

FIGURE 28 Sites where the missionary-mapmakers purchased and recovered churches (1712–1716).

example, did they use their status as imperial envoys to exert pressures on local Christians to subscribe to the Jesuit position, as Guigne suggests? Such questions exceed this study's scope.

Conclusion

This second intermission has explored the missionary activities of the European mapmakers during the land surveys, from which we can distill a number of relevant insights. First, the writings of Le Blanc and Guigne allow us to state with certainty that missionary-mapmakers used their capacities as imperial envoys to exert influence locally and in an attempt to further the interests of local Christian communities, as du Halde and others suggested. Second, given the factional tensions among the different Catholic orders, we must consider whether they did so selectively, as claimed by Guigne, as well as whether the missionary-mapmakers employed their status as imperial envoys for other purposes linked to tensions with their MEP and Dominican colleagues. Although these questions remain open, this discussion further contextualizes the land surveys and illustrates how some of the tensions discussed in the first intermission also had repercussions for the land surveys, even if they played out in differing ways.

CHAPTER 3

The Afterlife of Maps: Circulation, Adaptation, and Negotiation

諭內閣學士蔣廷錫、皇興全覽圖、朕費三十餘年心力、始得告成。山脈水道、俱與禹貢相合。爾將此全圖、並分省之圖、與九卿細看。倘有不合之處、九卿有知者、即便指出。看過後面奏。 438
康熙 58 年二月 12 日

Imperial order for grand secretary Jiang Tingxi. The *Overview Maps of Imperial Territories*, for which We have spent more than thirty years of mental effort, has finally been announced completed. Mountain ranges and river courses are all consistent with the *Tribute of Yu*. Together with the nine ministers, you will carefully look at this general map, and also at the provincial maps. Should there be inconsistencies, and there is someone among the nine ministers who know it, they should immediately point it out. After having looked at them, [you will] report back in person.

April 1st, 1719

••

Immediately following the land surveys, the Imperial Workshops began producing different editions of the resulting atlas, the *Overview Maps of Imperial*

438 *Kangxi chao shilu, juan 282*. For a translation of the entire passage, see Fu (1966), 127–128.

Jiang Tingxi (1659–1732) was one of the four earliest grand secretaries and would continue to serve under the Yongzheng emperor. Hummel (1943), 142–143. “More than thirty years” confirms that in retrospect the Kangxi emperor saw the preliminary work (Chapter 1) and the more intense period of land surveying (Chapter 2) as one and the same project. The *Tribute of Yu* (*Yugong* 禹貢) is the oldest known book on geography in East Asia and appears in the *Book of Documents* (*Shujing* 書經), one of the Five Classics of Chinese literature. This reference also confirms the emperor’s attention to ancient precedents in establishing new Qing cartographic practice (Chapters 1 & 2).

Territories or *Huangyu quanlan tu* 皇輿全覽圖.⁴³⁹ In later decades, these would form the basis for further adaptations and reduced maps in imperially commissioned compilations. At the same time, missionaries involved in the project sent a vast corpus of maps and descriptions back to Europe, igniting a period of intense broader exchanges relating to cartography. Much of the material eventually concentrated in Paris and inspired plans for a European incorporation of the Qing atlas. The young French cartographer Jean-Baptiste Bourguignon d'Anville (1697–1782) undertook the commission, basing most of his adaptations directly on maps the missionaries had sent. After finishing these adaptations, d'Anville also produced four overview maps, based only loosely on the Qing atlas, following careful negotiation of cartographic data among Beijing, Paris, and Saint Petersburg. This triangular exchange of cartographic material in the 1720s and early 1730s also informed a revision of the Qing atlas under the Yongzheng emperor and shaped the mapping of Central Asia in Saint Petersburg.

In 1735, finally, more than fifteen years after the first maps had reached Paris, d'Anville's forty-one regional and general maps of the Chinese provinces, Tartary, Tibet, and Korea appeared as part of an expensive four-volume description of continental East Asia entitled *Description géographique, historique, chronologique, politique et physique de l'empire de la Chine et de la Tartarie chinoise*.⁴⁴⁰ Immediately after publication, d'Anville's collection of maps became the focus of much debate and enjoyed such wide circulation that still other cartographers would themselves later carefully rework these European adaptations from the Qing atlas. As a result of this long process of circulation, adaptation, and negotiation of cartographic data, both the Qing atlas and its European incorporation remained the authoritative cartographic works on continental East Asia until well into the nineteenth century.

