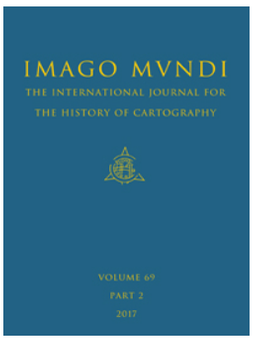

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Imago Mundi
The International Journal for the History of Cartography

ISSN: 0308-5694 (Print) 1479-7801 (Online) Journal homepage: http://www.tandfonline.com/loi/rimu20

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To cite this article: Mario Cams (2017) Not Just a Jesuit Atlas of China: Qing Imperial Cartography and Its European Connections, Imago Mundi, 69:2, 188-201

To link to this article: http://dx.doi.org/10.1080/03085694.2017.1312114

Not Just a Jesuit Atlas of China: Qing Imperial Cartography and Its European Connections

MARIO CAMS

ABSTRACT: In the literature, the 'Overview Maps of Imperial Territories' or *Huangyu quanlan tu* 皇輿全覽圖, is mostly referred to as 'the Jesuit atlas of China'. The reason is that this early eighteenth-century atlas of all Qing China's territories plus Korea and Tibet is assumed to have resulted from European missionaries importing European cartographic practices. In this essay, I argue that this view is outdated and can no longer be sustained. By revisiting the background of the missionaries' involvement in cartographic exchanges between Asia and Europe, the techniques used for surveying Qing territories and the production of the resulting atlases, I show that the mapping project behind the 'Overview Maps of Imperial Territories' is best understood as a creative answer to the unique needs of Qing frontier management and imperial control, made possible by the integration, in mensurational and in representational terms, of European and East Asian cartographic practices.

KEYWORDS: China, Qing Empire, Kangxi emperor, Jesuit missions, Sino-Western relations, land surveys, surveying instruments, Académie des sciences, *Huangyu quanlan tu*, Jesuit atlas, Kangxi atlas, Manchu.

Curiously, the atlas known as 'Overview Maps of Imperial Territories' or *Huangyu quanlan tu* 皇輿全覽圖 hardly rings a bell among historians of cartography. Yet, this enormous atlas of Qing China, printed in several versions, resulted from the largest mapping project of the early modern world and can be considered unique in at least three aspects. First, it was largely based on field surveys conducted by mixed teams of Qing officials and European missionaries and covers a large part of continental East Asia (Fig. 1). Second, it is probably the most important example of early modern state-sponsored cartography, involving not just a few able cartographers but an entire state apparatus spurred on and personally supervised by an activist emperor. And third, it is a product of the creative integration, in mensurational and representational terms, of two different cartographic practices, European and East Asian.

The emperors of the 'Great Qing' ruled China from 1644 until 1911 and controlled lands that stretched far beyond the borders of the traditional Chinese state. The rulers of the Qing were Manchus who had invaded China from the north in the first half of the seventeenth century, causing the former Ming dynasty (1368–1644) to fall. When the atlas under discussion was printed in the years 1717–1721, the Qing Empire, founded in Manchuria, had consolidated military and administrative control over all the former Ming provinces within the Great Wall (historians call this 'China proper'). It had also conquered much of the vast Mongolian steppes and parts of Taiwan and was sending armies into Tibet and towards the

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Imago Mundi Vol. 69, Part 2: 188–201
 ISSN 0308-5694 print/1479-7801 online
https://doi.org/10.1080/03085694.2017.1312114

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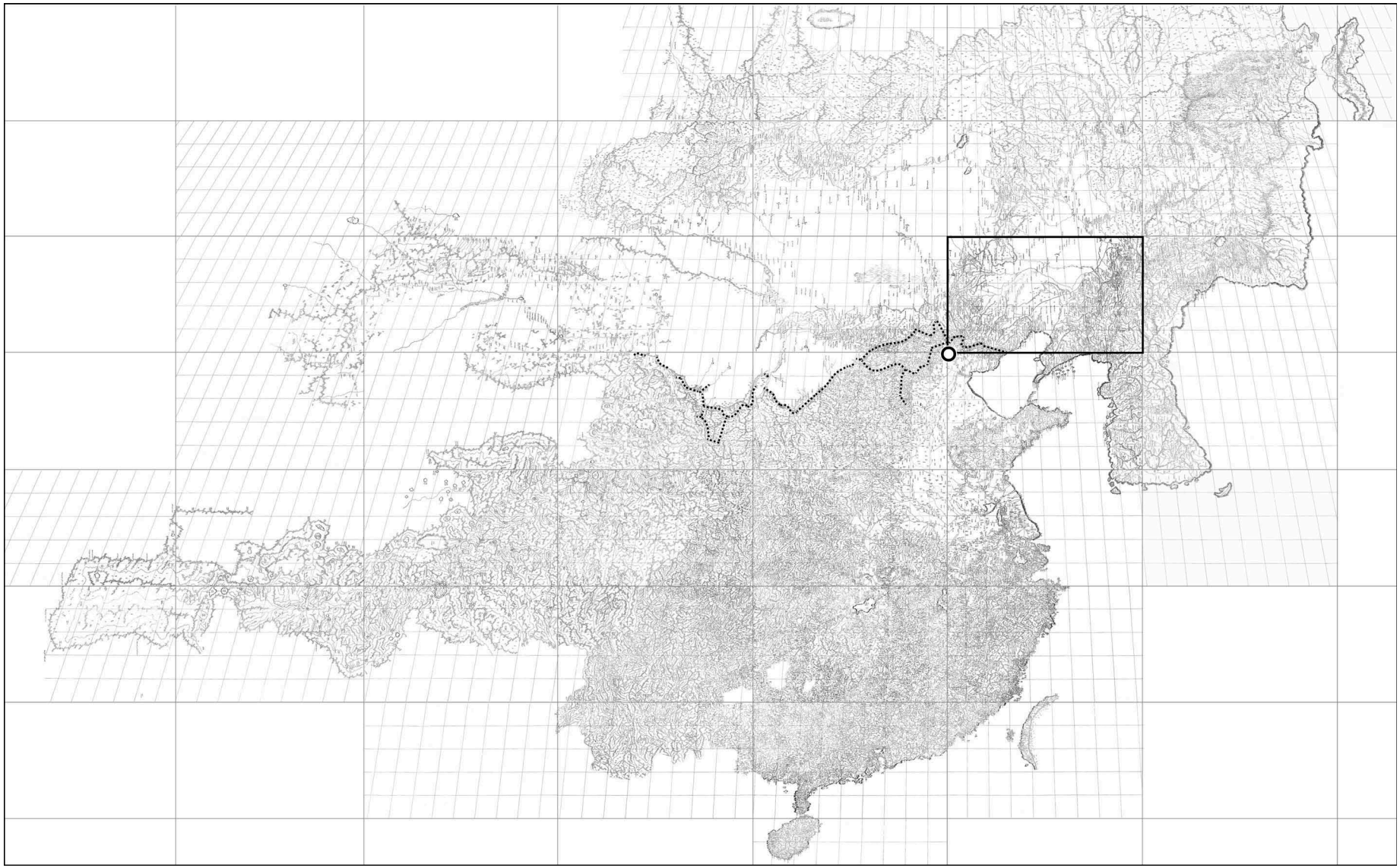

Fig. 1. The 41 sheets of the 1719 copperplate atlas together constitute one large map of continental East Asia, from Lake Baikal (north), to Sakhalin (northeast) and Taiwan (east), and from Hainan Island (south), to Kashgar (west). Original scale 1:4.000.000); whole map about 3.2 × 4.7 m. North is at the top. Place-names beyond the Great Wall (highlighted here by dotted lines) are rendered in Manchu, while those south of it are in Chinese (see Fig. 3). The white circle indicates Beijing and the rectangle the sheet reproduced in Figure 3. Individual sheets assembled from those in Wang Qianjin 汪前进 and Liu Ruofang 刘若芳, *Qingting sanda shice quantuji* 清廷三大實測全圖集, vol. 1 (Beijing, Waiwen chubanshe, 2007). Integrated with graphical assistance from Lieveke op Ten Berg (LievekeOntwerpt.nl).

deserts in the far west (today's Xinjiang province). In other words, Qing China was almost at the height of its territorial reach at the beginning of the eighteenth century, laying the foundations for the territory of the People's Republic of China today.[1]

It was during these times of unprecedented territorial expansion that the Kangxi emperor (r. 1661–1722), a contemporary of Louis XIV (r. 1643–1715) and Peter the Great (r. 1682–1725), decided that more accurate maps were needed to effectively control the vast new frontiers. The means to improve existing mapping were readily available from Jesuit missionaries, some of whom the emperor already employed as technical experts at the court in Beijing. Missionaries had tutored the emperor and his sons in European-style mathematics, astronomy and geography, and they also oversaw and assisted in the production of astronomical instruments, cannons, clocks and other such artefacts at the imperial workshops, located in the heart of the imperial palace. When, in 1688, a new group of French Jesuits arrived, some of them trained by the Académie des sciences and armed with a new generation of mobile instruments from Paris, all elements were in place to allow the kind of exchanges that led to the largest mapping project the world had ever seen.

