoleon could have used this precious time to begin the attack sooner and defeat Wellington before the Prussians arrived.\footnote{Ibid., 81.}

The more realistic answer is not as clear cut. The event of the rain itself is confirmed by nearly all accounts and its effects on the soldiers were real. Napoleon himself lists the unfavorable weather conditions as one of the several reasons why he lost Waterloo in a document written in St. Helena during his exile. In it, he claims, “If the weather had permitted the French army to maneuver on its terrain beginning at 4 am, the Anglo-Dutch army would have been cut up and scattered before 7 am: it would have lost everything.”\footnote{Napoleon I, \textit{The Mind of Napoleon. A Selection from his Written and Spoken Words}, trans. J. Christopher Herold (New York, London : Columbia University Press, 1961), 237.} However, the assertion that Napoleon waited a few hours for the ground to dry is questionable at best. This is an exaggeration because “if any worthwhile drying was to occur, several hours of summer sun were required, which, to all at Waterloo that morning, did not look likely.”\footnote{Adkin, \textit{The Waterloo Companion}, 414.} The probable cause for this postponed attack was also due to Napoleon’s army arriving late.\footnote{Ibid., 413.} The overall status of the troops was at an extreme low point, affecting not only the speed in which they marched to Waterloo but also their ability to fight. Jac Weller takes notice that,

\[\text{Napoleon’s armies were as bad as ever: in addition to three days of marching and fighting, the troops had to find most of their food. Finally, all weapons needed to be cleaned after the downpour of the afternoon and night before. An attack by a poorly concentrated, tired, hungry, and}\]

\footnote{418 Ibid., 81.  
421 Ibid., 413.}
inadequately armed army would have been worse than a delay.\textsuperscript{422}

Coupled with this, was Napoleon’s overconfidence that Blücher was still slowly recovering from the loss at Ligny and that Marshal Grouchy was well on his way in rooting him out.\textsuperscript{423} This false sense of comfort gave Napoleon the notion that time was on his side and could afford to delay the attack.

As it is known today, the arrival of the Prussian army at Waterloo would spell the end of Napoleon. In order to avert this loss, Napoleon would have had to make every hour count in his assault on Wellington’s army. His strategy of taking the offensive supports such an action, therefore making it viable plan. But at the morning of June 18\textsuperscript{th}, this was simply not an option. External factors of the rain, muddy ground, and the unhealthy state of his troops prevented the attack from commencing on time.

**Unsuccessful Attacks on Wellington’s Successful Defense**

Throughout the Battle of Waterloo, Wellington repelled a nearly endless onslaught of French army attacks, a testament to the genius of his defensive tactics. Napoleon’s inability to break the Anglo-Allied lines as seen by the ineffective preliminary artillery barrage, costly infantry assaults, and disastrous cavalry charges contributed to his eventual failure at Waterloo. At first glance, one would judge this a major fault in Napoleon’s tactical skill. Indeed, critics such as Owen Connelly would likely characterize Napoleon’s methods of attack as “hurried and unsophisticated.”\textsuperscript{424} However, upon closer examination, it is revealed that outside forces were at play. This simultaneously aided in Wellington’s defense and harmed Napoleon’s offense.

At the beginning of the battle, Napoleon deployed his “Grand Battery” to

\textsuperscript{422} Weller, *Wellington at Waterloo*, 193-194.  
\textsuperscript{423} Rosenbaum, *Loss of Waterloo*, 87.  
\textsuperscript{424} Connelly, *Blundering to Glory*, 202.
bombard the Anglo-Allied positions, but to little effect. The purpose of this artillery barrage, as reflected by Napoleon’s tactics, was to smash a hole in the enemy’s center, create disarray, shake the enemy’s morale, and to soften the enemy for subsequent troop attacks. However, despite nearly 30 minutes of uninterrupted artillery strikes, Napoleon has had little effect on the Anglo-Allied forces.  

Fortunately for Wellington, his forces were located on a hilly ridge. His troops were able to take cover behind the reverse slope position, significantly reducing Allied casualties. On top of this, the soft, soggy ground that formed from the rain easily absorbed the impact of ricocheting round shots and exploding shells. As depicted in the documentary series, *Battlefield Detectives*, even a shell detonated at point blank range of a target was unable to produce damage of any kind due to the soft ground.

Throughout the battle, Napoleon sought to break the Allied forces by infantry attacks to the center led by d’Erlon. The ineffective artillery barrage from before did little to aid d’Erlon’s advancing infantry. Napoleon’s tactics always called for the infantry or cavalry to be supported by artillery. While this was the case, the lack of any real damage by the artillery only left the infantry open for attack. To this day, d’Erlon’s choice of using column formation attacks against the Anglo-Allied line formation is heavily criticized. In regards to force on force contact, the critics are correct. The column’s distinct disadvantage stemmed from the decreased firepower capability. Only the first two rows of the formation could fire upon an enemy, whereas in a line, all troops are able to fire at once. But what factors led to the use of the column? As stated previously, the column offered the French the value of flexibility and mobility. It “permitted the commander to move large numbers of men over the battlefield more rapidly and with better control than had been possible with more rigid lines. In particular, the column could operate more effectively than

426 Ibid., 299.
427 “Massacre at Waterloo.” *Battlefield Detectives*. History Channel (USA: November 9, 2003).
the line in hill terrain.” As columns marched, they could easily switch to a different formation to match the varying incoming threats. However, the real issue came not with the ability to switch formations, but the timing of the switch. Changing from a column to a line formation mid-march required perfect timing. If it occurred too soon, the formation would slow down prematurely, have increased difficulty overcoming physical obstacles, and become disorganized. If it happened too late, the battalion was more likely to be destroyed by enemy fire. Additionally, the Allied forces again wielded the power of the terrain. The French “had to charge uphill over miry ground. The English were stationary on the crest, excepting when they charged, and then they charged downhill.” Napoleon’s infantry could not see past the ridge that hid many of Wellington’s forces until the very last minute.

The infamous cavalry charge by led by Marshal Ney would prove to be one of the most catastrophic endeavors by the French. Some controversy is placed on whether Napoleon or Ney ordered the charge, but most sources indicate it was indeed Ney’s command. He believed at the time that wounded Allied soldiers being moved to the back were retreating. Knowing that cavalry were the most effective against a retreating force, Ney thought an opportunity presented itself. He ordered 9,000 horsemen to attack in mass. What resulted was nothing short of a tactical blunder. Ney’s cavalry units were met with Wellington’s infantry in square formations. This tactic consisted of soldiers forming into block patterns that were essentially walls of bayonets pointing from all sides. The cavalry was effectively useless, as not one square was broken. This was due in large part to the horse’s psychological fear, refusing to charge into a small human fortress. British Lieutenant Colonel James Stanhope documented his first hand account of the

431 Watson, Waterloo, 15.
432 Ibid., 103.
433 Weller, Wellington at Waterloo, 198.
435 Ibid., 172-173.
436 Weller, Wellington at Waterloo, 110.
cavalry charge in a letter to the Duke of York, which stated, “When the French cavalry attacked us in squares (which they did with the most persevering gallantry, never retiring above 100 or 150 paces & charging again) our men behaved as if they were at a field day, firing by ranks & with the best possible aim ... not a man moved from his place”. 437 Another failure on the cavalry’s part was the fact they did not turn the overrun artillery pieces of the Allies against them. At least twelve times the French were in possession of the guns, but neither used them nor sabotaged them. 438

In the realm of tactics, Napoleon's efforts were simply not enough to make any form of significant impact against Wellington. Despite the constant attacks of Napoleon’s army, each was repelled from the main body of the Anglo-Allied forces. External elements such as the hilly terrain, soggy ground, incapable officers, and the superior defensive tactics of the enemy all drastically affected Napoleon’s own abilities to effectively engage in combat. By this end, Wellington was able to hold off Napoleon until the timely arrival of Blücher's Prussian reinforcements.

Conclusion

Napoleon looks across the vast ocean in his Longwood House at St. Helena. He now possesses no army, no status, and no power, only himself and the sound of the ocean waves. No doubt he asks himself, “How did victory escape my grasp? Where did it all go wrong?” Napoleon would have the next six years of his life to ponder these questions. For the rest of the world, a lifetime of historical speculation and debate attempting to answer these exact questions will define a large part of Napoleon’s legacy.

The loss at Waterloo meant the end of Napoleon’s military and political career, owing much of this to a series of his own mistakes in both strategy and

tactics. However, the impact of the various external factors that greatly influenced his ability to wage a successful war cannot be overlooked. The army he led, a shadow of its former self, was not the same one he used to win Austerlitz. His subordinate officers, while experienced, were unable to achieve his strategic goals. The environmental conditions, both in terrain and weather, hindered his mobility and in turn his ability to control the pace of combat. Finally, the strategy and tactics of his enemies, at least on the day of June 18th 1815, proved to be superior to his own. Napoleon Bonaparte will always be remembered for his genius in military campaigns and battlefield coordination, but it is important to also remember that even the best men are subject to elements they cannot control.
The Empress Dowager’s Role in the Reforms of 1898

Kimberly Black

Abstract

The Empress Dowager Cixi has been chastised in the historical record—she is accused of being an evil and ruthless leader. Some recent historical research, however, has challenged this representation. One blemish remaining on the Empress’ record is her role in ending the Hundred Days Reform of 1898 and ordering the executions of six men involved. By specifically re-examining the events and important players in the Hundred Days Reform, especially Kang Youwei, the Empress Dowager Cixi is once again redeemed.