With its main focus on the circulation of the Qing atlas and the process of its adaptation for the European reading public, this chapter discusses how maps gradually transferred between individuals, reworked and eventually adapted to fit new audiences' visual and cultural expectations. Ultimately, this led to an eventful afterlife for these maps on both ends of the Eurasian continent. I initiate my analysis with an examination of the different printed editions and manifestations of the Qing atlas. Next, I conduct a detailed analysis of its

⁴³⁹ I could not ascertain the Manchu name for the atlas.

⁴⁴⁰ du Halde (1735). The name "Tartary" referred at the time to almost the entire area lying between the Chinese provinces and Muscovy, much of it inhabited by nomadic peoples. It equates approximately with present-day northeastern China (or Manchuria), Mongolia, Xinjiang, and parts of Siberia and Central Asia.

European incorporation, discussing d'Anville's work as well as the first steps in the publication process. Finally, I will explore how certain gaps in cartographic information stimulated a process of negotiating indirectly obtained data among Beijing, Paris, and Saint Petersburg, on the one hand allowing revision of the Qing atlas while on the other facilitating the completion of d'Anville's four general maps. In all, this chapter aims to retrace the many connections that guided the circulation of these maps across Eurasia, in itself the result of the circulation of cartographic practices over previous decades, thereby illustrating their wide impact.

3.1 The Printed Life of the Overview Maps of Imperial Territories

None of the maps printed in the Imperial Workshops immediately following the land surveys were available for public sale before the twentieth century. Instead, at least for the remainder of the Kangxi emperor's reign, they remained at court for perusal by the emperor and senior court officials. Only significantly reduced versions eventually made it into large imperial compilations, treating other matters alongside geography, that circulated widely.

Walter Fuchs, in a comprehensive study on the subject, has argued for the production of different versions of the Qing atlas for consultation at the palace. At the time of writing, Fuchs had access to cartographic material kept at several institutions in Beijing. Based on a detailed analysis, he distinguishes among three different printed editions of the Qing atlas during the Kangxi reign. The first edition, he argues, printed in 1717 using woodblocks, contains twenty-eight separate and regional maps of the Chinese provinces, different parts of Tartary and Tibet, and Korea. The second, printed from copperplates by the Italian missionary Matteo Ripa and completed in 1719, consists of forty-one individual sheets combining to form one large map and incorporating updated depictions of the Tibetan highlands. A third edition, again from woodblocks, produced in 1721 as a revision of the first, includes seven updated regional maps, which also depict parts of today's Xinjiang province, in the place of the Tibetan maps of 1717.⁴⁴¹

Although I largely follow Fuchs' distinction between the two main versions of the Kangxi-era Qing atlas, the woodblock atlas and the copperplate multi-sheet map, I argue that the copperplate version was subject to the same revision process as the woodblock atlas during the years immediately following the completion of the land surveys. The 1717–1718 survey of the Tibetan

⁴⁴¹ Fuchs (1943), 116 & 60.

highlands (Chapter 2) had improved cartographic knowledge of the region and prompted adjustments to both the woodblock and the copperplate atlases to accommodate the new data. My argument depends on a close comparison of extant copperplate sheets and a reinterpretation of Fuchs' own scholarship, in which he claimed to have identified a "draft copy" of the copperplate atlas.⁴⁴² I will show that the dynamics informing the differences between the first and second editions of both the woodblock and the copperplate versions were remarkably similar. In so doing, I discuss all printed editions resulting from the land surveys during the Kangxi reign as well as their later adaptations under subsequent emperors, laying out a foundation for further exploration of the afterlife of these maps.⁴⁴³

3.1.1 *The Woodblock Editions*

The carving and printing for the two woodblock editions of the Qing atlas, also known as the *Overview Maps of Imperial Territories per Province* or *Huangyu quanlan fensheng tu* 皇輿全覽分省圖, took place at the Imperial Workshops. This occurred in the *xiushuchu* 修書處, the court's printery, located just north of the palace's *Wuyingdian*. It seems the woodblock atlas formed a set with the *Imperial Commissioned Overview of Imperial Territories*, the large route book (produced simultaneously) discussed in Chapter 2. Both the maps and their textual companion, printed by and for the court, were newer, it seems, available for sale as such before the fall of the Qing in 1911.

