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Moving Beyond the Military Revolution

Andrade, Tonio. *The Gunpowder Age: China, Military Innovation, and the Rise of the West in World History*. Princeton and Oxford: Princeton University Press, 2016. ix + 432; Sharman, J.C. *Empires of the Weak: The Real Story of European Expansion and the Creation of the New World Order*. Princeton and Oxford: Princeton University Press, 2019. xii +196; Yun-Casalilla, Bartolomé. *Iberian World Empires and the Globalization of Europe 1415-1668*. Singapore: Palgrave Studies in Comparative Global History. Palgrave Macmillan, 2019. xxvi + 520 pp.

The military revolution is dead. Its importance to historiography over the past half century can hardly be overstated – the innovative and influential idea, first put forward by Michael Roberts and then transformed by Geoffrey Parker, has long set the terms of debate about warfare in early modern Europe and the world, and war’s impact on government and society. Nevertheless, while specialists on pre-modern European military history have been criticizing and amending the theory for decades, two recent publications by scholars outside this tradition, Tonio Andrade and J.C. Sharman, have now put the final nails in the military revolution’s coffin. Because both the proponents and the critics of the military revolution look to the history of the early Iberian global empires to test and explain their ideas, it is appropriate that this review essay appears in the *Bulletin for Spanish and Portuguese Historical Studies*. Indeed, for a look at another way to view the relationship between global military affairs and European state-making, a new book by Bartolomé Yun Casalilla points in a promising direction. Ultimately, however, there is something still largely missing from these three books – and indeed the entire debate about the military revolution – that needs to be addressed.

A scholar of Swedish history, Roberts published ideas in the 1950’s and 60’s that identified the tactical innovations of Maurice of Orange and Gustavus Adolphus during the century between 1560 and 1660 as a force that created “a great divide separating mediaeval society from the modern world.”¹ Roberts’ theory boils down to a chain reaction of causation and effect, beginning with the attempts of these two military leaders to make the most efficient use of the musket. Doing so led to tactical innovation, then to an increased emphasis on drill to put those tactics

¹ Michael Roberts, “The Military Revolution, 1560-1660,” in *The Military Revolution Debate: Readings on the Military Transformation of Early Modern Europe*, ed. Clifford J. Rogers (Westview: Boulder and Oxford, 1995), 13. First published in Michael Roberts, *Essays in Swedish History* (Minneapolis: University of Minnesota Press, 1967), 195-225, and published in an earlier form as Michael Roberts, *The Military Revolution, 1560-1660, An Inaugural Lecture Delivered before the Queens’ University of Belfast* (M. Boyd: Belfast, 1956). The collection by Rogers is an excellent starting point for anyone wishing to follow the early debate on the military revolution.

into practice, next to professional standing armies of unprecedented size in order to provide a soldiery trained in the new drill, and subsequently a corresponding strain on early modern states to equip, feed, and pay these newly engrossed armies, ultimately leading to new, modern governmental forms either through reform or revolution. In short, in order to make the best use of a new military technology – gunpowder – the modern state was born.

A generation later Parker updated Roberts' theory, first in an article published in 1976 and then in book form in 1988.² Significantly, Parker subtitled his monograph "Military Innovation and the Rise of the West, 1500-1800." Not only did he expand Roberts' timeframe, he also broadened the argument to explain why Europe emerged by 1750 from economic and military backwaters to produce the first globe-spanning empires. A student of the Eighty Years War, Parker emphasized the thin lines and volleys of Dutch musketeers in the late sixteenth-century over the seventeenth-century Swedes. More importantly, he emphasized the new star-shaped style of fortifications, the *trace italienne* – which emerged even before Maurice of Orange's tactical innovations – to better defend against the larger artillery pieces that were beginning to appear in sieges and, when defending the fortresses, to take advantage of better lines of fire. Parker argued that more than anything else, the imposing new fortifications and the resulting emphasis on sieges accounted for the rapidly growing armies and the strain on the resources of governments. He also emphasized the full incorporation of the logic of gunpowder weapons in naval warfare, with the Europeans the first in the world to build ships bristling with cannon and adopting tactics to make the best use of them, abandoning ramming and the grapple-and-board tactics that had governed naval battles previously. Together, larger armies disciplined by drill, cannon-oriented fortresses, cannon-oriented ships, and the increased ability of European governments to pay for all of this enabled Europeans to seize control of territory from the suddenly outdated armies of non-Europeans.

