

Was There a Military Revolution in Late Joseon Korea?

A Comparative Analysis of the Recent Discussions on Late Joseon Military History in Korean and Anglo-American Academic Society

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Abstract

This article examines the applicability of the Military Revolution Thesis to late Joseon Dynasty history (1599–1897), comparing the recent discussions in Anglo-American and Korean academia. The military changes in Joseon following the Imjin War (1592–1598) and the Manchu Invasions (1636–7), particularly the shift from cavalry to infantry tactics and the adoption of gunpowder weapons, are explored through the lens of the military revolution theory. By comparing and critically assessing the scholarship of No Yeong-gu, Kim Yeong-joon, Tonio Andrade, and Kang Hyeok-hyeon, the study evaluates the similarities and differences between European and Joseon military transformations. It highlights the limitations of directly applying the Eurocentric military revolution theory to Joseon, emphasizing the need to consider Joseon's unique historical and cultural context. This article contributes to a broader understanding of military changes in late Joseon and positions them within global military history, arguing for a more nuanced approach to interpreting military innovations outside Europe.

Keywords

Joseon Military Revolution, Gunpowder Weapons, Imjin War, Military Revolution, Musketeer Training, East Asian Warfare, Asia Military Revolution

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Introduction

The military system of the later Joseon Dynasty (1392–1897) period differed significantly from that of the early period. The Imjin War of 1592–1598 and the Manchu Invasions from 1637 were major turning points for Joseon's military system, which necessitated and resulted in several fundamental changes.

Despite the widespread transformations that occurred in Joseon's military operations, organization, defense system, military administration, weapons, and tactics, no single comprehensive term or framework has been coined to describe these changes. In part, this is perhaps due to the fact that relatively few scholars work in the field of Joseon military history. Even those few scholars tend to focus on several highly specific topics within the wide definition of military history. To be sure, these scholars' narrow foci have led to a significant deepening of our knowledge in many important areas of the military history of Joseon Korea. Yet, we nevertheless lack an integrated, holistic, and critical approach to explain the nature and significance of the developments that occurred in the late Joseon military system. This is in contrast to other areas of late-Joseon history, where there are multiple discourses seeking to explain developments of the period. These discourses, although controversial, provide frameworks for understanding the evolutions reflected in the historical record. In the field of military history, there are as yet only explanatory frameworks for specific sub-fields, such as the Five Military Divisions system or the capital defense system.

Of course, the lack of an all-encompassing framework does not mean there has been no effort by scholars to assess and explain late-Joseon military developments more holistically. The most notable attempt at an explanatory thesis has been to apply the early modern European Military Revolution Thesis. The thesis' suitability to the Joseon context was first discussed by scholars in South Korea, in response to which several Anglo-American scholars specializing in East Asian history also carefully examined its potential applicability. Since its inception, the Military Revolution Thesis has prompted one of the fiercest debates in the

field of European military history. There have been various attempts to apply the thesis to non-European regions, particularly to East Asia. Applying the Military Revolution Theory to Joseon is part of this wider trend.

Reviewing the ongoing debate over the existence or otherwise of a Military Revolution in Joseon can provide a meaningful contribution on two levels. Firstly, within Korean history, discussion of the thesis can lead to the construction of a useful framework to understand the military history of the late Joseon period as a whole. Secondly, as part of world history, interrogating the same theoretical framework applied to other countries improves our understanding of the universality and particularity of Korean military history.

This article aims to compare and analyze discussions of the Military Revolution Thesis in the late Joseon context seen in both Anglo-American and Korean academia, providing a comprehensive overview of the scholarship to date. Specifically, the article focuses on two main aspects. Firstly, it examines how Anglo-American and Korean academia respectively analyze the Military Revolution Theory in Joseon. Secondly, the article identifies the major similarities and differences between these two discussions. The aim is to provide a more world-history-oriented and balanced basis for further research into late Joseon military history.

The remainder of this article is structured as follows. Section 2 briefly explains the ‘Military Revolution’ thesis and examines the academic debates prompted by it. It presents an overview of not only the European debates but also the discourses concerning the existence of East Asian military revolution, which have recently garnered attention. The section also provides a theoretical background for the analysis that follows. Section 3 introduces two studies by Anglo-American scholars. Reviewing the work of Kang Hyeok-hyeon and Tonio Andrade, as well as that of Kang and Kirsten Cooper, the section examines how Anglo-American academic field explains Joseon’s military revolution, focusing particularly on what late-Joseon changes they highlight. Section 4 introduces Korean scholarship in the form of two studies, by No Yeong-gu and Kim Yeong-joon respectively, as well as recent trends in Korean

military research. Finally, Section 5 compares the similarities and differences between the Anglo–American and Korean discussions. While there are certainly aspects of the military revolution that both fields focus on, the subtle differences in how these scholars seek to prove the existence of a Military Revolution are revealing.

The Military Revolution Thesis: A Historiographical Review

This section examines the historiographical development of the European ‘Military Revolution’ thesis to provide a theoretical context in which to review the recent debates on East Asian and Joseon military revolution.

1) Debates Around an Early modern ‘European’ Military Revolution

Despite numerous attacks on Michael Roberts’ thesis on the ‘Military Revolution,’ the idea that Europe’s military power underwent a radical change or ‘modernization’ which contributed to its eventual world dominance still stands (Starkey 2003, 35). The basic argument of Roberts’ 1967 article is that ‘by 1660 the modern art of war had come to birth’; by modern art of war he meant ‘mass armies, strict discipline, the control of the state, the submergence of the individual’ and ‘the use of propaganda, psychological warfare, and terrorism as military weapons’ (Roberts 1995, 29). Roberts argued that this fundamental transformation was initiated by the tactical reforms overseen by Maurice of Orange and Gustav Adolf of Sweden, which enabled their armies to use their firepower more efficiently than their opponents (Roberts 1995, 13–15). This, in turn, triggered the chain of development which eventually led to a transformation of government and its financial system to sustain the ‘modern’ war effort. In other words, the military revolution created the modern state (Black 2008, 34–41).

