A Forgotten Friendship: How a French Missionary and a Manchu Prince Studied Electricity and Ballooning in Late Eighteenth Century Beijing

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Abstract: After the suppression of the Society of Jesus in 1773, the French missionary Joseph-Marie Amiot, last of the great Jesuit scholars of China, befriended the Manchu prince Hongwu 弘旿, court artist and cousin of the Qianlong emperor. Hongwu became the most enthusiastic local patron of the ex-Jesuits still living in Beijing, helping them with research and providing them with information. Together, Amiot and Hongwu discussed new developments in natural philosophy, from electrical medicine to gas balloons. They conducted experiments in the Jesuit’s quarters at the North Church and in the prince’s nearby mansion, drawing from European and Chinese traditions alike to explain them. In the end, they concluded that their investigations were socially and politically dangerous, so they decided to keep them secret. It has generally seemed that the missionaries who remained in Beijing toward the end of the eighteenth century had few local encounters and failed to communicate contemporary natural philosophy; the story of the friendship between Hongwu and Amiot is a notable exception, revealing that cross-cultural exchange remained possible.

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Introduction: The Exchange of Knowledge in Beijing

During the early 1770s, events at both ends of Eurasia radically reconfigured the conditions for the exchange of knowledge between them. In Europe, the global suppression of the Society of Jesus, promulgated in 1773, brought an end to the institution that had sustained almost all serious studies of China in the West for nearly two centuries. In China, internal unrest, culminating with the Wang Lun 王倫 uprising of 1774, convinced the Qianlong emperor (1711-1799) that religious sectarianism was the major threat to Qing stability.¹ The events compounded upon each other. Quarrels between the missionaries following the suppression fed into the emperor's heightened suspicion, leading to further restrictions on their activities. In consequence, the last two decades of the Qianlong reign saw the French missionaries in Beijing—now technically “secular priests,” though still calling themselves “ex-Jésuites”—retreat from public life. From then on, their primary support came not from the Church or the Qing, but from the French state. It is not surprising, then, that for this period there is hardly any trace of contact between missionaries and local figures. Historians know a great deal about the exchange of knowledge in Beijing from the time of Matteo Ricci through the events of the suppression, but very little about what happened after the early 1770s.²

It seems that meaningful contact between the few remaining missionaries and local figures really did decrease. During the high Qing, the missionaries had come to depend for patronage mostly on imperial institutions rather than on independent literati.³ At the turn of the eighteenth century, the Kangxi emperor turned Beijing into a flourishing center of cultural exchange.⁴ At the beginning of his reign (1736-1795), the Qianlong emperor followed in his grandfather’s footsteps, patronizing the missionaries’ work in technology, mathematics, and other Western studies. During the 1750s and 1760s, the Jesuit fathers Giuseppe Castiglione (1688-1766) and Michel Benoist (1715-1774) designed a European-style palace at the Yuanmingyuan 圓明園, where they performed electrical experiments and debated astronomical theories with the emperor. But by 1774, Castiglione and Benoist were both dead, and the fountains they had designed for the palace were turned on only when the emperor planned a

¹ Rowe (2011), p. 82.
² The most thorough treatment of the topic to date, by Joanna Waley-Cohen (1993), deals mostly with the missionaries as technological and military advisers.
⁴ See especially Jami (2008).
visit—and then, since the machinery no longer functioned, water had to be hauled in manually.5 With imperial patronage drying up, literati support did not flow back in. For the most part, the scholars of the Qianlong and Jiaqing (1796-1820) reigns conducted their Western studies without much contact with actual westerners.6 And yet, there were exceptions.

This article is about one such exception, the story of the Manchu prince, artist, and intellectual Hongwu 弘旿 (1743-1811) and his decade-long friendship with one of the last surviving members of the Jesuit mission to China, Joseph-Marie Amiot (1718-1793). Hongwu was a grandson of the Kangxi emperor, a first cousin of the Qianlong emperor, and, according to the missionaries, “one of the most curious, most intelligent, and most learned of this court.”7 During the 1780s and 1790s, he frequently visited the North Church, or Beitang 北堂, the headquarters of the French mission. Hongwu helped the missionaries with their scholarly research, kept them updated on imperial affairs, and even secured them minor political favors. In return, the missionaries helped him to investigate new topics in natural philosophy and particularly in physics, including electrical medicine and aerostatic balloons. Together, Hongwu and Amiot discussed the theoretical principles behind these exciting discoveries and built laboratories to conduct their own experiments. This story of sustained cross-cultural exchange between an ex-Jesuit missionary and a non-Western figure in Beijing is perhaps the only one we know of, and it was certainly one of the last.

The exchange of knowledge between Hongwu and Amiot has mostly eluded the attention of historians in part because it took place in unexpected settings and between an unusual pair of interlocutors; even more, because they deliberately kept it discreet. Neither the ex-Jesuit missionary nor the Manchu prince fits neatly into the paradigm of Jesuit-Chinese exchange. Hongwu was not Chinese, and Amiot was no longer a Jesuit. The former was not a professional scholar-administrator, and the latter never served at court in a regular capacity. They met in private at the missionary’s Church and the prince’s mansion, not at the Yuanmingyuan or the Astronomical Bureau, the Beijing locations more ordinarily associated with the earlier exchange of mathematics, astronomy, physics, and technology. Moreover, their investigations took place entirely off the record. Hongwu and Amiot did consider sharing them with the emperor—and decided not to. They concluded that the open display of such mysterious things as electrical medicine and gas balloons would expose them to accusations of unorthodoxy and put the missionaries and their

6 See, for example, Sivin (1995) and Sela (2012).
7 Amiot to Bertin, 1 September 1788, Institut de France (IF), MS 1517, 49-54.
friends at risk. They therefore decided to keep them secret, especially from the emperor. The result was that their ideas and experiments were little known at the time and largely forgotten to posterity.

That this story did take place, however, calls into question what we think we know about Western studies in China during the period between the end of the Jesuit mission and the outbreak of the First Opium War. Historians have often believed that as the eighteenth century progressed, the missionaries kept the Chinese increasingly ignorant of new developments in natural philosophy. They tend to explain this decision as motivated by an underlying commitment to Catholic theology, which seemed to be increasingly at odds with emerging modern science. The story of Hongwu and Amiot is an exception to this narrative. It shows that some contact continued, that the missionaries were enthusiastic about discussing certain topics in natural philosophy, and that a few local figures remained interested in it. To the extent that further exchange did not take place, it was due not to religious zealotry, but to local social and political conditions. On the other hand, the story is also exceptional in another sense: To our knowledge, there were no others like it. What we know about it comes only from scattered traces in French archives, and while Chinese sources corroborate and contextualize it, they provide few details. What it shows then is not that the received narrative is wrong, but rather that it is incomplete. The exchange of natural philosophy in late Qianlong Beijing was indeed altered, reduced, and displaced, but nevertheless it did continue.

