

Leidschrift

Historisch Tijdschrift

Artikel/Article: *The Trojan Gun: The Jesuits as cultural mediators of military technology and the court in Beijing, 1601-1644*

Auteur/Author: Barend Noordam

Verschenen in/Appeared in: *Leidschrift*, 27.1 (Leiden 2012) 101-119

Titel uitgave: *Aan het hof. Rivaliteit, legitimiteit en successiestrijd aan de Euraziatische hoven, 1250-1750*

© 2012 Stichting Leidschrift, Leiden, The Netherlands

ISSN 0923-9146

E-ISSN 2210-5298

Niets uit deze uitgave mag worden gereproduceerd en/of vermenigvuldigd zonder schriftelijke toestemming van de uitgever.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the publisher.

Leidschrift is een zelfstandig wetenschappelijk historisch tijdschrift, verbonden aan het Instituut voor geschiedenis van de Universiteit Leiden. *Leidschrift* verschijnt drie maal per jaar in de vorm van een themanummer en biedt hiermee al vijftientig jaar een podium voor levendige historiografische discussie.

Artikelen ouder dan 2 jaar zijn te downloaden van www.leidschrift.nl. Losse nummers kunnen per e-mail besteld worden. Het is ook mogelijk een jaarabonnement op *Leidschrift* te nemen. Zie www.leidschrift.nl voor meer informatie.

Leidschrift is an independent academic journal dealing with current historical debates and is linked to the Institute for History of Leiden University. *Leidschrift* appears tri-annually and each edition deals with a specific theme.

Articles older than two years can be downloaded from www.leidschrift.nl. Copies can be order by e-mail. It is also possible to order an yearly subscription. For more information visit www.leidschrift.nl.

Articles appearing in this journal are abstracted and indexed in *Historical Abstracts*.

Secretariaat/ Secretariat:

Doelensteeg 16
2311 VL Leiden
The Netherlands
071-5277205
redactie@leidschrift.nl
www.leidschrift.nl

Comité van aanbeveling/ Board of recommendation:

Dr. J. Augusteijn
Prof. dr. W.P. Blockmans
Prof. dr. H.W. van den Doel
Prof. dr. L. de Lig
Prof. dr. L.A.C.J. Lucassen
Prof. dr. H. te Velde

The Trojan Gun: Jesuits as Cultural Mediators of Military Technology and the Court in Beijing 1601-1644

Barend Noordam

In 1601 Matteo Ricci¹ (1552-1610) finally achieved what he had been striving for: an opportunity to be received in audience with the Chinese Wanli Emperor (r. 1572-1620) in Beijing.² For this purpose he had prepared a number of gifts – amongst other things clocks, a map and a spinet – as was the practice for any foreign dignitary visiting the Emperor as an official emissary. But an official emissary of whom? Those in charge of handling the tribute missions sent by Asian rulers, belonging to a department of the Ministry of Rites (禮部, *libu*), had problems categorizing this particular envoy, as Matteo Ricci did not represent any particular polity or ruler. In the end he was allowed to be received, but he did not get to converse with the Emperor himself, which undoubtedly must have been a disappointment to him. Still, his gifts left a fine impression at the court. Especially the clocks, made to a very high European standard, caught the Emperor's eye. More importantly, in 1633 the gifts again proved their value as a door-opener to the inner court when the Jesuit Adam Schall von Bell (1592-1666) was summoned to repair the spinet brought by Ricci, also creating an opportunity for him to convert some members of the Emperor's immediate entourage. In the course of the first half of the seventeenth century, the Jesuits thus benefited from their knowledge of European science and technology³ to lodge themselves ever closer to court circles and the Emperor himself, by vaunting their technical skills and expertise and offering their services to the Ming dynasty (明朝, 1368-1644). In this they

¹ For an overview of the Jesuit mission in China, see L. M. Brockey, *Journey to the East. The Jesuit Mission to China, 1579-1724* (Cambridge, MA 2007). For a recent biography of Matteo Ricci, see R. Po-chia Hsia, *A Jesuit in the Forbidden City: Matteo Ricci, 1552-1610* (New York 2010).

² I would like to thank Jos Gommans, Peter Rietbergen, Maaïke van Berkel and Sander Molenaar for their various helpful comments on my draft.

³ I understand 'science' and 'technology' here in Dagmar Schäfer's broad definition of 'a culturally and historically embedded making of knowledge about nature and matter'. See D. Schäfer, *The Crafting of the 10,000 Things: Knowledge and Technology in Seventeenth-Century China* (Chicago 2011) 4.

were helped by converts they made among the scholarly and official elites, who were their connection with the court.⁴ Science and technology thus played an essential role in the Jesuits' penetration of the court. Most modern scholars have concentrated on the use of astronomical expertise in this process. I wish to draw the attention to the role of military technology and expertise, however, as the Fathers and their converts were able to contribute valuable services to the government when it came under pressure from the Manchus, who threatened to overrun the realm from the northeast.