The debate was later reinvigorated by Geoffrey Parker’s revision. Instead of confining himself to Maurice and Gustav as Roberts had done,

Parker included the early modern Spanish army as another pioneer of modern warfare (Parker 1995, 39). Furthermore, Parker presented a more fundamental origin of the military revolution than Roberts' tactical reforms: it was the new type of fortress which appeared in Renaissance Italy, the *trace italienne*, which revolutionized European warfare (Parker 1995, 39). The significance of Parker's argument is, as Clifford Rogers pointed out, that he raised 'military technology as a causative factor' in the Military Revolution debate (Rogers 1995, 4).

Indeed, after Parker, technology became an inseparable aspect of any discussion of early modern warfare and even in general early modern history. Among the important technological developments, gunpowder has almost always received the most emphasis. Although numerous criteria have been suggested for establishing the beginning of the early modern European military revolution, most have nonetheless identified gunpowder weaponry as one of the most important characteristics (Raymond 2007, 3). This scholarly consensus is reflected in Armstrong Starkey's argument that, 'the introduction of gunpowder was fundamental to this revolution, which included the introduction of cannon, artillery fortification, and big-gun sailing vessels' (Starkey 2003, 35). Russell F. Weigley defined the era from the Battle of Breitenfeld in 1631 to the Battle of Waterloo in 1815 as 'the Age of Battles' (Weigley 1991, xi). In those battles, Weigley concluded that 'firepower' was the key factor, embodying 'a new kind of tactical proficiency' (Weigley 1991, xi). Similarly, Parker cited the French invasion of Italy in 1494-95 as the beginning of modern warfare (Parker 1995, 9). Parker's rationale is identical to that of Weigley: firearms were the catalysts of major change (Parker 1995, 9-10). In many works of early modern military history, the innovations of a string of military reformers, such as Maurice and Gustav, are also interpreted in light of the shifting balance in battle tactics from 'shock' to 'firepower' (Showalter and Astore 2007, 61-63).

The validity of the Military Revolution Thesis has by no means gone uncontested, however. For instance, in his 1985 article, David A. Parrott argued that the characteristics of the period often attributed to the military revolution 'was not revolution, but an almost complete failure to

meet the challenges posed by the administration and deployment of contemporary armies' (Parrott 1995, 228). Jeremy Black also argued that there were three 'revolutionary' periods instead of a single 'military revolution,' and the nature of the military revolution was 'the clever adaptation of existing ideas to suit local circumstances' (Black 1995, 110–111). He further argued that military adaptation is a more appropriate term than revolution (Black 2011, 7). Although his argument of three specific periods of military revolutions is debatable, his emphasis on adaptation to suit particular circumstances is an important corrective to the notion of the military revolution as a model to be followed by every army.

John France, a prominent medieval military historian, asserted that 'battle, before the modern age, was inevitably, in its crucial stage, a close quarter affair because missile weapons suffered from grave limitations' (France 2005, 503). He further noted that this "close-quarters battle fought in close-order formation remained untouched" and "nothing resembling 'Military Revolution' occurred before the nineteenth century" (France 2005, 507). Peter H. Wilson also contended that the 'idea of a military revolution' is based on a largely nineteenth-century concept of a "coherent story of modernization." He also undermined Roberts' dichotomy by arguing that Gustav Adolph's army at the Battle of Lützen (1632) cannot be simply referred to as a 'progressive' force against its 'reactionary' opponent (Wilson 2018, 113). He further posited that, although 'it has become a historiographical convention' that the more firepower-oriented Dutch infantry tactics were inherently superior to those of the Spanish army, 'the distinction is not accurate, nor does it correspond to sixteenth-century military thinking that drew directly on the ancient world for its inspiration' (Wilson 2009, 90).

In another recent work, Frank Jacob and Gilmar Visión-Alons maintained that "there never was a military revolution" and "the changes in the practice of war observed in Europe during the Early Modern period took place on a global scale, occurred numerous times throughout history, and are part of an endless evolutionary process of research and development prompted by immediate threats" (Jacob and Visión-Alonso 2016, 1). This succinctly summarizes the direction in which the most re-

cent academic debates concerning the concept of a military revolution have been moving.

2) The Cases for 'East Asian' Military Revolution

The Military Revolution debate did not long remain confined within the boundaries of European history. Recently, several scholars attempted to rectify the 'Eurocentrism' allegedly inherent in the 'European' Military Revolution Thesis, by proposing the case for the existence of an 'East Asian' or even 'Eurasian' military revolution. Without doubt, the achievements of these studies have been considerable, especially in pointing out several points that scholars specializing in European military history were largely unaware of. Nevertheless, even they could not completely free themselves from the basic framework established by Roberts and Parker.

Scholars of non-European military history have mostly accepted the fundamental tenets of the 'gunpowder revolution' theory. Tonio Andrade's recent work is one of the most notable examples. In an article co-authored by Kang Hyeok-hyeon and Kirsten Cooper, Andrade argued that "East Asian developments show striking parallels with European ones, and that the Military Revolution should perhaps be seen not as a European-specific development, but rather as a Eurasian-wide phenomenon" (Andrade, Kang and Cooper 2014, 51-84). One such parallel is the existence of volley-fire tactics and the drilling that enabled them. In a more recent work in 2016, Andrade named the entire period from the 10th to the mid-15th century the 'gunpowder age.' According to Andrade, this period began with China as the leading world power in gunpowder technology. After five hundred years, Europeans had begun to secure pre-eminence, only for China to quickly close the gap. It was not until the eighteenth century that a gap opened up again and what Andrade referred to as the 'Great Military Divergence' occurred (Andrade 2016, 297-298). Similarly, Peter Lorge situated the Asian military revolution through the existence of the 'gunpowder revolution' (Lorge 2008, 10-21). Lorge also argued that every aspect of early modern warfare in Europe was also evidenced in Chinese warfare (Lorge 2008, 73). Clearly, in

these works, gunpowder technology is central to understanding military innovation during this period.