The Amiable Prince

Very few historians have noticed the existence of the “amiable prince” (aimable Prince) whom the missionaries called “hong wu ye” and not one so far has attempted to determine his identity. The task presents two major challenges. The first is archival: the name appears in just a handful of handwritten letters scattered among several hundred. Most of those letters

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8 Elman presents a strong formulation: “The Jesuits and Protestants in China rejected the European original when the native source betrayed their religious sensibilities” (Elman (2005), p. xxviii); see also Sivin (1995), p. 66.

9 Quote from Amiot to Bertin, 15 November 1784, IF, MS 1516, 298-307. Waley-Cohen and Long Yun 龙云 both mention the prince briefly without speculating as to which prince this was (Waley-Cohen (1993), p. 1537; Long (2010), p. 241).

10 The prince was mentioned in thirteen letters written between 1784 and 1790, all currently held in the archives of the Institut de France and the Bibliothèque nationale de France in Paris. Amiot mentioned him in eight letters and gave the
never went to press; in the few that did, the relevant parts were usually edited out; and in the one or two where they were not, the figure was simply called “a prince.” No variation of the name was ever published, and the very existence of the person emerges only from the careful collation of diffuse manuscripts. The second challenge is historical: even in their manuscript letters, the missionaries never gave Chinese characters for the prince’s name. Fortunately, the set of people to whom it may have referred is limited by the fact that he was a grandson of the Kangxi emperor; unfortunately, this does not narrow things down very much, since the Kangxi emperor was one of the most fecund in Chinese history. The sons of his sons alone numbered about a hundred, and almost all of them shared the same generation name hong 弘. This suggests that the appellation “hong wu ye” was a two-character name beginning with hong, with the addition of the honorific ye 爷. There was only one of the grandsons of the Kangxi emperor with a name that fits: Hongwu 弘旿. Of all the living sons of the sons of the Kangxi emperor who were active during the right period, what we know about Hongwu from the Chinese record matches well with the missionaries’ descriptions. Hongwu was the right age. He was born in 1743, so when the missionaries first mentioned him in 1784, he would have been the master of his own household, but still plausibly “young” in the eyes of one missionary who was twenty years his senior. Hongwu was of the right importance. If he had held a higher rank, such as gong 公, “count,” or wang 王, “regulo,” then the missionaries would have used that title instead of the generic term “prince,” as indeed they did for several of his cousins. Hongwu was in the right place at the right time. From the mid-1770s on, he was without a major position and living in the Imperial City. Most importantly, we know from Chinese sources that

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11 See, for example, Bourgeois (1786), “Extrait d’une lettre écrite de Péking le 19 nov. 1784,” p. 578.

12 Each missionary had his own Romanization system: Amiot used the transliteration “Houng-ou-yé,” others spelled it variously “hong ou ye” or “hong-ou-yé” (Bourgeois to Bertin, 19 November 1784, IF, MS 1520, 258-260; Nicolas Raux to Bertin, 27 November 1786, Bibliothèque nationale de France (BnF), Bréquigny MS 3).

13 As a member of the imperial clan, his full name was Aisin Gioro Hongwu, Aixin Jueluo Hongwu.爱新覺羅弘旿.


15 The missionaries typically translated wang 王 as “regulo” and gong 公 as “count” (see, for example, Amiot (trans.), “Hymne mandchou chanté à l’occasion de la conquête du Kin-Tchouen,” BnF, Manchu MS 285, p. 2).
Hongwu had strong artistic and cultural inclinations and that he and the missionaries shared several acquaintances. All of this suggests that “hong wu ye” was indeed Hongwu.

As a child, Hongwu grew up in Beijing around the missionaries. His father, Kangxi’s twenty-fourth son Yunbi 允祕 (1716-1773), and his cousin, the Qianlong emperor, born five years apart, were childhood friends and remained close into adulthood. Hongwu spent his early days during the 1750s and 1760s at the heart of the Qing court, when Jesuit missionaries were both present and popular. He could have played in the European-style waterworks of the imperial palace, which he later painted, and marveled at the demonstrations of an air pump, which he later borrowed. The Jesuit artist Castiglione may have encouraged the young Hongwu’s enthusiasm for painting; his earliest work dates from the 1750s, when the Italian missionary was still working at the Yuanmingyuan. There Hongwu could have also met the French missionary Benoist, who was at the time responsible for the design and maintenance of the palace’s European technology. Perhaps Hongwu was the “grandson of the Kangxi emperor” who Benoist reported asked him once for an explanation of how to calculate eclipses. Intelligent and well-connected missionaries like Benoist and Castiglione could well have had some effect on a curious child.

As a young man, Hongwu held several commands of minor distinction, but he did not take to the martial way of life. He received a commission as second-rank general in 1763 at the age of twenty and finally reached the rank of banner prince more than ten years later in 1774. For a first cousin of the emperor, this ascent was not quick. In 1778, at the age of thirty-four, Hongwu’s military career came to an end. His own brother accused him of corruption in conspiracy with a certain Manchu manor lord, “exploiting their power, unfairly seizing land, and so on.” The emperor was not pleased. If such crimes went unpunished, he reasoned, then they might become still more common; even worse, what if his own sons followed their cousin’s bad example? In a harshly scolding decree, he ordered Hongwu stripped of his ranks and titles.

Hongwu’s career never really recovered. Though he remained a cousin of the emperor, he was marginalized in matters of war and government.

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16 Yang (2003), p. 3.
19 Da Qing Gaozong Chun Huangdi shilu 大清高宗純皇帝實錄 (QSL), juan 680, Qianlong 28, Month 2, Day 9; beizi 貝子; QSL, juan 951, Qianlong 39, Month 1, Day 28.
20 QSL, juan 1051, Qianlong 43, Month 2, Day 27.
21 QSL, juan 1053, Qianlong 43, Month 3, Day 30.
His writings reveal a painful awareness of his disgrace: “My skill unworthy to dedicate to my country, my lowly position a shame to my legacy,” he lamented in one poem. One year after the scandal, “having committed no great fault,” he was given a new lower-ranking command in the Han military banners, and he went on to receive several minor promotions. But these positions were no more than nominal sinecures, signs of social rehabilitation only. His real obligations likely went little beyond showing up for the occasional display or ceremony. Having effectively retired from public affairs, Hongwu spent most of his time in Beijing with little official business to attend to.

It was around this time that Hongwu began to dedicate himself to arts and letters. He took his freedom as an opportunity to paint watercolors, compose poetry, write calligraphy, collect books, and otherwise indulge his interests. The shift to literatus seems to have suited him. He achieved a reputation as a man of learning, amassing a library of over 2,000 volumes. He became one of the most respected artists in the Manchu court, known especially for his calligraphy and his landscape paintings. He even won his way back into the good graces of the emperor, who ordered many of his scrolls to be hung in his various palaces. The imperial catalogue included 37 of Hongwu’s works, and the Beijing Palace Museum today still holds over a hundred.