In the sixteenth century European expansion into Asia was spearheaded by the Portuguese, who settled as far as the port of Macao on the southern coast of the Ming Empire. As in other parts of the world that were reached by Europeans during this period, here missionary enterprise closely followed the progress of the Portuguese, searching new converts for the catholic faith. In China the most important role in this enterprise was played by the Jesuits. There, perhaps more than anywhere else, they accommodated themselves to the local power structure and its culture in order to be heard. Below I will argue that the Jesuits, owing to their policy of cultural accommodation, inadvertently became exemplars of cultural mediators, functioning as a human conduit through which European science and technology could flow into China.⁵ One aspect of this process was constituted by the transfer of military armaments and expertise, a perhaps surprising component of a missionary proselytizing tactic. Although military technology at first sight seems culturally to be a value-neutral property, whose acceptance or rejection would mostly be based on pragmatic reasoning, below I will argue that the mediation of this technology depended on the negotiation of socio-cultural obstacles. Guns and military expertise had to be appropriated⁶ by the receiving culture. In

⁴ J. Spence, *The China Helpers. Western Advisers in China 1620-1960* (London 1969) 3-6, 12; W. Peterson, 'Learning from Heaven: The Introduction of Christianity and other Western Ideas into Late Ming China' in: F. W. Mote and D. Twitchett ed., *The Cambridge History of China, Vol. 8: The Ming Dynasty, 1368-1644, Part 2* (Cambridge 1997) 789-839: 800; G. H. Dunne S.J., *Das grosse Exempel* (Stuttgart 1965) 98-99.

⁵ C. R. Boxer, 'Jesuits at the Court of Peking, 1601-1775', *History Today* 7 (1957) 580-589: 580-582.

⁶ 'Appropriation' is understood here as the process by which a culture asserts ownership/gains power over, or otherwise makes a previously 'alien' cultural artefact its own. This often took the form of discursive legitimization, which

the process the receiver was more important than the sender. The struggle of the Jesuits to be accepted in Beijing as experts in service of the Dragon Throne was facilitated by their knowledge of European science and technology – including military crafts – which was culturally translated to ensure the success of the missionary enterprise. In this article I want to highlight how this process of cultural translation – transfer – worked on an ideological level and what role the ‘senders’, the Jesuits, played to facilitate the appropriation of their science and technology by the Chinese. The Jesuits were pragmatic ‘senders’: the transfer of science and technology was a means to the end of introducing Christianity. But their pragmatism led to a profound engagement with Chinese systems of thought and systems of ideological legitimization.⁷ The role of the Jesuits in the transmission of European science and technology to China fits very well with Matthias Middell’s notion of ‘cultural transfer’, which he proposes should be studied on three levels. These are, respectively, the systems of ideological thought and interpretation of the involved cultures, the people involved in the process of transfer, and the goods – technologies and ideas – which were eventually, in this case, appropriated by the Chinese.⁸ What I propose is to look at the transfer of European astronomy and military technology as two steps in a Jesuit attempt to gain influence at the court, keeping in mind the three levels of Middell’s scheme. This is a fruitful exercise in my view, because comparing and contrasting the transfer of astronomy and military technology brings the factors behind the successes and failures of such processes to the foreground. Furthermore, by presenting both processes as part of a single narrative, it arguably becomes clear that the failure of the transfer of astronomy precipitated a change in tactics, which made the transfer of military technology a more successful affair.

claimed historical antecedents or prior existence of the artefact in question in the own culture. Cultural mimicry was another tactic, and the donning of literati garb and manners by the Jesuits can therefore also be seen as a process of appropriation. See K. Ashley and V. Plesch, ‘The Cultural Processes of “Appropriation”’, *Journal of Medieval and Early Modern Studies* 32 (2002) 1-15, for a survey of the different usages of the concept.

⁷ B. Elman, ‘China and the World History of Science, 1450-1770’, *Education about Asia* 12 (2007) 40-44: 42-43.

⁸ M. Middell, ‘European History and Cultural Transfer’, *Diogenes* 48 (2000) 23-30: 26-27.

The 'literati'-model and Jesuit court policy

In 1594 Matteo Ricci made a momentous decision which was to help the Jesuits establish themselves in Beijing and facilitate their future role as cultural mediators: he adopted the garb and the lifestyle of the Chinese literati, a scholarly elite which was selected on the basis of meritocratic principles to occupy all the positions within the civil bureaucracy and, partly, in the military chain of command as well.⁹ It was a smart move on the part of the Jesuits. The literati were bound to the dynasty by a mastery of the official orthodoxy, which was the requirement to pass the so-called civil service examinations, in which this mastery was tested. Only a small amount of the literati who participated in these examinations would ever become members of the bureaucracy, but those who passed the lower exams could still count on its prestige to gain important functions in local society.¹⁰ Their social, economic *and* political status thus depended in part on the dynasty and the legitimization they provided by their training in the mostly Confucian moral, ethical and political philosophy. For those who reached the apex of power at the court of Beijing, vicinity to the Emperor furnished an additional source of prestige and patronage. An important element in all this was that the court functioned as a model of the social order it propagated, an exemplar of excellence by which the rest of the world was judged. According to state orthodoxy, the Emperor (and by extension his court) was the mediator between heaven and earth, since the Emperor's task was to order earth according to the principles of heaven. Heaven (天, *tian*), an opaque concept, usually implied either an impersonal supernatural force (perhaps comparable to 'fate'), or a somewhat anthropomorphic omniscient and omnipotent god, which/who bestowed the mandate to rule (天命, *tianming*, the so-called 'Mandate of Heaven') on a virtuous and just

⁹ Peterson, 'Learning from Heaven', 797-799; K. M. Swope, 'Bestowing the Double-Edged Sword: Wanli as Supreme Military Commander' in: D. M. Robinson ed., *Culture, Courtiers and Competition: The Ming Court (1368-1644)* (Cambridge, MA 2008) 61-115: 66.

¹⁰ B. Elman, 'Civil Service Examinations. Kējǔ 科举' in: L. Cheng ed., *Berkshire Encyclopedia of China: Modern and Historic Views of the World's Newest and Oldest Global Power* (Great Barrington, MA 2009) 405-410: 405-406, 409.