Interestingly, despite specifically rejecting the notion of a uniquely ‘European’ military revolution, these scholars nonetheless implicitly accept Parker’s premise that the ‘rise of the West’ was made possible by Europe’s military superiority. Parker indeed acknowledged that the people of East Asia were familiar with many of the key concepts of the Military Revolution (Parker 1995, 136). He particularly emphasized how early modern Japan successfully employed Western firearms (Parker 2007, 333). This example is highly significant, as Japan is well known as being the only East Asian nation that successfully ‘modernized’ itself and developed into a great power during the late–nineteenth century. Here, once again, it is firearms, and the tactics focused on maximizing their effect, that symbolize ‘modernity.’

To be sure, these studies have greatly widened the scope of the Military Revolution debates and provided many valuable insights. However, two main weaknesses stand out. Firstly, the arguments concerning the East Asian or Eurasian Military Revolution are predominantly confined within the tactical and technological areas. More specifically, these studies mostly attempt to locate the ‘gunpowder revolution’ in Asia. Of course, the emphasis on gunpowder weaponry and tactics is important in European Military Revolution Thesis. However, it is important because this innovation in warfare was supposed to lead to the birth of the modern state system, not because of the adoption of gunpowder weaponry itself.

Secondly, as we have seen, there are increasing doubts over the existence of a European military revolution as Roberts and Parker understood it. Numerous recent studies argue that the effects of the tactical reforms of Maurice of Nasau and Gustav Adolph have been exaggerated, questioning whether firepower-oriented tactics were indeed more ‘modern’ than allegedly more traditional shock tactics. In this context, we are bound to question the utility of arguing for the existence of an Asian military revolution based on some similarities with a European military revolution—if, indeed, there was such a phenomenon.

The Joseon Military Revolution Thesis in Anglo-American Scholarship

This section examines the discourses on possible military revolution in late Joseon Korea, discussed in Anglo-American academia. As we have seen above, there has been significant recent research interest among Anglo-American scholars in the pertinence of discussing an Asian military. These scholars' focus tends to be on China and Japan, however, or these countries' interaction with European maritime empires (such as those of Portugal, Spain or the Netherlands). Early modern Korea under the Joseon Dynasty has received scant attention. Notably, only two studies have seriously addressed the case for a military revolution in Joseon, both of which include Kang Hyeok-hyeon as an author. Some of the content in these two studies overlaps significantly. Nonetheless, since these two studies focus on different aspects of Joseon's military innovation, this section will examine each study in detail. Although the 2014 article co-authored by Tonio Andrade, Kang Hyeok-hyeon, and Kirsten Cooper provides a more comprehensive discussion of the military revolution in Joseon, this section discusses Kang Hyeok-hyeon's 2013 article first, following the order of publication.

1) Kang Hyeok-hyeon. 2013. "Big Heads and Buddhist Demons: The Korean Musketry Revolution and the Northern Expeditions of 1654 and 1658." *Journal of Chinese Military History* 2 (2).

Kang's 2013 article explores how Joseon's military revolution, though resembling Europe's, took a unique path. Focusing on Joseon's northern expeditions of 1654 and 1658, mounted against Russian Cossacks at the Qing dynasty's request, Kang shows how Joseon successfully used firearms to repel Cossack forces. According to Kang, these campaigns, known as the 'Nashin Expeditions,' demonstrated Joseon's military advancements, particularly in the use of gunpowder weapons.

Kang argues that Joseon's military innovations were significant in three ways: (1) The number of musketeers increased rapidly after the Im-

jin War, with musketeers replacing archers in military units by 1708. (2) Joseon improved training methods, introducing advanced tactics like volley and rotating fire. (3) The Joseon government expanded its military budget to maintain these innovations, shifting from unpaid conscripts to salaried soldiers, seemingly following a similar path to its contemporary European ‘fiscal–military states.’

These changes align with Peter Lorge’s definition of a revolution as a “permanent change.” Joseon restructured its military around infantry firearms, making lasting institutional changes. Compared to Europe, however, Joseon’s revolution remained ‘incomplete,’ as it was largely confined to musketry. The momentum for reform declined under the Qing–dynasty hegemony that took hold after the Manchu invasions of the mid–seventeenth century.

Despite the success of its northern expeditions, Joseon lost the drive to continue military innovations, as the stabilization of the Qing borders removed external pressures. Consequently, Joseon did not complete the financial reforms needed to sustain its military revolution.

2) Andrade, Tonio, Kang Hyeok-hyeon, and Kirsten Cooper. 2014. “A Korean Military Revolution? Parallel Military Innovations in East Asia and Europe.” *Journal of World History* 25 (1).

The 2014 joint article by Andrade, Kang and Cooper highlights how East Asian military innovations, particularly in Joseon, paralleled developments in Europe, challenging the Eurocentric view of the military revolution. Tonio Andrade, the lead author, has extensively studied military revolutions in Asia, while Kang Hyeok-hyeon focuses on Joseon’s military changes, and Kirsten Cooper studies early modern European transnational interactions. Together, they offer a comprehensive analysis of the military revolution from Asian, Korean, and European perspectives.

Andrade, Kang and Cooper’s article emphasizes the importance of East Asia in the global discourse on the military revolution, particularly focusing on the “Revolution in Drill” in Joseon. This concept refers to the introduction of disciplined, coordinated military units, essential for the effective use of gunpowder weapons. In Europe, leaders like William

Louis of Nassau developed tactics such as volley fire, which allowed continuous shooting. Similarly, in Asia, China and Japan also adapted to gunpowder weapons, developing infantry tactics, as seen in Qi Jiguang's manual *Ji xiao xin shu* (The New Book of Effective Techniques) and Japan's use of gunpowder in the Sengoku (Warring States) period (15–16th centuries).