Because of the involvement of Jesuit missionaries in the Qing mapping project, scholars who have published on cartography in continental East Asia, including Walter Fuchs, Joseph Needham, Cordell Yee and Theodore Foss, have tended to adhere to the idea that the Qing mapping project was in essence a European-led scientific endeavour, only temporarily practised alongside traditional Chinese cartography.[2] Over the last fifteen years, scholars have tried to reframe this view in order to give more credit to the Qing side. Laura Hostetler, for example, has argued that the mapping project and resulting atlas were part of a Eurasian shift toward early modernity, in which Qing China took equal part.[3] Despite her efforts, the outdated assumption that existing cartographic practice, whether it is called 'Chinese', 'traditional' or 'pre-modern', was replaced by, or temporarily existed separately from, a new type of cartography, be it 'Jesuit', 'European', 'scientific' or 'early modern', has remained firmly in place in the literature, perhaps spurred on by the conviction that the sciences as practiced in early modern Europe were universal and therefore spread naturally.[4]

By looking carefully at the techniques used during the land surveys and the representations adopted in the resulting atlases, this article calls into question the old assumption that a new type of cartographic practice completely displaced pre-existing ones. It challenges previous claims that the Qing mapping project was a cartographical intermezzo executed by Jesuit missionaries who imported European techniques of land surveying —that there was, in other words, a Manchu adoption of European cartographic practices. Instead, the Qing mapping project and the resulting atlas emerge as creative answers to the unique needs of Qing frontier management and imperial control, made possible by the integration of European and East Asian techniques of map making.

Initial Cartographic Exchanges

Under the auspices of the Portuguese crown, Jesuit missionaries first reached Ming China in the latter half of the sixteenth century. From the start, they participated in cartographic exchanges, albeit in different ways and for different purposes. The cartographic works of Jesuits Matteo Ricci (1552–1610) and Michele Ruggieri (1543–1607), the first missionaries who were able to gain a foothold in the Chinese provinces, are well known, and a large body of scholarship has been devoted to the subject. In essence, both men produced and transmitted cultural translations of two different sets of cartographic practices (Ricci from Europe to China, Ruggieri from China to Europe).

The different versions of Ricci's world map, the *Kunyu wanguo quantu* 坤輿萬國全圖, were based on European atlases but are seen by many as new maps altogether. For the Chinese elites, these maps constituted new representations of the world that stood in sharp contrast with their own understanding. The concepts of projection and hemispheres, of East Asia as merely constituting one part of a larger whole, the inclusion of the Americas, and other new elements that originated from European cartographies were introduced to the Chinese readership for the first time.[5]

Ruggieri, on the other hand, drew maps based on Chinese cartographies, often found in compilations on geography mainly consisting of text.[6] His collection included a general map of Ming China as well as separate maps for each province, sometimes complete with earlier drafts. He took over the grid system found in Chinese cartographies but also made an attempt to delineate external borders, in line with European cartographic practice. Ruggieri's manuscript maps eventually reached Rome, where they were received as a completely new representation of East Asia. One major difference between Ricci's and Ruggieri's maps, however, is that Ricci's work

became relatively widespread owing to its publication in several versions, whereas Ruggieri's maps remained hidden in Italian archives until well into the twentieth century.[7]

Around 1650, the next major step in terms of cartographic exchanges by Jesuit missionaries took place. Michael Boym (1612–1659) and Martino Martini (1614–1661), both exceptionally mobile missionaries, found themselves on opposite sides of the Ming-Qing transitional wars.[8] Both missionaries eventually made it back to Europe and drew maps of East Asia on the basis of Chinese cartographies. They were able to add data based on their own rudimentary observations and information from contacts, an improvement when compared with Ruggieri's maps. Boym's work consists of eight manuscript maps that were entrusted to the archives, whereas Martini published an entire atlas as he passed through Amsterdam. His ornately decorated *Novus Atlas Sinensis* (1654) would remain the most authoritative cartographic source on East Asia available to the European readership for nearly a century.[9]

In the course of the seventeenth century, when all these maps were circulating, Jesuit missionaries had achieved a certain level of recognition from local elites in China, sometimes using curious objects from Europe, such as world maps, as social lubricants. As a result of their extensive contacts, Jesuits soon also procured imperial interest, in the first place for the technical and artistic skills they displayed as part of their strategy to gain a foothold in the Chinese provinces. Such skills included, but were not limited to, cartographic and textual representations of regions that were largely unknown to the educated Chinese.[10] At the same time, Jesuit missionaries gathered geographical data and cartographical depictions from Chinese language sources as part of their exploration of East Asia, data they shared with their colleagues and European contacts. Thus, although the role of cartography in the early Jesuit missions to China should certainly not be overestimated, it did occupy an important position in terms of transmitting concrete knowledge of and by the 'other' between the two continents. It was against this background of mutual exchanges in cartography, mostly dependent on Jesuit mobility between Europe and Asia, that the mapping project discussed in this article was carried out.

After the Qing conquest of Beijing, a number of Jesuits served the new Manchu rulers as artisan-experts at the imperial palace. Ferdinand Verbiest (1623–1688), for example, tutored the Kangxi emperor and his sons in European style mathematics, astronomy and geography, constructed European-style cannon, improved the crucial state calendar, and built large stationary instruments for the Beijing observatory. Possibly as part of his tutoring activities, he also composed the *Kunyu quantu* 坤輿全圖, a world map based on Ricci's work but improved with new data from contemporary European cartographies.[11] Moreover, since he was seen as an imperial expert in instrument manipulation, Verbiest became the first missionary involved in land surveying organized by the Qing court: in the years 1682–1683, as part of the imperial entourage, he produced route maps and topographical maps of the emperor's travels just north of the Great Wall.[12]

Throughout his reign, the Kangxi emperor continuously expressed his wish to employ more European missionaries, mostly as technical experts in the service of the Qing state. For their part, the Jesuits understood that missionaries with a training in the sciences could contribute greatly to their proselytizing mission. In fact, it was hoped that the presence of more trained missionaries would increase Jesuit influence at court and perhaps lead to imperial protection for their missionary work in the provinces, which was regularly hampered by local administrators and public distrust.[13]

A New Hybrid Practice

The missionaries' own calls for more trained personnel eventually led to the establishment of a French Jesuit mission sponsored by King Louis XIV and his new Académie des sciences. The French mission became the first to feature explicitly defined scientific goals as part of the Jesuits' broader religious objectives and the first not to fall under the patronage of the Portuguese crown. Several new missionaries were appointed *Mathématiciens du Roy* and correspondents of the Académie des sciences. Before the missionaries left France, academicians presented them with a list of questions intended as a guideline for studying Qing China. It appears that geography was a primary concern: nearly half the questions relate to the geography of areas included in and surrounding Qing territories.[14]

Naturally, these 'king's mathematicians' did not travel empty handed. Gifts to the Kangxi emperor included the best Paris had to offer in ornate maps and scientific instruments.[15] In Europe, Paris-made instruments had become the material embodiment of French statecraft and scientific enquiry, so much

so that in 1717 Peter the Great personally visited the famous workshops of Butterfield, Chapotot and Bion, where a new generation of mobile instruments were produced and sold.[16] Instruments from these workshops were also taken to the Qing court by the French missionaries, as contemporary accounts and museum catalogues from Beijing and Taipei clearly show.[17] This transmission of new instruments eventually reinforced the Jesuits' position as technical experts at the Qing court and facilitated the absorption of selected European techniques into existing Qing practices.