Introduction

Crushed by consecutive wars with outside powers and riddled with internal strife, China found itself in a rather dismal and declining state during the nineteenth century. The first and second Opium Wars forced China’s borders open to the influence of the West.439 Living conditions were going from bad to worse. These hardships triggered both the Taiping and Nien rebellions, which were peasant-led resistance movements that ultimately failed.440 Due to these conditions, China had begun to attempt slight reforms under the Self-Strengthening Movement. These reform measures included military reform as well as sending select students abroad to learn about foreign

440 Chien Po-Tsan, Shao Hsun-Cheng, and Hu Hua, Concise History of China (Peking: Foreign Languages Press, 1964), 96-104.
institutions and practices.\textsuperscript{441} The Sino-Japanese War, however, was something very different – it was the final straw. Not only did this defeat shock the Chinese people, but it also proved the ineffectiveness of previous reforms. Losing to Western powers and submitting to humiliating treaties was bad enough, but Japan was seen as particularly inferior. This loss, therefore, was especially embarrassing and severely damaged the pride of the Chinese people. Although this was a disaster, it seemed that out of this calamity China had finally found an impetus to enact true, sweeping reforms.\textsuperscript{442}

The spring and summer months of 1898 are known as the Hundred Days Reform. During this time, the Emperor, taking the advice and guidance of reform-minded individuals, issued edict after edict, although this push for change ultimately failed.\textsuperscript{443} Many historians have studied these events in an attempt to understand what went wrong: why did China fail to modernize? Some blame the conservatives in government, including the Empress Dowager, and others blame the aggressive speed of the reforms. In just over a century since this event, the arguments made have been re-evaluated, revised, and even rejected. Even the most well-intentioned works, however, still represent the Empress Dowager Cixi in an extremely negative light. Regardless of whoever else is held responsible, she seems constantly to be a magnet for criticism—a focal point for condemnation. It is as though she alone must carry the burden of destroying China’s chance of modernization in 1898 and, thus, preventing the nation from reaching its potential. Yet, a closer look at the Hundred Days Reform, and the different historical debates surrounding it, creates a new picture. It becomes clear that the alleged hero of reform, Kang Youwei, was actually acting with ulterior motives. It was only these selfish goals that placed Kang in line with the Emperor and in opposition with the Dowager. The Empress Dowager, on the other hand, responded to Kang’s

\textsuperscript{441} Jack Gray, \textit{Rebellions and Revolutions: China from the 1800s to the 1980s} (New York: Oxford University Press, 1990), 102-125.
\textsuperscript{442} June Grasso, Jay Corrin, and Micheal Kort, \textit{Modernization and Revolution in China: From the Opium Wars to the Olympics} (Armond, NY: East Gate Publishing, 2009), 52-54.
\textsuperscript{443} Grasso, Corrin, and Kort, \textit{Modernization and Revolution in China}, 54-56.
questionable aspirations and corresponding actions in the only way appropriate for someone in her position.

The Hundred Days Reform – A Brief Background

Despite the failure of the Hundred Days Reform, it is seen as an important moment in Chinese history. It was the first real step toward modernization and the West. Although the reforms were never put into full effect, the mere act of issuing reforms has earned the Hundred Days a prominent place in Chinese memory.\(^{444}\) The classic narrative to explain why these reforms failed is that the Empress Dowager Cixi came out of retirement at the Summer Palace and stole back power from the reform-minded Emperor. Due to her alleged conservative tendencies, the Empress violently and vengefully crushed reform once she had usurped power. It is true that Empress Cixi had been residing at the Summer Palace during the Hundred Days and that her nephew, the Emperor, had at least nominal control. It is also true that once the Dowager returned to the Forbidden City, the Hundred Days Reform ended and many edicts were rescinded, therefore preventing certain reformers from accomplishing their goals. Leaders of reform, furthermore, were sentenced to death without trial— a fact that has led many historians to view the Empress as a merciless villain and reform leaders as martyrs. These details, as well as the hyperbolic writings of the reform leader Kang Youwei while in exile, have led many historians to represent the Hundred Days Reform in a black and white, good versus evil, paradigm, which ultimately is too simplistic and misleading.\(^{445}\)

Defending the Empress Dowager

Traditional historical opinions of the Empress have been colored by vicious

\(^{444}\) Roger R. Thompson, review of *Rethinking the 1898 Reform Period: Political and Cultural Change in Late Qing China* by Rebecca E. Karl and Peter Zarrow, *The China Quarterly*, No. 176 (Dec., 2003): 1112-1114.

rumors. Some of these rumors made Cixi out to be a murderer and others were even more debased—taking on sexual undertones. Kang Youwei “even implied that Li Lien-ying, who attended on her, was not a eunuch.” One writer, Sir Edmund Backhouse, falsified a diary and claimed Cixi authored it. This diary makes her seem threatening and combative, and it was subsequently quoted as fact. The Empress’ role in the Boxer Rebellion (which occurred after the Hundred Days Reform) has led historians to present the Empress as extremely xenophobic as well. Her level of participation and knowledge of the rebellion, however, has been questioned. It seems that the Empress actually tried to stop the Boxers once she truly understood the situation; she issued various edicts but unfortunately had little success.

Some historians have looked beyond the Empress’ political actions in order to present her in a more flattering light. These revised accounts highlight admirable qualities of her personality. By turning to sources such as Mrs. Conger and Princess Der Ling, historians have succeeded in proving that the Empress was not simply a heartless villain. Mrs. Conger, the American wife of a missionary in China, stated in a letter that when she was given an audience with the Empress, the Empress “was bright and happy and her face flowed with good will. There was no trace of cruelty to be seen.” Although the Empress could have been putting on a kind face for her guest, Princess Der Ling spent two years with the Dowager. Der Ling wrote a book recounting her experiences in the Imperial Court and, although she

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447 Grant Hayter-Menzies, *Imperial Masquerade: The Legend of Princess Der Ling* (Hong Kong: Hong Kong University Press, 2008), 163.
448 Chan, “Reformer as Conspirator,” 40.
identified herself as a foreigner, she thought of the Empress as a mother. She admits that the Empress had her moments of anger, but maintains that this anger was always justified. Der Ling even expresses a desire to return to the Imperial City.\footnote{Princess Der Ling, \textit{Two Years in the Forbidden City} (New York: Moffat, Yard and Company, 1911).} Other historians have drawn attention to the Empress’s love of calligraphy, but this especially is not a convincing reason to change the common perceptions of the Empress.\footnote{Yuhang and Zurndorfer, “Rethinking Empress Dowager Cixi through Production of Art.”} Cixi could certainly love calligraphy and even be kind to her allies, while still thwarting all progress in China by ruling with an iron fist.

A true defense of the Empress must encompass her political actions. In her new book, \textit{The Empress Dowager Cixi: The Concubine Who Launched Modern China}, Jung Chang examines previously untapped resources including diaries, letters, and eyewitness accounts pertaining to the Empress Dowager Cixi in order to construct a new image of the Empress as a political figure. Her book encompasses Cixi’s entire political career—thoroughly modifying the historical record.\footnote{Chang, \textit{The Empress Dowager Cixi}.} Even Jung Chang, however, cannot deny that when she resumed power, the Empress ordered the execution of six reform leaders without proper trials – Chang even asserts that two of these men were innocent victims.\footnote{Ibid., loc 4371.} By re-examining the motivations of the Empress and the figure of Kang Youwei, it becomes apparent that the Empress acted in the best way possible, not only for her own preservation but also for the preservation of her country.

\textbf{The Empress as a Reform Minded Leader}

Cixi is often presented as a conservative blockade, but she was not as clung to the past as these accounts suggest. The Dowager was intensely interested in new technology, especially Western technology. She established China’s first telegraph –
an essential improvement to communication technology.\textsuperscript{457} She also desired to travel by train even though her ministers were apprehensive.\textsuperscript{458} Cixi managed to build China’s first railroad despite opposition from conservatives in court.\textsuperscript{459} Furthermore, she was interested in photography. In Der Ling’s accounts, the Empress gets her picture taken over and over again and even insists on going into the dark room.\textsuperscript{460} As far as reform, as early as 1860 Cixi was already open to the idea.\textsuperscript{461} She encouraged educational reform in such subjects as math and astronomy.\textsuperscript{462} In order to facilitate a more Western education, she encouraged Chinese students to be sent abroad.\textsuperscript{463} Many of these early reforms were a part of the Self-Strengthening Movement. Her major ally in this reform was Li Hongzhang (also referred to as Earl Li), an official in the Imperial Court. Indeed, “The earl had by now emerged as the foremost moderniser of the country…. With [his] assistance, Cixi steadily, yet radically, pushed the empire toward modernity.”\textsuperscript{464} It is also important to note that one of the reforms Li championed was the removal, or at least revision, of the “hollow and ornamental” eight-legged essay.\textsuperscript{465} During the Hundred Days Reform, Kang Youwei would advocate again for this particular reform. Already it seems that Cixi’s motive for executing reform leaders could not have been the actual reforms they proposed.

It is clear that the Empress was actually a supporter of reform, and the Dowager was similarly favorable to the Hundred Days Reform. The Empress Dowager Cixi was in retirement before the Hundred Days. During this time,

\textsuperscript{457} Ibid., loc 2297.
\textsuperscript{459} Chang, The Empress Dowager Cixi, loc 2371.
\textsuperscript{460} Ling, Two Years in the Forbidden City.
\textsuperscript{463} Chang, The Empress Dowager Cixi, loc 2283.
\textsuperscript{464} Ibid., loc 2209.
\textsuperscript{465} Grasso, Corrin, and Kort, Modernization and Revolution in China, 52.
“Emperor Guangxu did nothing to follow up Cixi’s reforms, and let them lapse.”

Chung goes even further by arguing, “if Cixi had been in charge, she would never have allowed Japan to become superior in military hardware.” In fact, after the embarrassing loss in the Sino-Japanese War, “with the survival of his dynasty at stake, Emperor Guangxu turned to Cixi.” The reforms of 1898 were not passed despite her disapproval: the situation was quite the opposite. Well before Chang’s new book, historians consistently asserted that Cixi at least passively approved of the Hundred Days, asserting that, “The Dowager did not oppose reform at the outset. In fact, without her consent, the reform edicts could not have been issued.”

Furthermore, “there is no lack of evidence that she was not only well aware of most of what Guangxu was doing that spring and summer of 1898 but was supportive of reform.” Chang, however, goes further: she suggests the Dowager’s role was even larger than these historical narratives claim. She states that “altogether they spent more than two thirds of their time together” in order to prove that the Hundred Days Reform was—from the beginning—a collaborative effort between the Empress and her nephew.