Hongwu immersed himself in a courtly circle of aspiring literati. Its other core members were his cousins Yongrong 永瑢 (1744-1790) and Yongzhong 永忠 (1735-1793), all fairly close in age. Together the three princes pursued artistic refinement and spiritual cultivation. Hongwu styled himself Yaohua Daoren 瑤華道人, “Daoist of the Illustrious Jade,” and Yongzhong as Jiuhua Daoren 九華道人, “Daoist of the Nine Illustriousnesses.” They amused themselves with drinking games, poetry contests, and short excursions to scenic sites. They discussed philosophy and recited stories of strange and wonderful things. Ji Yun 紀昀 (1724-1805), the general editor of the Siku quanshu 四庫全書 and also an advocate of Western technology, recalled one that Hongwu liked to tell about a fox spirit, a mythical troublemaker in folklore and fable. Once, a Mongol prince went out hunting and shot a fox. Examining it, he found something curious: On its hind legs were two little red shoes fitted for bound feet, a telltale sign that the creature must have recently transformed from its disguise as a

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23 QSL, juan 1081, Qianlong 44, Month 4, Day 28.
24 Li and Huang (2005), pp. 462-463.
25 Li (1906), dingshang 丁 上/ p. 2b.
26 Yang (2005), 190.
beautiful temptress. Receptive to the strange and wonderful, the court culture of the Manchu aristocracy was a world in which European studies still retained some appeal.

**Manchus and Missionaries**

Close relationships between Manchus and missionaries went back to the beginning of the Qing. At the turn of the eighteenth century, the Kangxi emperor had taken a real interest in Western learning, and, for a time, the Qianlong emperor had too. Both employed Jesuits at court as advisers on Western studies, and a few of them came to know the emperors rather well. The exchange of knowledge, particularly in technology, mathematics, geography, and astronomy, flourished under these conditions, with other members of the Manchu aristocracy also playing an active role. In the early eighteenth century, some born to prominent Manchu families were practicing Christians. As late as the 1760s, Benoist believed that the best mathematician in Beijing was not a Chinese literatus at all, but rather the prince Yunlu 允禄 (1695-1767), whom he described as the patron (protecteur) of the Astronomical Bureau (Qintian jian 欽天監). By the 1770s, the missionaries’ contact with Manchus was not as visible as it had once been. But it continued nevertheless in unofficial settings, while contact with Chinese scholars seems to have fallen away almost entirely.

Relationships with Manchu nobles were easier for the missionaries to maintain because there were more reasons and opportunities for Manchu nobles to cultivate them. The manufactured Manchu culture of the Qianlong court had the unintended result of feeding demand for European technology, particularly clocks and guns. Every year during the summer months, the emperor took his inner circle to Rehe 熱河 to avoid the baking heat of Beijing and to encourage the conquest elite to reconnect with their supposed semi-nomadic roots. Activities included rides and hunts with the emperor, or as Amiot described them, “those arduous exercises with which his ancestors amused themselves when they were still nothing but horde chiefs.” Yet, by this time, many of the Manchu nobility probably

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28 Ji (1801), juan 8.
29 For an overview, see Jami (2012) and Standaert (2011).
31 Benoist (1887), Letter of 12 September 1764, p. 249.
32 On Western military technology in China during the Qianlong period, see Waley-Cohen (1993).
34 Amiot to Bertin, 16 November 1789, IF, MS 1517, 94-95.
felt little genuine connection to that way of life. Kangxi and his lieutenants may have spoken Manchu at home, but their grandchildren, who were born and raised in Beijing, did not. Rehe must have seemed quite provincial to them, and while it was a great honor to accompany the emperor, it was also very boring. Playing with clocks and watches was an excellent way to pass the time. So too was firing European guns, which Manchus exclusively were permitted to own. Although some Han Chinese officials also followed the court to Rehe, they had little time to pursue such amusements because they were still obligated to fulfill their regular government functions throughout the summer. And, according to Amiot, tinkering and shooting would have been difficult for them anyway, on account of their long fingernails.

The missionaries exploited their status as the only Western Europeans in full-time residence in Beijing to corner a small-scale economy in luxury goods. Manchus may have had plenty of guns, but ammunition was limited, and though they received watches as patronage gifts from Canton, they lacked the materials to repair them. The missionaries were well-positioned to provide new supplies. For a while, they trained Chinese novices in watchmaking, but since it was never possible to match the work of the finest European artisans, they continued to import. In a letter to Paris, Amiot signaled gun and watch maintenance materials as the most important items to be sent from France: “You would not believe how agreeable these sorts of things are to our Princes and other Manchu lords,” he wrote; “It is a good thing, in a way, that one must wait three years to have from France what one desires. This long wait tempers the vivacity of the desires and turns to my advantage.” Indeed, Amiot joked, it was also to the advantage of the mission’s supporters back in France, because if Beijing were as close to Paris as Amiot’s hometown of Toulon was, he would have been tempted to ask for more materials every day. For missionaries, technological toys were a cheap price to pay for good will. For Manchus, a constant supply of bullets, powder, springs, and screws was one of the major benefits of having a missionary friend.

Many of the Manchus who lived in Beijing, such as Hongwu, Yongrong, and Yongzhong, also had regular occupations that put them in contact with the missionaries. Yongrong held positions at the imperial artists’ workshop called the Ruyiguan (如意館) (Hall of Fulfilled Wishes) and at the

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35 The question of the ‘sinicization’ of the Manchu court is contentious in Qing historiography; for an overview, see Elliott (2001), pp. 1-35.
36 Amiot to Bertin, 20 August 1790 / 4 October 1790, IF, MS 1517, 104-136.
37 Amiot to Bertin, 10 October 1789, IF, MS 1517, 65-86.
38 Amiot to Bertin, 25 January 1787, IF, MS 1516, 408-425.
39 Bertin to Cibot, 31 December 1780, IF, MS 1523, 99-104.
40 Amiot to Bertin, 20 August 1790 / 4 October 1790, IF, MS 1517, 104-136.
Astronomical Bureau, the two institutions to which a few missionary artists, technologists, astronomers, and mathematicians were usually attached. He was also one of the only non-Western figures from the period who can be definitely shown to have visited the North Church. There he befriended the missionary Jean-Matthieu de Ventavon (1733-1787), whom he designated as his personal watchmaker. Yongrong and Ventavon got along so well that the superior of the French mission, François Bourgeois (1723-1792), was afraid to cross ways with Ventavon in an internal dispute lest he upset his subordinate’s powerful patron.\footnote{Bourgeois to Bertin, 25 May 1781, IF, MS 1519, 191-199.} The missionaries never mentioned Yongrong’s brother Yongzhong by name, but his notebooks reveal his own interest in Europeana, including references to musical instruments and a certain “Western mustard plant” (xiyang jiecai 西洋芥菜) that he seems to have procured from a missionary for his garden.\footnote{永忠 永忠, Yanfen shi gao 延芬室稿, National Library of China, Rare Books 国家图书馆普通古籍 (NLC), MS 25573.} After the suppression of the Society, Manchu princes like these were among the only people in China who still had both interest in the missionaries and access to them.