Immediately following the French Jesuits' arrival in Beijing, in 1688, the Kangxi emperor asked one of them, Jean-François Gerbillon (1654–1707), to take part in a Qing diplomatic mission to negotiate a common border with Russia. In 1686, Russian expansion in Siberia had led to clashes with Qing troops at the Russian fortification of Albazin, located well within what the Manchus considered to be their northernmost territories. Concerned about the threat of Russian expansion, the Kangxi emperor agreed to negotiate, which resulted in the 1689 Treaty of Nerchinsk.

Scholars have written extensively on the flurry of map-making activities during and after the negotiations, but less well known is the fact that Gerbillon recorded latitudes and distances all the way from Beijing to Nerchinsk.[18] Once there, his repeated observations of the altitude of the sun at noon and the pole star at night allowed him to determine, as precisely as possible, the location of Nerchinsk, which undoubtedly informed the negotiating process. By also briefing the emperor upon his return about strategic frontier locations in terms of both latitude and distance from the capital, Gerbillon demonstrated to the emperor the advantages of obtaining such data, not least in the context of frontier management. Soon after, Gerbillon and other Jesuits were asked to start tutoring the emperor in 'practical geometry', the mathematical basis for conducting land surveys, and to explain the uses of the new instruments they had brought from Paris to the emperor and the artisans of the imperial workshops.[19]

As the mapping of Qing frontier regions continued with the help of the French missionaries, the need for precision instruments tailored to land surveying increased. This need was provided for in two ways. On the one hand, the emperor allowed some missionaries to travel to Europe and back again, often returning with instruments large and small. He also sent trusted courtiers to Guangzhou (Canton), in a secret search for more instruments and products from Europe.[20] On the other hand, the palace's workshops, having long manufactured their own surveying instruments and timepieces, started emulating Paris-made prototypes, which is confirmed by European textual sources and museum catalogue entries.[21] The emperor would personally direct instrument production by the workshops, judge the quality of newly produced specimens and practice his surveying skills, as claimed by Joachim Bouvet (1656–1730), another French Jesuit missionary.

> The Emperor of China began, about five years ago, to erect within his own palace a sort of academy of painters, engravers, sculptors and craftsmen in steel and copper for timepieces and other mathematical instruments. To stimulate them in their emulations, he most often proposes [to take] European pieces as a model, and among them, those that have been made in Paris ... regularly, when he is in Beijing every day at a certain hour, or once every two days when he is at some of his houses of leisure, he has those [pieces] that come from the hands of his new academicians brought to him. He examines them himself, reproves for each one that which is imperfect, approves that which merits praise, and keeps those of which he finds nothing to criticize and that surpass the ordinary.[22]

The exploration and emulation of instruments originally developed for the Paris Academy (and thus the methods they stood for) opened the door for their integration into Qing cartographic practice. This process was greatly accelerated during the latter stages of the Zunghar-Qing wars (1687–1697), the conflict that marked the Qing conquest of the Khalkha, a group of Mongols who inhabited most of the territories of today's Mongolia and the Chinese province of Inner Mongolia. By ordering Jesuit missionaries to join his campaigns, the Kangxi emperor created the opportunity to supervise personally land surveying at the frontier. As part of the imperial entourage, missionaries determined exact latitudes through the observation of the sun at midday and the pole star at night with the help of Paris-style mobile instruments, such as mobile demi-circles or quadrants.[23] At the same time, Qing officials would take measurements of the route travelled in terms of *li* 里 (1 *li* roughly equals 575 metres) with a graduated rope, in accordance with inherited practices.

Missionaries also discussed the results of their work in audience with the emperor, who paid close attention to all surveying efforts along the road. The emperor later recounted surveying activities at the Qing-Khalkha border, for example, in his collection of personal reflections.

> The road from [a gate of the Great Wall] to the border, measured with a rope, is 800 *li* long, which is shorter when compared to what was measured by those who frequent [that road]. The road from Beijing to [the same gate] is very short: roughly calculated no more than 423 *li*. The crown prince can send someone to measure it by rope. At the border post, instruments were used to observe the height of the pole star. It was 5 degrees higher than in Beijing. Measured like this, the distance in *li* is 1250.[24]

The emperor here draws attention to the near compatibility, as he understood it, of European and Qing practices: first, he notes that the road from the capital to the border, measured by rope, is 1223 *li* long (800 + 423 *li*). Next, he gives the difference in altitude of the pole star, observed to be 5 degrees higher than in Beijing. Given that it was widely believed the earth was a perfect sphere and with Qing astronomical treatises at the time prescribing one terrestrial degree as equal to 250 *li*, the emperor arrives at the computed distance of 1250 *li* (5 × 250 *li*), nearly matching the measured distance. During a later campaign, when routes travelled were more east–west oriented, it seems that calculations based on trigonometry served to turn measured road distances into rough estimates of longitude vis-à-vis Beijing.

When the conquest of Mongolia was finally completed, in 1698, missionaries were once again sent on a tour of the region and expected to 'make a map of the lands of the Khalkha, [the emperor's] new subjects'. [25] Missionary sources claim that the emperor was well pleased with the resulting map, although this time, given the great distances covered, it had become clear that measured road distances did not nearly correspond with those calculated on the basis of differences in latitude. Because the discrepancy was so large, it was agreed that the terrestrial degree had to be redefined to cover a distance of 200 *li* and, following from that, that the *li* itself had to be redefined to about 4/5th of the one used to produce the measuring rope. To deal with the issue, the emperor ordered the exact measurement of the length of one degree of latitude on the Beijing meridian in 1702, something Jean Picard (1620–1682) had done near Paris some three decades earlier, and on the basis of which the most basic unit of length, the *chi* 尺 (1800 of which constitute one *li*), was restandardized.[26]

In sum, only certain elements of the techniques newly introduced from Europe, mostly constituting their geometrical and instrumental aspects, were selected to fit existing Qing practices, in an effort to explore the new Qing frontiers.[27] This meant that other defining features of land surveying as practiced by the Paris Academy, such as the precise measurement of base lines for triangulation, were not appropriated by the Qing court. At the same time, important components of inherited Qing practice, not least the measurement of road distances with ropes, were retained and refined in order to obtain estimates of longitude vis-à-vis Beijing. This process of integration took more than a decade to take shape and eventually led to the establishment of a new, or hybrid, cartographic practice, shaped by Qing conquest and inaugurated by the re-standardization of the most basic unit of length, the *chi*.

The Resulting Atlases

Comprehensive land surveys of all Qing territories were eventually conducted between 1708 and 1718, entirely based on this newly established cartographic practice. Given the sheer size of the imperial realm, different teams of mapmakers had to work simultaneously, with each group consisting of several Qing officials assisted by two or three missionaries. These teams relied on a careful strategy in the more remote parts of Qing territories, such as the new Mongolian frontier, whereas they could fall back on a well-established and elaborate state apparatus in the densely populated Chinese provinces. Mathematicians and mapmakers were also dispatched to Korea and Tibet in the entourage of imperial envoys, but European missionaries could not go with them because these lands did not fall under the direct military and administrative control of the Qing state. In fact, only the main roads leading into Tibet and Korea were surveyed, so that the depictions of these territories in the resulting atlases cannot be compared to those of other areas.

Even when it is clear that the techniques used for land surveying were by no means simply imported from Europe by the Jesuit missionaries, the question remains how much the resulting atlases reflect European cartographic practice. After all, most scholars interested in the mapping project do not discuss surveying techniques in order to argue that the mapping project should be seen as a European or Jesuit project. Instead, they rely heavily on the mode of representation adopted in the resulting atlas, focusing on how the atlas does not fit within the whole of 'Chinese' cartography.[28] This, it seems, lies at the base of dismissing the Qing mapping project as a 'Jesuit intermezzo' in Chinese cartography. Yet, a closer look at the resulting atlases paints a more complex picture.