Although the new paradigm they had articulated quickly won broad approval, Roberts and Parker also attracted critics among military historians of early modern Europe. Two voices in particular emerged in the 1990's that convincingly shook the military revolution's foundations. The prolific Jeremy Black leveled three attacks on the military revolution. First, the decades surrounding 1700 featured technical and tactical innovations at least as significant as those surrounding 1600: the socket bayonet, flintlock muskets, and the line-ahead formation in naval warfare, for example. Moreover, it was not until this period that Western Europeans could consistently beat the Ottoman Empire. Second, Black accused proponents of the military revolution of anachronism,

² Geoffrey Parker, "The 'Military Revolution,' 1560-1660 – a Myth?" *The Journal of Modern History* 48, no. 2 (1976): 195-214; Geoffrey Parker, *The Military Revolution: Military Innovation and the Rise of the West, 1500-1800* (Cambridge: Cambridge University Press, 1988).

cherry-picking Western victories over non-Western states to give a greater impression of effectiveness than there was. The conception of a military revolution begins by looking at the overwhelming strength of Western states vis-à-vis non-Western ones in the nineteenth century, and then creates a just-so story as to how they got there, gathering evidence that supports its theory and ignoring counter-evidence. Third, the military revolution suffered from Eurocentrism, despite Parker's remarkable ability to incorporate research on areas outside Europe (also in evidence in his work on climate history). A lack of real understanding of the effectiveness of non-European armies gave him a blinkered view of European exceptionalism.³ While Black was tugging at the military revolution from 1700 and beyond, Clifford J. Rogers pulled back from the European Middle Ages. Rogers identified the Hundred Years War as an equally innovative era, with an infantry revolution occurring in the fourteenth century when longbows, pikes, and crossbows became effective weapons against the heavy cavalry that had ruled the western European battlefield for centuries, followed by an artillery revolution in the early fifteenth century when primitive cannons first became able to knock down stone-walled castles. It is not lost on Rogers that the timespan of the military revolution keeps growing – from Robert's 100 years, to Parker's 300, and now with the infantry revolution, 500 years. To account for this ballooning time frame, Rogers posited that military change is best described as “punctuated equilibrium” – short bursts of change interspersed with periods of stasis.⁴ The fact that he borrowed this term from biology, where it describes the process of evolution, suggests however that the concept of a “revolution” has been stretched to its breaking point, and perhaps the technology and tactics touted by Roberts and Parker were not so uniquely influential after all.

Yet the idea of the military revolution continued to serve as a touchstone for historians for two more decades. But now into this scene arrives Tonio Andrade, who provides a sharp corrective to the Eurocentrism that Black decried. Surveying early modern Chinese military history, Andrade denies that early modern China ever lagged behind the West in military technology or tactics for more than a few years. Chinese troops drilled in a manner similar to the Dutch and Swedes at the center of the military revolution, incorporating the musket volley into their tactics so effectively that they maintained a basic equality with European troops. China already had a centralized sovereign state with a standing army, so here too it was

³ Jeremy Black, “A Military Revolution? A 1660-1792 Perspective” in *The Military Revolution Debate: Readings on the Military Transformation of Early Modern Europe*, ed. Clifford J. Rogers (Westview: Boulder and Oxford, 1995), 95-114; Jeremy Black, *A Military Revolution? Military Change and European Society 1550-1800* (London: Palgrave, 1991).

⁴ Clifford J. Rogers, “The Military Revolutions of the Hundred Years War,” in *The Military Revolution Debate: Readings on the Military Transformation of Early Modern Europe*, ed. Clifford J. Rogers (Westview: Boulder and Oxford, 1995), 55-93.

ahead of Europe in the game. Andrade acknowledges that European states had more effective fortifications and fighting ships, but the Chinese were able to adapt quickly and expel Western incursions nevertheless, as in Taiwan and eastern Siberia. When the Portuguese arrived on China's shores in the early sixteenth century, the intruders possessed better cannon because China had already had the massive walls that the Europeans were now developing. China never developed the smaller, proto-cannon that were so effective in late medieval Europe against thin medieval stone walls, which could then evolve into the long guns of Portuguese warships. Nevertheless, the dedicated warships bristling with cannon brought in by the Portuguese and later the Dutch first had a devastating effect on Chinese fleets, but then succumbed to the ancient tactic of fire ships, and then the Chinese quickly modernized their cannon to match the Europeans'. This process of quickly countering and then adapting the newly imported Western technology repeated itself with every advance in western military technology during the period up to the nineteenth century, which Andrade calls the "age of parity."

China fell behind in the nineteenth century partly because the Qing Empire had become so powerful that decades passed in the late eighteenth century without any serious rivals emerging to test its military practices and spur them to change, while Europe saw one war after another, which kept the technological and tactical race going. The result of this lag was that China found itself truly outclassed for the first time by Western forces during the Opium War against Britain in the 1830s. Another reason was that the pace of technological change in the West sped up thanks to the advances of the industrial revolution – as modern weapons became more sophisticated and evolved ever more quickly, the Chinese found they lacked the technical skills to reverse-engineer modern weaponry and keep up. Andrade confesses that he was surprised to realize how much Europe's Scientific Revolution mattered. He had become accustomed to defending China in courses he taught to undergraduates against claims of "backwardness," but when it came time to create steam engines, exploding shells, and precise howitzer trajectories, Chinese military specialists just had nowhere to begin. The point remains, however, that until the nineteenth century, drill and standing armies represented merely the catching up of the Europeans to the Chinese, and the new naval warfare and fortifications did not convey any kind of decisive advantage.