According to the authors, the Imjin War played a particularly significant role in introducing these changes to Joseon. After the war, Joseon rapidly transformed its military system by adopting Japanese gunpowder weapons as well as Chinese training methods. The establishment of the Military Training Agency (Hunryeondogam), a standing army of salaried full-time soldiers, marked a significant departure from Joseon's traditional conscription system, which relied on peasant militia. The focus on musketeers and the adoption of advanced training methods, such as volley fire, allowed Joseon to modernize its military system.

The key argument of the article is that Joseon's innovations in infantry tactics, particularly the use of musketeers and coordinated firing methods, paralleled developments in Europe. For example, the deployment and training of musketeers described in Joseon's *Orientation to the Military Arts* closely resembles European manuals like William Barriffe's *Military Discipline*. Both emphasized strict discipline, sequential firing, and the use of signals like drums to coordinate movements.

Even more, according to the authors, these Joseon military innovations were not just a theoretical development but successfully tested in the field, as can be seen in the skirmishes with Russian Cossack forces during the Northern Expeditions of 1654 and 1658. Joseon's musketeers played a decisive role in these engagements, demonstrating the effectiveness of their training and tactics.

The article concludes by questioning the Eurocentric perspective of the military revolution, arguing that similar developments occurred in East Asia. The authors call for further research and global data to support the idea that the military revolution was not confined to Europe.

The Joseon Military Revolution Thesis in Korean

Scholarship

This section examines how scholars working within Korean academia have responded to the theory of the military revolution in Joseon. Discussion of the thesis in the Korean academe has been relatively slow to arrive, despite its pre-eminence in the Anglophone military historiography of both Europe and Asia. Its occasional treatment has mostly been confined to the works of Korean scholars specializing in Western military history. Nonetheless, a few researchers have shown interest in the thesis' applicability to the Joseon context. Moreover, No Yeong-gu raised the possibility of a military revolution in Joseon earlier than his Anglo-American counterparts. Therefore, this article will first examine No Yeong-gu's pioneering work before moving to the subsequent research of Kim Yeong-joon.

1) No, Yeong-gu. 2007. "Military Revolution' and Joseon Dynasty's Military Reforms in the 17th and 18th Centuries." *Journal of Western History* 36.

No Yeong-gu's article explores the possibility of linking Joseon's military changes with the theory of the Military Revolution. He challenges traditional explanations of Joseon's post-Imjin War changes based on internal development theories, arguing that these changes align more with the military transformations seen in Europe after large-scale wars.

The article examines three main areas: changes in battle tactics, the expansion of military forces, and the establishment of a centralized fiscal structure. The main arguments are as follows.

Firstly, in terms of battle tactics, Joseon's shift from cavalry-based to infantry-based tactics after the Imjin War parallels changes in sixteenth-century Europe. Joseon adopted Qi Jiguang's *Zhe School tactics* and muskets, replacing bows. Infantry, equipped with swords for close combat, became the primary military force, supported by cavalry. This resembled Europe's transition from medieval tactics dominated by cavalry to the early modern tactics of musket and pike formations.

Secondly, with regard to military expansion, the size of Joseon's military grew significantly after the Imjin War, exceeding one million men by the early eighteenth century. The central army became dominant, and Joseon included lower social classes in its ranks. This expansion was driven by concerns over potential conflicts with the Qing dynasty and was part of King Hyojong's northern campaign policy.

Thirdly, to support its expanded military, Joseon made changes to centralize its fiscal system. These fiscal reforms are exemplified by the Law of Great Equity, which replaced tribute with rice and cloth, better suited for provisioning soldiers. Centralized taxation under the Seonhyecheong ministry allowed for efficient resource management, similar to Europe's adoption of mercantilism to fund large-scale wars.

No Yeong-gu argues that in these three important regards the changes in late Joseon reflect elements of a military revolution, as seen in Europe. While not identical, Joseon's military reforms, increased war expenditures, and centralized governance align with the global trends of military revolutions. No's article suggests that applying the Military Revolution Thesis offers a new perspective on late Joseon's historical significance by placing it within a global context, but it also acknowledges key differences between Joseon and Europe.

2) Kim, Yeong-joon. 2014. "Training Methods and Military Discipline of Joseon Musketeers around the 17th Century." *Journal of Military History* 92.

Kim Yeong-joon's article is one of the few studies to explicitly review the Military Revolution Thesis in Joseon after No Yeong-gu. The article criticizes the focus on military organization in late Joseon research while neglecting aspects such as training and tactics. It aims to explore the features of Joseon's military revolution that distinguish it from Europe.

Kim examines Joseon's military innovations through two key aspects: musketeer training and military discipline. Musketeer training is divided into individual firearms training and formation training. Joseon emphasized accuracy in firearm handling, using techniques like cheek-firing, similar to those introduced in Japan by Portuguese traders. For

formation training, Joseon adopted systems resembling European tactics, such as volley fire and rotating fire, documented in manuals such as the *New Artillery Manual* and the *Orientation to the Military Arts*. Yet, historical records reveal that Joseon's musketeers often adapted their tactics in response to cavalry-centric opponents like the Manchus, sometimes abandoning volley fire in favor of individual shooting from cover.

Military discipline is examined through two systems: the Reward System for Enemy Heads and the Collective Punishment. In contrast to Europe's focus on strict discipline, Joseon motivated soldiers by offering rewards for successful marksmanship, encouraging individual accuracy. The Collective Punishment system helped maintain unit cohesion, especially in mixed-rank units like the Sogo Army, where lower social classes dominated. This system allowed commanders to maintain control and accountability, stabilizing the military from the mid-seventeenth century.

Kim's article concludes that while Joseon's military innovations paralleled those in Europe, such as the emphasis on gunpowder weapons and new training methods, significant differences existed in how musketeers operated and the cultural values surrounding military discipline. Thus, mechanically applying the European military revolution theory to Joseon is problematic, as it would obscure these distinct cultural motivations and practices.