In a detailed study dating back to 1943, Walter Fuchs suggested that no fewer than three printed atlases were produced at the palace's imperial workshops immediately after the comprehensive land surveys.[29] The first, he argued, was printed from woodblocks in 1717 and contained 28 separate and regional maps of Qing territories in the Chinese language (Fig. 2). The second, printed from copperplates in 1719, consisted of 41 individual sheets that formed one large map, with toponyms in Chinese for areas inside the Great Wall, whereas those outside the Great Wall were given in Manchu (Figs. 1 and 3). A third atlas, again from woodblocks but this time containing 32 regional maps, was produced in 1721 as a revision of the first woodblock version. More recently, Wang Qianjin has shown that the atlases were drawn on the basis of a sinusoidal projection commonly known as the Sanson-Flamsteed, which allows true north–south distances to be easily inferred by measuring directly on the map where the parallels intersect with the main meridian.[30]

Although I largely follow Fuchs's distinction, I have elsewhere argued that the copperplate atlas, too, was subject to revision in much the same way as the woodblock atlas had been.[31] A 1717–1718 survey of the Tibetan highlands had improved cartographic knowledge of the region and prompted both the woodblock and the copperplate atlases to accommodate the new data. My argument is based on contemporary textual sources, a close comparison of extant copperplate sheets, and a new interpretation of Fuchs's own scholarship, in which he stated that he had identified a 'draft copy' of the copperplate atlas.[32] In sum, two different editions of the atlas were produced by the Qing court, one woodblock and one copperplate, both printed in two versions that differ mostly in the depiction of Tibetan lands.

The obvious differences in representation between the woodblock and copperplate atlases suggests that they targeted different audiences. First, the woodblock atlases contain place-names only in Chinese and consist of regional or provincial maps that leave external territories blank (Figs. 2 and 4). They also feature a textual companion, the *Imperially Commissioned Overview of Imperial Territories* or *Qinding huangyu quanlan* 钦定皇輿全覽, in essence a route book for all Qing territories compiled from the accumulated knowledge of several centuries' worth of elite scholarship.[33] All this illustrates that the woodblock atlases were designed to conform to Han-Chinese literati tastes in the presentation of geographic and cartographic data.[34] After all, the written word, more than cartographic depictions, was considered the ultimate authoritative source for all scholarship.

The technique of copper engraving, on the other hand, was new to the Qing court, having been introduced by the Italian missionary Matteo Ripa (1682–1746). Immediately after Ripa had finished engraving several landscapes of imperial estates, he was asked to engrave the atlas in the same way, indicating that copperplate engravings satisfied the emperor's aesthetic tastes.[35] Moreover, in contrast to the woodblock atlases, the copperplate ones include toponyms in Manchu for areas outside the Great Wall, and the 41 sheets are designed to form one large map measuring about 3.2 by 4.7 metres (see Figs. 1 and 3). These elements indicate that the copperplate atlas constituted a Manchu representation of Qing territories and territorial ambitions for the appreciation of the emperor and, by extension, the imperial clan.

Given the extensive differences in representation between the copperplate and woodblock atlases (compare Figs. 3 and 4) and the fact that they were produced for different audiences, the issue of how the atlas does not fit within the whole of 'Chinese' cartography begs a different approach than the one found in the literature. Better yet, these differences illustrate that these atlases are best considered on their own terms as Qing imperial cartographies. After all, it is hard to ignore the strong link between the development of hybrid cartographic practices on the one hand, and Qing conquest and frontier management on the other.

Scholars have long since established that the Kangxi emperor embraced new techniques out of practical concerns, namely, to control his vast lands and new frontiers more effectively, a priority in the face of difficulties resulting from Manchu minority rule and increased contacts with other powers. In other words, the unique characteristics of Manchu-Qing rule directly motivated the creation of new techniques of land surveying and diversified modes of representation, in a push to 'define the extent of Qing imperial space', making the link to 'traditional Chinese' cartography somewhat problematic.[36]

In arguing for the recognition of Qing imperial cartography as a separate genre, it is worth noting that none of the atlases mentioned above was available for sale to the public. Instead, both versions, copperplate and woodblock, were kept at court for perusal by the emperor and the court's senior officials. Only greatly abridged versions made it into imperial compilations that circulated widely and also treated other matters besides geography.[37] This further explains why Qing

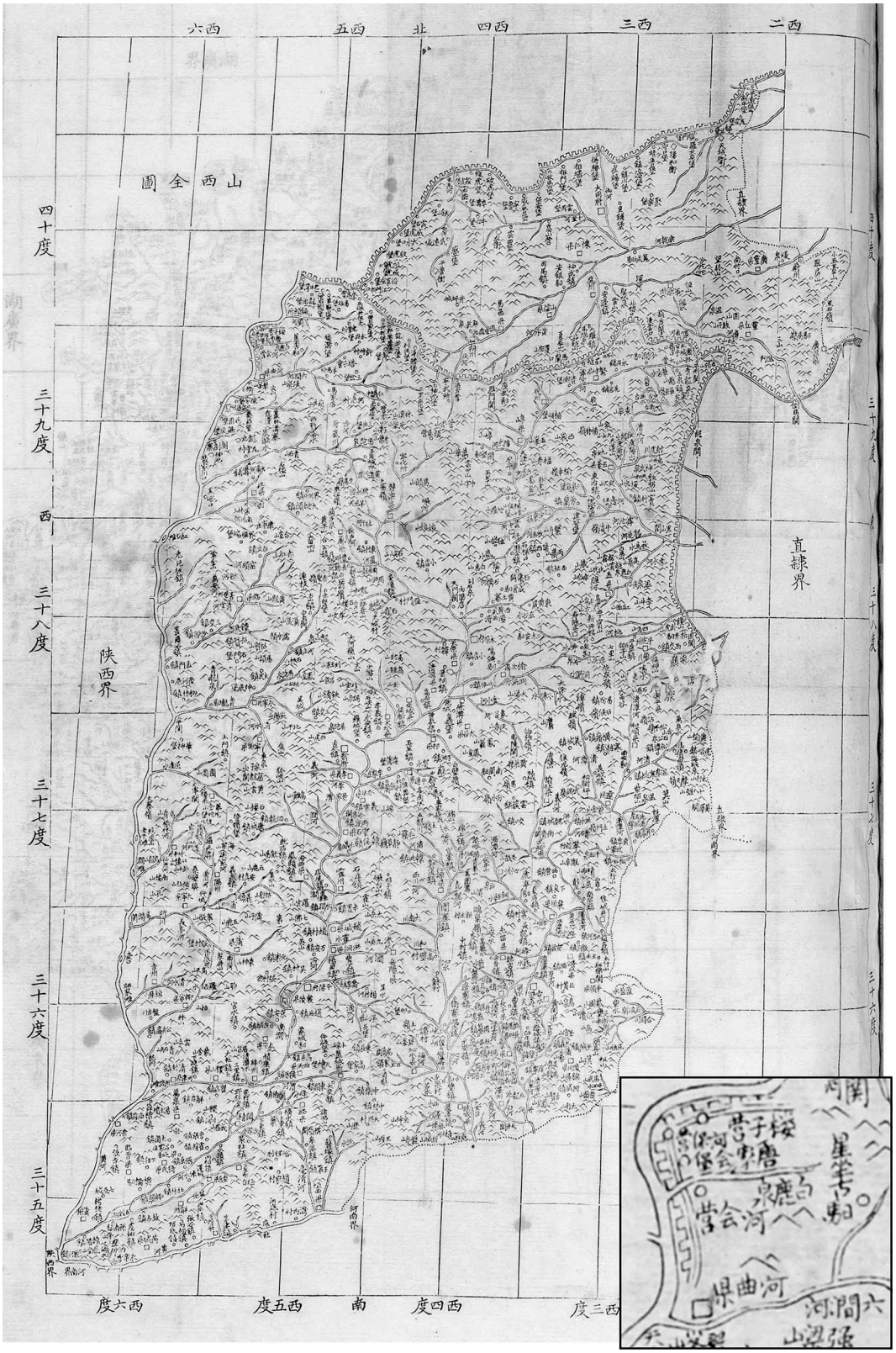

Fig. 2. The map of Shanxi province in the 1721 woodblock version of the Chinese atlas, said to be identical to the Shanxi map in the 1718 woodblock version. Territories beyond the provincial borders are left blank. About 38 × 25 cm. North is at the top. Degrees of latitude and longitude relative to the prime meridian through Beijing are given on all four sides. The Yellow River defines the province's western and southwestern boundaries. Three stretches of the Great Wall are clearly depicted, two in the north together with an eastern section that forms the province's northeastern boundary; small squares indicate the prefectural, departmental, and district seats, while small circles signify other towns (see inset). Most rivers are named. Royal Library of Belgium, LP VB 11.283 E (3), fol. 11. (Reproduced with permission of the Royal Library of Belgium, Brussels.)

