



BRILL

JOURNAL OF EARLY
MODERN HISTORY 19 (2015) 311-335

Journal of
Early Modern
History

brill.com/jemh

Cannibals with Cannons: The Sino-Portuguese Clashes of 1521-1522 and the Early Chinese Adoption of Western Guns

Tonio Andrade

Emory University

Abstract

Did Europeans have a military advantage over other peoples of the world during the early modern period (1500-1800)? Scholars of the “military revolution” school have argued that European guns, tactics, fortification techniques, and ships conferred significant benefits on European forces, whereas other scholars suggest that the European military edge was slight at best. This article examines the first armed conflict in history between European and Chinese forces: the so-called Sino-Portuguese War of 1521 and 1522. Scholars on both sides of the military effectiveness argument have adduced this conflict to buttress their positions, but there are few studies of it in either western or East Asian languages. This article suggests that during the first set of engagements, which occurred in 1521, Portuguese artillery was markedly superior, but that in the second set of engagements, in 1522, Chinese artillery played a significant role, causing significant damage to the Portuguese. If there was still a gap in 1522, it was much smaller. Thus, the Sino-Portuguese conflict is less interesting for what it tells us about the “military balance” than for what it tells us about military change. When we discuss military balances, we tend to forget how swiftly they could shift, how rapidly adaptations could take hold. Indeed, historians should take a wider perspective on the military revolution: it was not a process that simply occurred in Europe and provided an edge to Europeans abroad. It was, rather, a global process of intermixture and adaptation. In the case of China, the rapid adoption of western artillery may have started around the time of the Sino-Portuguese Conflict, but it continued through the ensuing decades, as the Ming redesigned Portuguese-style guns and adapted them to their own needs until the only thing western about them was their name: Frankish guns.

Keywords

China – military history – military revolution – Portugal – European Expansion – Needham Question – “Battle of Tamao” – “Sino-Portuguese War”

Introduction

Did Europeans have a military advantage over other peoples of the world during the early modern period (1500-1800)? Scholars of the “military revolution” school argue that Europeans’ guns, tactics, fortification techniques, and ships conferred a significant advantage.¹ Others, however, contend that Europeans’ military edge was slight at best. Jeremy Black, the most prominent critic of the military advantage school, has called for more empirical research, and this article is an answer to his appeal.² It examines the first armed conflict in history between European and Chinese forces: the “Sino-Portuguese War” of 1521 and 1522.³

Little has been written about this conflict in any language, but scholars on both sides of the debate have adduced it to buttress their positions.⁴ Jeremy

1 See especially Geoffrey Parker, *The Military Revolution: Military Innovation and the Rise of the West* (Cambridge, UK, 1996); Geoffrey Parker, ed., *The Cambridge Illustrated History of Warfare: The Triumph of the West* (Cambridge, UK, 2008); Geoffrey Parker, “The Artillery Fortress as an Engine of European Overseas Expansion, 1480-1750,” in *City Walls: The Urban Enceinte in Global Perspective* ed. James Tracy (Cambridge, UK, 2000), 386-416.

2 Jeremy Black, “Conclusion: Global Military History, The Chinese Dimension,” in *Warfare in Chinese History*, ed. Hans van de Ven (Leiden, 2000), 428-442.

3 On the appellation “Sino-Portuguese War,” see Yongjin Zhang, “Curious and Exotic Encounters: Europeans as Supplicants in the Chinese Imperium, 1513-1793,” in *International Orders in the Early Modern World: Before the Rise of the West*, ed. Shogo Suzuki, Yongjin Zhang, and Joel Quirk (New York, 2013), 55-75, especially 63-4; Wang Dongqing 王冬青 and Pan Rudan 潘如丹, “Ming chao hai jin zheng ce yu jin dai xi fang guo jia de di yi ci dui Hua jun shi chong tu” 明朝海禁政策與近代西方國家的第一次對華軍事衝突, *Jun shi li shi yan jiu* 軍事歷史研究 2004 volume, no. 2, 138-147; and Andrew R. Wilson, “The Maritime Transformation of Ming China,” in *China Goes to Sea: Maritime Transformation in Comparative Historical Perspective*, ed. Andrew Erickson (Annapolis, 2009), 238-288, 281, note 61. In my book *Lost Colony* I suggested that the term “war” was too grand to be applied to these Sino-Portuguese conflagrations. Tonio Andrade, *Lost Colony* (Princeton, 2011), 337, note 23. I’m not so sure anymore.

4 The most detailed account in English is still that of T’ien-tsê Chang, *Sino-Portuguese Trade from 1514 to 1644* (Leiden, 1933), 54-60; but see Serge Gruzinski, *The Eagle and the Dragon: Globalization and European Dreams of Conquest in China and America in the Sixteenth Century*

Black himself argues that Chinese ease in overcoming the Portuguese naval forces shows that the military revolution model is overstated, that European expansion was a matter of will not capacity; the Chinese *could* have developed a powerful oceanic presence of the European type but chose not to.⁵ Sinologist Raimund Kolb disagrees, arguing that the Chinese victory was due to overwhelming numerical superiority and that the firepower of European cannons was “vastly superior” to that of the Chinese.⁶

As we'll see, the truth lies between these two extremes, but the Sino-Portuguese Conflict is perhaps less interesting for what it tells us about the “military balance” than for what it tells us about military change. Even before the conflict Chinese officials had recognized the effectiveness of Portuguese guns and had begun adopting them. The Sino-Portuguese Conflict sped up this process, and the rapidity of adaptation is evident in the conflict itself. The “war” was in fact two discrete sets of engagements, a year apart. During the first phase, in 1521, Portuguese firepower was far more effective than that of the Chinese, but during the second, in 1522, Chinese artillery was more than a match for the Portuguese, causing serious damage and playing a key role in the Chinese victory. If there was a gun gap in 1522, it was much smaller than the year before. When we talk about military balances, we must remember how swiftly they can shift.

This conclusion corroborates the work of other scholars, who have recently shown how rapidly and effectively war makers in China—and in East Asia more generally—adopted and adapted the new arms and techniques that arrived from Western Europe in the 1500s and 1600s.⁷ Indeed, the main Chinese

(Cambridge, UK, 2014), esp. 96-100; the most complete in Chinese is Wang and Pan, “Ming chao. Histories of Portuguese expansion often leave it out altogether, as in Malyn Newitt, *A History of Portuguese Overseas Expansion, 1400-1668* (London, 2005), and even histories of Macau tend to gloss over it quickly, as in Zhidong Hao, *Macau: History and Society* (Hong Kong, 2011), 11-12.

5 Jeremy Black makes this argument in various places in his huge oeuvre. See for example Jeremy Black, *European Warfare 1494-1660* (New York, 2002), 173; Jeremy Black, “Conclusion: Global Military History, The Chinese Dimension,” in *Warfare in Chinese History*, ed. Hans van de Ven (Leiden, 2000), 428-442 especially 437-8.

6 Raimund Th. Kolb, “Excursions in Chinese Military History,” *Monumenta Serica* 54 (2006): 435-464, 454.

7 Among the most important works in English are Kenneth Swope, “Crouching Tigers, Secret Weapons: Military Technology Employed during the Sino-Japanese-Korean War, 1592-1598,” *The Journal of Military History* 69, no. 1 (2005): 11-41; Kenneth Swope, *A Dragon's Head and a Serpent's Tail: Ming China and the First Great East Asian War, 1592-1598* (Norman, USA, 2009); Kenneth Swope, *The Military Collapse of China's Ming Dynasty, 1618-1644* (London,

commander in the Sino-Portuguese Conflict was a key figure in the Chinese adoption of western guns in the mid-sixteenth century: the scholar and official Wang Hong (汪鋐 1466-1536). Having witnessed the power of Portuguese artillery, he became a partisan of military reform, and thanks in part to his advocacy, thousands of Portuguese-style guns were installed on the Great Wall by the mid-1500s. His enemies nearly succeeded in having him written out of