3) Recent Discussions on Military Revolution Theory in Korean Academia

The term "Military Revolution Thesis" itself is rarely used in Korean scholarship, aside from the two studies examined above. Nevertheless, discussions on topics related to the Military Revolution Thesis such as the adoption of firearms, the expansion of musketry units, and the standardization of training methods—have seen many new contributions in recent years.

Although these studies do not directly address the theory of a military revolution, they do provide significant insights into the military transformations in mid-to late-Joseon Korea which are often held as major components of the military revolution in Europe. Therefore, it is nec-

essary to outline this recent scholarship here.

New scholarship in this area can be summarized in terms of two main areas: reforms to the military system and advancements in firearms technology.

The transformation of the military system has not been a primary focus of discussions of the Military Revolution in Joseon within either Anglophone or Korean academia (Kim Jong-soo 2015). This is the main weakness of the Military Revolution debate regarding Joseon. Without structural changes in military institutions, advancements in weaponry and training methods cannot be effectively implemented. From this perspective, the research concerning the shift from a ‘兵農一致’ (*byeongnong ilchi*, military-agricultural integration) system to a ‘兵農分離’ (*byeongnong bunri*, military-agricultural separation) system before and after the Imjin War (1592–1598) deserves special attention.

The Military Training Agency (Hunryeondogam) was the central institution in military system reform. It operated based on the principle of military-agricultural separation. In the context of Korean history, this was an innovative reform that shifted the military system from one of military-agricultural integration to one of military-agricultural separation. This reform was not merely an institutional change. The establishment of the Military Training Agency was in response to Qi Jiguang’s manual *Ji xiao xin shu*.

To adapt the core concepts of the *Ji xiao xin shu* to the realities on the ground in Joseon, various efforts were made. Firstly, in order to reform and implement the military system according to *Ji xiao xin shu* principles, Joseon imported military instructors from Ming China (Jang 2022). As the new military system gradually became more familiar, Joseon compiled and produced its own military manuals that better adapted the system to local circumstances (Li 2021). The Royal Division (Eoyeongcheong), the Anti-Manchu Division (Cheongnyeongcheong), and the Forbidden Guard Division (Geumwiyeong), which were subsequently established, also partially adopted the principle of military-agricultural separation (Jang 2022). Additionally, a common characteristic of these military divisions was that they were all created with the primary objec-

tive of defending the capital.

This transformation highlights the difference between the emergence of standing armies in Europe and Korea. In Europe, standing armies developed as large-scale national forces that upheld absolute monarchy and were actively deployed in wars of conquest. In contrast, standing armies in Korea were not aimed at expansion but were instead focused solely on the defense of the capital.

The perceived need for this transformation declined during the eighteenth century, as the risk of invasion diminished and improving the living standards of the general populace took political precedence. Notably, reformists commonly referred to as “*Silhak*” scholars argued for a return from military-agricultural separation to military-agricultural integration. Yet, rather than being a regression in military innovation, this shift in fact reflected an effort to sustain military reforms while adapting to changing realities (Kim Jin-su 2011).

Joseon’s military reforms were not confined to renaming military divisions or reorganizing their structures. The system underwent a fundamental transformation as it shifted from a conscript-based system to a recruitment-based or mercenary one, significantly altering the way military forces were mobilized. Furthermore, the creation of capital defense-oriented military divisions, rather than regional defense units, redefined the system of national defense.

In sum, recent research indicates that although military developments in Joseon differed from the Military Revolution in Europe, they nonetheless demonstrate that Joseon was undergoing its own significant military transformation.

The other important component of the Military Revolution debate is the adoption of firearms. What follows is an outline of the recent discussions on the distinct characteristics of Joseon firearm development.

Several recent studies have highlighted the unique aspects of Joseon’s utilization of gunpowder weapons. Kim Jin-su attempted to analyze the domestic impact of musket adoption in Joseon and compare it with trends in East Asia (Kim Jin-su 2015). This study is particularly noteworthy as it provides a comprehensive review of existing Korean

scholarship on muskets, arguing that Joseon prioritized the introduction and expansion of muskets following the Imjin War. It demonstrates that scholars generally agree that Joseon's adoption of muskets was a result of interactions and exchanges within East Asia and that musket production saw a rapid expansion after the Imjin War (see also Kim Jong-soo 2015).

Yet, a broader analysis of Joseon's utilization of gunpowder weapons offers deeper insights into the country's military transformation, as illustrated by Kim Byonglyuen's recent study (Kim Byonglyuen 2023). In fact, Joseon had a long history of gunpowder weaponry. It had already employed firearms in battles against Waegu (J. Wako, Japanese pirates) in the late fourteenth century. Throughout the early Joseon period, the kingdom continued to develop its gunpowder weapons, but with a focus on large-scale artillery, such as cannons, rather than personal firearms. These larger weapons were mainly utilized in naval warfare and siege defense, and they evolved primarily as defensive weapons rather than offensive ones.

The Imjin War of 1592–8 was a critical inflection point that catalyzed a shift from large-scale artillery to small firearms. Nevertheless, technological limitations meant that small firearms continued to be difficult to employ effectively. In fact, in battles fought after the Imjin War, the effectiveness of firearms remained limited, and close-combat units still occupied a dominant role on the battlefield (Jang 2021). Furthermore, Joseon's fundamental defense strategy relied on retreating into mountain fortresses, in order to conduct protracted, defensive warfare. For these reasons, from the eighteenth century onward, Joseon once again prioritized large firearms suited for defensive warfare. In particular, the army focused on support weapons (such as the Hwacha, 火車, or mobile artillery) that could overcome the technical limitations of accuracy and rate of fire (Kim Byonglyuen 2023).