Emperor, making him the ‘Son of Heaven’.¹¹ The quality of an Emperor’s reign and the prosperity of the realm was thus directly linked to the ruler’s moral stature.¹² If the world was in disorder, which could reveal itself in natural disasters or uprisings, this was thus due to the Emperor’s own personal failings as a virtuous ruler.¹³ This ideological conceptualization of imperial rule and the consequences it had for the functioning and status of the court meant that for Jesuits, access to the Emperor and his court would entail an enormous increase of prestige, power and legitimization of their activities, including the propagation of their religion.

Yet, despite the intelligence displayed in presenting themselves as the European cousins of the Chinese literati, they found themselves in a world which was not populated by scholar-officials alone. Other groups vied for influence at the court, including military officials, eunuchs and men with different cultural and religious backgrounds, as for example Muslim astronomers, who were involved in the calculations of the imperial calendar. In addition, despite their common, ideologically inculcated background, scholar-officials were quite often divided amongst themselves according to different interests.¹⁴ I would argue, however, that this multiplicity of actors

¹¹ E. Slingerland, ‘Classical Confucianism (I): Confucius and the *Lun-Yü*’ in: M. Bo ed., *Routledge History of World Philosophies. Volume 3: History of Chinese Philosophy* (London 2009) 107-136: 111; Schäfer, *The Crafting of the 10,000 Things*, 52.

¹² Mencius (372-289 BCE), an important Confucian thinker whose writings had to be studied for the state examination, posited that man’s moral sense was given by Heaven, allowing one to reflect on human nature, the self and – by extension – Heaven itself. This knowledge allows an emperor to serve Heaven by ordering the world according to its perceived wishes. See K. Chong, ‘Classical Confucianism (II): Meng Zi and Xun Zi’ in: M. Bou ed., *Routledge History of World Philosophies. Volume 3: History of Chinese Philosophy* (London 2009) 189-208: 195.

¹³ D. M. Robinson, ‘The Ming Court’ in: Idem ed., *Culture, Courtiers and Competition: The Ming Court (1368-1644)* (Cambridge, MA 2008) 21-60: 26-29.

¹⁴ *Ibidem*, 45. These different interests arose in the bureaucracy due to, for example, the tendency of officials to extend their patronage to aspiring literati from their regions of origin. Officials from different regional patronage networks thus often clashed, especially when trying to safeguard their ability to influence appointments of favourites to lucrative posts within the bureaucracy. Furthermore, the tendency towards factionalism seems to have increased in the later Ming dynasty, owing to the greater reliance of emperors on eunuchs to circumvent the official bureaucracy, which often constrained the Emperor’s executive powers. Being the Emperor’s private servants, by the late sixteenth century the eunuchs controlled imperial tax

and groups at the court probably made it easier for the Jesuits to gain access in the long run – in addition to their exterior display of acculturation – as they were just another interest group among many, some of which also contained a strong element of ‘foreignness’.

It is instructive to note, however, that it was exactly their close modelling after the scholar-official class which made them prone to attack from this quarter. They were potentially subversive to the people at court: they gained prestigious positions as court astronomers and founts of technical expertise, but did so without having bothered to go through the cumbersome state examination system. They therefore circumvented the normal route of career building,¹⁵ which included mastering the Confucian state orthodoxy that so critically bound the imperial elites to the dynasty, the court and the social order it represented. In addition, their Christian teachings were consciously packaged with their technological and scientific teachings and presented as a continuum of learning. As with the performative¹⁶ tactic of becoming Chinese-style literati, this packaging turned out to be a double-edged sword, as these Christian teachings

bureaux, staffed a secret police, and became intermediaries between the Emperor and his civil officials, who now rarely saw their sovereign. As a result, scholar-official interest groups formed alliances with important eunuchs at the court in order to pursue their interests. See F. Wakeman Jr., *The Great Enterprise. The Manchu Reconstruction of Imperial Order in Seventeenth-Century China* (Berkeley 1985) 11-15 and S. S. H. Tsai, *The Eunuchs in the Ming Dynasty* (New York 1996).

¹⁵ Peterson, ‘Learning from Heaven’, 835.

¹⁶ I understand ‘performativity’ here as used by, for example, Barbara Stollberg-Rilinger, who posits that ‘social reality is performatively regenerated through individual acts of communication’. These performative acts of communication then – as in, for example, staged drama – ‘effect what they signify’, based on the further premise that by communicating, one implicitly assumes understanding of this communication. In my view, by dressing and behaving as Chinese literati, the Jesuits ‘performed’ as members of the intellectual elite, and implicitly ‘communicated’ their wish to partake of this same social reality. The drawback of this approach was that, by aspiring to literati-status, they could also be judged by the standards those same literati applied to themselves. See B. Stollberg-Rilinger, ‘The Impact of Communication Theory on the Analysis of the Early Modern Statebuilding Processes’ in: W. Blockmans, A. Holenstein and J. Mathieu ed., *Empowering Interactions. Political Cultures and the Emergence of the State in Europe 1300-1900* (Farnham 2009) 313-318: 313-314.

contained ideas not easily reconcilable with Chinese thought.¹⁷ Any Chinese criticism levelled against the Christian faith thus tended to impact upon the remaining scientific corpus of knowledge as well.