2014); Nicola Di Cosmo, "Did Guns Matter? Firearms and the Qing Formation," in *The Qing Formation in World-Historical Time*, ed. Lynn Struve (Cambridge, USA, 2004), 121-166; Peter Lorge, *The Asian Military Revolution: From Gunpowder to the Bomb* (Cambridge, UK, 2008); Peter Lorge, "Development and Spread of Firearms in Medieval and Early Modern Eurasia," *History Compass* 9, no. 10 (2011): 818-826; Peter Lorge, *War, Politics, and Society in Early Modern China, 900-1795* (London, 2005); Kenneth Chase, *Firearms: A Global History* (Cambridge, UK, 2003); Hans van de Ven, ed., *Warfare in Chinese History* (Leiden, 2000). But Chinese-language scholarship has done most to revolutionize our understanding of the process of the adaptation of western guns. See especially Wang Zhaochun 王兆春, *Zhong guo huo qi shi* 中國火器史 (Beijing, 1991); Wang Zhaochun 王兆春, *Zhong guo ke xue ji shu shi: jun shi ji shu juan* 中國科學技術史: 軍事技術卷 (Beijing, 1998); Wang Zhaochun 王兆春, *Shi jie huo qi shi* 世界火器史 (Beijing, 2007); Huang Yi-Long 黃一農, "Ming Qing du te fu he jin shu pao de xing shuai" 明清獨特複合金屬砲的興衰, *Qing hua xue bao* 清華學報, 41(1) (2011): 73-136; Huang Yi-Long 黃一農, "Ming Qing zhi ji hong yi da pao zai dong nan yan hai de liu bu ji qi ying xiang" 明清之際紅夷大砲在東南沿海的流布及其影響, *Zhong yang yan jiu yuan ji li shi yu yan yan jiu suo ji kan* 中央研究院歷史語言研究所集刊 81 (4) (2010): 769-832; Huang Yi-Long 黃一農, "Ou zhou chen chuan yu Ming mo chuan hua de xi yang da pao" 歐洲沉船與明末傳華的西洋大砲, *Zhong yang yan jiu yuan li shi hua yan yan jiu suo ji kan* 中央研究院歷史語言研究所集刊 75, (3) (2004): 573-634; Liu Xu 劉旭, *Zhong guo gu dai huo yao huo qi shi* 中國古代火藥火器史 (Zhengzhou, 2004); Li Huguang 李湖光, *Da Ming di guo zhan zheng shi: da Ming long quan xia de huo qi zhan zheng* 大明帝國戰爭史: 大明龍權下的火器戰爭 (Beijing, 2010); Zheng Cheng 鄭誠, "Fa gong kao: 16 shi ji chuan Hua de Ou shi qian zhuang huo pao ji qi yan bian" 發煩考—16 世紀傳華的歐式前裝火炮及其演變, *Zi ran ke xue shi yan jiu* 自然科學史研究 32, no. 4 (2013): 504-522; Shi Kang 石康 (Kenneth Swope), "Ming-Qing zhan zheng zhong da pao de shi yong" 明清戰爭中大砲的使用, *Qing shi yan jiu* 清史研究 3 (2011): 143-149; Nan Bingwen 南炳文, "Zhong guo gu dai de niao chong yu Ri ben 中國古代的鳥槍與日本," *Shi xue ji kan* 史學集刊, 2 (1994): 60-66; Li Yue 李悅, "Ming dai huo qi de pu xi" 明代火器的譜系, (MA Thesis, Dong bei shi fan da xue, 2012); Xie Lihong 解立紅, "Hong yi da pao yu Man zhou xing shuai" 紅衣大砲與滿洲興衰, *Man xue yan jiu* 滿學研究 2 (1994): 102-118; Feng Zhenyu 馮震宇, "Lun Fo lang ji zai Ming dai de tu hua" 論佛郎機在明代的本土化, *Zi ran bian zheng fa tong xun* 自然辯證法通訊 34, no. 3 (2012): 57-62. For a Korean counterpoint, see Hyeok Hweon Kang, "Big Heads and Buddhist Demons: The Korean Musketry Revolution and the Northern Expeditions of 1654 and 1658," *Journal of Chinese Military History* 2 (2013): 127-189; and Tonio Andrade, Hyeok Hweon, Kang, and Kirsten Cooper, "A Korean Military Revolution? Parallel Military Innovations in East Asia and Europe," *Journal of World History* 25, no. 1 (2014): 47-80.

history, but today Chinese celebrate him as the first anti-imperial hero and the first successful partisan of “learning from the west.”⁸

The Sino-Portuguese Conflict provides a lesson about global military change. Military historian Geoffrey Parker has written about the “challenge and response” dynamic that underlay early modern Europe’s military revolution.⁹ The Sino-Portuguese Conflict shows that process at work in sixteenth-century China. Many authors still tend to represent the Ming as insular and backward when compared to a dynamic west.¹⁰ A generation’s worth of work on the mid- and late Ming period has shown how dynamic the Ming was, and even the late-Ming military—which has found it harder to shake a reputation for stagnation than other sectors of Ming society—has recently come to be seen as dynamic and adaptive.¹¹ In the Sino-Portuguese Conflict we glimpse a China open to influence, eager to learn and adapt, and in this way it was like so many other parts of the increasingly interconnected early modern world. It is likely that there was a global—or at least Eurasia-wide—process of gradual but consistent acceleration in military innovation during the early modern period, as

-
- 8 See Peng Quanmin 彭全民, “Wo guo zui zao xiang xi fang ‘fo lang ji’ xuexi de ren: Wang Hong lue kao” 我國最早向西方 “佛郎機” 學習的人——汪鋹傳略考, *Dong nan wen hua* 東南文化, 2000 volume, no. 9 (September 2000): 66-69, 66. See also “Gan tang liu yong: ming huan ci si” 甘棠留泳: 名宦祠祀, *Shenzhen yuan zhu min wang* 深圳原住民族網, 15 October 2012 (Originally published in the *Bao’an guo xue tang* 寶安國學堂), http://www.szzyanzhumin.com/a/culture/local_focus/history/2012/1015/20073.html, retrieved 5 March 2013. Roderich Ptak calls the adoption a case of “technology transfer.” Roderich Ptak, “The *Wugongchuan* (Centipede Ships) and the Portuguese,” *Revista de Cultura* 5 (2003): 73-83.
- 9 Geoffrey Parker, “The Challenge-and-Response Dynamic,” in *The Cambridge Illustrated History of Warfare*, ed. Geoffrey Parker (Cambridge, UK, 2008), 5-8; and Geoffrey Parker, “In Defense of *The Military Revolution*,” in *The Military Revolution Debate: Readings on the Military Transformation of Early Modern Europe*, ed. Clifford Rogers (Boulder, 1995), 337-366.
- 10 For a recent statement of this notion, see Niall Ferguson, *Civilization: The West and the Rest* (New York, 2011), 26-33.
- 11 Key works in English on Ming dynamism in general are Craig Clunas, *Empire of Great Brightness: Visual and Material Cultures of Ming China, 1368-1644* (Honolulu, 2007) and Timothy Brook, *Confusions of Pleasure: Commerce and Culture in Ming China* (Berkeley, 1998). On Ming military dynamism, see Swope, *Dragon’s Head*; Swope, *Military Collapse*; Shi Kang (a.k.a Kenneth Swope), “Ming-Qing zhan zheng”; Li Yue, “Ming dai huo qi”; Di Tema 迪特馬, “1514-1683 nian Zhong guo zai huo pao zhi zao ling yu zhong yu Ou zhou shui ping de la jin” 1514-1683 年中國在火炮製造領域中與歐洲水平的拉近, (MA Thesis, Zhejiang University, 2013); and Li Huguang, *Da Ming di guo*.

societies came into sustained contact as never before in history.¹² The military aspects of this great cultural intermixing are beginning to become a significant topic within the field of world history.

1521

Like so many Sino-European clashes in ensuing centuries, the first Sino-European conflict occurred in southern China, near the bustling port city of Guangzhou. A Portuguese diplomatic mission arrived in the city in 1517, hoping to meet the emperor and open formal relations.¹³ This wasn't easy for an unknown country, but the embassy managed to attain permission to visit the imperial court, whence it proceeded in 1520. When it arrived in Nanjing, where the court was temporarily based, things did not go smoothly. Some Chinese officials complained that the ambassadors were ill-behaved, and one official even beat a member of the embassy for failing to kneel in his presence, but the ambassadors managed to make influential friends, probably by means

-
- 12 A pioneering study of this process in the Ottoman Empire can be found in Gábor Ágoston, *Guns for the Sultan: Military Power and the Weapons Industry in the Ottoman Empire* (Cambridge, UK, 2005); and Gábor Ágoston, "Firearms and Military Adaptation: The Ottomans and the European Military Revolution, 1450-1800," *Journal of World History* 25, no. 1 (2014): 85-124. This Eurasian-wide military acceleration corroborates the more broadly-conceived paradigmatic work of Victor Lieberman. See especially Victor Lieberman, *Strange Parallels*, 2 vols., (Cambridge, UK, 2003-2009).
- 13 For more detailed information on this mission and other aspects of early Sino-Portuguese relations, see T'ien-tsê Chang, *Sino-Portuguese Trade from 1514 to 1644* (Leiden, 1969); John E. Wills Jr., "Relations with Maritime Europeans," in *The Cambridge History of China Volume 8: The Ming Dynasty, 1368-1644, Part 2*, ed. Denis Twitchett and Frederick W. Mote (Cambridge, UK, 1998), 333-375; T'ien-tse Chang, "Malacca and the Failure of the First Portuguese Embassy to Peking," *Journal of Southeast Asian History* 3, no. 2 (1962): 45-64; Roderich Ptak, "Macau and Sino-Portuguese Relations, ca 1513/1514 to ca 1900," *Monumenta Serica* 46 (1998): 343-396; Roderich Ptak, "Early Portuguese Relations up to the Foundation of Macao," *Mare Liberum: Revista de Historia dos Mares* 4 (1992): 289-297; Paul Pelliot, "Le Hoja et le Sayyid Husain de l'Histoire des Ming," *T'oung Pao* (second series) 38 (1948): 81-292; André Lévy, "L'arrivée des Portugais en Chine: la perception chinoise d'après l'Histoire Officielle des Ming," *Nouvelle Revue du XVII Siècle* 16, no. 1 (1998): 7-19; and Ng Chin Keong, "Trade, the Sea Prohibition, and the Fo-lang-chi," in *Proceedings of the International Colloquium on the Portuguese and the Pacific, University of California, Santa Barbara, October 1993*, ed. Francis Dutra and Joao Camilo dos Santos (Santa Barbara, 1995), 381-424.

of bribes.¹⁴ They may even have found favor with the emperor himself, who, some sources suggest, apparently even enjoyed learning the ambassadors' language.¹⁵

Unfortunately, while the ambassadors were passing bribes, their countrymen in Guangzhou were eating babies, or at least that's what many Ming sources say. One account describes how the children were cooked:

Their method is to use a huge cauldron to heat up water until it boils, and then an iron cage with a small child in it is placed on top, and the child is steamed until sweat comes out. When the sweat is gone, [the child] is taken out, and iron scrubbers are used to remove the bitter flesh. The child is still living at this point. Then they kill it, excise the stomach, take out the intestines, and steam and eat it.¹⁶

Allegations of Portuguese cannibalism appear in many Ming sources, even the official *Ming History*.¹⁷ The stories probably arose from the fact that the Portuguese were acquiring children as slaves and servants.¹⁸

14 *Ming History*, juan 325, section on "Fo lang ji." See also Pelliot, "Le Hoja."