The Anti-Dowager Plot: Controversy Resolved

Regardless of the Empress’s initial role in the reforms, in September 1898 the Dowager’s return to power signaled the end of the Hundred Days. She did not just relinquish her support of the movement, however, but executed the leaders of reform as a demonstration of this disapproval. What had changed? Although the reforms were made quickly, they were not excessively radical. Upon her return to the throne, the Empress claimed the reforms were breaking tradition in order to

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466 Chang, *The Empress Dowager Cixi*, loc 2870.
467 Ibid., loc 3361.
468 Ibid., loc 4001.
470 Hayter-Menzies, *Imperial Masquerade*, 70.
471 Chang, *The Empress Dowager Cixi*, loc 4014, 4036.
justify their reversal, but a closer study of the Empress’ actions while in power prove that she had no qualms about breaking tradition when it suited her own needs. Her appointment of the Emperor Guangxu, for example, went against traditional succession practices in China, but it helped her keep her own power and was thus acceptable.\textsuperscript{474} The accounts of Princess Der Ling, furthermore, exhibit moments when, in the presence of foreigners, the Empress broke traditional rules of the Imperial Court. For example, she allowed people to sit in her presence. This breach of tradition made the court ladies feel uncomfortable, but the Empress believed it would leave a better impression on her foreign guests.\textsuperscript{475} Additionally, the Princess’ accounts reveal that the Dowager used tradition as a convenient excuse. When the Empress was asked to sit for a portrait, she was hesitant because she did not know what a portrait was and what sitting for one would entail. She lied to the foreigners and told them that according to tradition she would have to ask her ministers for approval. This lie suited the Empress well because she could take time to think about the matter and then if she wanted to refuse she could do so without insult. This motivation she explicitly expressed to Der Ling.\textsuperscript{476} If the reforms were not that radical, and the Dowager presumably only used tradition as an excuse, then the most probable reason for the Empress’ actions in September of 1898 is the reformers’ plot against her. Many different people participated in the Hundred Days Reform, but only a select few – Kang Youwei and his friends - knew about this plot.

The Anti-Dowager Plot has attracted ample historical research. If this is the reason the Empress Dowager Cixi returned to power, it would explain why she was so unkind in her punishments and so determined to catch Kang, who escaped before the Empress could make him pay. There are several different versions of the plot, some say that the Empress would be murdered while others assert that she would only be imprisoned and stripped of her power. Luke Kwong, in his book, \textit{A Mosaic of}

\textsuperscript{474} Cameron, \textit{The Reform Movement in China}, 31.
\textsuperscript{475} Ling, \textit{Two Years in the Forbidden City}, 234.
\textsuperscript{476} Ibid., 214-215, 234, 201.
*Hundred Days Reform*, is skeptical of the plot entirely and points to some discrepancies. His strongest evidence is based on the timeline of events. The Dowager, he insists, arrived too early in the Forbidden City and therefore, “[the Dowager’s] decision to resume tutelage was not prompted by any knowledge of a plot.” Even this minority dissenter, however, admits that some kind of plot was definitely discussed, even if it was not yet ready to be executed. Kwong argues, “Whether T’an and Yuan actually talked about a forceful takeover of the Summer Palace remains a moot point.” T’an Sitong was a friend of Kang Youwei and involved in the plot. T’an is the one who revealed the plan to General Yuan Skikai—an ambitious military man who strategically befriended Kang’s people. Ultimately, Yuan sided with the Empress by warning her of the plot.

Historian Young-Tsu Wong responds to Kwong’s various arguments, including this particular argument about the Anti-Dowager Plot. He states, “We cannot consider the plot a ‘moot point,’ since Liang confirmed the plot in a secret correspondence to Kang...Liang’s secret letter has since unequivocally confirmed the plot.” (Liang Qichao was Kang’s student and right hand man during the Hundred Days.) Wong also revises the timeline of events to disprove Kwong’s statements. Wong’s work, similar to Chang’s book, looks at letters that reveal exactly when the Dowager learned of the plot against her. Kwong claims that “it is difficult to explain why, on learning of the conspiracy from Yuan, Jung-lu did not hasten to inform [the Dowager] of it.” Jung-lu was in charge of the military and was Cixi’s very powerful ally. Wong maintains that there is a letter in the Palace archives that “incidentally substantiates the possibility that Yuan disclosed the plots on September 19th. It can also explain why the Dowager rushed back to the

479 Ibid, 217.
480 Wong, “Revisionism Reconsidered,” 536.
Forbidden City on the evening of the same day.”

Wong’s evidence proves that the Empress learned of the plot earlier than Kwong believes, therefore solving the issue of her return.

It is clear that the plot did in fact exist, although the nature of the plot may be exaggerated in some accounts. Although Chang argues the plotters intended to murder the Empress, it seems more likely that the immediate plan was to kill only Cixi’s ally Jung-lu. Jung-lu was powerful because of his control of the army, but once this obstacle was gone the plotters could then imprison the Empress at the Summer Palace. In a discussion with Princess Der Ling, the Empress discusses the plot and maintains that it was only to imprison her – not to murder her. Chang claims that Cixi herself covered up the plot because she did not want the Emperor’s involvement to be revealed. The Empress does not suggest to Der Ling that the Emperor was involved, which is consistent with Chang’s argument. There is no reason, however, for Cixi to acknowledge the existence of the plot to Der Ling but disguise the murderous nature of it – if anything it would have strengthened her justification for executing the plotters and continuing to hunt down Kang. Regardless of whether or not Kang intended to have the Empress murdered right away, she clearly would have been vulnerable to eventual assassination if Kang had triumphed. This plot, therefore, threatened not just the Dowager’s power, but also her well-being. The only way for the Empress to guarantee her safety was to once again take the reigns of power.

The Empress and The Emperor - Contrasting Imperial Personalities

The Emperor and the Empress are often presented in opposition during the Hundred Days; the Emperor is presented as favorable to reform but constantly

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482 Wong, “Revisionism Reconsidered,” 537.
483 Chang, *The Empress Dowager Cixi*, loc 4219.
484 Ling, *Two Years in the Forbidden City*, 369-370.
overpowered by his ruthless and backwards aunt, the Empress.\textsuperscript{486} It appears that this could not be true since Cixi worked with the Emperor to enact reforms. There was, however, a major difference between these two leaders. The Empress Dowager Cixi was not just powerful but had remained powerful for decades. Her years of experience with court politics taught her how to deal with the rivalries she encountered. In order to gain power at all, the Empress had to out maneuver her enemy, Sushun. Before she was Empress, this prominent member of the Imperial Court was “the only man on the Board who had had some idea of Cixi’s intelligence, and he had wanted her killed.”\textsuperscript{487} Although this plan never went into action, Sushun did have Cixi’s young son and only male heir to the throne taken from her—a cruel measure to take against a new mother.\textsuperscript{488} Sushun hoped, in light of the Emperor’s ill health, to become regent in charge of the nation until Cixi’s son was old enough to rule. This would have weakened Cixi greatly, exposing her to further attack. The Empress, however, had already made valuable allies. Her supporters helped Cixi after the Emperor’s death and Sushun’s efforts were thwarted. Instead of a board of regents headed by Sushun, Cixi gained power as the Dowager.\textsuperscript{489} This episode was only the beginning of a long political career.

The Emperor, in terms of experience and influence, was nothing like his aunt. In 1898, the Emperor ruled in name only. He was a weak and inefficient ruler.\textsuperscript{490} He attempted to take control of government at the young age of twenty-six with little experience and inadequate training. Thus, “No part of his education would equip him to handle the modern world.”\textsuperscript{491} Some of his failures as a leader, such as not following through on Cixi’s earlier reform policies, have already been mentioned. Beyond his own inefficiencies, the emperor had to deal with the

\textsuperscript{486} Wong, “Revisionism Reconsidered,” 531, 533.  
\textsuperscript{487} Chang, \textit{The Empress Dowager Cixi}, loc 990.  
\textsuperscript{488} Keither Laidler, \textit{The Last Empress: The She-Dragon of China} (West Sussex: John Wiley & Sons, 2003), 100.  
\textsuperscript{489} Woo, “Empress Dowager Cixi,” 58.  
\textsuperscript{490} Cameron, \textit{Reform Movement in China}, 49.  
\textsuperscript{491} Chang, \textit{The Empress Dowager Cixi}, loc 2693.
Imperial Court; he was intelligent and had ambition but simply was not clever enough to manipulate court politics in his favor.\textsuperscript{492} It is true that the court was riddled with factions, and even the Empress was not as powerful as previous scholarship maintains. Cixi was forced to get information indirectly through various sources, and many of her actions were subject to this possibly inaccurate and even biased information.\textsuperscript{493} Furthermore, Princess Der Ling, whose stay at the Forbidden City was after the Empress’ return to power, noted that, “Her Majesty was not able to introduce reforms entirely alone, even though she might desire to do so, but had to consult with ministers.”\textsuperscript{494} Conger similarly asks, “how can this great Empire grow in strength and glory when her rulers are in such bondage?”\textsuperscript{495} It is clear that “to a great degree, both Cixi and her nephew, by virtue of their imperial rank, were always prisoners of their own court.”\textsuperscript{496}

The Empress, unlike her nephew, however, had the ability to maintain and exert power. For her, losing power was unacceptable.\textsuperscript{497} Her uncanny ability to exercise power despite these restrictions is perhaps why she was seen as a force constantly preventing the Emperor from exerting power. It seems that the truth of situation was that the Emperor was just significantly less adept at handling court politics in comparison with his aunt. Neither one was free from constraint, but the Empress had the experience and political savvy to still get what she wanted.\textsuperscript{498} The Empress’ power and support were, therefore, invaluable to the Hundred Days Reform. Kang Youwei and his friends, however, became inexplicably aligned with the emperor instead.