The legitimization of European science and technology by Jesuits and converts, and its Chinese critics

European science and technology were a convenient Trojan horse to acquaint the Chinese with Christian teachings, and Matteo Ricci seemed well aware of this.¹⁸ When he settled in Nanjing for a while, he was often visited by Chinese literati and officials who wanted to see his maps, clocks and other fruits of European scientific endeavour. Yet, he himself noted the ambivalence in the Chinese mentality and value system: the study of mathematics and medicine were not held in high esteem, as opposed to the study of philosophy. He was quick to understand, however, that this was entirely the consequence of the organization of the examination system. For the philosophy was of course Confucian orthodoxy, and the incentives connected to its study. The reverse was the case for such scholarly endeavours as mathematics, which begs the question of why European science generated such a high degree of interest amongst the Chinese in the first place.¹⁹

An important part of the explanation is that in the sixteenth century, at the end of which the Jesuits started to enter China, the intellectual climate in China started to move away from purely theoretical speculation towards a consideration of practical knowledge and the study of the natural world. The knowledge of sciences the Jesuits brought, including mathematics, astronomy, geometry, were thus received in a fertile intellectual climate. This climate was known amongst Chinese literati as the ‘investigation of

¹⁷ Among the most important problems for the Jesuits was the Chinese practice of ancestor worship, which meant that deceased relatives were elevated to the status of deities, with the living family members tasked with the responsibility of continuing to provide for their well-being in the afterlife by their performance of certain rituals.

¹⁸ T. H. C. Lee, ‘Christianity and Chinese Intellectuals: From the Chinese Point of View’ in: Idem ed., *China and Europe. Images and Influences in Sixteenth to Eighteenth Centuries* (Hong Kong 1991)1-27: 3.

¹⁹ B. A. Elman, ‘Jesuit *Scientia* and Natural Studies in Late Imperial China, 1600-1800’, *Journal of Early Modern History* 6 (2002) 209-232: 210.

things and extension of knowledge' (格物致知, *gewu zhi zhi*).²⁰ This climate was stimulated by the growth and increasing monetization of the economy, which, in Benjamin Elman's words, resulted in 'the commoditization of things into objects of material value'. Practical knowledge about the properties of natural objects was therefore in demand.²¹

How did this tactic of introducing European science and technology fit in the objective of introducing Christianity in China? Here too, the Jesuits made use of a pre-existing link in Chinese thought between the investigation of things and gaining insight in the principles of the 'Way' (道, *dao*), a concept we can perhaps best understand in this context as the way of the natural world which was behind the balance and order of the universe. For the Jesuits too, the motivation to engage in science was to understand nature, and through this, to find God. Where Jesuits and Chinese intellectuals met, was on the understanding of the fundamental unity of nature and the supernatural. Heaven and earth, God and nature, were regarded by both as a single phenomenon.²² For the Jesuits this meant that, once they could introduce their science to the Chinese, they could automatically introduce Christian doctrines through this opening as well. The most important scientific road the Jesuits initially utilized to gain an intellectual foothold was astronomy. Knowledge of astronomical techniques was of great interest to the dynasty, as it was needed to construct the imperial calendar. The issuance of an accurate calendar fed directly in the function of the Emperor as mediator between heaven and earth and should be regarded as one of his main tasks in ordering the realm.²³

If successful, the Jesuits could insert themselves in the imperial bureaucracy as buttresses of the dynasty's legitimacy. Owing to contacts with officials and other influential literati, who were first and foremost drawn to the Jesuit's technical and scientific skills, it was suggested that the court should rely on Jesuit expertise to make accurate calculations for the calendar. In the early seventeenth century a group of officials proposed to

²⁰ Elman, 'Jesuit *Scientia* and Natural Studies in Late Imperial China', 212.

²¹ B. A. Elman, *On Their Own Terms. Science in China 1550-1900* (Cambridge, MA, 2005) 24.

²² Elman, *On Their Own Terms*, 217-218; A. S. Cua, 'The Emergence of the History of Chinese Philosophy' in: B. Mou ed., *Routledge History of World Philosophies. Volume 3: History of Chinese Philosophy* (London 2009) 43-68: 46.

²³ Schäfer, *The Crafting of the 10,000 Things*, 77; Spence, *The China Helpers*, 9.

the Emperor that four Jesuits should be admitted to the Imperial Astronomical Board to help improve the calendar.²⁴

Not all literati accepted the Jesuit intrusion in Chinese affairs, and criticism soon arose from parts of the scholar-official elite who saw them as a threat to the social order. Their resistance is quite understandable in light of the links that existed between scholarly learning, Confucian state ideology and the mutual legitimization of state and scholarly elite through the examination system. This situation also explains the fatal double-edged nature of the Jesuit's tactic of coupling their science to the Christian faith in one coherent world view. Despite Matteo Ricci's arguing that Christianity was fully compatible with Confucianism, which in his eyes was devoid of religious elements, many literati continued to see Christian teachings as heterodox and thus a danger to the Confucian social order. In the context of the same debate, we can see different methods of cultural appropriation and of what one might term 'counter-appropriation' in action. A discursive tactic applied by both proponents and opponents of European science was to claim it had a forgotten Chinese origin and was thus derivative. Tellingly, when an influential Chinese convert to Catholicism, Xu Guangqi (1562-1633), denied that European science had an Chinese origin, orthodox literati resistance against the Jesuits and their teachings became stronger. Beforehand, the construed Chinese origin had been used either as a rhetorical tool to downplay European achievements, or as a legitimating tactic to use European scientific techniques.²⁵ Now a *Chinese* convert was robbing both the Jesuits and the converts of this discursive tool which could readily have been used to appropriate European science into Chinese tradition, in the process seemingly laying bare the feared intention of Jesuits and converts to wholly replace Chinese learning (and the Confucian state orthodoxy coupled to it) with European thought and religion.