15 *Ming History*, juan 325, section on "Fo lang ji."

16 Yan Congjian 嚴從簡, *Shu yu zhou zi lu 殊域周咨錄* (Beijing, 2000), 320. Yan used an earlier source, Li Wenfeng 李文鳳, *Yue shan cong tan 月山叢談*, which contains an almost identical description. That section of the *Yue shan cong tan* is also excerpted in Gu Yanwu 顧炎武 (a.k.a. Gu Tinglin 顧亭林), *Tian xia jun guo li bing shu 天下郡國利病書*, in Gu Yanwu, *Gu Yanwu quan ji 顧炎武全集*, vols. 12-17 (Shanghai, 2011), 3831.

17 *Ming History*, juan 325, section on "Fo lang ji," which notes that the Portuguese (Folangji) "captured small children and ate them" (掠小兒為食). References to cannibalism also occur in the *Guangdong fu zhi 廣州府志*, juan 107, "Huan ji" 宦績, Zhang Haipeng 張海鵬, *Zhong Pu guan xi shi zi liao ji 中葡關係史資料集* (Chengdu, 1999), 206; and Li Wenfeng 李文鳳, *Yue shan cong tan 月山叢談*, excerpted in Gu Yanwu, *Tian xia*, 3830-3832; and the "Dou xian Wang gong yi ai ci ji" 都憲汪公遺愛祠記, in *Xin'an xian zhi 新安縣志*, juan 23, "Yi wen er" 藝文二, excerpted in Zhang, *Zhong Pu*, 206-7, 206. Other references occur in the *Ming shan cang 名山藏*; see Kazunori Fukuda, "The Relations between China and Portugal in the Early Sixteenth Century: Some Observations on the Yue Shan Cong Tan," *Revista de Cultura* 1 (2002): 100-105, 102. See also Wang and Pan, "Ming chao," 141.

18 The chronicler Barros notes the rumors about Portuguese eating children and suggests that many of the children taken as slaves had been given in surety for debts. João de Barros (1496-1570), *Da Asia de João de Barros e de Diogo do Couto: dos feitos que os portugueses fizeram no descobrimento dos mares e terras do Oriente*, 24 vols, Decada Tercera, Parte Segunda (Livro VI) (Lisbon, 1777), 14-17. See also Donald Ferguson, *Letters from*

They were misbehaving in other ways, too. Reports accused the Portuguese of blocking other nations from trading in Guangzhou, of knocking hats off Ming officials, of firing guns so that “the sound of their cannons pervades the land.”¹⁹ Even more worrisome were reports that they were “building houses and setting up stockades, relying on their guns to protect themselves.”²⁰ When the emperor died suddenly, the Portuguese fell out of favor, as their main patron in the imperial court was executed. The ambassadors were sent back to Guangzhou. When they arrived things had gotten quite bad indeed.

In the spring of 1521, a fleet of Portuguese ships had sailed up the Pearl River to trade in Guangzhou. City officials told them to leave. The Portuguese refused. When some Portuguese went ashore to trade, they were promptly arrested, and those who had remained on board refused even more adamantly to leave until their friends and family members were released.

In response, a Chinese fleet assembled itself. Commanding it was Wang Hong (汪鋐), whose victory over the Portuguese would make his career.²¹ Born in 1466, Wang Hong received his Jinshi degree in 1502. Starting in 1514 he was involved in the maritime defense of Guangdong.²² His main job was to keep the area clear of pirates, which he did with moderate success.²³ His fight against the Portuguese proved more challenging but ultimately more glorious.

Portuguese Captives in Canton, Written in 1524 and 1536, With an Introduction on Portuguese Intercourse with China in the First Half of the Sixteenth Century (Bombay, 1902), 15.

- 19 The phrase “sound of their cannons” is from a petition to the emperor by the Imperial Censor He Ao, which is excerpted in both the *Ming Veritable Records* and the official *Ming History*. See *Ming History*, juan 325, section on “Fo lang ji.”
- 20 Gu Yanwu, *Tian xia*, 3831.
- 21 Wang Hong has no biography in the official Ming History, which is rather disappointing for a man of his importance, but it probably reflects the fact that he ran into scandal toward the end of his career. Nor does his biography appear in L. Carrington Goodrich and Chaoying Fang, eds., *Dictionary of Ming Biography, 1368-1644*, 2 volumes (New York, 1976). A synopsis of his career can be found in Peng Quanmin, “Wo guo,” 66-69.
- 22 His official title might best be translated as “Chief Provincial Prosecutor” (按察使). See Wang and Pan, 142. I base my translation of official titles on Lin Jinshui 林金水 and Zou Ping 鄒萍, *Zhongguo gu dai guan zhi yi ming jian ming shou ce* 中國古代官制譯名簡明手冊 (Shanghai, 2004), with reference to Charles O. Hucker, *A Dictionary of Official Titles in Imperial China* (Palo Alto, 1985). Another title one finds in the sources is Deputy Marine Commissioner (海道副使); See Chang, *Sino-Portuguese Trade*, 54. Other accounts suggest that his official title at the time of the first war was *xun dao* (巡道): http://www.szyuanzhumin.com/a/culture/local_focus/history/2012/1015/20073.html. Retrieved 5 March 2013.
- 23 He received disciplinary action for his actions, when superintending the fight against pirates. Wang and Pan “Ming chao,” 142.

The precise details of the first skirmishes are not clear. It seems that Wang Hong first attacked in a straightforward way, ship-to-ship. According to Portuguese sources, “God saw fit to deal with them [the Chinese] in such a way that they departed from the encounter much damaged by our artillery, with the death of many of their people.”²⁴ Chinese sources corroborate this.²⁵ According to an account in a *Guangdong Gazetteer* from the Ming period, the Portuguese “fired their guns several times and defeated our troops.”²⁶ Wang Hong found it impossible to defeat the Portuguese in a standard firefight or by trying to board, because each time he tried to close, the Portuguese fired. According to some Chinese sources, he even tried recruiting divers to bore holes in the enemy hulls.²⁷ Portuguese sources say nothing of this plan, which is not likely to have been effective.

It seems that Wang Hong then switched tactics and tried blockading the Portuguese ships to prevent them from leaving or landing to gather supplies. As Portuguese chronicles note, the Chinese, having failed in attacking, “instead only tried to encircle our vessels, but the place was so narrow that it aided our five vessels far more than it helped their far more numerous ones, primarily because of the better artillery that we had.”²⁸ All of this supports the military edge argument, and, indeed, like many Chinese from the period, Wang Hong himself acknowledged the superiority of Portuguese artillery. “I daresay,” he wrote later, “that the ferociousness of the Portuguese depends on these guns

24 Barros, *Da Asia*, Decada Tercera, Parte Segunda (Livro VI), 21-22.

25 Some Sinophone scholars suggest that Wang Hong first attacked with Portuguese cannons and then with fire boats. See Peng Quanmin 彭全民, “Ming kang Pu ming chen Wang Hong mu zhi kao shi” 明抗葡名臣汪鋌墓志考釋, *Nan fang wen wu* 南方文物, 2000 volume, no. 3, 114-120, 115.

26 *Guangdong tong zhi* 廣東通志 (Wanli period), cited in Chen Jiafu 陳家副, “Ming dai liang Guang zong du bing yuan yu xiang yuan zhi yan jiu” 明代兩廣總督兵源與餉源之研究, (M.A. Thesis, National Central University, Taiwan, 2004), available online at the 碩博士論文電子檔授權書. http://thesis.lib.ncu.edu.tw/ETD-db/ETD-search-c/view_etd?URN=90125005, retrieved 4 March 2013.

27 See Li Wenfeng 李文鳳, *Yue shan cong tan* 月山叢談 excerpted in Gu Yanwu, Tian xia 3832. Other sources suggest that Wang Hong used a ruse to defeat the Portuguese but don't specify what kind. See Wu Jiafang 吳桂芳, “Yi zu Ao yi jin gong shu” 議阻澳夷進貢疏, in Zhang Haipeng, *Zhong Pu*, 204-205. (Originally from *Ming jing shi wen bian* 明經世文編, juan 342).