**Kang Youwei – A Hero Debunked**

\textsuperscript{492} Woo, *Empress Dowager Cixi*, 205.  
\textsuperscript{493} Kwong, *Mosaic of Reform*, 34-40.  
\textsuperscript{494} Ling, *Two Years in the Forbidden City*, 236.  
\textsuperscript{495} Conger, *Letters from China*, 43.  
\textsuperscript{496} Hayter-Menzies, *Imperial Masquerade*, 73.  
\textsuperscript{497} Laidler, *The Last Empress*, 137.  
\textsuperscript{498} Hayter-Menzies, *Imperial Masquerade*, 70.
Through the Anti-Dowager Plot, the Kang Youwei and his friends made an enemy out of a potentially important ally. Cixi’s immense influence in the Imperial Court was unmatched by anyone else, mostly notably her nephew. During the Self-Strengthening Movement, Li Hongzhang found himself in trouble but he had aligned himself with the Empress. Indeed, “It was said that only the personal intervention of the most powerful person in Beijing, the Empress Dowager Cixi, saved Li from losing his head.”

Not all of the reformers of the Hundred Days plotted against Cixi and those that did not were treated similarly to Li: their lives were spared, as were their reforms. For instance, Zhang Zhidong was a moderate reformer who proposed industrial and educational revamping in China. Zhang was not involved in the plot and actually appealed to the Dowager. In fact, “Despite the Empress Dowager Cixi’s suppression of the reforms, many of Zhang’s proposed social and educational changes were eventually implemented. Some of them even outlasted the Qing.”

Women’s education was another area of reform spared by the Empress. As an educated woman, this group of reformers used the Empress Dowager Cixi as a role model, which certainly (and intentionally) flattered her. These reforms were also allowed to continue, although they did not flourish.

Why did Kang Youwei and his friends choose to align themselves with someone as weak as the Emperor as opposed to the formidable Empress? In light of the fact that the Empress and Emperor initially worked together, why did Kang Youwei and his allies work against her at all? Did these leaders simply forget that “the events of 1898 were as much about power as they were about ideas?”

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499 Grasso, Corrin, and Kort, Modernization and Revolution in China, 52.
500 Cameron, Reform Movement in China, 39.
501 Tze-Ki Hon, “Zhang Zhidong’s Proposal for Reform: A New Reading of the Quanxue Pian” in Rebecca E. Karl and Peter Zarrow’s Rethinking the 1898 Reform Period Political and Cultural Change in the Late Qing China (Cambridge, MA: Harvard University Asia Center, 2002), 77-98, 79.
503 Thompson, review of Rethinking the 1898 Reform Period: Political and Cultural Change in Late Qing China, 1113.
shifting allegiances and power struggles, [Empress Dowager Cixi’s] support was invaluable.”

The reformers were not that foolish. In reality, Kang Youwei saw in the Emperor’s weakness something exploitable. Kang was a revolutionary-minded individual, but he desired revolution not to strengthen China, but to strengthen himself.

Although the reforms themselves were rather moderate, as stated earlier, they were made in very rapid succession. Some historians point to this rushed approach to reform as the cause of its failure. Unlike the Self-Strengthening reformers, these leaders did not allow China to slowly transform, but attempted to force reform upon the unprepared nation. The problem, however, was more than just the speed of reform - it was the reformers themselves. Kang Youwei was very radical. Although the actual reforms were moderate, “one may argue that the Hundred Days Reform programs seem too modest to match Kang’s political thought.” In fact, it has been argued that Kang played only a minor role in the Hundred Days Reform. Kwong maintains that Kang actually did not have “a very impressive record—at any rate, not one that sustains the conventional image of K’ang as the mastermind of the 1898 reforms.” Kang’s reputation as a champion reformer is a myth constructed by his students. Indeed, “K’ang’s former pupil who prefaced the collection, compared K’ang to the famous Wang An-shih who assisted the Emperor Shen-tsung of Northern Sung in implementing institutional changes...the analogy is nonetheless false.” Kang was not successful in his reform agenda, but what is more shocking is the reality of what his reform agenda entailed.

By the Hundred Days Reform, Kang and his allied reformers no longer

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505 Cameron, *Reform Movement in China*, 41-42.
506 Hua Shiping, "The Meiji Restoration (1868) and the Late Qing Reform (1898) Revisited: Strategies and Philosophies," *East Asia: An International Quarterly* 21, No. 3 (Sept., 2004): 3-22, 16-17.
507 Wong, “Revisionism Reconsidered,” 527.
509 Ibid., 197.
respected the authority of the monarchy. Some historians even assert that Kang was trying to destroy the monarchy completely, stating, “By following such overall reformation the Qing monarch would exist in name only.” These arguments contend that Kang had intentions of using imperial power in order to destroy imperial power. By taking a closer look at the language Kang used in his memorials to the throne, revolutionary undertones become apparent. Jianhua Chen deciphers the language for his English speaking audience in his article, “World Revolution Knocking at the Heavenly Gate.” He asserts that although Kang avoided using the term geming, which means revolution, he did so only to make his changes seem less radical. Regardless, “The Hundred Day Reform was haunted by the specter of revolution ... Kang Youwei tried to avoid using geming, though his radical reform project was no less than a revolution.” Instead, Kang used the term bianfa and weixin. Chen explains that, “the term weixin was inscribed with a radical tendency.” Other historians have argued that the reformers were even willing to take up arms in order to bring down the monarchy.

There is a common error in the generalization that late Ch’ing reformers were wedded to peaceful change. A closer examination of the reformers’ activities from 1898 to 1911 reveals that they were ready to take up arms against the Ch’ing government at critical moments, as testified by the aborted coup of 1898...

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511 Peter Zarrow, “The Reform Movement, The Monarchy, and Political Modernity,” in Rebecca E. Karl and Peter Zarrow’s Rethinking the 1898 Reform Period Political and Cultural Change in the Late Qing China (Cambridge, MA: Harvard University Asia Center, 2002), 17-47.
512 Chen, “World Revolution Knocking at the Heavenly Gate,” 100.
513 Ibid., 101.
514 Chang, “Reformer as Conspirator.”
Not only does the statement above confirm the Anti-Dowager Plot, but it also alludes to the potentially aggressive and revolutionary nature of the reformers.

Although Kang attempted to hide his revolutionary inclinations through Confucian teachings, it seems this was not only ineffective but actually backfired.\textsuperscript{515} It was not Confucian ideals but the model of Western Revolutions, including the French and American Revolutions that inspired Kang Youwei. He wanted to start by reducing the power of the throne, although the ultimate goal would be to eliminate it completely.

According to Kang’s reform schedule, the ideal of French or American democracy was too distant for China to achieve in one jump, and a more practical route was to move her from the Age of Disorder to the Age of Approaching Peace, namely transferring her authoritarian monarchy into a constitutional monarchy.\textsuperscript{516}

Chang maintains that Kang did not want to abolish the monarchy at all, but actually wanted to become the Emperor. It may be that “Kang wanted to become Emperor and had been trying to create a mandate for himself.”\textsuperscript{517} Although it does seem that “Kang’s prime concern at this time was clearly his political interests,” these interests did not necessarily include becoming Emperor.\textsuperscript{518} It is true that the reforms Kang pushed for would not immediately destroy the monarchy, but they would immediately distribute power in the form of a constitutional monarchy with a parliament. Rather than attempting to become the monarch, it is more likely that Kang wished to position himself, as opposed to the Emperor, as the leader of these

\textsuperscript{515} Cameron, \textit{The Reform Movement in China}, 50.
\textsuperscript{516} Chen, “World Revolution Knocking at the Heavenly Gate,” 96.
\textsuperscript{517} Chang, \textit{The Empress Dowager Cixi}, loc 4198.
\textsuperscript{518} Wong, “Revisionism Reconsidered,” 518-519.
parliamentary men. To the dismay of the Dowager, Kang advised the Emperor to fire top officials and recommended his own friends for positions, including high-ranking positions as ministers. People loyal to Kang began to surround the Emperor. General Yuan noted this favoritism and it is what motivated him to befriend Kang’s people.\textsuperscript{519} In order to control and manipulate the Emperor, “Kang preached to the young Emperor with a menacing manner.”\textsuperscript{520} Kang stressed the urgency of reform while reminding the Emperor of the past injuries the Empress had inflicted, including a secret treaty with Russia that the Emperor was not consulted on, in order to create a rift between them. No longer would aunt and nephew work together.\textsuperscript{521} The reputation of Kang Youwei seems doubly false – he was not a successful reformer and his plans for reform were constructed mainly for his own benefit.

**The Empress Redeemed**

It was neither Cixi’s conservative policies nor the Emperor’s propensity for reform that caused the lines to be drawn in the way that they were; Cixi and reformers were not inherently at odds. At first, the Empress even saw promise in Kang Youwei. One of Kang’s innovative ideas was the creation of the Planning Board. This political body would bypass the current government structures to enact reform measures.\textsuperscript{522} Chang maintains that the Dowager actually liked Kang’s proposal, stating, “Evidently, Kang and Cixi were thinking very much alike.”\textsuperscript{523} The Empress only became suspicious of the reform leader when she became aware of his potential revolutionary nature.\textsuperscript{524} It became apparent that Kang was not reforming the government but setting up the government for his own benefit. It is clear that “Cixi had never stood in the way of Kang’s reformist policies – indeed she agreed with them. She had actually been the first to appreciate Kang’s talents and promote

\begin{footnotesize}
\textsuperscript{519} Chang, *The Empress Dowager Cixi*, loc 4177.
\textsuperscript{520} Jianhua, “World Revolution Knocking at the Heavenly Gate,” 102.
\textsuperscript{521} Chang, *The Empress Dowager Cixi*, loc 4063-4198.
\textsuperscript{522} Wong, “Revisionism Reconsidered,” 518-520.
\textsuperscript{523} Chang, *The Empress Dowager Cixi*, loc 4072.
\textsuperscript{524} Bland and Blackhouse, *China Under the Empress Dowager*, 129.
\end{footnotesize}
him. But she refused to hand over power to him.” Kang was attempting to aggrandize his own power by manipulating the emperor, and even worse he was plotting against the Empress.

Kang Youwei and his allies, aware of the Dowager’s savvy—that she could not be tricked nor bullied like her nephew—resorted to plotting against her. When the Dowager returned to the throne, she wanted the reforms to continue but found this impossible. It has already been mentioned how select reforms were allowed to continue, and only “those decrees concerning Kang and his associates were cancelled.” Unfortunately, the Empress was preoccupied with punishing the plotters so the cascade of reform edicts stopped as well giving the impression that reform was crushed. The plot against her explains Cixi’s vengeance; she had to set an example, but people not directly involved in the plot were shown some measure of mercy—even those associated with Kang. The executions were not demonstrations against reform but demonstrations against manipulative, power-hungry individuals.