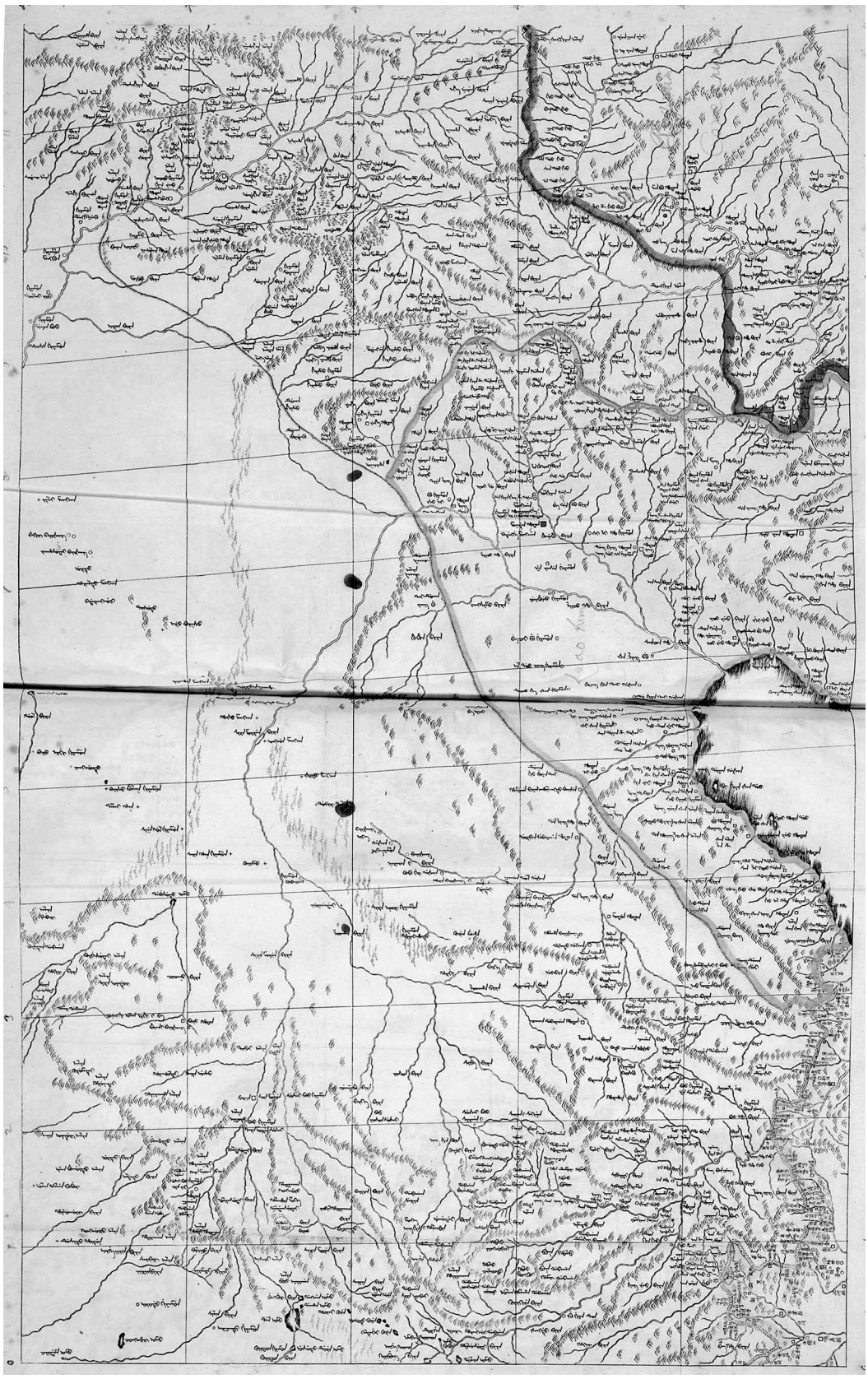

Fig. 3. A sheet from the 1719 copperplate version of the Chinese atlas (see Fig. 1) showing the area surrounding Liaodong Bay. Lakes and coastline are boldly hatched. Colour was applied to highlight three major boundaries: the border between Qing and Korean lands (bottom right, in brown); the inner Qing boundary demarcating the Manchu homelands and formed by the coastline and a willow palisade (centre, in green); and the Great Wall east of Beijing that constituted the old Ming border fortifications (bottom left, in yellow). The sheet thus mostly covers parts of today's provinces of Inner Mongolia, Hebei and Liaoning. About 40 × 64 cm. Royal Library of Belgium, LP VB 11.283 E (2), fol. 10. (Reproduced with permission of the Royal Library of Belgium, Brussels.)

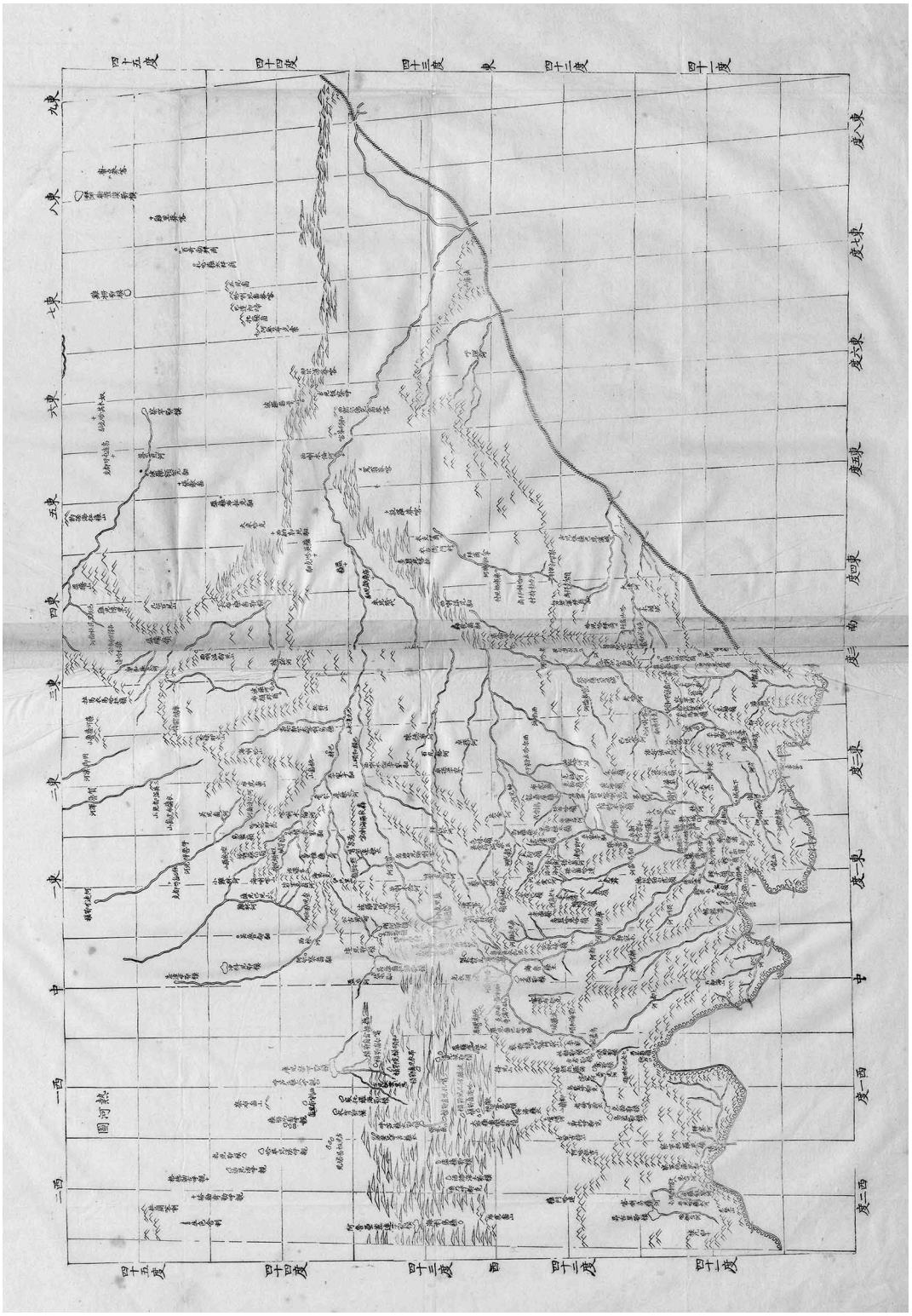

Fig. 4. A sheet of the area north of Beijing and west of the Liaodong Bay (part of today's Inner Mongolia and Hebei provinces) from the woodblock atlas (1721). Territories beyond the regional borders are left blank. The coverage of the map differs substantially from that found on any given sheet in the copperplate multi-sheet map (compare with Figs. 1 and 3). Only Mongol lands north of the Great Wall (bottom left) and west of the willow palisade (centre right) are depicted here, leaving the Liaodong Bay, Manchu homelands and the border with Korea blank. Chinese rather than Manchu script is used for place-names. About 31 × 54 cm. Royal Library of Belgium, LP VB 11.283 E (3), fol. 6. (Reproduced with permission of the Royal Library of Belgium, Brussels.)

imperial cartography existed together with 'traditional Chinese' cartography and renders the idea of a 'new' type of cartographic practice fully or temporarily replacing an 'old' set of practices in this regard obsolete.