If Andrade provides a critical check to Parker's idea that the military revolution led to "the rise of the West," J.C. Sharman dismantles it completely. Like Black, Sharman believes that the overwhelming power of the nineteenth-century Western powers has clouded the judgment of early modern scholars. Surveying the work of others rather than providing his own original research, Sharman, an international relations scholar, points out that even when accounting for the limited success that Europeans had abroad until 1800, the component parts of the military revolution had nothing to do with it: "the styles of warfare Europeans

used abroad were almost completely different from those that they used at home.”⁵ The Spaniards who toppled the Mexica and Inca were loosely organized adventurers, untrained in drill and not fighting in the innovative tactics developed by Maurice of Orange and Gustavus Adolphus. Portuguese success in Asia and Africa depended on avoiding conflict with powerful local rulers, certainly the Mughal Empire but also local African states. They sought to control shipping lanes and a few ports, resources that were uninteresting to the land-based African and Asian sovereigns. When the British and Dutch did manage to start carving out territory for themselves in India and southeast Asia, the actors were private trading companies, not fiscal-military states produced by the military revolution. And the persistence of Ottoman strength into the eighteenth century belied the dominance of European powers even in their own backyard.

Sharman also rejects the engine of change that is supposed to have fueled the military revolution at home: competition. Roberts and Parker’s model of change rests on a Darwinian European system of fierce rivalries, where each polity had to adopt technological and tactical innovations quickly or else succumb to defeat and perhaps extinction. Drawing on the works of sociologists like Jon Elster, Sharman rejects the idea that institutions can efficiently learn the correct lessons from military failure. Battles and war in particular are complicated affairs with multiple causes for victory and defeat, on the one hand, and, on the other, are just plain messy and bewildering affairs. If historians today cannot agree on why a particular country won or lost a campaign, or even figure out exactly what happened, how were contemporary actors supposed to draw clear, correct lessons? Indeed, as Sharman points out, there were several different paths to a centralized government capable of financing the increasing costs of war in the early modern period, and the failure to keep up with the supposedly modern trajectory toward central government did not mean instant exile to the rubbish heap of history – the Polish-Lithuanian Commonwealth, perhaps the antithesis of the fierce, centralized fiscal-military state forged by the military revolution, persisted until the 1790’s. Sharman delivers a sharp retort to the assumption that technology drives military history, even during more recent history. He argues instead that cultural motivations drove military and political change as much as, or more, than gunpowder and the military and naval tactics designed to make best use of it.

What lessons, then can we learn from early modern Europeans’ military forays into the wider world? Bartolomé Yun-Casalilla suggests that we reverse the lens while looking to explain how Europeans affected the world and also examine the impact of globalization on social and political change inside Spain and Portugal. The military revolution depends on the Weberian idea of modern state sovereignty as its end-goal, but with Spain and Portugal we see composite monarchies and kings

⁵ Sharman, *Empires of the Weak*, 4.

who share power with many other influential classes and institutions creating the first global empires. Yun-Casalilla seeks to look not just at formal institutions, but at informal networks of families, patrons-and-clients, and cooperative groups like Genoese bankers, and he views the crown as not just a referee in the competition for authority and economic resources between the great families, the church, and towns, but also as a player. Essentially, the eroding economic base of all the powerful groups in early modern Iberia forced them to seek ever greater resources, and thanks to overseas empire the crown was able to provide them, keeping society stable for decades despite the great stresses of the changing economy and the dynastic wars of the sixteenth and early seventeenth centuries.