Chang claims the reason the Empress did not hold official trials was because she did not want the Emperor to be implicated in the plot. Cixi had reason to believe that the Emperor was involved in the plot but wanted to present a unified front to the public. Although it is hard to speculate on the Empress’ inner thoughts, there is evidence suggesting further circumstances that not only inclined her but actually forced her to make this decision. Bland, a notoriously anti-Dowager historian, points to two main motivations. He claims “the emperor lived to see the New Year and thereafter to regain his strength, a result due in some degree to the Empress Dowager’s genuine fear of foreign intervention, but chiefly to her recognition of the strength of public opinion.” Bland’s historical account points to

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525 Chang, The Empress Dowager Cixi, loc 4182.
526 Ibid., loc 4457.
527 Ibid., loc 4445.
528 Ibid., loc 4381.
529 Bland and Blackhouse, China Under the Empress Dowager, 150.
a rift between the Manchu and the Chinese. The Qing dynasty was a Manchu dynasty but all of the people executed were Chinese. Keeping positive relations between the Chinese people and the Manchu rulers was a constant worry throughout Qing era, and Cixi was no exception. Indeed, “It seemed clearly inadvisable to prolong the trial, especially as there was undoubtedly a risk of widening the breach between Manchus and Chinese by any delay.”530 Foreign intervention, as Bland mentions, was also a concern. Even though the Empress avoided any delays through official trials, “Sir Yinhuan was taken off the original list for execution. The British and the Japanese lobbied on his behalf.”531 When it comes to the domestic concerns of a sovereign nation, foreign intervention is usually inappropriate and should be minimal. For Cixi, however, it was a very real and palpable issue.

It is certainly lamentable that two innocent men may have been killed because they were not given a proper trial, but proper trials were not feasible; Cixi’s hands were tied. If the Dowager allowed time for foreign nations to impose their will upon her, she would either have to let the plotters go, which for reasons of her own security simply was not an option, or risk offending potential allies. Furthermore, implicating the Emperor in the plot and prolonged trials would have torn the country apart. The Empress would have wanted to be vindicated: she would have wanted to force her enemies to take responsibility for their actions by being convicted and disgraced. Kang Youwei was writing malicious lies about Cixi abroad and a trial would have revealed the truth. The Empress cared deeply about what foreigners thought of her, exemplified by her treatment of Mrs. Conger and her breach of court tradition in the presence of foreign guests. Every time the Empress had a guest she would question Princess Der Ling and anyone else present endlessly about what they thought of her.532 As a leader, however, she had to put the needs of her country first. In September 1898, the Empress acted in the only

530 Ibid., 154.
531 Chang, The Empress Dowager Cixi, loc 4417.
532 Ling, Two Years in the Forbidden City, 191.
way she could.

Conclusion

Defeated and on the run, the reformers who escaped spun hateful stories about the Dowager; representations of her in history are full of gross inaccuracies based on these lies. The Empress has unjustly carried the burden of destroying reform in China when in reality she encouraged it. When reform leaders threatened her, she did what any other powerful and gifted monarch would have done in the situation – she defended herself and ensured nothing of the sort would ever be attempted again. The plot against her was planned not because of her conservative tendencies but because of her power, which the reformers, most notably Kang Youwei, were attempting to seize for themselves. Whether or not we choose to look back on these actions as “right” or “wrong” must be determined by judging Cixi in the appropriate context. She was, after all, a monarch. It is wrong for the historical record to chastise this leader for simply maintaining power and guaranteeing her future safety. If it could be proven that these reformers, in charge of the government, were going to be successful in creating positive change in China, then perhaps we could look back at this moment with sadness as a missed opportunity——but we still could not judge the Dowager for doing what is rightfully expected of a monarch whose power is being challenged. In fact, it seems that this monarch acted altruistically by putting the needs of her country first in September of 1898.

There seems to be a lot of debate and controversy over the events of 1898. The secrecy and isolation of the Forbidden City only adds to the muddle. As recently as 1976, with the death of communist leader Mao Zedong, a gold mine of new archival materials has become available to historians. Jung Chang and Young Tsu-Wong have both made use of these sources and their findings are new and intriguing. Despite the groundbreaking nature of these findings, many of their arguments can be accepted based on their consistency with other sources. Further research employing these newly accessible resources is still required in order to
further substantiate these incredible arguments, and perhaps also to correct other episodes of Chinese history that have been inaccurately recorded.
Technological Diffusion in Early-Meiji Naval Development, 1880-1895

Cathryn Morette

Abstract
This paper will focus on the first period of naval development during the Meiji Era, 1880-1895, when the Japanese navy relied heavily on Western support. Western nations such as Britain and France supplied technology, advisors, and vessels, which when combined, had a major role in the early organization of the Imperial Japanese Navy. These years, and the role of these European powers, were foundational in Japan's spectacular rise to world power at the turn of the twentieth century, highlighted most prominently through their naval success during the Sino-Japanese War of 1894-1895. Nevertheless, this success could not have been accomplished without the theory of “Advantage of Backwardness” and the unprecedented naval torpedo warfare strategy of the Sino-Japanese War.

Introduction
The Imperial Japanese Navy is emblematic of the rise of Japan as a world power. In 1868, when Japan emerged from self-imposed isolation to join the comity of nations, its influence in the world counted for nothing. But in a few short years, due to prodigious effort, Japan created the foundations for political, economic, and military power. Within a generation, Meiji Japan built a navy that prevailed against China in 1895. A decade later, an even more modern Japanese navy defeated the Russian fleet, an event Theodore Roosevelt considered the “greatest phenomenon the world has ever seen.” In this meteoric rise, the success of the Imperial Japanese Navy played a decisive role.

The Tokugawa period (1600-1868) eliminated any Japanese overseas navigation and curbed the few military seafaring traditions the nation possessed. A historically insular nation, only twice in nine hundred years did Japan attempt to

invade Asia – once in the seventh century and once in the sixteenth century. From 1880 to 1920, Japan invested in the development of an army and navy, relying heavily on Western support and influence to do so. Japan used a two-phase policy in acquiring technology from abroad: first, by relying almost entirely on Western tutelage; and second, by beginning licensed production while at the same time continuing the study of foreign technology and purchase of ships. The first phase, which lasted from 1880 to 1895, was foundational in Japan’s spectacular rise to world power at the turn of the twentieth century. Dissemination of Western naval technology, primarily in the form of mentorship and procurement, provided an intrinsically motivated nation a robust foundation to create an indigenous, innovative naval strategy and a world-class navy who, in its utmost infancy, defeated China in the Sino-Japanese War in 1895. Japan could not have accomplished this without the support of Britain and France – in terms of ships, advisors, and school systems – from 1880 to 1895, but this success is also due to the theory of “Advantage of Backwardness” and the unprecedented naval strategy used in the Sino-Japanese War.

**Historiography**

There is a debate between historians about the significance of the European technological diffusion on the modernization and success of the Imperial Japanese Navy. Many respected historians have argued that the West was indispensable in the Meiji Restoration and the change that followed. Kamikawa Kimura, author of *Japan-American Diplomatic Relations in the Meiji-Taisho Era*, argues that Matthew Perry’s arrival in Japan was the impetus for the Meiji Restoration. W.G. Beasley, author of *The Rise of Modern Japan*, similarly argues Western pressure to open Japan galvanized a national impulse to change, and that Japan entered the Meiji Restoration to offset a perceived Western threat. Nobutaka Ike states, in his

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article “Western Influences on the Meiji Restoration,” that once reform was underway, Western political theory was central to the changes that occurred. Unlike Kimura or Beasley, Ike doesn’t believe that Japan was completely sealed off and isolated: he argues, instead, that Japan strategically allowed specific information from the Chinese and Dutch to permeate their border and believes this information likely influenced the future government structure.536

David Evans and Mark Peattie’s highly regarded work, *Kaigun: Strategy, Tactics, and Technology in the Imperial Japanese Navy, 1887-1941*, begins where these historians leave off – with the development of the Imperial Japanese Navy. The authors brilliantly examine the role of transportation and global dissemination of naval technology, but only from the perspective of its benefits to Japan. They attribute the success of the Japanese navy in the Sino-Japanese war to support from Britain and France, and to intangible factors they describe as, “fortunate position and timing,” a theory more commonly known as “Advantage of Backwardness.”537 In comparison, historians Graham Gooday and Morris Low discuss the role of transportation and global dissemination of naval technology from a European perspective. They argue that the technological diffusion benefitted both Japan and European countries, including Britain and France. Gooday and Low are two of the historians situated on the other side of the debate, arguing that indigenous Japan played a crucial role in the development of the Meiji Restoration and the technological diffusion of Western information that followed.


symbolic representation of the rise of modern Japan in the Meiji Period (1868-1912),” and sees the Meiji Restoration and the change that followed suit to be indigenously driven. 538 Schencking’s argument challenges the prevailing historiography of an apolitical Japanese navy, and supports this with displays in which Japanese political parties played a critical role in the emergence of the military, particularly the navy.539 In addition to the role of political parties, Miwao Matsumoto, author of “Reconsidering Japanese Industrialization,” argues that the private sector played a critical role in the transfer of technology to Japan from 1880-1920. In his article, he suggests that the technological diffusion did not occur as freely as other historians have described, and touts private Japanese companies as responsible for fostering much of this interaction. In his words, “private companies played a unique and independent role in transferring, assimilating, and producing new technologies, in addition to the well-known role in implementing infrastructures already established by the government sector.”540

Both arguments contain truths that cannot be dismissed, and should be considered more holistically. While Evans and Peattie focus extensively on the role of Britain and France when discussing the development of the Imperial Japanese Navy, in their conclusion of Kaigun, the authors propose a more moderate perspective. In the words of Schencking, “this middle path, Evans and Peattie argue, was situated between the extreme options of relying entirely on Western support and the potential pitfalls it entailed or solely emphasizing indigenous design, which would have significantly delayed the maturation of Japan’s navy.”541 The success of the Imperial Japanese Navy arose from foundational Western imports in terms of shipbuilding, weaponry, and naval education, but the naval strategy that emerged during the Sino-Japanese War contained unique Japanese

539 McBride, review of Making Waves, 834.
541 Schencking, review of Kaigun by David C. Evans and Mark R. Peattie, 492.
characteristics that were indigenous innovations. This naval strategy, which highlighted agile torpedo boats and quick-firing guns, was less westernized than many historians consider. Following the Sino-Japanese War, this hybrid strategy would further develop domestically and was the impetus for future Japanese success. This may seem to discredit the argument that Japan’s naval success was entirely Western driven, but it simply serves as a caveat. The role of the West is indisputably foundational, but the Japanese played a key role in shaping the resources and naval strategy brought to them by Britain and France. In addition, besides the brief discussion in Kaigun, most historians have failed to credit the theory of “Advantage of Backwardness” in Japan’s ability to so quickly materialize a world-class navy. This paper serves the purpose to provide the evidence and argument for this perspective.