The first edition of the woodblock atlas (scale 1:2,000,000), carved and printed around 1717, contains twenty-eight separate and regional maps of varying sizes of:

- The Manchurian homelands and outlying regions north of the Great Wall, including Shengjing 盛京 (present day Liaoning 遼寧), the Amur River basin, and the Ussuri River basin (5 maps);
- (Khalka) Mongol territories and outlying regions, including today's inner and outer Mongolia up to Lake Baikal and down to Hami (4 maps);
- The headwaters of the Yangzi, Yalong and Yellow rivers (3 maps);

442 Fuchs (1943), 125–27.

443 Several manuscript editions of the Qing atlas reside in the main libraries and archives of mainland China, but are not available for consultation at the time of writing. As a result, this chapter only considers printed editions. For a taste of the wealth of maps at The First Historical Archives of China 中國第一歷史檔案館, see Li (2012), 66–78.

- The Korean peninsula (1 map); and
- The fifteen Chinese provinces (15 maps).⁴⁴⁴

On maps of clearly delineated regions such as the Chinese provinces, Shengjing, Korea, and regions in the immediate vicinity of the Great Wall, those lands beyond the indicated provincial, state, and internal boundaries (such as the Great Wall) remain consistently left blank (figure 29). Together with the sequence of these maps within the atlas, these blank spaces suggest that the printed versions depended directly on the manuscript maps drawn in the field: particularly in the first edition woodblock atlas, the order of the different sets of maps as outlined above largely coincides with the order of the areas surveyed, just as those areas the maps depict or leave blank largely correspond to the geographic scope of the areas each team surveyed.⁴⁴⁵

The maps' empty spaces (beyond regional borders) contain the map titles as well as the names of bordering regions (only the latter in maps of the Chinese provinces (figure 37)). Degrees of latitude and longitude relative to the main meridian through Beijing appear beyond the gridlines on all four sides. The maps exaggerate the sizes of rivers because double lines depict their courses and mountain pictograms appear scattered rather randomly across the map in mountainous regions. These maps' precision, then, lies entirely in the placement of cities, towns, and, to some extent, the national, provincial, and internal boundaries within the gridlines. Squares indicate the prefectural, departmental, and district seats while small circles signify smaller towns. In areas lacking natural boundaries such as large rivers, dotted lines delineate provincial territories. The woodblock maps use only Chinese, although Manchu toponymy and terminology form the basis for Chinese-language renditions of place names and other information for areas outside the Chinese provinces to the north and west of the Great Wall.⁴⁴⁶

Compared to the first edition of the woodblock atlas, the revised edition first printed around 1721 is identical apart from the sheets covering Tibet and the northeastern part of today's Xinjiang (all other maps remain unchanged).⁴⁴⁷

444 Fuchs (1943), 124–8.

445 With the exceptions of Korea, for which teams only surveyed the main road connecting the capital with Qing territories; and the headwaters of the Yangzi, Yalong, and Yellow rivers, located in Kokonor, a region not surveyed until 1717–1718 (Chapter 2). These maps do not match the accuracy found on other sheets and therefore must borrow from earlier maps.

446 Stary (1997), 192.

447 Volume 2 of Fuchs (1943) includes facsimile versions of all 1717 and 1721 maps. I have not been able to consult a complete first edition of the woodblock atlas.