The great problem facing the Spanish monarchy (which, rather than Portugal, is Yun-Casalilla's central concern) is while the crown faced threats and opportunities across Europe and the globe, none of the constituent parts of the composite monarchy – Castile, Aragon, Naples, Milan, the Burgundian inheritance, and so on – had a constitutional obligation to fund war beyond a narrowly conceived self-defense. Specie from America solved this problem by providing the liquidity and flexibility that the crown needed; the vast stream of silver allowed them to borrow against future taxes in Castile, and the money thus obtained could be used wherever it was needed. The silver meant that that they could do this without asking too much of the nobility, church, or towns of Castile. The system kept the “Spanish empire” decentralized yet powerful, and the Portuguese kings enjoyed a similar dynamic with the revenues they received from the Asian trade. The Habsburg system also depended on the localities to fend for themselves when attacked, which worked pretty well at first (although Yun-Casalilla does not mention the decisive role played by yellow fever and malaria in defending its tropical empire).⁶ And yet each locality could draw on the knowledge and resources of the entire empire via informal networks that grew spontaneously rather than under state direction; Genoese bankers financed mercury mining in Germany to use in processing Peruvian silver, which monetized Castilian taxes to pay for an army in Flanders. This worked until Olivares broke the system while trying to upgrade it, putting too much pressure on the various powerful interests with whom the crown had previously shared power. Additionally, the Dutch and English developed the ability to attack the informal and formal networks that held the empire together in a thin, global spider's web, seizing a few ports and trade networks and thereby disrupting the entire system. The empire was able to survive thanks to the dismissal of Olivares and the abandonment of his reforms, but the cost was the end of corporate governance in the empire and a new governmental pattern where a swarm of local interest groups, rather than larger corporate bodies, now negotiated

⁶ See J.R. McNeill, *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620-1914* (Cambridge and New York: Cambridge University Press, 2010).

privileges and autonomy with the crown, which Yun-Casalilla argues slowed down economic growth in the empire.

Iberian World Empires and the Globalization of Empire offers a path forward, away from the old military revolution model. It shows that decentralized states can remain resilient and that “the rise of the West” was not just a one-way street of Europeans acting on the non-West. Yet throughout these three recent monographs the authors each raise another intriguing idea that they do not quite push to its logical conclusion. While arguing that early modern China was the equal to the West militarily, Andrade praises Qing logistics, enabling their armies to push into central Asia for the first time in centuries. He then points out admiringly that the Dutch and Russians that the Chinese faced were “fighting effectively thousands of miles away from their metropolises.”⁷ Sharman, too, occasionally gestures to logistics to explain military effectiveness, as when he credits the inability of the Ottomans to push into central Europe not to line volleys and drill but to “the fact that the Ottomans were operating at the extremes of their logistical range.”⁸ And for Yun-Casalilla the logistical strains of a truly global empire are just assumed as part of the background, one of the reasons why the Spanish and Portuguese empires could not be otherwise than decentralized. The tendency of logistical concerns to pop up again and again in the narrative points to something larger: the fact remains that the Spanish and Portuguese, and the Dutch, English and French after them, were able to send powerful fleets and armies across the globe even as soon as the early sixteenth century, and by the mid-eighteenth century each war that was fought between European states metastasized into world-wide conflict. The Chinese and Indians may have had answers for line volleys, the *trace italienne*, and naval warships, but the Europeans could always send out another fleet and army, while the non-Europeans could never threaten the European metropolises.

In a special issue of *The Journal of Military History*, published in 1999 and dedicated to surveying European warfare with the non-European world, George Raudzens examined the history of early modern global conflict and picked out ships as the most decisive of “the four big causes: ships, guns, steel, and germs” that enabled the early modern European empires. The ability of western Europeans to send large quantities of people and material reliably around the world was an advantage overlooked by military revolution proponents.⁹ Raudzens describes the Portuguese empire in Asia as essentially a “sea transport superiority empire,” and argues that the ability of Europeans to pump more and more settlers into their colonies in the Americas meant that while “outnumbered generally, the colonist-

⁷ Andrade, *The Gunpowder Age*, 234.

⁸ Sharman, *Empires of the Weak*, 120.

⁹ George Raudzens, “Military Revolution or Maritime Evolution? Military Superiorities or Transportation Advantages as Main Causes of European Colonial Conquests to 1788,” *The Journal of Military History* 63 (1999): 631-42.

invaders in turn outnumbered the indigenes locally.”¹⁰ Throughout the Americas, the stream of colonists “swamped local Amerindian defences sequentially from the first landing places outward and inland.”¹¹ While the Spanish toppling of the Mexica and Incas do not fit this scheme, neither were they truly conquests, better characterized as rebellions or political coups where the Spaniards worked with local allies to decapitate the ruling elite and seize power for themselves. Whether one agrees with all the details of Raudzen’s argument, this important but neglected article points to a larger truth: when the musket line volleys, *trace italienne* fortresses, cannon-bearing ships, and supposedly modern states fall away as explanatory agents for European expansion in the early modern world, one is left with the fact that European countries were able to project power globally, and no one else was until twentieth-century Japan. Non-western countries might have had the means, as Zhen He’s fifteenth-century tours of the Indian Ocean demonstrates, but they did not have the desire to sustain this ability. Military historians might focus their attention on why and how European states developed the ability to fling their fleets and armies around the globe more profitably than looking ever more closely at musketry tactics and fortifications in Europe itself.

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¹⁰ Raudzens, “Military Revolution,” 636.

¹¹ Raudzens, “Military Revolution,” 636-37.