A faithful European incorporation of these Qing atlases, published in Paris in 1735, is often mistakenly taken as proof that the mapping project constituted an essentially Jesuit or European project. The missionaries had sent woodblock and copperplate editions of the Qing atlas to Europe soon after their production in Beijing, after which the Parisian Jesuits contracted the French cartographer Jean-Baptiste Bourguignon d'Anville (1697–1782) to produce a European version. D'Anville's collection of maps appeared on the market as part of an expensive four-volume description of 'China, Tartary and Tibet', compiled by the Parisian Jesuit Jean-Baptiste du Halde (1674–1743).[38] Later, d'Anville's maps became more widely available in the form of a pirated stand-alone atlas known as the *Nouvel Atlas de la Chine*, published in The Hague in 1737.[39]

Thus, even though the Jesuit missionaries played an essential role as interlocutors in the circulation of cartographies between Europe and Asia, the Qing atlas known as 'Overview Maps of Imperial Territories' or *Huangyu quanlan tu* should not be seen as a European cartographic project for the most part executed by Jesuit missionaries, as claimed in much of the literature. On the contrary, a close look at the initial exchanges, the techniques used for land surveying, and the resulting atlases, makes clear that the mapping project does not fit comfortably within the established categories of 'traditional-Chinese' or 'early-modern European' cartography. As an essentially hybrid or intercultural product, the question of authorship demands an approach that is very different from trying to classify the mapping project and resulting atlases as belonging to either a 'European' or an 'Asian' tradition.

From this, it follows that the mapping project can no longer be seen as a complete or temporary departure from 'traditional' practice in favour of a 'scientific' one, but rather as an attempt to marry selected new techniques of land surveying and modes of representation to existing practices, which fully agrees with what is known about the development of the sciences in general. As a result of this process, improved hybrid practices developed at the Qing court, constituting creative and carefully negotiated answers to contemporary needs and dynamics. In this case, this integration of cartographic practices and knowledge culminated in the largest mapping project the world had ever seen, and into the impressive set of atlases known as the 'Overview Maps of Imperial Territories'. Ultimately, it provided the Manchu court, the Chinese elites and the European readership with a clear and reliable representation of the extent and significance of Qing imperial space.

Acknowledgements: This article presents a condensed argument, tailored to historians of cartography, from the author's forthcoming book *Companions in Geography: East–West Collaboration in the Mapping of Qing China (c.1685–1735)* (Leiden and Boston, Brill, 2017).

Manuscript submitted May 2015. Revised text received August 2016.

NOTES AND REFERENCES

1. Laura Hostetler, *Qing Colonial Enterprise: Ethnography and Cartography in Early Modern China* (Chicago, University of Chicago Press, 2001), 33–37.
2. Walter Fuchs, *Der Jesuiten-atlas der Kanghsi-zeit: Seine Entstehungsgeszchichte nebst Namensindices für die Karten der Mandjurei, Mongolei, Ostturkestan und Tibet* (Beijing, Fu-jen University, 1943); Joseph Needham, *Science and Civilization in China*, vol. 3: *Mathematics and the Sciences of the Heavens and the Earth* (Cambridge, Cambridge University Press, 1959); Cordell D. K. Yee, 'Traditional Chinese cartography and the myth of Westernization', in *The History of Cartography*, vol. 2, bk. 2: *Cartography in the Traditional East and Southeast Asian Societies*, ed. John B. Harley and David Woodward (Chicago, University of Chicago Press, 1994), 170–202; Theodore Foss, 'A western Interpretation of China: Jesuit cartography', in *East Meets West: The Jesuits in China 1582–1773*, ed. Charles E. Ronan and Bonnie B. C. Oh (Chicago, Loyola University Press, 1988), 209–51.
3. Hostetler, *Qing Colonial Enterprise* (see note 1), 205–11.
4. Han Qi, 'Cartography during the times of the Kangxi emperor: the age and background', in *Jesuit Mapmaking in China: D'Anville's Nouvelle* [sic] *Atlas de la Chine (1737)*, ed. Roberto M. Ribeiro and John O'Malley (Philadelphia, St Joseph's University Press, 2014), 51-62; Bai Hongye 白鸿叶 and Li Xiaocong 李孝聪, *Kangxi chao 'Huangyu quanlan tu'* 康熙朝《皇舆全览图》 (Beijing, Guojia tushuguan chubanshe, 2014); Stephen Whiteman, 'Kangxi's auspicious empire: rhetorics of geographic integration in the early Qing', in *Chinese History in Geographical Perspective*, ed. Du Yongtao and Jeffrey Kyong-McClain (Lanham, Lexington Books, 2013), 33–54; Laura Hostetler, 'Contending cartographic claims? The Qing empire in Manchu, Chinese and European maps', in *The Imperial Map: Cartography and the Mastery of Empire*, ed. James R. Akerman (Chicago, University of Chicago Press, 2009), 93–133; Benjamin A. Elman, 'Ming-Qing border defense, the inward turn of Chinese cartography, and Qing expansion in Central Asia in the eighteenth century', in *Chinese State at the Borders*, ed. Diana Lary (Seattle, University of Washington Press, 2008), esp. 38, 42, 45; Peter Perdue, *China Marches West: The Qing Conquest of Central Eurasia* (Cambridge, Harvard University Press, 2010), 449–53.
5. Later, Jesuits Guilio Aleni (1582–1649) and Francesco Sambiasi (1582–1649) further edited Ricci's map. For a full overview of cartography in the Jesuit missions to China, see Henri Bernard, 'Les étapes de la cartographie

scientifique pour la Chine et les pays voisins: depuis le XVIIe jusqu'à la fin du XVIIIe siècle', *Monumenta Serica* 1:2 (1935): 428–77. For Sambiasi's maps, see Ann Heirmann, Paolo de Troia and Jan Permentier, 'Francesco Sambiasi, a missing link in European map making in China?', *Imago Mundi* 61:1 (2009): 29–46.

6. There is a high degree of similarity with maps in Chinese geographical works at the time, such as those included in the *Guangyu tu* 廣輿圖.

7. Eugenio Lo Sardo, *Atlante della Cina di Michele Ruggieri, S.I.* (Rome, Istituto Poligrafico e Zecca dello Stato, 1993).

8. For a comprehensive overview of both missionaries' lives and work, see Noël Golvers, 'Michael Boym and Martino Martini: a contrastive portrait of two China missionaries and mapmakers', *Monumenta Serica* 59 (2011): 259–71.

9. Martino Martini, *Novus Atlas Sinensis: Tavole* (Trento, Centro Studi Martino Martini, Università degli Studi di Trento, 2003).

10. For Jesuit-authored textual material on geography as taught in Europe at the time, an important work to mention is the *Zhifang waiji* 職方外紀, first compiled by Diego de Pantoja (1571–1618) and Sabatino de Ursis (1575–1620).

11. Lin Dongyang 林东阳, 'Ferdinand Verbiest's contribution to Chinese geography and cartography', in *Ferdinand Verbiest (1623–1688): Jesuit Missionary, Scientist, Engineer and Diplomat*, ed. John W. Witek, Monumenta Serica Monograph Ser. 30 (Nettetal, Steyler Verlag, 1994), 135–64.

12. Noël Golvers, 'An unnoticed letter of F. Verbiest, S.J., on his geodesic operations in Tartary (1683/1684)', *Archives internationales d'histoire des sciences* 50 (2000): 86–102.

13. Mario Cams, 'Restituting church buildings and negotiating church factions: missionary mapmakers and the making of local networks (1712–1716)', *Frontiers of History in China* 4:9 (2014): 489–505.