**Meiji Restoration (1600-1868)**

From 1600 to 1868, Japan underwent a period of isolation. In the 1620s and 1630s, the Tokugawa rulers came to the conclusion that Japan’s existing relations with Europeans should be discontinued, in part due to concerns about the potential corruption that could arise from the exposure to Christianity. Christianity was savagely persecuted in Japan, followed by an end to foreign trade – save for small-scale trade with China and a Dutch trading post. Meanwhile, European powers took their new warships to the waters, and by the mid-nineteenth century, India and nearly all of Southeast Asia were under European control. Although Japan ruled as a superficially “closed” nation, the nation was by no means industrially underdeveloped or uninformed. Instead, the Tokugawa rulers selectively appropriated sources of foreign expertise that were imported and

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studied. Nonetheless, the Tokugawa period of isolation eliminated any Japanese overseas navigation as well as the need for military or naval protection. This in turn curbed the few military seafaring traditions the nation possessed, creating a massive disadvantage for Japan.

In 1852, Commodore Matthew Perry arrived in Japan, armed with a letter from the White House and the intentions to foster relationships with the closed nation. With Perry’s arrival, only a collection of sail and oar powered coastal ships, and a few vintage cannons stood between the insular nation and the foreigners. On July 25, 1852, Commodore Perry was welcomed ashore and presented with the opportunity to deliver a letter to the governor of Uraga – shattering Japan’s self-imposed isolation. With Perry’s return in 1854, a treaty was signed at the Convention in Kanagawa, agreeing to protect shipwrecked Americans and provide water, fuel, and food to ships passing through, but it contained no statement concerning foreign trade. Nevertheless, this treaty would be quickly followed by similar treaties with Britain and Russia.

The Meiji Restoration, which began in 1868, rose from the Shogunate’s inability to cope with the pressing problems arising from the growing economic and political pressure as well as Tokugawa’s weakness to foreigners. It is often considered that this foreign encounter with Matthew Perry and his crew served as a “wake up call” for Japan’s leadership. The opinion of Ii Naosuke, Lord of Hikone, was that Japan could not expect safety by sticking to the ancient seclusion policy, but could change with the times and conduct foreign trade. The government that

546 Evans and Peattie, Kaigun, 4-5.
551 Kimura, Japan American Diplomatic Relations in the Meiji-Taisho Era, 23.
emerged in the mid-1860s was chiefly preoccupied in carrying out new policies designed to move Japan rapidly toward the forefront of world history by the turn of the 20th century.552 This new government placed priority on the strength of the military under the concept *Fukokukyonei*, meaning to “enrich the country, strengthen the army.”553 Meiji leaders knew, furthermore, that Japan could only protect themselves from the West by adopting Western technology.554 In addition, the idea that Japan could raise her international position to the level of Western powers by absorbing Western civilization was growing more and more popular.555 Much of this thought was directed at the development of a premier military to protect Japan’s now vulnerable coastline and to potentially expand Japan’s purview beyond her current borders.556 Based on this belief, the Japanese government engaged the West by consulting foreigners as advisors, sending young men abroad, and adopting Western military and naval technology. Key to Japan’s ability to quickly modernize was the role of transportation and global dissemination of naval technology.

Much of this dissemination occurred through the employment of foreign advisors from Europe and North America in the late nineteenth century. Generally speaking, the Meiji leaders saw the employment of foreigners as a necessary but temporary evil and, thus, sought to educate Japanese to replace the foreigners as quickly as possible.557 The average length of a service contract for a foreign advisor was around five years, and by the turn of the century, native Japanese were in total control of decision making in most aspects of the Meiji government. In the early years of the Meiji period, there were three thousand hired foreign professionals in government service. Most of these employees came from the four countries most

553 Nish, review of *The Meiji Restoration* by W. G. Beasley, 719.
554 Ibid., 719.
significant to Japan’s foreign relations at the time: Great Britain, France, the United States, and Germany.\textsuperscript{558}

**Technology Transfer from Western Europe and North America (1880-1895)**

The early Meiji navy was a ragtag collection of vessels thrown haphazardly together, but the period following the separation of the navy from the military in 1872 was characterized by incredible development. With an independent budget and advisors, the navy finally could develop beyond infancy. Not only did the Japanese have a lack of seafaring ships and weapons, Japan also lacked the necessary manpower. In the words of Evans and Peattie, “Without a strong maritime tradition, and, as yet, without a strong, modern sense of nationhood, Japan had no significant pool of men long familiar with the sea or experiences in disciplined national service.”\textsuperscript{559} Therefore, critical to Japan’s ability to develop a navy was their ability to first acquire the information to do so. Similar to many other aspects of the Meiji government, during the first decades of the Meiji era, the navy received foreign support in the form of advisors. While the reinforcement of Japanese military traditions was fundamental to the navy, in the years immediately following 1872, they relied on a Western model. In its search for a model, Britain was a logical choice due to her consistent dominance of the seas.\textsuperscript{560} In 1870, an imperial decree designated the British navy as the model for Japan’s naval development, and three years later, at the request of the Japanese government, a 34-man British naval mission arrived in Japan.\textsuperscript{561} One member of this party was Lt. Commander Archibald Douglas, who directed instruction at the Naval Academy in Tsukiji for several years and served as an advisor to the navy until 1879. While Douglas was not at the cutting edge of naval technology, his role within the navy and the Naval Academy substantially advanced the development of the navy and

\textsuperscript{558} Ibid., 105.

\textsuperscript{559} Evans and Peattie, *Kaigun*, 9.

\textsuperscript{560} Ibid., 11.

\textsuperscript{561} Ibid., 12.
established the British tradition within the Japanese navy in terms of seamanship, uniforms, and officer training.\footnote{Ibid., 12.}

In addition to this British naval mission, the Imperial Japanese Navy had two key British advisors during the late nineteenth century. The first was Lt. Commander L.P. Willan, RN, who was hired to teach gunnery and navigation at the Imperial School from 1879-1885, during which he provided instruction in contemporary naval tactics to 31 naval cadets. These men would go on to be the leaders and shapers of the navy during the next decade. The second was Captain John Ingles, RN, who is argued to be responsible for developing Japan into a respected navy. Ingles arrived to Japan in 1887 to serve as an instructor at the Imperial Naval Academy and as an adviser to the general modernization of the Japanese navy. Ingles educated the Japanese navy technologically and transformed the navy into a legitimate fighting force, by introducing concepts including blockade, counter-battery fire, and tactics for modern steam ships.\footnote{Ibid., 12-13.} To do so, Ingles provided a necessary gap-analysis on the navy to determine its current state and what would need to be accomplished to create a modern, competitive navy. For this reason, he was one of the initial supporters of steam ship technology.

By the end of the 1870s, Japan began to turn away from dependence on large, foreign assistance missions. They were very expensive, and besides, Japan was beginning to develop confidence in the naval arena. Moreover, the men trained by Douglas, Willan, and Ingles, began to become leaders in their own right, and the young Japanese men that had been sent abroad were returning with expertise that made these foreign assistance groups unnecessary.\footnote{Ibid., 11-12.} In the words of Evans and Peattie, “while the Japanese fully recognized the need to keep abreast of the latest development in Western naval technologies, foreign naval advisers were now more selectively chosen, both in numbers and in nationality.”\footnote{Ibid., 12.} Nonetheless, this small
number of advisers and counselors continued to prove essential in the strategic development of the Japanese navy.

In December of 1897, The Engineer published a photographic montage of “Pioneers of Modern Engineering Education in Japan,” which depicts a selection of Japanese and Western teachers who had worked to transform Japan’s engineering, military, and naval programs.\textsuperscript{566} In the words of Gooday and Low:

The predominance of Japanese figures in this representation is highly significant: it is an acknowledgment by British observers that the industrialization of Japan—the "Britain of the East"—was not a feat accomplished solely by Western experts who transferred their science and technology to passive Japanese recipients.\textsuperscript{567}

The role of foreigners allowed the Japanese to quickly learn from them and then replace the majority of the foreigners by the 1880s. However, equally important to note is the sizable number of Japanese figures depicted. The Engineer’s photographic montage focuses primarily on native teachers active in Japan after 1880 and excludes the several foreigners who therefore trained this indigenous workforce the decade prior. These foreign aid and teachers were critical to allowing indigenous Japanese to rise to prominence and excellence by 1880. These Japanese naval officers were trained at the Imperial Naval Academy, which was established in Tokyo as Japan’s first naval academy in 1869.\textsuperscript{568} Under the leadership of Western advisors, the academy was formed in Western tradition where men learned traditional Japanese military values, naval science, general education subjects, and trained for physical fitness over a period of four years.\textsuperscript{569}

\textsuperscript{566} Gooday and Low, “Technology Transfer and Cultural Exchange,” 99-100.
\textsuperscript{567} Ibid., 99.
\textsuperscript{568} Evans and Peattie, Kaigun, 10.
\textsuperscript{569} Ibid., 10.
With construction of the Imperial Naval Academy well under way, Japan began the process of building a fleet to complement the new manpower. Yet, in the mid-1880s when Japan was ready to begin this process, Japanese shipyards were not advanced enough to construct a modern warship. For this reason, Japan again looked west. The first Japanese warships launched from British port at the end of the 1870s. The three ships, two armored corvettes and one armored, steel hulled frigate, were team driven and barque-rigged—the highest quality and most modern technology of the day. Japanese navigational and technological skills were so inadequate that the ships had to be delivered to Japan by British crews. While still inadequate to properly utilize these naval marvels, the ships provided invaluable hands-on training to officers in training and to the neophyte naval architects.  