In summary, Joseon's gunpowder weaponry did not evolve along the same trajectory as its counterparts in Europe. In Europe, where continuous warfare was the norm, small firearms were advantageous not only for defensive purposes but also for offensive operations. By con-

trast, in the context of Joseon, which prioritized defense, and which faced technological constraints and limited incentive for continuous innovation, artillery took precedence. This suggests that when discussing the Military Revolution in Joseon it would be misleading to consider only the musket as representative of the Gunpowder Revolution. Instead, another core element of Joseon's military transformation was its focus on large firearms.

A Comparison Between Anglo-American and Korean Academia: A Critical Assessment

Building on the preceding review of Anglo-American and Korean scholars' arguments in favor of a Military Revolution in Joseon, this final section examines the similarities and differences in these studies and critically assesses their merits.

The first point to note is that scholars working in Anglo-American and Korean academia all clearly acknowledge one key point: the "Gunpowder Revolution" indeed occurred in Joseon. Before the Imjin War, while China and Japan widely adopted infantry firearms, Joseon approached gunpowder weaponry from a different direction, focusing more on large cannons. After the Imjin War, however, Joseon turned its attention to infantry firearms, reflecting the practice of the invading Japanese forces they had encountered, and rapidly replaced its traditional archery-centered weapon system with one built around the musket. Scholars also agree that not only did the number of musketeers increase, but new tactics and training methods for their operation were also developed. In other words, Joseon simultaneously achieved both the quantitative expansion of its army and the growing sophistication in mastery of gunpowder weaponry by its infantry.

The rationale behind each scholar's argument for these innovations differs somewhat, however. Kang Hyeok-hyeon emphasizes the performance of musketeer units during the Nashin Expedition as evidence of the success of the Gunpowder Revolution. Tonio Andrade focuses less on

the performance of musketeer units in combat and more on their training methods. He highlights that, similar to their European contemporaries, Joseon musketeer units adopted volley fire and sequential fire tactics, and underwent rigorous training based on manuals. Andrade thus places more emphasis on the “Revolution in Drill,” which he sees as essential for the success of the Gunpowder Revolution—as it was in early modern European cases. No Yeong-gu focuses on the rapid expansion of musketeer forces and the formation of a large standing army. Kim Yeong-joon has argued that Joseon’s musketeers were influenced by a military culture that valued individual ability over strict adherence to training manuals, marking a contrast to Andrade’s argument. These subtle differences in perspective reveal that, while these scholars broadly agree that a Gunpowder Revolution occurred in late Joseon Korea, there is yet no consensus around its impact and origins.

Beyond the revolutions in gunpowder weaponry and drill, the areas of military affairs selected for study by historians of late Joseon differ significantly. No Yeong-gu, who first proposed the possibility of a Military Revolution in Joseon, also discussed the management of large armies and the centralization of the fiscal structure to support military expenditures. Although Kang Hyeok-hyeon introduces these topics, he limits the scope of Joseon’s Military Revolution by stating, “Joseon’s military reforms were radical by local standards, but the military revolution in Joseon was mostly confined to the musketry revolution, with limited effects on fiscal mobilization and social reforms.” Tonio Andrade, too, focuses on the content of the Drill Revolution and does not address the relationship between military innovation and social change in Joseon. Instead, he notes that, despite the Gunpowder Revolution, the cultural tradition of archery remained intact in Joseon. Kim Yeong-joon, apart from discussing changes in training techniques, does not mention other aspects of the military revolution theory. In other words, apart from the Gunpowder and Drill Revolutions and with the exception of No Yeong-gu, scholars hesitate in making the case for a Joseon Military Revolution more broadly defined.

One characteristic unique to Anglo-American researchers is their

emphasis on the connection between Europe and Joseon. Kang Hyeok-hyeon views the two Northern Expeditions (Nashin Expeditions) as a confrontation between the Military Revolutions of Europe and Joseon. He argues that the European revolution failed in East Asia, while the Joseon Military Revolution proved its validity. Tonio Andrade focuses on the Dutchman Jan Janse Weltevree (Pak Yŏn), who drifted ashore in Joseon. He attaches great significance to the fact that Weltevree's arrival coincided with the period of the Gunpowder Revolution in Joseon. Hailing from the Netherlands, Weltevree came from one of the European countries undergoing significant military innovations at the time. Andrade argues that it was with the help of Weltevree that Joseon improved its gunpowder weaponry—thus establishing a connection between the military innovations of Joseon and Europe.¹ Anglo-American scholars broadly speaking tend to interpret even occasional or small-scale military encounters Europe and Joseon as events with a large historical significance. Although this might enable scholars to see the military history of Joseon in a broader, global perspective, there is a danger of over-simplification and exaggeration.

Reviewing this field more broadly, there are definite limitations to the scholarship making the case for a Joseon Military Revolution. While these studies' novel contributions to our understanding of late Joseon military transformation are welcome, the case for a Military Revolution in Joseon remains unconvincing in several key regards.

Firstly, it is doubtful that the quantitative expansion of musketeer units (which was, in fact, quite modest compared to contemporary European armies) led to a proportional improvement in the combat effectiveness of the late Joseon military. In fact, the Joseon government soon found itself unable to sustain the costs of maintaining its enlarged musketeer units and regressed to past practices. Instead of maintaining a large

¹ The claim of such a Joseon-European connection is generally not accepted in Korean academia. Instead, Korean scholars argue that while Joseon was interested in Dutch firearms and ships, it adopted a defensive posture toward improving its military system through Dutch technology. For related discussions, see Kim Moonsik, "Chosŏn intellectuals' understanding of Holland in the 18th Century," (Kim 2007).

salaried standing army, Joseon reverted to the traditional system whereby a small group of regular soldiers (*Jeonggun*) was sustained by economic contributions made by auxiliary personnel (*boin*), the regular soldiers serving in rotation.² This system was not dissimilar to the militia system of the early Joseon period, which relied on an essentially amateur, peasant army. The alleged “Gunpowder Revolution” in Joseon Korea therefore did not ultimately lead to the greater professionalization of the Joseon military system, nor to the maintenance of a large standing army such as those seen in Europe.