As an artist working at the pleasure of the emperor, Hongwu lived not only in physical proximity to the missionaries, but also in somewhat similar circumstances. By the late 1770s, the Europeans most closely connected to the imperial court (though not the highest-ranking) were the French painters working and in fact also living at the Ruyiguan. In a way, they, like Hongwu, were also court artists. The most significant evidence of the missionaries’ activities during the post-Jesuit period to be found in any Chinese sources comes from the archives of the imperial art studios.\footnote{On the Jesuits artists at the Ruyiguan, see Kleutghen (2015).} During the 1780s and 1790s, while Hongwu visited the North Church, two of his acquaintances, the artists Na Yancheng 那彥成 and Peng Yunmei 彭芸楣, collaborated with the ex-Jesuits Louis-Antoine de Poirot and Giuseppe Panzi at the Ruyiguan. In 1793, the four together signed their names on a painting commemorating the Khalkha Mongols’ submission tribute of horses and elephants. In that same year, Hongwu painted the same scene and gave his piece an almost identical title.\footnote{Compare Ka’erka gong xiang ma tu juan 喀爾喀貢象馬圖卷 with Ka’erka gong xiang ma tu 喀爾喀貢象馬圖; Yang (2005), p. 193.}

Hongwu also shared something with the missionaries in his pursuit of alternative religious interests. Buddhism and Daoism were a common refuge for those like Hongwu who had found their political ambitions disappointed, thus failing to fulfill the highest duty of a Confucian scholar. The early death of several of his children seems to have intensified his sense of social detachment, and perhaps encouraged a search for a more
spiritual kind of fulfillment. He described his worldly ambitions, or lack thereof, in one poem:

Remote antiquity knew no fame
A sincere heart keeps watch by itself
The moon is bright, the wind and the dew are cold
Relying on myself, I am quiet in middle age.

His poetry and calligraphy referred to Daoist philosophy and Buddhist iconography, such as Amitābha statues and chrysanthemum flowers. His artwork too expressed strong Daoist and Buddhist themes. For example, “Yu the Great Controlling the Waters” depicts a host of heavenly immortals observing the sage king’s labors—which were not so unlike those undertaken by missionaries like Benoist on the imperial waterworks. His art name, Yaohua Daoren 瑤華道人, made his self-identification as a Daoist explicit.

Christianity was another matter. During the late Qianlong period, the religion was generally forbidden to Manchus, all the more so to those close to the emperor. Though some chose to ignore this rule, and at great cost, there is no evidence that Hongwu ever considered conversion; if he had, the missionaries probably would have said so. But a search for spiritual alternatives to Confucian orthodoxy might still have kindled his interest in the missionaries. By the early 1780s, however, such an interest was increasingly difficult to pursue. Virtually all of the institutions that had previously sustained exchange between missionaries and local figures were decaying or defunct. The Society of Jesus was no more, and the Jesuits who had once been closest to the emperor had been dead for many years. The European-style palaces they had designed were falling into disrepair, and the machines they had demonstrated had been reclaimed and brought back to their residence. It was at this point that Hongwu began to frequent the North Church.

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45 Yang (2005), pp. 185-186.
46 Hongwu, Yaohua Daoren shichao, 瑤華道人詩抄 (Collected poems of Yaohua Daoren), NLC, MS 93051 (edition A), juan 10.
47 Hongwu, Yaohua Daoren shichao, NLC, MS 93051 (edition A), juan 9; Hongwu, Yaohua Daoren shichao, NLC, MS 25072 (edition B), ce II, juan 5.
48 “Da Yu zhi shui tu” 大禹治水圖.
49 Elliott (2001), pp. 9, 240.
51 Bourgeois to Bertin, 19 November 1784, IF, MS 1520, 258-260.
Hongwu at the North Church

At the time of the suppression, ten Europeans were attached to the French Mission at the North Church, within the walls of the Imperial City. Their lives were generally pleasant and cosmopolitan. They wore Chinese silks and drank French wine, corresponded with scholars and statesmen, and mostly ran their own affairs. The papal brief announcing the global suppression of the Society of Jesus, formally read in Beijing on November 15, 1775, signaled an immediate end to their ecclesiastical status as Jesuits, but not to their way of life. A new patron, the French minister Henri-Léonard Bertin (1720-1792), came to their rescue, securing funding from the royal coffers for the continuation of the French mission and assuming full control over the correspondence between Paris and Beijing for almost two decades to follow. On a day-to-day basis, things went on much as they had before. The missionaries, now referring to themselves as “ex-Jesuits,” continued to write about the Chinese tradition and to send their works to France. Many of their letters, treatises, and translations were published between 1776 and 1791 in the Mémoires concernant les Chinois, the final achievement of early modern missionary sinology. Countless more were not. It is from thirteen of their unpublished letters, written by three different missionaries, that we know about Hongwu’s visits.

From Hongwu’s princely mansion, still standing today in Daqudeng 大取燈 Alley, it was a little over two kilometers through the Imperial City to the French Residence. There he was well received by the aging and increasingly isolated missionaries, who were delighted to entertain such an illustrious and well-disposed visitor. By 1784, his visits had become regular. Hongwu and Amiot soon developed a singular friendship, forged in mutual curiosity and fired by genuine affection. At the time, Amiot was the undisputed spiritual and intellectual leader of the French mission, having achieved a reputation in Europe as one of the preeminent living scholars of China. In Beijing, Hongwu had earned his own reputation, at least among the missionaries, as “a great amateur of European things.” The two therefore had much to discuss, and their friendship grew stronger. The other missionaries acknowledged this special relationship. As Amiot’s health declined toward the end of the decade, Hongwu was one of the only people he would still admit into his quarters. When Hongwu came to talk

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52 There are many studies of the events of the suppression: for a recent synthetic account, see two articles by R. Po-chia Hsia (2014, 2015); for the classic version told from the French archives, see de Rochemonteix (1915); for a version told from the Roman archives, see Krahl (1964).

53 For an overview of the collection, see Dehergne (1983).

54 Zhang et al. (1886), juan 13, Jingshi zhi 京師志 13.

55 Bourgeois to Bertin, 10 October 1788, BnF, Bréquigny MS 2.
with the septuagenarian missionary, Amiot considered it “a visit that one could call a veritable visit of a friend.”  

Language exchange was a prerequisite for communication and a topic of perennial interest. Amiot taught Hongwu how to read and write French words “just for fun;” he reported that his student managed to pronounce them “better and more distinctly than our Germans and our Portuguese can,” even though he had no idea what he was saying. In turn, Hongwu helped to teach the missionaries his own languages. He asked them to design a “machine that writes characters,” so that they could reproduce Chinese texts. He also encouraged them to study Manchu. When Amiot completed a landmark Manchu dictionary, edited and published in Paris, a copy was sent to Beijing for his approval. Amiot showed it to Hongwu, who complimented it so profusely that Amiot worried he had only “wanted to flatter me.” Amiot’s short letter back to France in his own elegant Manchu script reveals that he, too, had been a diligent student.