28 Barros, *Da Asia*, Decada Tercera, Parte Segunda (Livro VI), 21-22.

alone. Since ancient times, no weapons have ever surpassed these powerful and violent ones.”²⁹

Nonetheless, by encircling the Portuguese, Wang Hong had gained the upper hand. The Portuguese were unable to resupply and suffered hunger and illness. Wang Hong might well have obtained their surrender if his blockaders hadn't made a mistake. Having focused on keeping the enemy in, they failed to keep the enemy out. Some Portuguese ships slipped through the blockade with reinforcements. The most powerful was commanded by the stalwart Duarte Coelho, a “very Catholic” man. The captains of the newly reinforced Portuguese fleet resolved to burst through the blockade.

They made their move just before dawn on September 8, 1521, but Wang Hong was ready. According to a Chinese source, he'd worked out a careful plan: “All of it was carefully thought through. The barbarian vessels are all large and difficult to maneuver, and when desiring to act they must rely upon wind and sails. At this time the southern wind was extremely intense. His Excellency daubed together some shabby bandit boats, loaded them up with all kinds of dried firewood and tinder-like materials, and poured into them grease and fat.”³⁰

The wind was favorable, and the fireboats had their desired effect. Portuguese chronicles note that “there was in this attack a resemblance to hell itself, with fire and smoke, because collision was not the sort of thing our side wanted to do, because they had no other desire than to find a clear route for their passage [*caminho despejado pera sua viagem*], which they did not dare to make, so fiercely had they already been burned in this attack.”³¹

Here Chinese and Portuguese sources diverge. The Chinese account quoted above goes on to say that Wang Hong “ordered the many [troops] to board, to the sound of drums and war cries, and it was a great victory and there were no

29 Wang Hong, “Zou chen yu jian yi mi bian huan shi” 奏陳愚見以弭邊患事. This memorial appears in various sources. I relied on the version in Yao Jiarong 姚家榮, “Xi pao de ying yong yu Ming dai de guo fang” 西砲的應用與明代的國防 (M.A. Thesis, Hong Kong Lingnan University, 2004), 16.

30 “Dou xian Wang gong yi ai ci ji” 都憲汪公遺愛祠記, in *Xin'an xian zhi* 新安縣志, juan 23, “Yi wen er” 藝文二, in Zhang Haipeng, *Zhong Pu*, 206-7. Cf. Jin Guoping 金國平, *Xi li dong jian: Zhong Pu zao qi jie chu zhui xi* 西力東漸: 中葡早期接觸追昔 (Macau, 2000): 2; and Chen Botao 陳伯陶, “Wang Hong tao ping tun men,” in Chen Botao, *Dong guan xian zhi* 東莞縣志, juan 31, “Qian shi lue san” 前事略二, reprinted in Zhang Haipeng, *Zhong Pu*, 205. Balfour adduces this and a similar account, without naming his sources, in S. F. Balfour, “Hong Kong before the British,” *Journal of the Royal Asiatic Society Hong Kong Branch* 10 (1970): 135-179, 172-173.

31 Barros, *Da Asia*, Decada Tercera, Parte Segunda (Livro VI), 22-23.

survivors.”³² Portuguese sources, however, claim a different outcome. The day of the battle, September 8th, was the festival of the Virgin Mary’s birth. Devout Duarte Coelho instructed everyone to pray. The most famous Portuguese chronicle, that of João de Barros, describes what happened next: “Our Lady, who aids those who call on her in such times of need, responded by sending a thunderstorm, which for us was wind at our backs but which caused the enemy to tip over and lose some of their [vessels].”³³ The Portuguese managed to escape back to Malacca, where they later founded a “house on the hill” in her honor.

The Chinese sources that detail the fire attack and claim no survivors are not firsthand sources. One, for example, was inscribed on a temple that was erected in honor of Wang Hong. It, like related sources, seems to conflate the battles of 1521, in which Coelho escaped after a miraculous storm, with the battles of 1522, which turned out much worse for the Portuguese.³⁴

1522

In 1522, a new Portuguese fleet arrived on the Chinese coast. Leading it was Admiral Martim Affonso de Mello, whose orders were to re-establish good relations. He proceeded optimistically up the Pearl River toward Guangzhou but soon found his way blocked by an impressive force. Whereas the Chinese fleet of 1521 had been gathered quickly, this fleet was well-armed and well-prepared. De Mello described it in a report to the Portuguese king: “the Chinese fleet . . . seemed in total to be more than three hundred sails, large and small, and eighty of them were very large junks of two masts, very well armed with small artillery and many other of the weapons they have.”³⁵

32 “Dou xian Wang gong yi ai ci ji,” 206-7. Cf. Jin Guoping, *Xi li dong jian*, 2; and Chen Botao, “Wang Hong tao ping,” in Zhang Haipeng, *Zhong Pu*, 205.

33 Barros, *Da Asia*, Decada Tercera, Parte Segunda (Livro VI), 23.

34 Indeed, like a similar source, it notes that “In this battle the troops set forth in Zhengde 18 xinsi 辛巳 [1521] and they returned and celebrated victory in Jiaping renwu 壬午 [1522].” “Dou xian Wang gong yi ai ci ji,” in Zhang Haipeng, *Zhong Pu*, 206-7. In fact, the two battles occurred a year apart, one in 1521 and one in 1522, and there’s no reason that Wang Hong would have stayed on campaign for a year in 1521 and then waited to declare victory until the following year. The Portuguese had certainly been chased away in 1521, and they only returned in force the following summer. In subsequent years, the Chinese anti-Portuguese fleet came out annually after the monsoon winds began blowing from the south.

35 Letter from Martim Afonso de Mello Coutinho to the King of Portugal, Goa, 25 October 1523. In João Paulo Oliveira e Costa, “A Coroa Portuguesa e a China (1508-1531)—do Sonho

The two Chinese officers who led the fleet, Ke Rong (柯榮) and Wang Ying'en (王應恩), didn't attack at first.³⁶ "They just wanted," Mello wrote, "to demonstrate their power . . . doing nothing more than going in front of me and shooting a few shots, [making noise] with their drums and gongs [*sinos de fiesta*], placing them in front of the port that I intended to reach."³⁷ Mello's goal was peace, so he exercised restraint, although, he wrote, "it pained me that I could not shoot them."³⁸

He managed to get near enough to prepare boats to trade on shore of some islands, but each day at dawn Chinese forces attacked, rowing armed vessels back and forth and firing guns. When he led a party ashore to take on water, he and his men were pinned down by artillery fire for an hour and had to abandon their water barrels and make a break for their ships, "coming back with blood but no water."³⁹

The war junks pressed their attack, and the Chinese firepower was so effective that de Mello took extreme measures. He ordered the anchor cords to be cut, the expensive anchors abandoned, and the ships to make a run for deeper water. His brother Diogo de Mello led the way with two shallow-drawing vessels, trying, it seems, to sound a passage through the flats. The Chinese fleet approached the sounding vessels and began firing.⁴⁰

The Virgin Mary didn't help this time. As João de Barros writes, "the first sign that victory would be given to the enemy came in the form of a spark getting into the powder carried by Diogo de Mello, which blew the decks of his vessel into the air, and he and the hull went to the bottom together."⁴¹ The admiral was devastated: "I saw one of the vessels burst into flames and go down to the bottom, with nothing left alive or dead that we could see, and it was my brother

Manuelino ao Realismo Joanino," In *Estudos de História do Relacionamento Luso-Chinês, Séculos XVI-XIX*, ed. Antonio Vasconcelos de Saldanha and Jorge Manuel Dos Santos Alves (Lisbon, 1996), 11-84, quote on 76. (Mello's letter appears as an appendix to this article, on pp. 75-81.) The letter is also contained in another edition: Ronald Bishop Smith, *Martim Afonso de Mello: Captain-Major of the Portuguese Fleet which Sailed to China in 1522, Being the Portuguese Text of Two Unpublished Letters of the National Archives of Portugal* (Bethesda, 1972).

36 *Ming Veritable Records*, Shizong Emperor Reign, juan 24, Jiajing 2, 3rd month.

37 Letter from Martim Afonso de Mello Coutinho to the King, Goa, 25 October 1523, In Oliveira e Costa, "A Coroa Portuguesa," 76.

38 Letter from Martim Afonso de Mello Coutinho to the King, Goa, 25 October 1523, In Oliveira e Costa, "A Coroa Portuguesa," 76.