In the mid-1880’s, Japan contracted for two, second-class steel decked cruisers named “Naniwa” and “Takachiho.” Prior to their arrival in Japan, Cpt.

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570 Ibid., 13-14.
571 Ibid., 15.
Ingles pronounced them the finest warships of their type anywhere in the world. Japan briefly turned to France for its foreign naval construction; Japan wanted to maintain relations with a range of naval powers, and French naval constructors had proved vital in developing the first Japanese naval yard at Yokosuka, the site of some of the only domestic construction of small ships according to Western design, prior to the turn of the century.\(^{572}\) In addition, France was surpassing British intelligence in warship design with their concept of small, fast warships that proved effective in the Sino-French War of 1883-1885. This vessel style was referred to as torpedo boat and Japan placed an order for 48 to be built over an eight-year period.\(^{573}\) To supplement this fleet, Japan ordered Kotaka, the largest torpedo boat of its time, from Britain in 1888.\(^{574}\) 1887 serves as the year that a modern Japanese naval force first emerged.\(^{575}\) In the 1880s, famed French architect Emile Bertin was brought to Japan on a two-year contract to guide the expansion of the Japanese navy and supervise the reconstruction of the 48 ships.\(^{576}\) This period allowed Japan to embrace the revolutionary new technologies embodied in torpedoes and torpedo boats. While in Japan, Bertin designed the Sankeikan class of warships, whose designs attempted to match several heavy warships of German design that had been acquired by the Chinese.\(^{577}\)

By securing some of the West’s best naval technology early on, Japan was afforded time to develop a sizable naval infrastructure in order to produce similar vessels in a later period. By mid-1880s, Japan was phasing out sail-powered and reinvesting in steam-driven warships, and they also began to take first steps to be able to construct their own vessels. In 1884, Japan imported machinery and

\(^{572}\) Ibid., 15.
\(^{573}\) Ibid., 15.
\(^{574}\) Ibid., 17.
\(^{577}\) Ibid., 17.
temporarily hired men from Britain.\footnote{Ibid., 14.} This period also saw the emergence of small maritime construction enterprises. These enterprises prospered because of contracts with the navy to build torpedoes, machinery, and smaller warships, and their importance would grow in the years leading up to the Sino-Japanese war (1894-1895).\footnote{Ibid., 14.} Miwao Matsumoto, author of “Reconsidering Japanese Industrialization: Marine Turbine Transfer at Mitsubishi,” argues that the private sector played a critical role in the transfer of technology to Japan from 1880-1920.\footnote{Matsumoto, “Reconsidering Japanese Industrialization,” 74.} Matsumoto touts the crucial role the British played in transferring modern technological information to Japan, describing the British as the “naval architects of the world.”\footnote{Ibid.,” 76.} Britain also supplied the Meiji government with more foreign employees than any other Western country: to the tune of 1,034 people from 1868 to 1900.\footnote{Ibid., 76.}

By the early 1890s, Japan’s navy comprised of a small, but growing number of light, fast warships that were effectively unarmored and powerfully armed. One of the most important aspects of the intensive technological borrowing of the late 19th century was that the exposure to foreign experts allowed Japan to begin developing revolutionary and complex battle tactics on their own. With a robust foundation, provided by the advisors from Britain and France and new, hands-on experience on Japan’s first warships, Japan was now ready to begin discussing naval strategy. With Japan’s young men returning from abroad and a fresh class of domestic naval leaders, Japan’s indigenous naval strategy was comparable to those being developed in Europe and the United States. For instance, while tacticians in Britain were developing the classic T-capping maneuver—in which a line of warships crosses in front of a line of enemy warships, and is believed to be the most effective means by which to destroy an enemy battle fleet—officers at the Japanese Naval Staff College were creating the same.\footnote{Schencking, review of Kaigun by David C. Evans and Mark R. Peattie, 492.} Japan did not adopt Western tactics

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\begin{itemize}
\item \footnote{Ibid., 14.}
\item \footnote{Ibid., 14.}
\item \footnote{Matsumoto, “Reconsidering Japanese Industrialization,” 74.}
\item \footnote{Ibid.,” 76.}
\item \footnote{Ibid., 76.}
\item \footnote{Schencking, review of Kaigun by David C. Evans and Mark R. Peattie, 492.}
\end{itemize}
at face value instead they blended the imported strategy, tactics, and technology with their own styles of warfare.\textsuperscript{584} Due to Japan’s complete lack of ships and weaponry prior to 1880, Japan did not have large, armored warships like Britain or France. Instead, investments were made into agile torpedo boats and arming the warships they did have with a few big guns that were supplemented with numerous medium-sized firing guns.\textsuperscript{585} This was unlike many large Western powers, but proved incredibly successful in the Sino-Japanese War. This success can also be attributed to the theory of “Advantage of Backwardness,” which states that with highly developed mentor, underdeveloped countries can leapfrog technological advancements and innovation by adopting the technology, business models, and systems of other countries. For Japan, this allowed their navy to reach world-class caliber within two decades, and with minimal trial and error. This became a uniquely powerful formula for the Imperial Japanese Navy; with no existing navy or naval thought prior to 1880, Japan could consider the Western tactics, ships, and education system unbiased to a Japanese tradition. Yet, without the time or the finances to support a fully Westernized warship model, Japan adopted a unique naval fleet strategy that would prove incredibly effective in the Sino-Japanese War.

The Power at Play: Sino-Japanese War (1894-1895)

Japan was embarking on an ambitious modernization process, aimed at gaining military parity with the established Western powers. The Sino-Japanese War became a stadium for this spectacle.\textsuperscript{586} On the eve of the Sino-Japanese war, at surface level, China’s navy appeared superior to Japan’s newly organized fleet. The Chinese navy consisted of four regional fleets, which, in total, was comprised of twice as many ships as Japan possessed. In addition, China possessed two German-

\textsuperscript{585} Evans and Peattie, Kaigun, 18.
built battleships for which Japan had no counterparts, and which provided China with an advantage in terms of firepower. The Chinese had foreign advisers and technicians aboard their ships, whereas no foreigners would serve with the Japanese warships at sea.\textsuperscript{587} That being said, these supposedly superior factors proved irrelevant once the war began. Chinese ships were armed with short-barreled guns in twin barbettes in echelon that could fire only in restricted arcs. In comparison, Japan utilized new, quick firing guns on their agile ships. Evans and Peattie consider the additional flexibility of Japan’s artillery at sea to be China’s major disadvantage in the Sino-Japanese War.\textsuperscript{588}

The Sino-Japanese War contained two decisive naval battles that alerted both China and the West to Japan’s new naval prowess: The Battle of Yalu and the Battle of Weihaiwei. These battles were the first major battles between modern, ironclad ships. In September 1894, en route to Korea, the Japanese fleet stumbled upon a small convoy of Chinese ships, instigating the Battle of Yalu. The Japanese overwhelmed these ships and destroyed a cruiser and gunboat, captured a gunboat, and sank a loaded transport ship.\textsuperscript{589} While Japan severely injured the Chinese fleet, a handful of important Japanese warships were also damaged in this battle.

In the Battle of Weihaiwei, the Japanese utilized their torpedo boats. While the attacks were by no means spectacular (Evans and Peattie argue that they were, in fact, a complete failure), this was the first use of torpedo boats in East Asian waters, making the strategy unprecedented. Japan sank, captured, or ran aground all but two of China’s remaining warships of their once substantial fleet.\textsuperscript{590} In the end, the Japanese won the Battle of Weihaiwei through broadside naval gunfire, which is the effect of a “line ahead” tactic, a classic tactic where ships create an end-to-end line.\textsuperscript{591} Line ahead was the formation that preserved the greatest flexibility and simplicity of movement. It minimized tactical confusion and maximized

\begin{thebibliography}{9}
\bibitem{587} Evans and Peattie, \textit{Kaigun}, 38.
\bibitem{588} Ibid., 38-39.
\bibitem{589} Ibid., \textit{Kaigun}, 41.
\bibitem{590} Schencking, \textit{Making Waves}, 83.
\bibitem{591} Evans and Peattie, \textit{Kaigun}, 46-47.
\end{thebibliography}
broadside fire. In this strategy, Japan’s speed was critical, as fast ships allowed the fleet to cut across the enemy fleet’s approaching path and to concentrate fire at the decisive moment on one of the weakest portions of the Chinese formation. Moreover, one of the principal factors in the Japanese victory was clearly its superiority in firepower, namely their quick-firing guns. Torpedoes proved to be, at the very least, a moderate success.\textsuperscript{592} China’s traditional approach to warfare was compared unfavorably with that of modern Japan.\textsuperscript{593} At the end of the war, Tokutomi Soho exulted: “Now that we have tested our strength we know ourselves and we are known by the world. Moreover, we know we are known by the world.”\textsuperscript{594} It was only when Japan had shown its ability to equal the West in killing and destruction that the West accepted it as civilized. Nonetheless, this conflict with China over Korea led to the realization for Japan that their small fleet was remarkably outmatched by potential adversaries, and would lead to massive expansion of domestic naval construction efforts.

The Sino-Japanese war was a turning point in the modern history of East Asia.\textsuperscript{595} Japan—the West’s model pupil—had effectively learned the lessons of modern warfare. In the words of David C. Wright, “After the loss of Port Arthur, Western newspapers quickly did an about-face in their coverage, declaring Japan the triumphant and pre-eminent power in East Asia. Japan had modernized and China had not, despite decades of exhortation by the former to the latter.”\textsuperscript{596} Japan’s advantages lay in their recent and ultra-modern investments in a small quick fleet with quick firing guns, and China’s lack of recent similar investments. After the war, Japan, Paine states, “became the yardstick by which China always

\textsuperscript{592} Ibid., 48-49.
\textsuperscript{593} Wippich, review of The Sino-Japanese War of 1894-1895 by S. C. M. Paine, 259.
fell short.”^597 Lone, author of *Japan’s First Modern War: Army and Society in the Conflict with China, 1894-1895*, considers the war to have been a political failure for Japan, as it provoked anxiety in the West concerning Japan’s imperial ambitions, and cost her the support of Korea.^598 Still, the war accomplished for Japan its outright goal: to be perceived by Western nations as a force to be reckoned with.