Hongwu also cultivated his relationships with the missionaries by helping them with their scholarly research. His expertise was particularly valuable because it extended to subjects that the missionaries were often less familiar with. In the days of the Society, unity of purpose and corporate discipline had limited the kinds of questions that they would pursue. Furthermore, the majority of their local acquaintances were successful scholars and state bureaucrats, public servants whose works were likewise limited. A combination of pressures from both inside and outside the mission had thus pushed the missionaries toward a general orthodoxy. Hongwu may have been unusual among their friends in this regard. His approach to scholarship was characteristically fearless, perhaps even reckless. In particular, he seems to have developed an interest in alchemy, a natural enough pursuit for an artist and a Daoist. In 1784, Bourgeois was investigating a certain elastic gum. Failing to produce it, he asked Hongwu for help, whereupon the prince sent him a “book of the secrets of making silver” that supposedly contained instructions for the gum as well. In conversation with Amiot during the same year, Hongwu speculated about the knowledge and skill of ancient Chinese alchemists. It is likely not coincidental that at about this time, Amiot began to take

56 Amiot to Bertin, 16 November 1789, IF, MS 1517, 94-95.
57 Amiot to Bertin, 16 October 1790, IF, MS 1517, 139-144.
58 Raux to Desvoyes, 12 November 1789, IF, MS 1518, 99-100.
59 Amiot to Bertin, 16 November 1789, IF, MS 1517, 94-95.
60 Amiot to Bertin, 20 August 1790 / 4 October 1790, IF, MS 1517, 104-136.
61 Bourgeois to Bertin, 19 November 1784, IF, MS 1520, 258-260.
Daoism and Chinese alchemy in particular more seriously than almost any European had before.⁶²

Art was another specialty of Hongwu’s, and one with a more obvious audience in Europe. Just as Bertin sent objects to Beijing for Amiot’s Chinese friends, so Hongwu sent objects to Paris for Amiot’s French ones. Hongwu was always “very appreciative” of Bertin’s generosity, and he did his best to show it.⁶³ In 1788, after admiring some French curios, he insisted that Chinese artists could match them for skill. He gave Amiot and Bourgeois each a set of painted glass snuffboxes and another pair for Bertin, one depicting a frog and a grasshopper, the other a goldfish, painted on the inside so that the minister might “compare difficulty with difficulty, patience with patience.”⁶⁴ Amiot found them ugly. But he sent them along anyway, asking only that the minister not take it as a sign of his own lack of taste. In the following years, Hongwu sent many more art presents for Bertin: colored inks, Ming porcelains, ivory flower boxes, and a xianglu 香爐 incense burner.⁶⁵ And, just as the French aristocrat maintained a cabinet of Chinese curiosities, the Manchu, with a “decided taste for all that comes from France,” kept his own French one.⁶⁶ Thus Hongwu became, through his friendship with Amiot, a peripheral member of what Bertin came to call his “literary correspondence” (correspondance littéraire).

Hongwu lent what little political power he retained to help facilitate the correspondence. During the mid-1780s, the missionaries faced even greater logistical difficulties than normal, caused by a crackdown on Christianity and hostilities between France and Britain. Qing regulations at the time mandated that all items sent from Paris to Beijing first pass a customs inspection at Canton. Amiot complained about the customs officials’ “roguery,” by which he meant everything from disregard for fragile items to outright theft. Bertin offered the somewhat ridiculous suggestion that Amiot ask the Manchu general and statesman Agui 阿桂 (1717-1797) to intervene on his behalf.⁶⁷ Amiot had a better idea. When a shipment arrived in Beijing in 1788, he showed it to Hongwu, illustrating how wantonly the boxes had been ransacked. Hongwu promised Amiot to intercede on his behalf with his “good friend” the “Prime Minister” Heshen 和珅 (1750-1799). In this way, the missionaries seem to have obtained a

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⁶² On Amiot’s late enthusiasm for Daoism, see, for example, Amiot to the Comte de Mellet, 24 September 1790, published in Huard and Wong (1960), 61-98.
⁶³ Amiot to Bertin, 16 October 1790, IF, MS 1517, 139-144.
⁶⁴ Amiot to Bertin, 1 September 1788, IF, MS 1517, 49-54.
⁶⁵ Bourgeois to Bertin, 10 October 1788, BnF, Bréquigny MS 2; Amiot to Bertin, 1 October 1788, IF, MS 1517, 55-56; Amiot to Bertin, 16 October 1790, IF, MS 1517, 139-144.
⁶⁶ Amiot to Bertin, 11 November 1788, BnF, Bréquigny MS 2.
⁶⁷ Amiot to Bertin, 25 January 1787, IF, MS 1516, 408-425.
special order that their imports be delivered from Canton unopened. The irony of the episode is that for all Amiot’s accusations of the customs officials’ corruption, Heshen was then earning an ignominious reputation as one of the most corrupt officials in Qing history. The only difference was that this time, through the efforts of their friend, the missionaries were able to turn it to their favor.

By far the most valuable thing that Hongwu provided was intelligence. Information about the emperor and his family was extremely useful, but it was carefully managed by a sophisticated censorship apparatus. Hongwu was a member of the imperial family and maintained a personal relationship with the emperor. He was an “eyewitness” source on the emperor’s health and habits, and thus the privileged holder of what were in some sense state secrets. He shared this information with the missionaries. In 1789, Hongwu assured Amiot that although the emperor was approaching eighty, he could still “ride a horse, hurl a lance, and shoot an arrow” like a man half his age. The next year, he confided that while the emperor was otherwise still in excellent shape, he had become a little hard of hearing in one ear. The misfortune, he suggested, could be turned into an opportunity. Hongwu had noticed on a table in Amiot’s study an illustration of a novelty ear trumpet that could be attached to the head inconspicuously under one’s hair. Perhaps, he said, the missionaries might offer one to the emperor, innocently presenting it as a mere curiosity, since “it is not unlikely that under the pretext of ascertaining the effect, the emperor will want to try it himself.” Hongwu and Amiot schemed to give the emperor a hearing-aid.

Advice about the emperor’s personal preferences was particularly valuable because by this time the missionaries’ participation at court was largely restricted to ceremonial gift giving. When preparations began for the emperor’s massive eightieth birthday celebration several years in advance of the planned date in 1790, the missionaries identified another opportunity. Amiot consulted with Hongwu, who was “perfectly aware of his tastes,” to help choose presents. Hongwu suggested some copies of the Desheng tu, a set of illustrations of Qing military victories that had been painted by Castiglione decades earlier and engraved in France. Amiot requested the prints in 1787, and they arrived three years later, just in the nick of time. First he showed them to Hongwu, who assured him that

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70 Amiot to Bertin, 16 November 1789, IF, MS 1517, 94-95.
71 Amiot to Bertin, 16 November 1789, IF, MS 1517, 94-95.
72 Amiot to Bertin, 20 August 1790 / 4 October 1790, IF, MS 1517, 104-136.
73 Amiot to Bertin, 25 January 1787, IF, MS 1516, 408-425.
although there were a few minor mistakes, such as the improper coloring of certain military uniforms, these would only serve as proof of authenticity. The emperor would be delighted with this “monument to his glory” from “the first Kingdom of Europe” — “I take responsibility for the complete satisfaction on the part of the emperor,” he promised.  