39 Barros, *Da Asia*, Decada Tercera, Parte Segunda (Livro 8), 285.

40 Barros, *Da Asia*, Decada Tercera, Parte Segunda (Livro 8), 286.

41 Barros, *Da Asia*, Decada Tercera, Parte Segunda (Livro 8), 286.

Diogo de Mello's vessel, and with him went fifteen or twenty members [*criados*] of my father's household, and of mine, who had gone with him."⁴²

The captain of the other sounding vessel, a man named Pedro Homen, saw survivors floating in the water and sent a launch to rescue them. The Chinese attacked, first with artillery and then by sending boarding parties. Pedro was a powerful man, "in stature, one of the largest men of Portugal, and his spirit of bravery and physical strength were different from the common man,"⁴³ but the Chinese had a hero of their own. "Pan Dinggou (潘丁苟) . . . was first to board, and the other troops followed and advanced in good order."⁴⁴ The combat was intense. Pan's side overcame Pedro's, yet Portuguese sources suggest that the most devastating attacks came not from hand-to-hand combat but from Chinese guns: "[Pedro Homen's] fighting was such that if it hadn't been for the shots of [Chinese] artillery, he never would have died, so great was the fear of the Chinese to approach him."⁴⁵

De Mello raced to the rescue, but when he reached Pedro Homen's vessel it was too late. Just one sailor and one cabin boy were left, having hidden in a crow's nest [*gavea*]. Portuguese chronicles say that the Chinese troops slaughtered everyone on board, "because they show mercy to no-one."⁴⁶ Chinese sources corroborate the slaughter: "Pedro [别都廬] . . . and other leaders were captured alive, and thirty five trophy heads were captured, and ten other [living] prisoners were taken, male and female."⁴⁷ Pedro and his fellow captives died soon enough, executed by order of the emperor. Admiral de Mello escaped after burning Pedro Homen's ship so the Chinese couldn't capture it.⁴⁸

Thus, in this second engagement, the Portuguese encountered a far more effective fleet, and they seem to have lost their advantage in firepower. Whereas in 1521, the Portuguese were able to compensate for Chinese numerical superiority by means of their guns, they could not do so in 1522. This suggests that

42 Letter from Martim Afonso de Mello Coutinho to the King, Goa, 25 October 1523, In Oliveira e Costa, "A Coroa Portuguesa," 78.

43 Barros, *Da Asia*, Decada Tercera, Parte Segunda (Livro 8), 286.

44 *Ming Veritable Records*, Shizong Emperor Reign, juan 24, Jiajing 2, 3rd month.

45 Barros, *Da Asia*, Decada Tercera, Parte Segunda (Livro 8), 286.

46 Barros, *Da Asia*, Decada Tercera, Parte Segunda (Livro 8), 286. De Mello wrote that he "found everyone dead with Pedro Homen." Letter from Martim Afonso de Mello Coutinho to the King, Goa, 25 October 1523, in Oliveira e Costa, "A Coroa Portuguesa," 78.

47 *Ming Veritable Records*, Shizong Emperor Reign, juan 24, Jiajing 2, 3rd month.

48 The fight took a toll on the Chinese as well. The commander Wang Ying'en was killed in action, and Chinese sources suggest that many Chinese soldiers were killed when de Mello scuttled Homen's ship. From *Ming shi*, juan 235, *Foreign Countries Part 6* (外国六) section on "Fo lang ji."

the Chinese had learned from the previous encounter and adapted. The second Chinese fleet was far better armed than the first. Did it have western-style guns? We can't be sure, but it seems likely, because there is abundant evidence that the Chinese had begun adopting Frankish guns well before 1522.

In 1517, when the Portuguese ambassadors had arrived in Guangzhou, an eminent scholar named Gu Yingxiang (顧應祥, 1483-1565, jinshi in 1505), paid careful attention to their guns, writing, "On each side of their ships are placed four or five guns, and from within the ship's hold they can secretly fire them. If another ship comes near, the bullets burst asunder the planks and the water leaks right in. With them one can rampage across the seas and other countries cannot stand up against them."⁴⁹ It seems that the Portuguese were ordered to donate one of their cannons to help defend the Guangzhou region against pirates, along with a recipe for powder to suit it.⁵⁰

At some other point around this time, another Ming official also worked to incorporate western guns. A later Ming source tells the story:

There was a man named He Ru (何儒), the deputy magistrate (巡檢) of Baisha in Dongguan County, who once had to go to a Frankish [*Folangji*] ship to collect tolls. He met some Chinese men—Yang San, Dai Ming, and others—who had lived for years in their [the Portuguese's] country, and these men were entirely familiar with the making of boats, the casting of guns, and the method of making gunpowder. [Wang] Hong ordered He Ru to secretly send people over to them, selling rice wine as a pretext, to clandestinely talk to Yang San and the others, order them to declare their allegiance, and offer them rewards and presents. These men proved willing to become loyal and a plan was devised. At night He Ru secretly came over with a small boat and conveyed them to the shore.⁵¹

The official *Ming History* has a terser version of this story, which differs on some details but concurs that He Ru "obtained their . . . ship guns and other

49 Gu Yingxiang 顧應祥, cited in Zheng Ruozeng 鄭若曾 (1503-1570), *Chou hai tu bian* 籌海圖編, juan 13, section on Folangji, in *Zhongguo bing shu ji cheng* 中國兵書集成, ed. Chinese Military Book Compendium Editorial Committee, vols 15-16 (Beijing, 1990), 1257. See also Gu Yingxiang 顧應祥, "Jing xu zhai xi yin lu" 靜虛齋惜陰錄, excerpted in Zhou Weiqiang 周維強, "Fo lang ji chong yu Chen Hao zhi pan" 佛郎機銃與宸濠之叛, *Dong Wu li shi xue bao* 東吳歷史學報, 2002 volume, no. 8 (March 2002): 95-125, 102.

50 Gu Yingxiang, "Jing xu zhai xi yin lu," 102.

51 Yan Congjian 嚴從簡, *Shu yu zhou zi lu* 殊域周咨錄 (Beijing, 2000), 321-2.

technologies China's possession of the various Frankish firearms began with [He] Ru."⁵²

Sources—at least those that have been uncovered to this point—cannot allow us to state categorically that the advantage in firepower enjoyed by the second Chinese fleet stemmed from an increasing use of western-style artillery, but it is certainly a reasonable supposition. In any case, it seems clear that the Chinese won the second conflict not just by means of superior numbers, but also because they, too, had effective guns and could use them well, something apparent from Portuguese sources. Mello noted that the Chinese fleet was “very well armed with small artillery.”⁵³ Later, his men were pinned down for an hour by Chinese gunfire when they went ashore to gather water, and after they made it back to their ships, Chinese gunners blasted them so fiercely that Portuguese guns were incapable of answering. Mello had to take the extreme step of cutting anchor cords and running. Similarly, in the ensuing battle, Chinese guns killed many Portuguese and, at least as Portuguese sources would tell it, directly contributed to the Chinese victory.

Thus, whereas Portuguese artillery was overwhelmingly effective during the battles of 1521, it is Chinese artillery that comes to the fore in extant descriptions of the battles of 1522. This suggests that the Chinese quickly learned to counterbalance Portuguese firepower with their own.

The Ming Dynasty and Foreign Guns

There is still a widespread perception of Ming China—particularly the mid-and-late-Ming—as insular and closed off to foreign influence, despite the efforts of so many historians of China to show Ming dynamism, military and

52 *Ming Veritable Records, Shi zong shi lu*, juan 154, cited and translated by Geoff Wade, in Geoff Wade, “The Portuguese as Represented in some Chinese Sources of the Ming Dynasty,” in *Portugal e a China: Conferencias nos encontros de historia luso chinesa* ed. Jorge M. dos Santos Alves, (Lisbon, 2000), 263-316, plus appendices 295-6.

53 Letter from Martim Afonso de Mello Coutinho to the King of Portugal, Goa, 25 October 1523, In João Paulo Oliveira e Costa, “A Coroa Portuguesa e a China (1508-1531)—do Sonho Manuelino ao Realismo Joanino,” in *Estudos de História do Relacionamento Luso-Chinês, Séculos XVI-XIX*, ed. Antonio Vasconcelos de Saldanha and Jorge Manuel Dos Santos Alves (Lisbon, 1996), 11-84, quote on 76. (Mello's letter appears as an appendix to this article on 75-81.) The letter is also contained in another edition: Ronald Bishop Smith, *Martim Afonso de Mello: Captain-Major of the Portuguese Fleet which Sailed to China in 1522, Being the Portuguese Text of Two Unpublished Letters of the National Archives of Portugal* (Bethesda, 1972).

otherwise. People in China and the West have attributed this supposed insularity variously to Confucianism, to bureaucrats who found warfare beneath their notice, to xenophobia, to cultural pride, to arrogance, to a general lack of curiosity, etc.⁵⁴

Those who hold such views should look at the examples of Gu Yingxiang, He Ru, and especially Wang Hong, just a few of the men who avidly adopted Portuguese cannons. Indeed, no one was more a member of China's Confucian elite than Wang Hong.⁵⁵ He passed the highest level civil examinations in 1502, examinations held just once every three years and in which only three hundred students from all of China passed. His degree gave him access to the privileges of highest-level office, but it was after he defeated the Portuguese and, even more importantly, after he began championing the use of Portuguese guns that he began rising quickly through the ranks.⁵⁶

In 1529 (Jiajing 9), Wang Hong submitted a memorial proposing that *folanqji* (i.e., Frankish guns) be deployed along the Great Wall:

Today on the strategic borders the fortifications and walls are not fully secured, and when the bandits come there is ravaging and devastation. The towers (墩臺) have been constructed merely as lookout towers, but the walls and fortifications (城堡) lack any capacity to defend at long range, and so frequently there are troubles. It would be suitable to use the Frankish guns I have submitted. The small ones weigh just twenty pounds

54 John King Fairbank and Merle Goldman, *China: A New History* (Cambridge, MA, 1998), 115; Thomas Arnold, *The Renaissance at War* (London, 2001), 18-19; Jack Kelly, *Gunpowder: Alchemy, Bombards, and Pyrotechnics: The History of the Explosive That Changed the World* (New York, 2004), 99; Fan Chuannan 范傳南, "'Gong ma qi she' long zhao xia de Qing dai guo qi: Qing daihuo qi fa zhan ji shi yong zhuang kuang shu lun" '弓馬騎射' 籠罩下的清代火器清代火器發展及使用狀況述論 *Dong shan shi fan xue yuan xue bao* 樂山師範學院學報, 23, no.8 (2008): 100-106, 102; Carlo Cipolla, *Guns, Sails and Empire: Technological Innovation and the Early Phases of European Expansion, 1400-1700* (New York, 1965), 117; David Landes, "Why Europe and the West? Why Not China?" *The Journal of Economic Perspectives* 20, no. 2 (2006): 3-22, 19.