14. Virgile Pinot, *Documents inédits relatifs à la connaissance de la Chine en France de 1685 à 1740* (Paris, Geuthner, 1932), 7–9. Questions 2, 13, 14, 15, 16, and 20–28 (out of 28) are related to geography. See also Isabelle Landry-Deron, *La preuve par la Chine: La 'Description' de J.-B. du Halde, jésuite, 1735* (Paris, Éditions EHESS, 2002), 150–59.

15. Guy Tachard, *Voyage de Siam, des pères jesuites, envoyez par le roy aux Indes & à la Chine. Avec leurs observations astronomiques, et leurs remarques de physique, de géographie, d'hydrographie, & d'histoire* (Paris, Arnould Seneuze et Daniel Horthemels, 1686), 9–10. See also Catherine Jami, *The Emperor's New Mathematics* (Oxford, Oxford University Press, 2012), 102–8 and 151–56.

16. E. A. Kniajetskaia and V. Chenakal, 'Pierre le Grand et les fabricants français d'instruments scientifiques', *Revue d'histoire des sciences* 28:3 (1975): 250–57. The article includes a list of instruments purchased from the Chapotot workshops. An online catalogue of the State Hermitage Museum includes several instruments from these workshops. The catalogue is accessible via http://www.hermitagemuseum.org/wps/portal/hermitage/explore/collections/col-search/.

17. For example Antoine Gaubil, *Correspondence de Pekin* (Geneve, Droz, 1970), 33; *Qinggong Xiyang yiqi* 清宫西洋仪器, *Gugong bowuyuan cang wenwu zhenpin daxi* 故宫博物馆藏文物珍品大系 (Shanghai, Kexue jishu chubanshe, 2011), 21, 23, 29–32, 70–71, 76, 83, 128–32.

18. For Jesuit map making after Nerchinsk, for example, see Eugenio Lo Sardo, 'Antione Thomas's and George David's maps of Asia', in *The History of the Relations between the Low Countries and China in the Qing Era (1644–1917)*, ed. Willy F. Vande Walle and Noël Golvers (Leuven, Leuven University Press, 2003), 75–88; Francisco Roque di Oliveira, 'Seventeenth-century Jesuit surveys for a secure overland route from Europe to China', in *In the Light and Shadow of an Emperor*, ed. Arthur K. Wardega and António Vasconcelos de Saldanha (Newcastle upon Tyne, Cambridge Scholars Publishing, 2012), 468–501. For Gerbillon's daily observations, see Jean-Baptiste du Halde, *Description géographique, historique, chronologique, politique, et physique de l'empire de la Chine et de la Tartarie chinoise*, 4 vols. (Paris, Le Mercier, 1735), 4: 87–251.

19. As a result of the tutoring sessions, a number of tables and treatises were produced that are directly relevant to land surveying, such as the Practice of Instruments for Measuring Heights and Distances (*Celiang gaoyuan yiqi yongfa* 測量高遠儀器用法) and the Tables of Distance between the Horizon and the Terrestrial Sphere (*Dipingxian li diqiu mianbiao* 地平线离地球面表), both produced as surveyor's manuals. See Jami, *The Emperor's New Mathematics* (note 15), 142–43 and 191–95.

20. This is confirmed by several Qing and European sources, including du Halde, *Description* (see note 18), 4:241–42; *Acta Pekinensia: Western Historical Sources for the Kangxi Reign* (Macau, Ricci Institute, 2013), 36; John W. Witek, 'An Eighteenth Century Frenchman at the Court of the K'ang-hsi Emperor: A Study of the Early Life of Jean François Foucquet' (doctoral dissertation, Georgetown University, 1973), 528; *Kangxi chao manwen zhupi zouzhe quanyi* 康熙朝滿文朱批奏摺全譯 (Beijing, Zhongguo shehui kexue chubanshe, 1996), 476.

21. Du Halde, *Description* (see note 18), 4:218, 227–28; Joachim Bouvet, *Portrait historique de l'empereur de la Chine* (Paris, Estienne Michallet, 1697), 198–200; Witek, 'An Eighteenth Century Frenchman at the Court of the K'ang-hsi Emperor' (see note 20), 464–65. For examples of large instruments kept at the Palace Museum in Beijing, see *Qinggong Xiyang yiqi* (note 17), 149–58. For proportional compasses, rulers and squares, see *Qinggong Xiyang yiqi* (note 17), 64–91. A gilt-brass semicircular sundial with compass produced at the imperial workshops and dated 1701 is included in Feng Mingzhu 馮明珠, *Kangxi dadi yu taiyangwang Luyi shisi tezhan: Zhongfa yishu wenhua de jiaohui* 康熙大帝與太陽王路易十四特展: 中法藝術文化的交會 (Taipei, National Palace Museum, 2011), 150.

22. 'l'Empereur de la Chine commença, il y a environ cinq ans, d'ériger dans son propre Palais une espece d'Academie de Peintres, de Graveurs, de Sculpteurs & d'Ouvriers en acier & cuivre pour les Horloges & autres instrumens de Mathématiques. Pour piquer leur émulation, il leur propose le plus souvent pour modéles des Ouvrages d'Europe, & entr'autres de ceux qui ont été faits à Paris … il se fait apporter regulierement tous les jours à une certaine heure, lors qu'il est à Pé-king; ou de deux jours l'un, lors qu'il est dans quelqu'unes de ses Maisons de plaisance, ceux qui sortent des mains de ces nouveaux Académiciens. Il les examine luy-même; il reprend dans chacun ce qu'il y a de défectueux; il approuve ce qui merite de la loüange: il retient ceux, où il ne trouve rien à redire & qui passent l'ordinaire' (Bouvet, *Portrait historique de l'empereur de la Chine* (see note 21), 131–32). This is confirmed in an account by Jean François Foucquet (1665–1741). See Witek, 'An Eighteenth Century Frenchman at the Court of the K'ang-hsi Emperor' (note 20), 464–65.

23. Gerbillon's accounts of three such imperial campaigns, all targeting the Mongolian heartland, were edited and inserted in Du Halde, *Description* (see note 18), 4:252–288, 304–355, 356–384.

24. '自独石口至喀伦, 以绳量之有八百里, 较向日行人所量之数日见短少。自京师至独石口为路甚近, 约计不过四百二十三里。皇太子可试使人量之。喀伦地方用仪器测验北极高度, 比京师高五度。以此度之, 里数乃一千二百五十里 ...' *Siku quanshu* 四庫全書 digital database, *Kangxi yuzhi wenji, juan* 2. Quoted in Qin Guojing 秦国经, '18 shiji Xiyangren zai cehui Qingchao yutu zhong de huodong yu gongxian 18', 世纪西洋人在测绘清朝舆图中的活动与贡献', *Qingshi yanjiu* 清史研究 (1997:1): 38. *Kalun* is a rendition in Chinese of the Manchu word *karun* (meaning frontier or border). Mark Elliott, 'Frontier stories: periphery as center in Qing history', *Frontiers of History in China* 9:3 (2014): 336–60. Since precise measurements in terms of *li* are given here, I have chosen to translate this as 'border post'. This is a reference to the border of Qing and Khalka territories, as confirmed in Gerbillon's published diaries (see du Halde, *Description* (note 18), 4: 314).

25. 'pour faire la carte de päys des Kalkas, ses nouveaux suiets'. Yves de Thomaz de Bossièrre, *Jean-François Gerbillon, S.J. (1654–1707): Un des cinq mathématiciens envoyé en Chine par Louis XIV* (Leuven, Ferdinand Verbiest Foundation, 1994), 140. In his diaries, Gerbillon further mentions that the main instrument that was used during the 1698 survey was 'a semi-circle which the emperor had provided, well graduated and with a telescope ... [mounted] above the alidade' (du Halde, *Description* (see note 18), 4: 397). Gerbillon's full account of this journey can be found in du Halde, *Description* (see note 18), 4: 385–422.

26. The techniques for measuring the terrestrial degree near Beijing appear to have differed greatly from those used by Picard. For a contemporary account of the expedition, see H. Bosmans, 'L'œuvre scientifique d'Antoine Thomas de Namur, S.J. (1644–1709)', *Annales de la société scientifique de Bruxelles* 44 (1924–1925): 169–207. See also John W. Witek, 'The role of Antoine Thomas, SJ, (1644–1709) in determining the terrestrial meridian line in eighteenth-century China', in Vande Walle and Golvers, *The History of the Relations between the Low Countries and China in the Qing Era* (note 18), 89–103.