Hongwu’s own gift for the occasion, a commemorative battle scene that he had painted himself, suggests his sincerity.  

Hongwu helped the missionaries to understand what mattered most in the imperial ideology: the Qianlong emperor’s changing view of himself. With increasing corruption in the capital and unrest in the provinces, successful military campaigns remained a bulwark of Qing legitimacy. In the 1790s, the Qianlong emperor began to style himself as the “Old Man of the Ten Complete Victories” (Shi quan lao ren 十全老人). Earlier Jesuits had helped him to project his image as a successful commander by painting his victories; Hongwu advised their successors to remind him of it. The birthday presents were duly recorded in the imperially-commissioned Grand Ceremony of the Eightieth Birthday.  

Electrical Machines and Gas Balloons  

Hongwu had “inherited from his august grandfather the love of the sciences and of French people,” and he could hardly have found a better expert on both than Amiot. Together they discussed Enlightenment physics, from electrical medicine to gas balloon aviation, performed cutting-edge experiments at the North Church, and built a new laboratory in Hongwu’s nearby mansion. The exceptional story of their collaboration shows that the ex-Jesuits in Beijing were as eager as ever to discuss certain topics in natural philosophy and that some local enthusiasm remained. The fact that so little record of it survives reflects neither the missionaries’ supposed religious scruples with modern science writ large, nor a lack of interest on the part of local figures, but rather their cognizance of very real social and political risks. Amiot and Bertin had hoped to continue the Jesuit

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74 Amiot to Bertin, 20 August 1790 / 4 October 1790, IF, MS 1517, 104-136  
77 Baxun wanshou shengdian 八旬萬壽盛典四庫全書 (1795), juan 52.  
78 Amiot to Bertin, 15 November 1784, IF, MS 1516, 298-307.
tradition of parleying knowledge of nature for influence. Yet internal unrest in China and the suppression of the Society had soured the air around the missionaries. Moreover, the discoveries that most interested them, then drawing huge crowds in Paris and making scientific experiment into public spectacle, were dangerous for the very reason that they were enchanting. Hongwu was well aware of the precarious position his French friends were in. Poorly-kept secrets had led to the scandal that put an end to his own career, and having learned the value of discretion, he sought to impress it upon the missionaries. In the end, Amiot and Hongwu conducted their investigations in secret, and they never publicized their results. Nevertheless, Hongwu did become, in the estimation of Amiot, “initiated in all the mysteries of physics.” Since the days of the Society, the people, places and circumstances had all changed, and yet the cross-cultural pursuit of natural philosophy in Beijing continued.

Where once the centers of Western learning in Beijing had been the Astronomical Bureau, an organ of the Qing state, and the palace workshops, supervised by the Imperial Household Department, after the suppression of the Society of Jesus the French missionaries withdrew to their private residence at the North Church. Research there would have been impossible without the support of their new patron, Bertin, who sent them yearly packages right up to the eve of the French Revolution. Believing that knowledge of the sciences in particular was crucial for the success of the mission, he invited them to ask for anything they might need in the course of their studies. He responded to their requests with custom-built instruments, instructions for how to use them, and supplies for their upkeep. Just as important, he also sent reading material. At the time of the suppression, the North Church already possessed one of the most extensive European libraries in Asia. Bertin kept it updated for almost two decades thereafter with books by the preeminent natural philosophers of the day, including Jérôme Lalande, William Herschel, and Benjamin Franklin, as well as new issues of periodicals such as the Journal des sçavans and the Histoire de l’Académie royale des sciences. All told, the holdings of the North Church were probably comparable to those of a decent institution in

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79 See, for example, Bertin to Raux, November 1788, IF, MS 1524, 108-110.
80 See especially Belhoste (2011).
81 Consider, for example, Hongwu’s claim that he had refused to read the forbidden novel Hong lou meng 红楼夢 out of concern that it might contain politically charged language (see Hu (1996)).
82 Amiot to Bertin, 11 November 1788, BnF, Bréquigny MS 2.
83 Bertin to Collas, 31 December, 1780, IF, MS 1523, 86-98.
84 On Western collections in China, see Golvers (2013).
85 See, for example, Bertin to Amiot, 21 December 1785, IF, MS 1524, 36-51.
Europe, and none of the missionaries ever complained about a lack of resources. They were able to conduct research and perform experiments in the comfort of their own home.

Having seen what might have passed for a Parisian laboratory in the North Church, Hongwu decided to build his own, adorned “as best he could in the French style.”\footnote{Amiot to Bertin, 16 October 1790, IF, MS 1517, 139-144} It began with an air pump. During the early 1770s, Benoist had demonstrated an imported machine at the Ruyiguan, but eventually the emperor lost interest and the missionaries repossessed it for the North Church. Already it had attracted some local attention. They next lent it out to a certain Manchu count, and after he died several months later, his widow sent it back again. Hongwu was apparently the next in line to borrow it. By 1784, he was using the air pump for experiments at his own home.\footnote{Bourgeois to Bertin, 19 November 1784, IF, MS 1520, 258-260.} He became so enamored of it that Amiot promised to one day give him his own newer model. In the following years, Hongwu continued to expand his laboratory. He and Amiot often discussed scientific equipment, from cylindrical mirrors to “flying machines” \footnote{Amiot to Bertin, 25 January 1787, IF, MS 1516, 408-425.} (machine[s] à voler).\footnote{Amiot to Bertin, 11 November 1788, BnF, Bréquigny MS 2.} Hongwu’s facility with it became so great that Amiot gave him a flawed light bulb in the confidence that he would improve on the French design.\footnote{Amiot to Roze, 20 October 1784, Archives jésuites de la Province de France, Vivier MS I.} Hongwu thus exploited his friendship with the missionaries to procure some of the most sophisticated equipment available not only in Beijing, but anywhere. He used it to investigate exciting new topics in natural philosophy.

In 1784, one year after the first piloted flights took place in Paris, balloon mania reached Beijing. Bertin and the missionaries quickly identified gas and hot-air balloons as a potential means of propaganda, both a symbol of the utility of European science and a proof of France’s preeminence in perfecting it. Amiot basked in Gallic pride: “The rays of all the kinds of glory with which our nation shines today with such brightness before all the eyes of Europe, seem to me in a way to reflect on me,” he gloated upon hearing the news. Proposing improbable uses for aerostatic balloons became his favorite joke. In a letter to the French supercargo at Canton, he declared his desire to fly one down, so that he could chat with more Europeans than he had seen in decades.\footnote{Writing to Bertin, he imagined flying one to France to pay him a visit. In 1790, he was still thinking up new variations. If the next ship for China was scheduled to depart too late, he wrote Bertin, “you could send me a little aerostat in}
which you will put your letter, in directing it toward Beijing, only paying attention to put the address in Chinese.”