55 On Wang Hong's genealogy and schooling, see Peng Quanmin 彭全民, "Ming kang Pu ming chen Wang Hong mu zhi kao shi" 明抗葡名臣汪鉉墓志考釋, *Nan fang wen wu* 南方文物, 2000 volume, no. 3, 114-120, 114-115.

56 Portuguese cannons weren't the only thing that helped propel him through the bureaucracy. He also chose the winning side in a great factional debate and rode a wave of preferment when that side won. Of course, when the faction fell, he also fell. See Wu Changeng 吳長庚, Li Shicai 李世財, "Lun Wang Hong yu Jia jing guan chang zhi liu bi" 論汪鉉與嘉靖官場之流弊, *Jiangxi she hui ke xue* 江西社會科學, 2005 volume, no. 12: 239-244.

[jin] or less, and in terms of range they can reach six hundred paces. They can be deployed on the lookout platforms (墩臺), with each placement (墩) being equipped with one, with three men to protect it. The large ones can be seventy pounds [jin] or more, and they have a range up to five or six li. They should be deployed on the forts (城堡), with each fort being equipped with three, with ten men to protect them. Thus, every five li there will be one lookout tower (墩), and every ten li one fort (堡), and the small and large can back each other up, and the near and far as well. The bandit generals have nothing to counter this sort of thing, such that [if my plan is adopted] one can just sit and wait for them them, achieving victory without attacking.⁵⁷

The emperor approved the plan and, as the official *Ming History* notes, “this is the point at which [our] guns began to include *folangji*.”⁵⁸ So Wang Hong owed his career partly to Portuguese guns, although he was also a canny politician, choosing the winning side in a great factional battle among bureaucrats. Indeed, one might be tempted to argue that Portuguese guns were lucky to have Wang Hong as their advocate and that if he’d lost the factional fight, there might have been less interest in them.⁵⁹ Tempting, but wrong. Many, many Confucian gentlemen were interested in the new cannons.

In any case, today Wang Hong is becoming famous. The temple built in his honor still exists, and although it’s in poor shape, it has a new commemorative plaque, and groups are agitating to restore it.⁶⁰ That’s because Wang Hong is increasingly being lionized as China’s first anti-imperialist champion: “He was the first to lead troops to defend against the Portuguese western imperialists... and he was also the first person to import into China advanced western military technology... and to carry out its large scale promotion and promulgation.”⁶¹ Another Chinese article notes that Wang Hong’s victory over

57 *Ming History*, juan 235, *Foreign Countries Part 6* (外國六) section on “Fo lang ji.”

58 *Ming History*, juan 235, *Foreign Countries Part 6* (外國六) section on “Fo lang ji.”

59 On Wang Hong’s involvement in the factional fighting around the Great Rites Controversy, see Wu and Li, “Lun Wang Hong.”

60 See Wang Shilin 汪仕林, “5 ceng wei jian ru qin Shen zhen wen wu bao hu dan wei xi ri hui huang ru jin po luo bu kan” 5層違建“入侵”深圳文物保護單位 昔日輝煌如今破落不堪, *Sou fang zi xun zhong xin* 搜房資訊中心, 18 March 2012, at http://news.sz.soufun.com/2012-03-18/7281816_all.html, retrieved 2014-03-29.

61 Peng Quanmin, “Wo guo,” 66. Peng Quanmin has made it his personal mission to raise the profile of Wang Hong. See, for example, Peng Quanmin 彭全民, “Wang Hong yu Folangji zhi yuan” 汪鏞與佛朗機之緣, In *Shenzhen bo wu guan kai guan shi zhou nian ji nian wen ji* 深圳博物館開館十周年紀念文集 (Beijing, 1998), 191-205. Peng Quanmin 彭全民,

the Portuguese “opened the Chinese People’s struggle against western imperialist invasion, and thus has major historical significance. He was the first military scientist in history to propose ‘learning from the [western] barbarians to control the barbarians.’”⁶²

Wang Hong would probably have been pleased with this recognition, especially since his enemies tried to expunge him from the historical record. He had many enemies. He was impeached on multiple occasions, and he impeached in turn or used his office to retaliate against slights, real or perceived. Once, when he’d written a memorial calling for the use of Frankish guns on the northern borders, someone laughed at his writing. He had the person reassigned from his position as secretary-general of the Board of War to superintendent of Tongren Prefecture, a massive demotion. Someone joked with the poor man: “You’ve been blasted to Tongren by a Frankish gun.”⁶³

Ultimately, Wang Hong’s enemies won. He was dismissed from office. The official Ming history doesn’t even contain a biography for him, and the *Veritable Records* attribute the importation of Portuguese guns to He Ru. In fact, however, the importation of western-style guns was not the work of one or two men. A wide variety of Chinese—commoners, military leaders, and civil officials—were interested in them. Indeed, there is evidence that years before the Sino-Portuguese Conflict western guns were incorporated into the arsenal of the most famous and influential Confucian of the last five hundred years, the great Wang Yangming (1472-1529).

Of the hundreds of important Confucian thinkers in China’s immense canon, Wang Yangming is one of the most prominent, along with Confucius himself (551-479 BC), Mencius (372-269 BC), and Zhu Xi (1130-1200). He is most known for his philosophy, his scholarship, and his writing, but like many scholar-officials, he also made a mark as a general, recognized for his disciplined troops and wise leadership. His most important military test occurred in 1519, while he was governor of Jiangxi Province. A Ming imperial prince named Zhu Chenhao (朱宸濠) had risen up in revolt, claiming that he was the rightful heir to the

“Ming kang pu ming chen wang hong mu zhi kao shi” 明抗葡名臣汪鋹墓志考釋, *Nan fang wen wu* 南方文物, 2000 volume, no. 3, 114-120.

62 “Gan tang liu yong: ming huan ci si” 甘棠留泳: 名宦祠祀, *Shenzhen yuan zhu min wang* 深圳原住民網, 15 October 2012 (Originally published in the *Bao’an guo xue tang* 寶安國學堂), http://www.szyuanzhumin.com/a/culture/local_focus/history/2012/1015/20073.html, retrieved 5 March 2013. Almost identical language is used to introduce him in the Chinese wiki-encyclopedia site Baike, “Wang Hong,” Baike Wiki-Encyclopedia Entry, <http://baike.baidu.com/view/1452345.htm>, retrieved 5 March 2013.

63 The man was Wu Jin (吳縉). The story appears in the *Yue shan cong tan*, excerpted in Yan Congjian, *Shu yu*, 322.

throne. This prince had been sending out agents to raise money by means of overseas trade and to buy armor and weapons in Southeast Asia. Reliable sources make clear that among the weapons purchased were Portuguese guns, which his people obtained as early as 1518 (Zhengde 12), probably well before Wang Hong got them.⁶⁴

To counter these weapons, Wang Yangming himself was provided with Portuguese guns. An old scholar named Lin Jun (林俊), sixty-seven and sickly, went to great trouble to cast and send them.⁶⁵ Wang Yangming himself tells the story:

When the honorable Lin heard of the Ning prince incident, it was night-time, but he immediately sent people out to cast tin into Frankish guns. He also copied out a recipe for gunpowder with his own hands, giving his utmost with extreme loyalty to [help] punish the rebels. At that time it was the sixth month, and the heat was poison, and on the roads many were dying of sunstroke. But he sent two servants with their bundles and provisions. Via byways they braved the heat, traveling day and night, more than three thousand li, to bequeath their gift. When they arrived, [the rebellion was over and the prince] Hao had already been in captivity for seven days. But upon receiving the letter, I was so moved that tears streamed down my face.⁶⁶

64 Scholars have cast doubt on this idea, since, as historian Wang Zhaochun points out, the main source from which the data come, Rong Yingtai 谷應泰, *Ming shi ji shi ben mo* 明史紀事本末, was written well after the fact. See Wang Zhaochun, *Zhong guo huo qi shi*, 120-125; and Wang Zhaochun, *Zhong guo ke xue ji shu shi*, 198ff. Cf Lin Wenzhao 林文照 and Guo Yongfang 郭永芳, "Ming Qing jian Xi fang huo pao huo qiang chuan ru Zhong guo li shi kao" 明清間西方火炮火槍傳入中國曆史考, In *Ya zhou wen ming* 亞洲文明, ed. Huang Shengzhang 黃盛璋, collection one (第一集), 1992: 165-178. But a compelling article by Zhou Weiqiang adduces some rather watertight additional sources, including official punishment board documents that include testimony from a participant in the rebellion, who testified that in Zhengde 12 (1518) they did indeed send people to Guangdong to buy Frankish guns. Zhou Weiqiang 周維強, "Fo lang ji chong yu Chen Hao zhi pan" 佛郎機銃與宸濠之叛, *Dong Wu li shi xue bao* 東吳歷史學報, 2002 volume, no. 8 (March 2002): 95-125, 105