Another tactic was ascribing the invention of a certain technique to ancient sages and rulers or compare present-day practitioners to equivalent men in the remote past. Historical precedent thus again provided a certain

²⁴ A. Dudink, 'Opposition to the Introduction of Western Science and the Nanjing Persecution (1616-1617)' in: C. Jami, P. Engelfriet and G. Blue ed., *Statecraft & Intellectual Renewal in Late Ming China. The Cross-Cultural Synthesis of Xu Guangqi (1562-1633)* (Leiden 2001) 191-223: 193.

²⁵ G. H. C. Wong, 'China's Opposition to Western Science during Late Ming and Early Ch'ing', *Isis* 54 (1963) 29-49: 30-32.

legitimacy to present-day implementation.²⁶ This rhetorical tactic could also backfire, as when Xu Guangqi equated Matteo Ricci with Xi He, a mythical astronomical genius from the remote past. But this move stirred up controversy amongst those insisting on the foreignness of European science. Literati concerned about Jesuit influence had little ground to contest them; as foreigners they had assimilated themselves quite successfully to Chinese elite culture – thus implicitly recognizing its superiority – and other foreigners (Muslims) had historically been employed in astronomical pursuits as well. They therefore had to contest the process of appropriation of European science and technology into the Chinese culture, which required them to either ‘other’ these artifacts or prove their ineffectiveness. Proponents and opponents were thus engaged in a debate on the appropriateness of vesting authority, through tactics of appropriation, in European science within the Chinese cultural context.²⁷

In practice both ‘othering’ European science and pointing out its inefficacy were tactics that were implemented to great effect, especially when coupled to the charge that its utilization was a threat to social order. It was exactly the coupling of astronomical techniques to Christian doctrines that made the Jesuits vulnerable to attack.²⁸ Shen Que (1565-1624), one of the most outspoken critics of the Jesuits and their proposed role in constructing a new imperial calendar through their astronomical expertise, used the linkage of said expertise with Christianity as his main venue for

²⁶ Schäfer, *The Crafting of the 10,000 Things*, 85. Matteo Ricci also used this tactic by positing that certain Christian ideas were already present in ancient China, and practiced by sages, but henceforth forgotten. See Peterson, ‘Learning from Heaven’, 804.

²⁷ See M. de Certeau, *The Practice of Everyday Life* (Berkeley 1984) xix, 34-38, for further debate on ‘othering’ and its relation to the vesting of authority in foreign cultural artefacts in the context of appropriation into another culture.

²⁸ This coupling worked as follows: the Jesuits introduced several premises, new to the Chinese, that were part of their astronomical wisdom, for example the notion that the Earth was a sphere. The Fathers hoped that, once these premises were accepted, the idea that the universe was created by the Christian God would also be taken over. This was difficult to accept, because the most commonly held viewpoint in Chinese thought was that the universe was autonomously and spontaneously generated, without intercession from a sentient and willful, and moreover anthropomorphic, creator. One scholar also bluntly asked why the Lord of Heaven (as the Jesuits referred to their God in China) should exist prior to Heaven itself. See Peterson, ‘Learning from Heaven’, 807, 826, 829.

attack. European astronomy and its premises contradicted what was known about Heaven in China and handed down from the ancient sages. As the observation of Heaven and the construction of the calendar through astronomical methods were essential in aiding the Emperor in ordering the realm, the Jesuits' different system of astronomy endangered the correct reading of Heaven's patterns and thus threatened the Emperor's ability to order society. This was not just empty rhetoric, as officials widely feared that even '...a mere rumour about an incorrect calendar might lead to unrest or rebellion'. As a solution Shen Que suggested separating Chinese and 'barbarian', in effect arguing for 'othering' Europeans and their science.²⁹ So important was the calendar to the project of imperial legitimacy, that it was feared that surrendering it to 'barbarian' (i.e. European) expertise would entail China becoming barbarian in nature as well.³⁰ Xu Dashou (d. 1628), another opponent of the Fathers, even expressed the fear that the Jesuits would use their calendar to interpret Heaven's omens in their own favor.³¹ Shen Que's objections were heard and thus, ironically, the proposed Jesuit scientific and technological aid, other than their missionary activities *an sich*, led to the biggest setback for the Fathers thus far. From 1616 onwards many of them were persecuted, arrested and their converts punished.

The Jesuits as artisans and military experts

It can be said that the linking of astronomy to Christian teachings was the main obstacle to the introduction of European science and technology to China. Both were perceived not to be culturally neutral properties, but as carrying with them a certain world view which clashed with established orthodoxy and threatened to undermine the existing order. As Bruno Latour argued the gun is not just a tool – a neutral mediator – that can be wielded by an individual without changing his or her moral essence. In his view, technological artifacts are agents themselves, which, through their

²⁹ Dudink, 'Opposition to the Introduction of Western Science', 205, 220-221; Peterson, 'Learning from Heaven', 819-821.

³⁰ Dudink, 'Opposition to the Introduction of Western Science', 220.