Moreover, as even Kang Hyeok-hyeon admits, it is questionable whether the Nashin Expedition can be seen as a proof of a successful Gunpowder Revolution in Joseon. First of all, this clash between Joseon and Russia was hardly a grand confrontation between two parallel armies that had both undergone military revolutions. The Joseon army that participated in the Nashin Expedition numbered about 200, all of whom were musketeers, as noted in existing studies. Given these numbers, the Joseon troops can only be said to have participated in skirmishes, rather than in a full-scale pitched battle. Furthermore, mid-seventeenth-century Russia cannot be described as a pioneer of military transformation in Europe. Secondly, it remains to be determined whether the Joseon troops actually utilized volley fire or sequential fire in battle, and how effective they were in combat. The primary sources are vague about this. While it is true that Joseon troops earned a reputation as “Big Heads” and successfully completed the Nashin Expedition, the precise role of firearms in

² In essence, apart from the Military Training Agency (Hunryeondogam), the other military divisions—the Anti-Manchu Division (Chongyeongcheong), the Defense Command (Suyeochong), the Royal Division (Eoyeongcheong), and the Forbidden Guard Division (Geumwiyeong)—retained a similar system to the early Joseon period, with both regular soldiers and auxiliary personnel. The main difference was that the financial operations of each division were managed under military oversight, rather than by individual soldiers themselves. For representative studies on the financial operations of military divisions in late Joseon, see *Research on the Military System of the Joseon Dynasty* (Cha 1973), *Research on Military Affairs in the Joseon Dynasty* (Cha 1995), *Studies on the history of military system in the late period of the Yi dynasty* (Choi 1991), and ‘Inception of Eoyeong-Cheong and Establishment of On-duty Salary Payment System in the 17th century’ (Kim 2021).

these battles has not been fully clarified. Therefore, it would be rash to conclude that a “Gunpowder Revolution” had successfully taken place based solely on the use of firearms in, and the outcome of, the Nashin Expedition.³

The idea that Joseon experienced a Military Revolution after the sixteenth century because it changed the proportion of its army rapidly, by replacing traditional bow and edged weaponry with musketeers, can be questioned from another direction as well. In fact, had the late Joseon army had opportunities to be involved in more major wars, the tactical doctrine solely relying on muskets would have necessarily become untenable. In sixteenth- to seventeenth-century Europe, while musketeers were introduced, traditional pikemen and cavalry were still valued, and new and old tactical elements were integrated into a combined tactical system depending on the combat situation.⁴ In contrast, as researchers point out, Joseon abnormally increased the number of musketeers, which can be seen as evidence of its lack of combat experience and its failure to align military innovations with practical realities, rather than as evidence for “modern” innovation.

More importantly, it is questionable whether the proposition that Joseon reformed its society through military innovation is plausible in the context of the stable East Asian diplomatic order led by the Qing dynasty. While Joseon was concerned with military issues due to its conflicts with the Qing and its fear of possible future conflicts, it is hard to argue that Joseon aimed to become an international military power. Fundamentally, Joseon was under such diplomatic pressure from the Qing

³ In fact, the battles during the Nashin Expedition were not open-field engagements where formations were deployed. Rather, they were a series of riverine and siege battles, fought mostly on boats or near river fortifications. In such battle forms, the use of tactics like volley fire or sequential fire would have been highly restricted. For a more detailed explanation of the battle developments during the Nashin Expedition, see ‘Sino-Korean Expeditions to the Amur of the 1650s in Russian Sources’ (Kye 2018).

⁴ Recently, there has been a view that warfare during the era of the military revolution was not dominated by musketeer tactics alone, but by the combined use of pikemen and other units. For related discussions, see “The ‘Push of Pike’ in Seventeenth-Century English Infantry Combat,” (Yun 2022).

that it was nearly impossible to overtly expand its military forces. In fact, according to the Jeongchuk Treaty, signed after the Manchu invasions, Joseon was prohibited from constructing fortresses and defenses without explicit permission from the Qing.⁵ Although King Hyojong promoted the ‘Northern Expeditions’ as a pretext, it remained nigh on impossible for Joseon to expand its military to the level necessary for a confrontation with Qing. Therefore, as long as Qing sat at the head of a stable international order, the prospect of an independent “military revolution” on the Korean Peninsula was remote.

In addition, the arguments put forth for Joseon’s Military Revolution can also be critiqued based on recent developments in the debate over the European Military Revolution. Specifically, two closely related criticisms can be levelled at the “early modern Korean Military Revolution” thesis in light of the latest European historiography.

Firstly, the argument for an early modern Korean Military Revolution relied too heavily on several assumptions not supported by the empirical record, especially as regards the “Gunpowder Revolution.” These assumptions are increasingly being questioned by revisionist studies of early modern European history. As we have seen, the cases for a Korean Military Revolution are in large part constructed upon Joseon’s adoption of gunpowder weaponry. For example, much emphasis has been given to the importance of ‘volley fire.’ The practice of infantry counter-march that enabled volley fire by the Dutch army under Maurice of Nassau (1567–1625) had conventionally been regarded as a key innovation in European military revolution. Some research into East Asian military history found “striking parallels,” most notably in the Battle of Nagashino (1575) in Japan and in the practice of the early modern Korean army, and thus claimed there were similar revolutions in East Asia as in Europe (Andrade, Kang, and Cooper 2014, 51–84; Parker 2007, 333). Yet, it has more recently been pointed out that the Dutch army reformed by Maurice

⁵ For a detailed analysis, see ‘The Peace Treaty of 1637 and the An Ch’uwon Case in 1666’ (Kim 2016).

of Nassau “did not sweep victory over Spain” (Black 1991, 19). The Battle of Nieuwpoort (1600), long regarded as the crowning achievement of Maurice’s revolutionized Dutch army, was, in fact, a very hard-won victory for the Dutch that had little to do with infantry firepower and after which the Dutch army rarely fought a battle (Wilson 2022, 85). Recent scholarship has also argued that the volley fire practiced by the army of Japanese warlord Oda Nobunaga at Nagashino is mostly a fiction. On a more fundamental level, the adoption of firearms or certain tactics concerning infantry firepower alone cannot serve as proof of a Military Revolution. This is why recent studies instead emphasize the importance of traditional edged weapons and effective integration between traditional and new weaponry in early modern European warfare (Philips 1999, 256–257; Yun 2022, 837–857). This question of integrated weaponry systems has not yet been given sufficient treatment in the historiography of early modern Korea.