65 Lin Jun, 1452-1527. A collection of his writings is Lin Jun, 林俊, *Jiansu ji* 見素集 (Taipei, 1983).

66 Wang Yangming, "Shu Fo lang ji yi shi" 書佛郎機遺事, From Wang Yangming 王陽明, *Wang Yangming quan ji* 王陽明全集, vol. 3, "Wu zhen lu zhi wu" 悟真錄之五, "wai ji liu" 外集六. The guns were almost certainly not made of tin alone, but of bronze, an alloy of copper and tin. Tin, however, was a rare and expensive ingredient, which may be why it was singled out by Wang Yangming. As for the gunpowder recipe, in terms of proportions

Wang Yangming composed a poem to honor the old scholar and commemorate his “Worthy Deed of the Frankish Gun” [佛郎機遺事], which compares this maker of the Frankish gun to famous loyal heroes in history.⁶⁷ The poem—stuffed with allusions to famous officials—betrays no hint of derision toward foreign technology, or any feeling that war is unworthy of Confucian officials.

Indeed, the donor of the cannons, Lin Jun, was himself was a top-ranked scholar-official. Born in 1452, twenty years before Wang Yangming, he passed the highest level examinations in 1478 and went on to fill a number of top posts, primarily in Jiangxi Province, where he often needed to field armies against bandits and rebels. In his fifties and sixties, he was sickly and he retired from service.⁶⁸ How he acquired the knowledge of Portuguese guns isn’t clear,⁶⁹ but there’s no doubt of his belief in the technology, an interest shared not just with Wang Yangming but with a wider circle of highly-ranked scholar-officials.

This is clear from the fact that the “Worthy Deed of the Frankish Gun” became the subject of one of the literati’s favorite pastimes: a poetry exchange (唱和).⁷⁰ Several of these poems have been preserved, such as Zou Shouyi’s (鄒守益, 1491-1562), “Frankish Gun Handscroll Verse Bestowed on Mr. Jiansu Lin [i.e., Lin Jun]” [佛郎機手卷為見素林先生賦] and a verse by Tang Long (唐龍, 1477-1546).⁷¹ There is even an image from the time commemorating the

of ingredients, the gunpowder formulae in China and the West were not very different, but the making of the substance was (and is) a finicky art, and it is possible that Lin Jun felt his recipe was especially effective, perhaps having been influenced by Portuguese practices.

67 The poem can be found in Wang Yangming, “Shu Fo lang ji.” I will discuss it in a separate publication. See also Zhou Weiqiang, “Fo lang ji chong.”

68 Zhou Weiqiang, “Fo lang ji chong,” 112-114.

69 He was from Putian, a city on the coast of Fujian Province, which is where he retired and was living when he got news of the rebellion. In 1517, a Portuguese expedition under Jorge Mascarenhas (part of the larger Simao de Andrade mission to Guangzhou), sailed up the Fujian coast, stopping in the famous port of Quanzhou to trade (Quanzhou is only sixty km from Putian). It’s possible that Lin Jun learned about Portuguese guns from this exchange. See Ng, “Trade,” 386. See also Zhou Weiqiang, “Fo lang ji chong,” 117. Zhou cites in turn Liao Dake 廖大珂, “Zao qi Putaoya ren zai Fujian de tong shang yu chong tu” 早期葡萄牙人在福建的通商與衝突, *Dong nan xue bao* 東南學術, 2000 volume, no. 4, p. 72.

70 Zhou Weiqiang has pieced together the relationships between these men and the older Lin Jun. Zhou Weiqiang, “Fo lang ji chong.”

71 Zou Shouyi 鄒守益 (1491-1562), “Folangji shou juan wei Jiansu Lin xian sheng fu” 佛郎機手卷為見素林先生賦 [Literally “Folangji Handscroll verse bestowed on Mr. Jiansu Lin (i.e., Lin Jun)”], from Zou Shouyi 鄒守益, *Dongkuo Zou xian sheng wen ji* 東廓鄒先生文集. Reprinted in Zhou Weiqiang 周維強, “Fo lang ji chong yu Chen Hao

event, which shows Lin Jun in the act of presenting Frankish guns to Wang Yangming.⁷²

In the poems of these learned men we find no hint of reluctance to adopt western cannons, no notion that war is beneath them. On the contrary, they loved the story of Lin Jun, holding him up as a Confucian hero, a student who repays his master. And these elite officials, being at the center of wide nets of patronage and friendship, helped spread information about Portuguese cannons widely.

There is even evidence that Portuguese guns entered China even before the Portuguese arrived in Southeast Asia, although it is troublesome evidence, and Sinophone scholars tend to doubt it.⁷³ There is also evidence—circumstantial but suggestive—that the Ming learned about Frankish guns from the Ottomans, via the Silk Road.⁷⁴

zhi pan” 佛郎機銃與宸濠之叛, *Dong Wu li shi xue bao* 東吳歷史學報, 2002 volume, no. 8 [March 2002], 95-125, 109; Tang Long, “Folangji gong suo wei,” poem in Tang Long, *Yu shi ji* 漁石集, reprinted in Zhou, “Fo lang ji chong,” 112. The date of Tang Long’s birth is not entirely clear, with some sources giving 1475 instead of 1477.

72 I will discuss the image and the poetry in a separate publication, but see Zhou Weiqiang, “Fo lang ji chong,” 110.

73 Roderich Ptak buys the idea, as does Joseph Needham, who writes, “the Frankish breechloaders were a fairly familiar weapon in the south [of China] as early as +1510. If this is the case, it cannot have reached China directly from the Portuguese, because Malacca did not fall until +1511.” See Joseph Needham, *Science and Civilisation in China, V. 5 Part 7 Military Technology: The Gunpowder Epic* (Cambridge, UK, 1986), 369-72. Needham is drawing on the work of Paul Pelliot. See Pelliot, “Le Hoja.” See also Ptak, “*Wugongchuan*,” esp. 76. Kazunori Fukuda is skeptical, writing, “It is my contention that the cannon was brought to China during the period from 1514 to 1519.” See Kazunori Fukuda, “The Relations between China and Portugal in the Early Sixteenth Century: Some Observations on the Yue Shan Cong Tan,” *Revista de Cultura* 1 (2002): 100-105, 102. Wang Zhaochun deeply doubts the idea, Wang Zhaochun, *Zhong guo huo qi shi*, 120-125 and Wang Zhaochun, *Zhong guo ke xue ji shu shi*, 198ff. So do Lin Wenzhao 林文照 and Guo Yongfang 郭永芳, “Ming Qing jian Xi fang huo pao huo qiang chuan ru Zhong guo li shi kao” 明清間西方火炮火槍傳入中國曆史考, in *Ya zhou wen ming* 亞洲文明, ed. Huang Shengzhang 黃盛璋, collection one (第一集), 1992: 165-178. Yin Xiaodong 尹曉冬 and Yi Degang 儀德剛 suggest that it the 1510 date is possible, but they, too, explore other routes of transmission as more plausible. See Yin Xiaodong and Yi Degang, “Ming mo Qing chu Xi fang huo qi chuan hua de liang ge jie duan” 明末清初西方火器傳華的兩個階段, *Nei Meng gu shi fan da xue bao (Zi ran ke xue Han wen ban)* 內蒙古師範大學學報 (自然科學漢文版) 36(4) [2007]: 504-508, especially 504. Zhou Weiqiang surveys the literature and concludes that the date of importation was probably not earlier than Lin Jun’s adoption and Gu Yingxiang’s use: Zhou Weiqiang, “Fo lang ji chong,” 97.

74 See Di Cosmo, “Did Guns Matter?” 131-2.

In any case, Portuguese guns became a mainstay of Ming defenses. They bristled from the Great Wall. They were integrated with infantry units. They were mounted on carts and used as a sort of armored infantry. They were deployed on ships.⁷⁵ Nor were they simply copied. They morphed into a whole variety of Chinese sub-types. The official Weng Wanda (翁萬達, 1498-1552), for example, who received his jinshi degree in 1526, developed a gun known as the “vanguard gun” (先鋒炮), which was, as he himself described it, “copied from the Frankish gun but with modifications” (仿佛郎機而損益之也).⁷⁶ It was a shorter, faster-loading version of the Portuguese gun, equipped with a matchlock and designed so it could be used on horseback against nomads. The weapons expert Zhao Shizhen (趙士楨, 1552-1611), developed a cross between a Portuguese gun and a Turkish musket.⁷⁷ The great general Qi Jiguang (戚繼光, 1528-1588) made a version of the Frankish gun that was particularly powerful, designed to destroy enemy ships.⁷⁸ There were many other experiments as well, showing that, as the Ming scholar Zheng Ruozeng wrote, circa 1562, “the Chinese people, as they used [the Frankish guns], ingeniously altered them.”⁷⁹

The imperial court supported these efforts. Perhaps the first Frankish guns forged by order of the imperial court were produced in 1523, based, it seems, on the captured guns that Wang Hong sent to the capital after the second battle of Tunmen. They weighed three hundred pounds, and there were just thirty-two of them, a sort of test run.⁸⁰ But soon the central weapon bureau was producing thousands of Frankish guns of many sizes and types. In 1528 (Jiajing 7), for example it produced four thousand small Frankish guns for use on border fortifications.⁸¹ Excavated exemplars of this type weigh only four kilograms each, much smaller than the Portuguese models they had been based on.⁸²

75 *Shen zong shi lu*, juan 4, Geoff Wade's translation, Geoff Wade, “The Portuguese as Represented,” 300.