³¹ A. Dudink, 'The *Sheng-Ch'ao Tso-P'i* (1623) of Hsü Ta-shou' in: L. Blussé and H. T. Zurndorfer ed., *Conflict and Accommodation in Early Modern East Asia. Essays in Honour of Erik Zürcher* (Leiden 1993) 94-140: 125.

possession of certain qualities, can impact on the user's 'program of action' – his or her goals and intentions – and displace these. This was keenly felt by scholar-officials like Shen Que, who predicted that the utilization of European astronomy would transform China into a 'barbarian' country.³²

In response, Xu Guangqi persuaded the Jesuits to sever the connection between science, technology and the Christian faith in order to safeguard the mission in China. It is this change of tactics which usually is cited as a reason for the subsequent appointment of several Fathers to the astronomical department in Beijing in 1629. But military technology provided an even earlier avenue through which the Jesuits were able to redeem themselves in the eyes of the Emperor. As with the aborted attempt at the introduction of astronomy, the intercession of influential Chinese scholar-official converts like Xu Guangqi and also Li Zhizao (1565-1630) proved essential to gain the throne's attention. Here we can once again see the court at work as a space for competition and negotiation between different interest-groups. Such scholar-officials as Xu Guangqi and Shen Que were both at one time member of the prestigious Hanlin Academy (翰林院, *Hanlin Yuan*), a group of elite literati who were tasked with providing secretarial, artistic and academic services for the court. They operated outside the normal civil bureaucracy and functioned as a private pool of scholarly talent to the Emperor. As such, they were part of the court's inner orbit, enjoyed privileged access and were likely to be heard when they advised the Emperor. Thanks to Xu Guangqi's efforts, already in 1623 two Jesuits were invited back to Beijing as military experts, which indicated a relaxing of the court's attitude towards the missionaries.³³ Xu had been working on a project to introduce European military technology as a response to the new threat of the Manchus which had emerged in 1619 and it is by no means unlikely that he regarded it as a convenient opening to safeguard the future of the Jesuit mission in China. Added to this was the

³² B. Latour, 'On Technical Mediation – Philosophy, Sociology, Genealogy', *Common Knowledge* 3 (1994) 29-64: 30-34; Dudink, 'Opposition to the Introduction of Western Science', 220.

³³ Dudink, 'The *Sheng-Ch'ao Tso-P'?*, 122-123; Peterson, 'Learning from Heaven', 811, 819; Robinson, 'The Ming Court', 23-24, 45; D. M. Robinson, 'Introduction' in: Idem ed., *Culture, Courtiers and Competition: The Ming Court (1368-1644)* (Cambridge, MA 2008) 1-20: 1.

fact that the Wanli Emperor was known for his interest in military affairs and preferential treatment of military officials.³⁴

To combat the Manchu threat, aid was not immediately sought from the Jesuits, but rather the Portuguese, who had been allowed to settle at Macao by the Ming Empire since the late sixteenth century. Xu Guangqi and other Chinese converts in the bureaucracy took the lead in proposing to the throne the request of Portuguese guns and gunners from Macao in 1620. The idea was to have Jesuits join this expedition, because with their language skills they alone would be able to fulfill the essential task of instructing Chinese in the use of the guns. The request was authorized and Macao sent four guns and a small group of gunners up to Guangzhou, but they were detained there. The guns were eventually sent north to the border with the Manchus in 1621, with the gunners following in 1623-1624, where they performed well in the defense against Manchu attacks. There were several hitches, though, caused by the accidental exploding of some of the guns which killed and wounded several Chinese. This was probably a result of the Chinese using the first guns sent north in 1621 without Portuguese assistance, which necessitated the belated dispatch of the gunners left behind in Guangzhou two years later. The Jesuits seem to have benefited from these accidents, as scholar-officials advocating their employment as military experts managed to get two of them sent to Beijing around the same time. These advocates of the Jesuits pushed them into the role of military experts based on their knowledge of mathematics, which the Fathers seem to have accepted only reluctantly, complaining that supplying military aid was not their task. When summoned before the Board of War (兵部, *bingbu*) they pleaded for the use of Portuguese cannon, but denied having any expertise themselves. They did admit, however, that they would be able to admonish the Portuguese gunners to do their duties. The result was that the Jesuits were allowed to reside in Beijing again which signaled a relaxing of the ban on the mission as a whole.³⁵

³⁴ Y. L. Huang, 'Sun Yuanhua (1581-1632): A Christian Convert Who Put Xu Guangqi's Military Reform Policy into Practice' in: C. Jami, P. Engelfriet and G. Blue ed., *Statecraft & Intellectual Renewal in Late Ming China. The Cross-Cultural Synthesis of Xu Guangqi (1562-1633)* (Leiden 2001) 225-259: 225; Swope, 'Bestowing the Double-Edged Sword', 62-63.

³⁵ Dunne, *Das grosse Exempel*, 228-230; C. R. Boxer, 'Portuguese Military Expeditions in Aid of the Mings against the Manchus, 1621-1647', *T'ien-Hsia Monthly* 7 (1938) 24-36: 24-29; Huang, 'Sun Yuanhua', 225-228.

When compared to the abortive introduction of European astronomy, it seems that the proposal regarding the use of European weaponry met with less objections. Undoubtedly this was the result of the lack of a link – implicit or explicit – between this technology and Christian teachings, in addition to the real existence of Chinese precedents. Guns already existed in China before the arrival of the Europeans, though they were merely smaller and not as powerful. Tellingly, both Xu Dashou and Shen Que, who tried to combat this new avenue to Beijing for the Jesuits, were only able to argue against the employment of European weapons by referring to the accidents that had happened. Downplaying the advantage of European skill, Xu Dashou argued that cannon were a liability to the Chinese war effort, being more prone to blow up its gunners than the enemy.³⁶ This line of reasoning met with little success. Actually, the advance of Portuguese and Jesuit military technology was hindered more by factional infighting in Beijing. Many of the scholar-officials who favored European help were part of the so-called Donglin (東林) society. The Donglin faction lost a lot of political influence to a eunuch-led party at the court during the 1620s, which severely constrained their ability to extend their patronage to the Portuguese and Jesuit military expeditions.³⁷

During the reign of the new Chongzhen Emperor (r. 1627-1644) the eunuch-led party lost much of their political influence again. The Emperor granted the request of Xu Guangqi and Li Zhizao for a new Portuguese military detachment to be sent from Macao. This time a larger detachment was sent, aided by the Jesuit João Rodrigues (1561-1633) as a translator. Like their predecessors, they proved themselves in battles against the Manchus, which led the Portuguese commander of the detachment to ask for reinforcements, which was supported by Xu Guangqi. Like its predecessor from 1623-1624, this detachment, consisting of 300 men, was detained. This time there was resistance from some parts of the civil

³⁶ Wong, 'China's Opposition to Western Science', 42-43; Spence, *The China Helpers*, 9; Boxer, 'Portuguese Military Expeditions', 26-27.