Secondly, despite the recent revisionist arguments made against an early modern European Military Revolution, there is no doubt that the majority of scholars still agree that a major change in European warfare did indeed occur in the early modern era—however gradual and haphazard that change may have been. One of the most important changes was the expansion in the scale of warfare and of European armies. For example, Louis XIV’s France fought several major wars throughout his reign and, as a result, created a huge, professional standing army which dwarfed in size the armies of the preceding centuries (Lynn 1997). To sustain such massive armies, major European countries had to reform their finance systems, resulting in the so-called “fiscal–military state” (Brewer 1989). If we are to identify one truly innovative change with long-term significance, this would be it. However, it is difficult to observe anything comparable in early modern Korean history. Despite claims that the Joseon government did create a paid, professional standing army, this was a far cry from Louis XIV’s 400,000-strong standing army and there was no evidence whatsoever that seventeenth- and eighteenth-century Joseon state finances approached a “fiscal–military state.”

In conclusion, the pioneering contributions of the research notwithstanding, recent scholarship arguing for a late-Joseon Military Revolution fails to overcome several key problems and leaves much to be desired. The task of future research in this area must build upon and go beyond, the findings of the studies examined here in order to produce a more balanced, concrete picture of military developments in the late Joseon period.

Conclusion

Thus far, we have examined the discussions around the plausibility of a Joseon Military Revolution in both Anglo-American and Korean scholarship and explored the similarities and differences between these two bodies of literature. The discussions were born of an attempt to apply the European Military Revolution Thesis to the Joseon context, which is admirable in itself and has undoubtedly contributed greatly to the field of Korean military history. Nevertheless, there are several problems that require further research.

The Military Revolution Thesis in its original form, as proposed by Michael Roberts, argues that military innovations in Europe around the sixteenth to seventeenth century triggered social innovations that eventually contributed to the establishment of the modern state system. In its earlier form, the essence of European military revolution thesis centered on the adoption of gunpowder weaponry and tactical reforms to maximize its effect. The thesis has since attracted criticism for its technological determinism, while historians have also identified inconclusive evidence of transformation in the empirical record. Nevertheless, there have been attempts to apply this theory to Asian military history. Known as the ‘Asian Military Revolution Theory,’ this interpretation suggests that similar military innovations occurred in Asia. Yet, the Asian Military Revolution Thesis is not immune to the same criticisms leveled at its European counterpart.

The proposition of a Military Revolution in Joseon can be consid-

ered part of the broader Asian Military Revolution Thesis. Both Anglo-American scholars, such as Tonio Andrade and Kang Hyeok-hyeon, and Korean scholars, such as No Yeong-gu and Kim Yeong-joon, have explored this proposition seriously. Tonio Andrade focused on the rapid increase in the proportion of musketeers in late Joseon and the standardization of their training methods. Kang Hyeok-hyeon highlighted the performance of musketeers in actual combat during the Nashin Expedition. Both scholars argued that the Gunpowder and Drill Revolutions that occurred in Europe also took place in Joseon, suggesting the possibility of a Military Revolution in Joseon. Korean scholars' application of the Theory has been different. No Yeong-gu, for example, emphasized how the shift toward a musketeer-centric army in late Joseon brought about broader social changes. He argued that the expansion of artillery units led to changes in the military service system and the way military finances were managed. Kim Yeong-joon, on the other hand, focused on training and discipline, noting the similarities between Joseon's training methods, such as the implementation of sequential fire tactics, and European military innovations.

Taken as a whole, scholars who have investigated the possibility of a Military Revolution in Joseon have generally agreed on the existence of a "Gunpowder Revolution," but there is no consensus as to whether a true "Military Revolution" occurred. In fact, to varying degrees, some studies express skepticism in this regard.

Inevitably, applying the Military Revolution Thesis to Joseon requires caution. The Theory itself is not without its flaws, but more importantly, the changes that occurred in Joseon do not closely resemble those in Europe. Can we, as Kang Hyeok-hyeon suggests, describe Joseon's Military Revolution as being "limited to the musketry revolution, with other areas remaining restricted"? Such an interpretation may be possible. Yet if the revolution was confined to the musketry revolution, we must consider whether it is meaningful enough to be called a 'revolution' at all. If so, then the case of Joseon might be more valuable as an example of a failed military innovation rather than of successful innovation. In this case, it may be more worthwhile to examine how Joseon overcame

the shocks that followed its failed military innovations.

Recently, some scholars have proposed the term ‘evolution’ instead of ‘revolution’ when discussing military developments in early modern Europe. Frank Jacob and Gilmar Visoni-Alonzo, in their work, have gone so far as to declare that the idea of a military revolution was never more than a mirage, arguing that military tactics and technologies simply evolved and adapted to the circumstances of each country or region worldwide.

The key to evolution is adaptation. Joseon, too, succeeded in rapidly replacing its military system with one based on gunpowder weapons through an innovative process. Yet, we can understand that Joseon adapted to the resulting shocks in its own unique way. In other words, rather than seeking examples of military innovation in Joseon that resemble those in Europe, we should instead focus on the particularities of how Joseon started with a military innovation similar to those in Europe but transformed its military system in a distinct manner. This remains an important task for future research.

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