One day when Hongwu stopped by Amiot’s study, he noticed again laid out on a table an engraving depicting the gas-balloon flight of the Robert Brothers in the Tuileries Garden. When Amiot told him what had happened, Hongwu was at first incredulous: “Is this not just a pleasing story intended to amuse you?” he asked. After Amiot explained that the balloon was lifted by gases lighter than air, Hongwu grasped the theory immediately. Yet his first thought was not of Western ingenuity, but of Chinese tradition. Like most scholars of the late imperial period, Hongwu believed that many new things in Europe had been known to the ancient Chinese. Since the Ming, this argument had been deployed to legitimate Western mathematics and astronomy and to integrate such studies into the Confucian tradition. The missionaries had promoted the idea, and it was a common belief of those participating in the evidential scholarship movement that dominated intellectual trends in Hongwu’s day. For him, balloons were further proof of this theory. “We find in many fragments of ancient books examples of flying balloons,” he said to Amiot; “we treated all this as fable, since we did not believe it possible; but what recently happened in your France proves to us the contrary.”

Amiot took the suggestion as a prompt for investigation. He found one possible piece of evidence in a certain commentary on the *Shujing* 周経, which told of how the Yellow Emperor flew to heaven on the back of a dragon. The Yellow Emperor was known to have been knowledgeable about natural history and mineralogy; was it not possible that he had also discovered how to isolate gases lighter than air and used them to fill a dragon-shaped balloon, thousands of years before the Robert brothers built their globe aérostatique? Amiot told Bertin that he still held the French as “the true inventors of the aerostatic machine;” but it is certainly possible that he said something different to Hongwu.

Perhaps their potential relevance to the broader program of Qing scholarship was one of the reasons that Hongwu initially “showed a great desire to have one of the balloons to try.” Amiot protested that this would be difficult to arrange: first, ballooning was dangerous, and second, there was a technical difficulty. The Robert brothers had filled their balloon with hydrogen, which they made by dissolving iron in sulfuric acid. Amiot did not know how sulfuric acid could be obtained in Beijing. When Hongwu suggested that they try with nitric acid instead, Amiot had to tell him that

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91 Amiot to Bertin, 16 October 1790, IF, MS 1517, 139-144.
93 Amiot to Bertin, 15 November 1784, IF, MS 1516, 298-307; an abbreviated version of the story was published in Amiot (1786), “Extrait d’une lettre écrite de Péking le 15 nov. 1784,” 772-576.
this would not work. Amiot placated Hongwu with the suggestion that perhaps the Lazarist missionaries then already on their way to take over the French mission from the ex-Jesuits might have the necessary materials in their possession, or at least know how to make them. Hongwu asked to be informed upon their arrival. Amiot relayed the conversation to Bertin, who read it with great interest. If people in China were interested in balloons, it was essential for the future of the mission that they be encouraged. Again, he mobilized his “literary correspondence.” Unsure whether the Lazarists had in fact taken any sulfuric acid with them, he sent instructions for how to produce hydrogen without it.

But by the time the Bertin’s instructions arrived, Hongwu’s enthusiasm had evaporated. When Amiot brought up balloons again in 1787, and again 1788, Hongwu responded with only a few perfunctory words of caution; “he saw nothing but the danger to which they exposed themselves in flying to frequent an element that nature seems to have forbidden to them in refusing them wings,” Amiot complained. Amiot continued to broach the subject from time to time, but Hongwu was “obstinate in not being willing to agree that this art could in its being perfected become a great utility for men.” Hongwu conceded that the invention might be useful, “exclusively for war, since then one has no regard for expenses, difficulties, or dangers.” That idea, too, went nowhere. Amiot and Bertin were disappointed to watch the opportunity float by, but Hongwu’s advice may have been well founded. When a scientific attaché to the British diplomatic mission under George Macartney (1737-1806) apparently did demonstrate a balloon in Beijing in 1793, no one seems to have taken any interest.

Hongwu understood what kinds of knowledge would appeal to the local audience. Though he had once sought to experiment with gas balloons himself, he thought it imprudent to share the discovery more widely. The same thing happened with electricity, another topic in natural philosophy then attracting much attention in France and enthusiastically embraced by the missionaries. The North Church had acquired an electrical machine at least as early as 1764, when Bertin commissioned the physicist and natural historian Mathurin Jacques Brisson to make one on special order. It seems though that the machine was not even set up. For years it sat in storage at the North Church collecting dust, much to Bertin’s

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94 The terms used were “huile de vitriol” (sulfuric acid) and “eau forte” (nitric acid).
95 Amiot to Bertin, 15 November 1784, IF, MS 1516, 298-307.
96 Bertin to Amiot, 21 December 1785, IF, MS 1524, 36-51.
97 Amiot to Bertin, 25 January 1787, IF, MS 1516, 408-425
98 Amiot to Bertin, 1 September 1788, IF, MS 1517, 49-54.
100 Brisson to Bertin, 7 September 1764, IF, MS 1520, 17.
frustration. Whenever he complained about it to the missionaries, they made excuses: parts were broken or missing and they were difficult to repair or replace. Moreover, they claimed, none of them knew what to do with the thing anyway.101

Finally, in 1785, the Lazarists arrived and got the machine in working condition in order to investigate the theories of electrical medicine then enjoying a wave of popularity back in France.102 They set up a private demonstration at the North Church and invited a select group of local figures to observe. When they turned on the machine, the Chinese and Manchu guests instantly “began to admire the marvel” of the electrical phenomenon. Some even volunteered to undergo electrical therapy for “conditions of the nerves”—apparently a common malady in the busy capital city. Hongwu was among those in attendance. For years after, he pestered the missionaries to build another machine, and when they finally capitulated, “it gave him the greatest pleasure.”103

But, just as he had cautioned about the aerostatic balloons, Hongwu advised the missionaries to conceal the wonderful invention, particularly from the emperor.104 Like aerostatic balloons, electrical machines were potentially dangerous, and a misstep might have disastrous consequences; if a glass globe were to explode in the emperor’s face, he cautioned, “all would be lost.”105 Furthermore, demonstrations of electricity would feed into the very criticism of the missionaries that was the most damaging: that of religious heterodoxy. This time, the missionaries seem to have agreed without much protest. Their concern was that they did not understand the principles of the machine well enough to give a satisfactory account of its mysterious effects. They feared that they might therefore be taken for magicians—and considering the image of a foreign-looking, long-bearded old man in robes with sparks flying around, perhaps the fear was not unfounded.