³⁷ Huang, 'Sun Yuanhua', 228, 230. This conflict did not arise because of the Jesuits and their technology, but the fact that many of their Chinese supporters were affiliated with the losing Donglin faction meant a loss of indigenous support and patronage for the Jesuit mission. This constitutes an example of how the Fathers could indirectly suffer from an unfavourable political climate at the court. For a monograph on the conflict, see J. W. Dardess, *Blood and History in China. The Donglin Faction and Its Repression, 1620-1627* (Honolulu 2002).

bureaucracy against employing foreigners in China's service. Rather than being ideological, concerns were pragmatic, linked to questions of security. The first was that using Portuguese military personnel would make the Ming Empire seem weak, because it relied on foreign military aid, which might also embolden the Portuguese to ask for more concessions to strengthen their position in Macao. The second was that the Portuguese might use the opportunity to collect military intelligence about Chinese military strength, preparing the way for an invasion. These arguments, in combination with a lull in the fighting at the front, convinced the court to send the foreign military contingent back, with the exception of a small group of seven, including Father Rodrigues. These men remained behind to train Chinese troops in the use of cannon. Unfortunately most of them were killed in a mutiny of these troops, which for a while brought the process of military transfer between Europe and China to an end. Yet, the ploy to strengthen the Jesuit position in China had succeeded, as five Jesuits attached to the Portuguese military detachment managed to stay in China, constituting the first major reinforcement of the mission in eight years time. According to Huang Yi-Long, as a result '[...] the prohibition on religion became an empty shell'.³⁸

In the meantime, Father Adam Schall von Bell (1592-1666), had started making a name for himself in the field of astronomy from 1623 onwards. Xu Guangqi endeavored to bring back European astronomy by severing its link with Christian teachings and by 1629 a new calendar bureau was created, in which Jesuits and converts calculated the calendar according to European methods. In 1631, the young Jesuit entered this bureau as well and henceforth became famous for his skills in astronomy. Nevertheless, what granted him access to the court in 1633 was his ability to repair the spinet which Matteo Ricci had brought with him. He never met the Ming Emperor in person, but he, through such opportunities and the personal contacts this access to the court created, was able to convert eunuchs, court ladies and other members of the Emperor's entourage. In 1642, the Emperor finally noticed and rewarded him with a commission giving him the status equivalent of a civil official and the power to command subordinates as a gun-founding expert. Originally, reviewing the Portuguese military detachment that arrived in 1630, officials had questioned whether the expertise of the Europeans was really necessary, since everything related

³⁸ Huang, 'Sun Yuanhua', 238-243; Boxer, 'Portuguese Military Expeditions', 29-32; Dunne, *Das grosse Exempel*, 265-266.

to the casting and using of cannon had already been known in China. Therefore a request was also made to send for workmen from Fujian and Guangzhou provinces to cast cannon. This request was perhaps not too unreasonable, as the Portuguese at Macao also used Chinese artisans from Macao to cast cannon. Nevertheless, the Ming dynasty, now struggling against Manchus and internal rebellions, turned to a European to once again supply military technology.³⁹

Unlike the Portuguese involvement a decade earlier, enlisting the help of Adam Schall seems to have elicited far less criticism from the scholar-officials. Part of the reason may have been the outward signs of cultural transformation which Adam exhibited. Foreign military personnel had served Chinese dynasties since antiquity, and a repertoire of expectations and policies had been developed to integrate them and ensure their loyalty. One axiom was that foreigners came to China in order to be transformed by the superior virtue of Chinese civilization, and this normally showed in the adoption of Chinese culture, such as language, clothing and general lifestyle. Earlier, the two Jesuits who had been suggested as military experts in 1623 were described by Xu Guangqi as being attracted by China's culture.⁴⁰ Adam Schall von Bell also fit this description, as ever since Matteo Ricci Jesuits had tried to perform as a European species of Chinese literati. Especially now that the connection between science, technology and Christianity had been downplayed, there was much less suspicion that the foreigner had come to transform Chinese civilization. It also was decided to give foreign military employees a stake in the dynasty's status quo, and this was ensured by granting Adam a status commensurate to a civil official, if not actually making him one. This was one big step towards attaining a position in the civil bureaucracy itself, something Schall aspired to as a means to further missionary interests.⁴¹

The Jesuits possessed a number of characteristics which, I would argue, made them ideal in this function. As a legacy of the previous, Mongol Yuan dynasty (元朝, 1278-1368), the Ming government sought to control

³⁹ Spence, *The China Helpers*, 10-15; Huang, 'Sun Yuanhua', 240; Dudink, 'Opposition to the Introduction of Western Science', 221.

⁴⁰ Huang, 'Sun Yuanhua', 238.