76 Weng Wanda 翁萬達, “Zhi zao huo qi shu” 置造火器疏, Weng Wanda ji 翁萬達集 (Shanghai: Shanghai gu ji chu ban she, 1992), 378-379, cited in Feng Zhenyu 馮震宇, “Lun Fo lang ji zai Ming dai de tu hua” 論佛郎機在明代的本土化, *Zi ran bian zheng fa tong xun* 自然辯證法通訊 34 (3) (2012): 57-62, 59.

77 Feng Zhenyu, “Lun Fo lang ji,” 59-60.

78 Feng Zhenyu, “Lun Fo lang ji,” 60-61.

79 Zheng Ruozeng 鄭若曾 (1503-1570), *Chou hai tu bian* 籌海圖編, juan 13, section on Folangji, in *Zhongguo bing shu ji cheng* 中國兵書集成, ed. Chinese Military Book Compendium Editorial Committee, vols. 15-16 (Beijing, 1990), quote from 1264.

80 See Wang Zhaochun, *Zhong guo huo qi shi*, 127.

81 Wang Zhaochun, *Zhong guo huo qi shi*, 129.

82 Wang Zhaochun, *Zhong guo huo qi shi*, 129.

By the mid-sixteenth century, Frankish guns were being produced in widely divergent sizes for widely divergent uses. In mid-century, Qi Jiguang categorized them into six types, by length, weight of ammunition, and powder charge. Type one was 8-9 feet (尺) long, with a 16-oz (兩) pellet and 16 ounces of powder; type two was 6-7 feet long, with a 10-oz pellet and 11 ounces of powder, and so on, down to one-foot long specimens that shot 15-gram (3-錢) pellets with 25 grams (5 錢) of powder.⁸³ But here he was only talking about guns that were called “folangji.” In fact, China’s entire gun arsenal had become deeply influenced by guns from abroad, so much so that it seems wrong in a sense to continue referring to all these subtypes as western guns, so much had they been nativized.

Yet the Chinese themselves continued using the term “Frankish gun.” Although many of the sub-types came to have their own names (Shooting Star Cannon, Peerless General Great Gun, Vanguard Gun, etc.), the term “Frankish gun,” remained in use, a testament to Confucian bureaucrats’ willingness to adopt foreign technologies.⁸⁴

Conclusions

In sum, the Sino-Portuguese Conflict of 1521-22 provides evidence for assessing the military revolution model for the rise of the west. At first, the Portuguese did have an edge in the use of their guns, and, as a perceptive and nuanced article by Roderick Ptak shows, perhaps also in the use of naval vessels.⁸⁵ But the more important point is how swiftly this advantage seems to have dissipated. If it was apparent in the first set of battles, in 1521, it was absent in the second, in 1522, when, in contrast, it was the power of Chinese artillery that was mentioned more frequently.

As Geoffrey Parker and other proponents of the military revolution model point out, military clashes tend to breed innovation in a challenge-response dynamic.⁸⁶ This dynamic may have been particularly evident in early modern Europe, but it also occurred elsewhere, and the more we learn about Asian

83 Wang Zhaochun, *Zhong guo huo qi shi*, 126.

84 Chinese scholar Feng Zhenyu has recently written a brilliant study of this process of “nativization” (本土化). Feng Zhenyu, “Lun Fo lang ji.” For another discussion of the various varieties of Frankish cannons and the way traditional Chinese firearms were re-engineered along the lines of the new guns, see Wang Zhaochun, *Zhong guo huo qi shi*, 126-134.

85 Ptak, “*Wugongchuan*.”

86 See, for instance, Parker, “Western Way.”

military history, the more we arrive at a global perspective on the military revolution; it was not a process that simply occurred in Europe and provided an edge to Europeans abroad. It was, rather, a worldwide—or at least Eurasia-wide—process of intermixture and adaptation.⁸⁷ The Sino-Portuguese conflicts of 1521-22 were a key episode, spurring Ming officials to speed up their adoption of western guns. This process of adoption continued through the ensuing decades, as the Ming redesigned the guns and adapted them to their own needs, until the only thing western about them was their name: *folangji*.

We must also deepen our chronological perspectives on military innovation and adaptation. The Ming Dynasty proved adept at adopting western guns because firearms were written into its institutions. It had specialized central administrative structures which not only oversaw the production of firearms but also coordinated training and drill.⁸⁸ As historian Kenneth Swope has argued, when western guns arrived in China they were viewed as variations on a theme, easily incorporated.⁸⁹ Indeed, there is a good case to be made for considering the Ming Dynasty the world's first "Gunpowder Empire," a moniker suggested by historian Sun Laichen.⁹⁰ By the end of the 1300s, the Ming had around 150,000 dedicated firearms troops, or 10 percent of total infantry, a proportion that rose to 30 percent by the late 1400s, and a level that would not be attained by European infantries until the mid-1500s.⁹¹

Indeed, Sun has argued that the Ming "started the 'military revolution' not only in Chinese but also world history in the early modern period."⁹² Perhaps

87 Again, the work of Gábor Ágoston is particularly paradigmatic in this respect, particularly Ágoston, *Guns for the Sultan*.

88 The Ottoman Empire also had specialized bureaus overseeing firearms quite early on. See Ágoston, *Guns*, 16-24.

89 Swope, "Crouching," 20.

90 Sun Laichen, "Ming-Southeast Asian Overland Interactions, 1368-1644," (Ph.D. Dissertation, University of Michigan Department of History, 2000), 31. The term "gunpowder empire" is of course drawn from other scholars, most notably William McNeill and Marshall Hodgson. See William McNeill, "The Gunpowder Revolution," *MHQ: The Quarterly Journal of Military History* 3, no. 1 (1990): 8-17; William McNeill, *The Pursuit of Power: Technology, Armed Force, and Society since A.D. 1000* (Chicago, 1982); and Marshall G. S. Hodgson, *The Venture of Islam, Volume 3: The Gunpowder Empires and Modern Times* (Chicago, 1977). Recently, historian Stephen Haw has persuasively suggested that the term "first gunpowder empire" should be applied to the Yuan Dynasty (1279-1368). Stephen G. Haw, "The Mongol Empire—The First 'Gunpowder Empire'?" *Journal of the Royal Asiatic Society* 23, no. 3 (August 2013): 1-29.

91 Wang Zhaochun, *Zhong guo huo qi shi*, 103-106.

92 Sun Laichen, "Ming-Southeast," 31.

we might refine Sun's chronology—the gun had arrived in Europe by the 1320s and underwent its own parallel process of development there—but there is no doubt about the significance of Eastern Eurasia in the process of global military adaptation in the early modern period. We must view Europe's developments within a global framework, and the perspective from Asia may cause us to question conventional historiographical wisdom about European military developments.

Certainly, the 1500s and 1600s were a period of tremendous military innovation in East Asia, which was as riven by warfare as Europe, particularly between 1550 and the mid-1680s. During the 1540s, Chinese mandarins and military leaders, having already adopted Frankish guns, eagerly introduced large muzzle-loading artillery and European-style arquebuses.⁹³ Indeed, it seems that the Chinese immediately began deploying arquebuses in a more sophisticated way than they were used in Europe. The famous arquebus volley technique, by which soldiers kept up a constant fire by shooting in turns, is attested in Chinese records from 1560 at the latest, nearly forty years before the most commonly asserted date of origin for the technique in Europe.⁹⁴ The following century, the 1600s, was also marked by rapid military innovation in East Asia, as Chinese adopted advanced muzzle-loading cannons and improved on the western models that inspired them.⁹⁵

At present we know far more about warfare in Europe and the west than about that in the rest of the world, but the situation is changing quickly. In the coming decades, standard narratives of European and global military history will be revolutionized, and it is likely that the apparent rapidity of military change spurred in China by the 1521-22 Sino-Portuguese War will turn out not to be unusual. Rapid adaptation was probably a general dynamic throughout Eurasia during the early modern period.

93 On the muzzle-loading cannon, see the brilliant article Zheng Cheng, "Fa gong."

94 I discuss this in Andrade, "The Arquebus Volley Technique in China, c. 1560: Evidence from the Writings of Qi Jiguang," *Journal of Chinese Military History* [in press, expected 2015].

95 See especially Huang Yi-Long, "Ming Qing du te fu he jin shu pao"; Huang Yi-Long, "Ming Qing zhi ji hong yi da pao zai dong nan."