Bertin tried to assuage the missionaries’ concerns about electrical experiments nevertheless. He was eager that “the French especially would have the merit of bringing this discovery to China and of having made the understanding of it easy.” After having gone through significant efforts for more than a decade to get the machine working, he was understandably not eager to see it packed away almost as soon as it had been taken out. He exhorted the missionaries to demonstrate “these sorts of novelties,” if not before the emperor, then “at least to the princes of his blood” like

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101 Bertin to Yang, 30 November, 1777, IF, MS 1522, 137-143.
102 Raux to Bertin, 27 November 1786, BnF, Bréquigny MS 3.
103 Raux to Bertin, 17 November 1786, IF, MS 1518, 95-97.
104 Raux to Bertin, 27 November 1786, BnF, Bréquigny MS 3.
105 Bourgeois to Bertin, 19 November 1784, IF, MS 1520, 258-260.
Hongwu. He suggested that they advertise displays of French ingenuity, instead of making them into a “ridiculous secret.” To help them do this, he sent more new equipment, accompanied by a lengthy set of hand-written instructions. Simply explaining the physical principles behind the electrical machine would be the best “cure of all credulity in magic.” Bertin’s efforts, however, were unsuccessful. The missionaries made various excuses. They claimed that electrical medicine had proved less effective than they at first had hoped. Amiot and Hongwu shifted their experimental focus to electric lamps, which seemed both more useful and less dangerous. The Lazarists continued to tinker with the electrical machine, but only for “purely physical experiments,” not for medical uses. It seems that all kinds of public demonstration were discontinued.

Only a few years later in 1793, when the Macartney Embassy arrived in Beijing, the Chinese representatives at the negotiations made an ostentatious show of ambivalence about the recent inventions put on display. Most historians agree that this was a deliberate play for leverage: the Qianlong emperor understood the value of western technology and wished to maintained firm control over it, feigning an attitude of cultural superiority for political reasons. By that time, however, neither his knowledge of the missionaries’ work, nor indeed his control over it, was entirely firm. He may have understood Western technology well enough to know its value, but he had also grown somewhat hostile to it, as judged by those who knew him personally, and as a result he had not been told about the experiments that continued within the very walls of the Imperial City. Those who still pursued Western natural philosophy were doing so in secret. And if Amiot and Hongwu were a significant exception, there were not many who followed their example. On October 7, 1793, the Macartney Embassy left Beijing. Amiot died the next day. It would have been difficult for Hongwu to have continued the work without him.

**Conclusion: The Legacy of a Friendship**

Even though the friendship between Hongwu and Amiot did not spark widespread Chinese interest in late Enlightenment physics, it was by no means without impact. Somewhat counterintuitively, it was significant just

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107 Bertin to Amiot, 21 December 1785, IF, MS 1524, 36-51.
108 Amiot to Bertin, 11 November 1788, BnF, Bréquigny MS 2.
109 Amiot to Bertin, 10 October 1789, IF, MS 1517, 65-86.
110 Amiot to Bertin, 11 November 1788, BnF, Bréquigny MS 2.
because it was probably not representative. Situated at a historical bottleneck in the exchange of knowledge between China and Europe, Amiot and Hongwu had a disproportionate impact on what came after. By 1793, no one in Europe seriously questioned Amiot’s expertise on the Chinese tradition, and we do not know if anyone born in China besides Hongwu knew much about gas balloons or electrical medicine. And yet, the following decades saw major transitions in the approaches of European and Chinese scholars toward each other. There are tantalizing suggestions that their new perspectives may reflect the legacy of a forgotten friendship.

During the last decade of Amiot’s life, his evaluation of the Chinese tradition underwent a momentous transformation. From harsh early criticism of most practices beyond Catholicism and Confucian orthodoxy, he began to approach other knowledge traditions of China with an open-mindedness almost unmatched in the history of the Jesuit mission to China. He argued that Daoism had been unfairly maligned by its Confucian opponents and that it contained physical, metaphysical, and even spiritual truths. His essay on religious Daoism, published in 1791, became the longest widely available treatment of the subject in any Western language, and one of the least critical.112 He even took up a qualified defense of Tibetan Buddhism, almost unique among all the Jesuit authors.113 By this time, Amiot had come to believe that “the principles of all the sciences” of Europe and China, particularly in physics, were mutually complementary—for example, he argued at length that Franz Mesmer’s theory of animal magnetism was prefigured by the dual principles of yin and yang—and that they shared a common history, deriving from a single ancient pan-Eurasian tradition.114 While Amiot was developing these ideas, Hongwu was his closest non-Western friend.

In the early nineteenth century, Amiot’s work on these topics became a springboard for many who were interested in the thought of China. Chief among them were the first professional academic sinologist, Jean-Pierre Abel-Rémusat, and the philosopher G.W.G. Hegel. In conversation, these two scholars did much to reconfigure China in the European imagination, disagreeing on the value of its tradition but agreeing that it was best

113 Amiot to Bertin, 20 August 1790 / 4 October 1790, IF, MS 1517, 104-136.
114 Quote from Amiot to Bertin, 25 January 1787, IF, MS 1516, 408-425. For more on Amiot’s yin-yang theory of animal magnetism, see the three letters published in Huard and Wong (1960) (which were actually sent to Louis-Raphaël-Lucrèce de Fayolle, Comte de Mellet, rather than to François Desvoyes, as previously attributed).
represented not by the books of Confucius, but by those of Laozi. To the extent that Amiot had played a role in constructing this view, it was probably with Hongwu’s help and encouragement.

In China, it is a puzzle that toward the end of the eighteenth century, while literati remained as interested as ever in Western astronomy and mathematics, it seems that they did not seek out contact with actual Westerners. The major thinkers of the evidential scholarship movement aimed to recover the old learning of China through the new learning of the West. This was the spirit that animated the *Chouren zhuan* (Biographies of mathematicians and astronomers). Called by Joseph Needham “the nearest approach to a history of Chinese science ever written in China,” the book promoted selective aspects of Western astronomy and mathematics while also arguing that its origins were Chinese. Its editor, the scholar and statesman Ruan Yuan (1764-1849) does not appear to have spoken with a single ex-Jesuit missionary.

But appearances may be deceptive. In 1787, having passed the provincial-level civil service examinations, Ruan Yuan arrived in Beijing. There he was taken in by Zhu Gui, who ran in the same courtly circles as Hongwu. In 1792, Hongwu organized a literati retreat to the Wanshou si, a temple in the suburbs of Beijing, where he and six friends sat in the shade, painted the landscape, wrote poetry, and got drunk. Among them were the painters Peng Yuanrui and Na Yancheng, who were still working alongside the French artists at the Ruyiguan, as well as the young Ruan Yuan. Hongwu must have made an impression, since after he died in 1811, it was Ruan Yuan who arranged for the cutting of the wood blocks to publish his collected poems. When Ruan Yuan began work on the *Chouren zhuan* around 1797, Hongwu, intimately acquainted with the last of the early modern Jesuit missionaries in Beijing, might have been a valuable resource.

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115 On Hegel’s interpretation of Daoism, see Thoraval (1998); on Abel-Rémusat’s, see Cheng (2014).


119 The visit was recounted by both Shen Chu (沈初) and Ruan Yuan (阮元); Shen (Qianlong period), *Shiji* juan 11; Ruan (1842), *juan* 2.

120 Yang (early twentieth century), *Yuji* juan 5.

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