27. Recent scholarship confirms that in the case of the Qing, other practices introduced by individuals and goods arriving from afar were likewise selectively appropriated into existing frameworks. For mathematics, see Jami, *The Emperor's New Mathematics* (note 15); for medicine, see Beatriz Puente-Ballesteros, 'Jesuit medicine in the Kangxi court (1662–1722): imperial networks and patronage', *East Asian Science, Technology and Medicine* 34 (2011): 86–162.

28. Richard J. Smith, *Mapping China and Managing the World: Culture, Cartography and Cosmology in Late Imperial Times* (London, Routledge, 2013), 48–88; Yee, 'Traditional Chinese cartography and the myth of Westernization' (see note 2); Needham, *Science and Civilization in China* (see note 2).

29. Fuchs, *Der Jesuiten-atlas der Kanghsi-zeit* (see note 2), 1: 16 and 60.

30. Wang Qianjin 汪前进, '"Huangyu quanlan tu" cehui yanjiu《皇舆全览图》测绘研究' (doctoral dissertation, Chinese Academy of Sciences, 1990). The Sanson-Flamsteed projection was probably first introduced by French Jesuits, at least one of whom is known to have taken a map of Asia with him, drawn on the basis of a Sanson-Flamsteed projection in 1699.

31. Mario Cams, '18th century Qing atlas production and its European connections', in *History of the Mathematical Sciences: Portugal and East Asia V*, ed. Luís Saraiva (Singapore, World Scientific Publishing, forthcoming 2017).

32. Fuchs, *Der Jesuiten-atlas der Kanghsi-zeit* (see note 2), 1:25–27.

33. I have been able to identify two versions of the *Qinding huangyu quanlan*, in four extant copies, each containing only a small part of the entire work. First, there is the draft version, kept at two institutions: three bound parts (*ce* 册) are at the Library of Congress, Washington, while another set of more than ten *ce* is at the Sichuan University Library. Library of Congress (LC), Chinese Rare Books Dept., B118 W19, accessible online via http://www.wdl.org/en/item/4662/. A second, printed, version is kept at the National Library of China in Beijing and at the National Central Library in Taipei in, respectively, 3 and 8 *juan* (National Library of China (NLC), Rare Books Dept., SB 09779; National Central Library (NCL), Rare Books Dept., 000024). Manchu memorials dealing with the *Qinding huangyu quanlan* are also extant. *Kangxi chao manwen zhupi zouzhe quanyi* (see note 20), 434, 741 (National Library of China (NLC), Rare Books Dept., SB 09779; National Central Library (NCL), Rare Books Dept., 000024).

34. As Cordell Yee noted, cartography in continental East Asia is characterized by two tendencies, mensurational and textualist, both of which are reflected in the atlas and its textual route book companion. Yee, 'Traditional Chinese cartography and the myth of Westernization' (see note 2), esp. 109.

35. Ripa is often mentioned as the cartographer behind the copperplate atlas. It is important to note, however, that Ripa could only have supervised the process of copper-plate engraving and printing. Giovanny Stary, for example, has convincingly shown Ripa's 'total ignorance of the Manchu language', one of the two scripts used for the atlas (Giovanni Stary, 'Manchu toponomy in the atlas of Matteo Ripa', in *La missione cattolica in Cina tra i secoli XVIII–XIX: Matteo Ripa e il Collegio dei Cinesi*, ed. Michele Fatica and Francesco D'Arelli (Naples, Instituto Universitario Orientale, 1999), 188, 191).

36. Mark C. Elliott, 'The limits of Tartary: Manchuria in imperial and national geographies', *The Journal of Asiatic Studies* 59:3 (2000): 603–46, esp. 624.

37. The earliest known version, dating from 1726, is the *Gujin tushu jicheng* 古今圖書集成. Maps included in the *Gujin tushu jicheng* were later published separately throughout, it seems, the 18th and 19th centuries with titles such as *Neifu (yu) ditu* 内府(輿)地圖, *(Da Qing) yu ditu* (大清) 輿地圖 or *Qing yitong yutu* 清一統輿圖. Furthermore, under subsequent emperors, further versions of the Qing atlas were produced, all building on, or adding to, the Kangxi-era atlases. See Cams, '18th century Qing atlas production and its European connections' (note 31).

38. Du Halde, *Description* (see note 18).

39. *Nouvel atlas de la Chine, de la Tartarie chinoise et du Thibet* (The Hague, Henri Scheurleer, 1737). The complex genealogy of maps that underlies d'Anville's China maps and its pirated version is reconstructed in Mario Cams, 'The China maps of Jean-Baptiste Bourguignon d'Anville:

origins and supporting networks', *Imago Mundi* 66:1 (2013): 51–69.

Bien plus qu'un 'Atlas jésuite de la Chine': la cartographie impériale des Qing et ses connections européennes

Dans la littérature, les 'Cartes générales des territoires impériaux' ou *Huangyu quanlan tu* 皇輿全覽圖, sont généralement mentionnées comme 'l'Atlas jésuite de la Chine'. La raison en est que cet atlas de tous les territoires de la Chine des Qing, plus la Corée et le Tibet, daté du début du XVIIIe siècle, est supposé être l'œuvre de missionnaires européens ayant importé les pratiques cartographiques européennes. Dans cet essai, je montre que cette thèse est dépassée et ne peut plus être soutenue. En revisitant les fondements de l'implication des missionnaires dans les échanges cartographiques entre l'Asie et l'Europe, les techniques utilisées pour lever les territoires Qinq et la production d'atlas qui en résultèrent, je montre que le projet cartographique qui sous-tend les 'Cartes générales des territoires impériaux' est mieux appréhendé comme une réponse innovante aux besoins spécifiques de gestion de la frontière Qinq et du contrôle impérial, rendue possible par l'intégration des pratiques cartographiques de l'Europe et de l'Extrême-Orient en termes de mesure et de représentation.

Nicht nur ein Jesuiten-Atlas von China: die Kartographie der Qing-Dynastie und ihre europäischen Verbindungen

In der Literatur wird die 'Umfassende Karte der kaiserlichen Gebiete' oder *Kangxi Huangyu Quantu* 皇輿全覽圖 gewöhnlich als 'Jesuiten-Atlas von China' bezeichnet. Dahinter steht die Annahme, dass dieser Atlas des frühen 18. Jahrhunderts, der die gesamten Territorien der Qing-Dynastie sowie Korea und Tibet wiedergibt, ein Resultat kartographischer Techniken sei, die von europäischen Missionaren aus ihrer Heimatkultur mitgebracht worden waren. In diesem Beitrag belegt der Autor, dass diese Sicht überholt ist und nicht länger aufrechterhalten werden kann. Er untersucht die Hintergründe für die Einbindung der Missionare in den Austausch kartographischen Wissens zwischen Asien und Europa, die Techniken, die bei der Aufnahme der Territorien der Qing-Dynastie zum Einsatz kamen und die Herstellung der daraus resultierenden Atlanten. Der Autor zeigt, dass das hinter der 'Umfassenden Karte der kaiserlichen Gebiete' stehende kartographische Projekt am besten als kreatives Reagieren auf die einzigartigen Bedürfnisse der Verwaltung und der kaiserlichen Kontrolle in den Grenzregionen des Reiches zu verstehen ist, wobei Problemlösungen mess- und sichtbar durch die Verbindung von europäischen und ostasiatischen kartographischem Techniken befördert wurden.

No solo un atlas jesuita de China: la cartografía imperial Qing y sus conexiones europeas

Dentro de la literatura, los 'Mapas generales de los territorios imperiales' o *Huangyu quanlan tu* 皇輿全覽圖, son frecuentemente mencionados como 'El atlas jesuita de China'. La razón se debe a que este atlas de los primeros años del siglo XVIII de todos los territorios de la China Qing, más Corea y el Tibet, se consideró que era el resultado de la importación de prácticas cartográficas europeas por parte de los misioneros europeos. En este artículo argumento que esta visión está superada y no puede ser sostenida por más tiempo. Al revisar los antecedentes de la participación de los misioneros en los intercambios cartográficos entre Asia y Europa, las técnicas usadas para el levantamiento de los territorios Qing y la producción de los atlas resultantes, muestro que el proyecto cartográfico de los 'Mapas generales de los territorios imperiales' se comprende mejor como una respuesta creativa a las necesidades únicas de la gestión de la frontera Qing y al control imperial, hecho posible por la integración en términos mensurables y representativos de las prácticas cartográficas europeas y de Asia oriental.