Following Japan’s surprising and stunning win at the Battle of Yalu, foreign military observers attributed Japan’s success to its modernity and westernization. That being said, in reality, Japan did not rely solely on foreign experts and world-class warships to lead themselves into this modern era. While Westerners provided information concerning war tactics and warship construction, Japan’s naval officials played an equally critical role in the navy’s success. It was Japanese naval officials who had to acquire the funding necessary to develop this world-class, modern navy. J. Charles Schencking argues that Japan was able to develop their navy only by, “lobbying oligarchs, coercing cabinet ministers, forging alliances with political parties, occupying overseas territories, conducting well-orchestrated naval pageants, and launching spirited propaganda campaigns.”^599 He argues that Japanese political parties played a critical role in the emergence of the military services, particularly the navy.^600 In his article, “The Imperial Japanese Navy and the Constructed Consciousness of a South Seas Destiny, 1872-1921”, he explains that for the navy to secure a percentage of the domestic budget, as early as 1872, navy officials had to construct a separate, strategic identity from that of the army.^601 Therefore, he describes, the Imperial Japanese Navy focused its efforts on

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^600 Ibid., 834.

expansion into the South Seas, specifically Nan’yo.\textsuperscript{602} Miwao Matsumoto, author of “Reconsidering Japanese Industrialization: Marine Turbine Transfer at Mitsubishi” argues that technologies did not automatically flow from other countries as freely as other historians have described.\textsuperscript{603} Instead, private companies, such as Mitsubishi, played a critical role in the transfer of technology to Japan. Nonetheless, private companies and the Meiji government could not have accomplished the naval modernization at such speeds without the technological diffusion and expertise provided from Britain, France, and the United States during the late nineteenth century.

In addition, some of the success afforded to Japan can be assigned to no single country or group of people. Instead, Evans and Peattie argue that some of Japan’s backward circumstances in men and material would have posed formidable obstacles to the modernization of Japan’s maritime force had it not be for fortunate position and timing, a concept more universally known as the “Advantage of Backwardness.”\textsuperscript{604} Evans and Peattie divide this concept into the following factors: the West’s current preoccupation with China, Japan’s lack of outdated navy, and the recent technological breakthroughs made by Western nations in naval technology. The Japanese navy came into being during a period of rapid technological change and tactical confusion among the world’s navies.\textsuperscript{605} Japan’s Meiji Restoration overlapped with the beginning of Western revolutions in transportation, communication, and modes of production. Therefore, Evans and Peattie argue that Japan was able to take immediate advantage of this without having to pass through the, “long scientific revolution that preceded the rise of industry in Europe.”\textsuperscript{606} The rapid revolutionary changes in naval technology that developed in America and Europe were available immediately in Japan because of

\textsuperscript{602} Schencking, “The Imperial Japanese Navy and the Constructed Consciousness of a South Seas Destiny, 1872-1921,” 770.
\textsuperscript{603} Matsumoto, “Reconsidering Japanese Industrialization,” 94.
\textsuperscript{604} Evans and Peattie, \textsl{Kaigun}, 9.
\textsuperscript{605} Ibid., 32.
\textsuperscript{606} Ibid., 10.
increased communication capabilities. The impact of these technologies, however, would not have been felt if Japan had a standing navy at the time. It was equally important that the infantile Japanese navy was not burdened with the sunk cost of obsolete equipment. In addition, the people affiliated with the navy were not attached to outdated techniques since no one had training or naval experience.\textsuperscript{607} And finally, during the key years of Japanese naval construction – 1880 to 1895 – Western nations who originally threatened Japan were preoccupied with potential expansion into China, providing Japan with the necessary time to develop their Imperial Japanese Navy in peace.\textsuperscript{608} This extremely fortunate timing allowed Japan to incorporate fully-developed Western technology into their emerging navy, with zero sunk costs and little external threat that could have pressured Japan to develop a mindlessly Western navy. Instead, what emerged around 1895 was a hybrid of western technology and successful strategy with traditional Japanese values. And finally, the period of intense technology diffusion into Japan from the West did not simply benefit Japan. The Battle of Yalu was the studied by naval staffs around the globe, as it was the first fleet encounter since the battle at Lissa in 1866\textsuperscript{609}

**Impact of the Sino-Japanese War**

In mere decades, Japan went from a closed, insular, nation to one of international recognition and prestige. By the 1890s, with only two decades of military and naval development, Japan was militarily and economically strong enough to assert her independence.\textsuperscript{610} This belief of historians is supported by Japan’s success in the Sino-Japanese war and her ability to accelerate military and naval development prior to World War I. The Sino-Japanese War proved to be an important turning point for the Japanese navy, as it entered into the second phase.

\begin{enumerate}
\item\textsuperscript{607} Ibid., 10.
\item\textsuperscript{608} Ibid., 9.
\item\textsuperscript{609} Ibid., 47.
\item\textsuperscript{610} Beasley, *The Rise of Modern Japan*, 140.
\end{enumerate}
of development, which would be characterized by the emergence of a Japanese centric strategy and production schedule:

The Sino-Japanese War provided the departure point for modern Japanese naval thought in the same way that American naval thought crystallized around the concerns of Mahan and the lessons of the Spanish-American War. Until that point, the navy’s frame of reference had been entirely Western, and certainly, Western tactical ideas, now readily available in the numerous translations of Western naval commentaries, were still pervasive during the succeeding decade. Yet, a more purely Japanese naval doctrine also began to develop during the same period.611

Evans and Peattie argue that it was the decade between the Sino-Japanese war and the Russo-Japanese war that brought along the maturation of the modern Japanese tactical doctrine based on its new experience and on foreign example.612 During the years 1894-1895, a body of thoroughly professional doctrine began to emerge, shaped by a nucleus of incisive, imaginative, and informed young officers who, working within the Naval Staff College, helped the navy prepare to do battle with its potential enemies at sea and with its service rivals at home.613

Following the Sino-Japanese War, the leader of the navy during the late Meiji era, Yamamoto Gombei, called for a dramatic expansion of the navy. The expansion centered on the acquisition of additional battleships, but for the first time, in conjunction with world-class vessels that would be built in Japan’s own shipyards.614 By 1902, Japan was designing and constructing her own torpedo boats. The quality of these boats was in line with the superb “thirty-knotters” used

611 Evans and Peattie, Kaigun, 50.
612 Ibid., 67.
613 Ibid., 51.
614 Ibid., 57-58.
by the Royal Navy. Japanese specialists were also beginning to produce their own designs for machinery, munitions, weapons, explosives; most of these domestic advances in naval technology represented an effort in research and development by the Japanese.

Conclusion

This paper has focused extensively on the role of westerners in Meiji naval development. Western nations such as Britain and France supplied technology, advisors, and vessels, which when combined, had a major role in the early organization of the Imperial Japanese Navy. However, this "industrialization" or, perhaps, "modernization" of the nation was by no means simply a process of "Westernization" by uncritically pro-Western forces in Japan. Instead, much of the success of the Imperial Japanese Navy is due to the domestic technology, indigenous talent, and culture of the Japanese. In the words of Gooday and Low:

The arrival of Americans in Japan in 1853-1854 is often portrayed as the "opening" of Japan and as the beginning of rapid, almost miraculous industrialization during the Meiji period (1868-1912). This ethnocentric emphasis on the agency of Westerners in developing Japanese science and technology overlooks the importance of domestic processes of urbanization, industrial development, and trade during the preceding Tokugawa period (ca. 1600-1868).

Thus, rather than taking at face value the asserted industrial "modernization" of Japan in the Meiji period, one could argue instead that this was, in many ways, a strategic reinforcement of the nation's traditional institutions under the diplomatically expedient banner of "Westernization."

615 Ibid., 62.
616 Ibid., 63.
617 Gooday and Low, "Technology Transfer and Cultural Exchange," 100.
618 Ibid., 102.
This theory also understates the complex and contrasting ways in which the careers of non-Japanese scientists and engineers were molded or redirected by their participation in Japan's imperial borrowings from other cultures. In the words of Gooday and Low, “Far from being immutable sources of Western technocratic wisdom, these imported experts found that their Japanese experiences changed their lives at least as much as their activities helped to change Japan.” The once popularly held belief that the diffusion of western technology into Japan was one-sided is incorrect; instead, the time foreigners spent in Japan significantly impacted their research and led to critical breakthroughs. In addition, Japanese dealings with foreign scientists and engineers were not always harmonious or even transparent.

The Japanese understood modern science and technology in terms of not only their utility to the nation's industrial development—but as something they could graft onto traditional Japanese values that remained largely intact despite Western incursions from 1880-1895. In particular, the Meiji looked to science and technology to further their aim of defending Japan against future invasions from other imperial powers. With speed and success, Japan assimilated Western techniques and synthesized them with indigenous Japanese values, and in the process, they created one of the strongest navies in the world. Between 1866 and 1914, there were only five major sea battles worldwide. Of those, Japan fought and won in three. In a short amount of time, Japan managed to surpass countries including China, Russia, and France who had served as models for the infant navy only decades prior. This success can be contributed to correctly interpreting the lessons of the Sino-Japanese war, Japan’s major investment in warships, their strategy of pairing small, quick ships with quick-firing artillery, and superb naval leadership and training. Of these, Japan owes Britain and France for their foundational training

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619 Ibid., 100.
620 Ibid., 101.
621 Ibid., 127.
622 Evans and Peattie, Kaigun, 504.
623 Ibid., 64-65.
program and warship design, but this list also highlights the indigenous accomplishments of the Japanese. By the turn of the century, the West’s model pupil embraced tradition and technology, learned key naval lessons from foreign advisors and in battle, and developed an emerging domestic infrastructure to become a naval leader in its own right.