⁴¹ R. J. Smith, 'The Employment of Foreign Military Talent: Chinese Tradition and Late Ch'ing Practice', *Journal of the Hong Kong Branch of the Royal Asiatic Society* 15 (1975) 113-138: 114-117; Peterson, 'Learning from Heaven', 798; Spence, *The China Helpers*, 5.

artisan work and tie it to state interests, which brought many benefits for imperial rule. The policy effected from the founding of the dynasty onwards organized all males of artisan background in a hereditary system, who worked in production sites under the supervision of the government. Included in the products thus under state control was military hardware. The scholar-officials were tasked with the supervision of the production sites, but consequently had to learn to understand the production process, since the state exams training only prepared them for the non-technical moral and political side of governance.⁴² This explains the literati's pre-occupation with the 'investigation of things and extension of knowledge' and the attraction Jesuit science and technological skills had to significant parts of the scholarly elite.

In an ironic twist of fate, Adam Schall found himself in the same position as the civil official elite he and the Jesuits before him had tried to emulate. He was expected to supervise artisan work, as befitted the scholar-official's socio-cultural function. Despite China's previous experience in the production of firearms, he was able to fill a lacuna due to his knowledge of more advanced European techniques. He possessed what Chinese officials usually did not: integrated scientific knowledge – including such fields as mathematics, chemistry and physics – and the ability to control aspects of the production process.⁴³

Thus, while Jesuit astronomical skills, owing to the issues of political legitimacy issues connected with the act of calendar making, had to be promoted in a heavily contested ideological field, the transfer of military technology fared much better thanks to the peculiar role of the 'new' scholar-official in the later Ming Empire. Acculturating to Chinese cultural habits and downplaying political linkages with powers like the Portuguese in Macao, the Jesuits seemed less of a military security risk to the Ming government. Indeed, they were a convenient jack-of-all-trades, combining the essences of the civil official, the scholar and the military expert.

⁴² Schäfer, *The Crafting of the 10,000 Things*, 92-96.

⁴³ N. Di Cosmo, 'European Technology and Manchu Power: Reflections on the "Military Revolution" in Seventeenth-Century China' in: S. Sogner ed., *Making Sense of Global History: The 19th International Congress of Historical Sciences Commemorative Volume* (Oslo 2001) 119-139: 121, 132-133.

Conclusion

Returning to Matthias Middell's three levels of transfer processes, the Fathers arguably faced the most resistance on the level of systems of thought and interpretation, in this case state orthodoxy. Ironically, by coupling their scientific and technological knowledge overtly to Christian teachings, they also became more vulnerable to criticism from the same literati who perceived the threat Christian teachings posed to the orthodox Confucian ideology that buttressed the system of imperial rule. The problem for the Jesuit mission tactic existed in the very link between state legitimacy based on canonized Confucian learning, the position of the elites who mastered this orthodoxy and the uses of science and technology in the service of the throne by this same elite. Astronomy was needed to buttress state legitimacy. Since the Jesuits had a more effective technique which allowed them access to the centre of the power structure, their Christian teachings were felt by part of the elite as a threat to state orthodoxy. Fears for a barbarian take-over were thus not wholly unfounded. The abortive introduction of astronomy clearly shows the limits to appropriation, as the Christian teachings were deemed heterodox. Therefore, the coupling of these teachings to astronomy meant that in the eyes of literati like Shen Que Jesuit astronomical science was an inappropriate and dangerous tool to assist the dynasty in its legitimizing projects, like the calculation of the imperial calendar. In the view of Shen Que and Xu Dashou, Jesuit astronomy could not be appropriated, because the coupled Christian teachings contradicted state orthodoxy and its utilization would as a consequence turn China into a barbarian empire.

As mediators, the Jesuits were more successful. In their efforts to introduce Christianity in China the Jesuits opted for a top-down approach, considering converting the empire's elite as a precondition to converting the rest of the population. In order to do so, they inserted themselves as part of the elite and posed as essentially a European cultural counter-part to the Chinese scholar-official, eventually penetrating court circles and the court itself as well. Soon, the science and technology of the Jesuits became their main attraction to the Chinese, and the Jesuits endeavored to strengthen the position of their mission by using their astronomical skills to gain a position at the apex of political power. They benefited enormously from a contemporary Chinese interest in natural studies and their application to practical problems. In terms of Middell's transfer framework, the Fathers had products on offer that were desired in China, astronomy and military

technology amongst them. A comparison between the transfer attempt of both supports my conclusion that the main obstruction for transfer to be negotiated was on the ideological level. It also shows the critical role of the receiving culture in shaping the transfer process, as Chinese converts urged the Jesuits to uncouple Christianity from their science and technology which paved the way for a more successful transfer of military technology, and later astronomy as well. In this way the Jesuits, after being expelled for a few years, were able to regain their position through their status as intermediaries of European military technology in a piecemeal fashion.

In all of this the court functioned as a space for competition and negotiation, where proponents and opponents of the Jesuits and their scientific prowess tried to convince the Emperor of their viewpoints, and urged decision making in line with their desires. The Jesuits gained their access to the court with the necessary intercession of powerful literati converts who were connected to court circles, like Xu Guangqi and Li Zhizao. Initially reluctant to take up this role and uncouple Christianity from their science, their unique possession of the knowledge required to supervise the production of weapons finally brought Adam Schall von Bell on the verge of becoming part of the established civil bureaucracy, after gaining the Emperor's interest through the display of technical skills. In the end, the fact that the military technology the Jesuits had on offer did not significantly clash with established Chinese precedents, and also did not carry with it the threat of cultural subversion of the imperial system, facilitated the transfer process. The loss of the 'Trojan Horse'-function of science for the introduction of Christianity, was compensated by Adam Schall's increased access to the court itself, enabling him to personally convert many in the Emperor's entourage, with the hope of once converting the Son of Heaven himself as well.