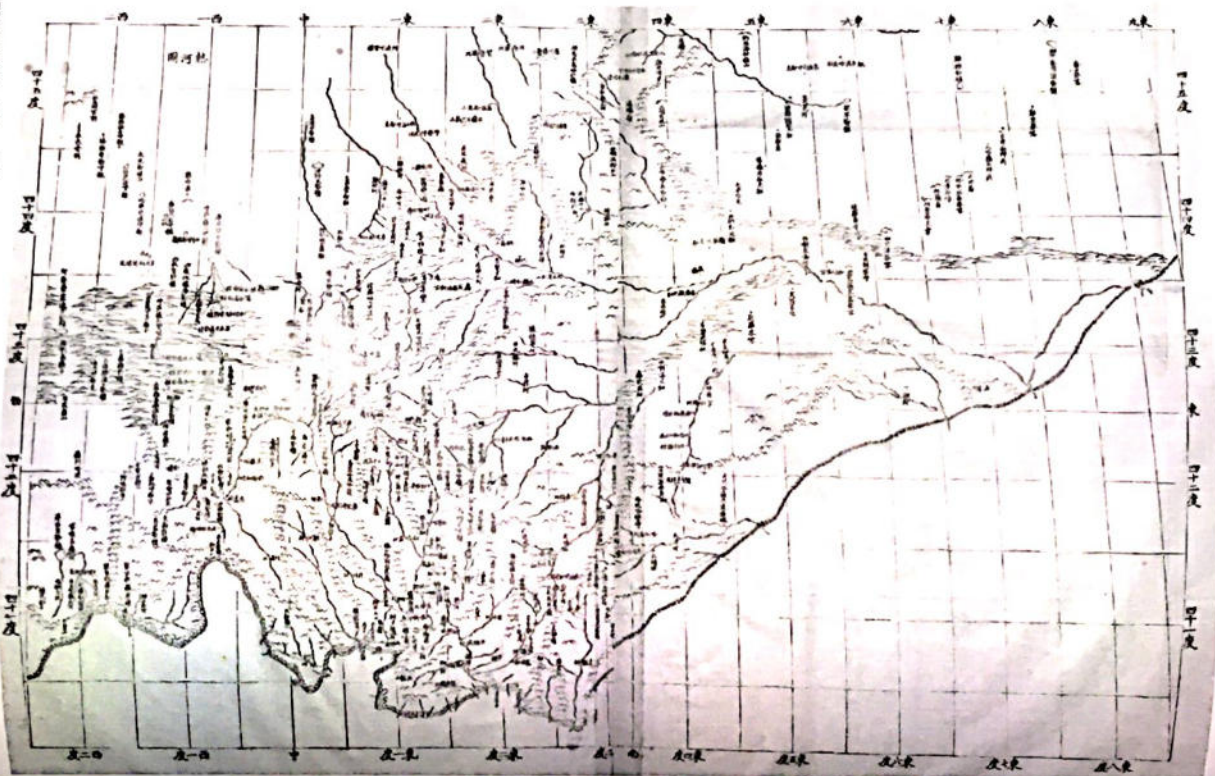


FIGURE 29 Map of the region of Rehe, taken from a woodblock atlas. Territories in Shengling (bottom-right) and within the Great Wall (bottom) are blank. All place names are in Chinese (c. 31 × 54 cm).

ROYAL LIBRARY OF BELGIUM, LP VB II.283 E (2), F.6.

TABLE 8 The two woodblock editions compared

First woodblock edition sheets (1717)	Revised woodblock edition sheets (1721)
<i>Heyuan tu</i> 河源圖 (Upper Yellow River)	<i>Heyuan tu</i> 河源圖 (Upper Yellow River)
[no title] (Yalong river)	<i>Jinsha langcang deng Jiangyuan tu</i> 金沙瀾滄等江源圖 (Upper Yangtze/Mekong)
[no title] (Upper Yangtze/Mekong/Salween)	
<i>Hami tu</i> 哈密圖 (Hami)	<i>Hami Gasi tu</i> 哈密噶思圖 (Hami-Gas)
(not included)	<i>Zawang Aerbultan tu</i> 雜旺阿爾布灘圖 (Tsewang Rabdan)
	<i>Lazang tu</i> 拉藏圖 (Central Tibet)
	<i>Yalu Zangbu tu</i> 雅魯藏布江圖 (Brahmaputra)
	<i>Gangdisi Alin tu</i> 岡底斯阿林圖 (Kailash)

According to Fuchs, the survey of the Tibetan highlands in 1717–1718 enabled the drawing of seven new maps covering the Tibetan regions depicted in the 1717 first-edition woodblock atlas' four maps plus additional territories in Tibet proper (table 8).⁴⁴⁸ The carving for these sheets, however, only occurred in 1721 following a full revision of the Chinese renditions of place names.⁴⁴⁹ The Imperial Workshops then printed the revised woodblock atlas simultaneously with its textual companion, the *Imperial Commissioned Overview of Imperial Territories*.⁴⁵⁰

One opportunity for improving Fuchs's findings, which date back to the 1940s, lies in close study of these different editions' extant sheets. At present, unfortunately, maps in mainland China are difficult to consult in best, so that here I can discuss only a limited number of maps mentioned in

⁴⁴⁸ Fuchs (1943), 116.

⁴⁴⁹ Fuchs (1943), 143–44. Fuchs quotes a passage from the *Kangxi chao shilu*, which announces a revision of Tibetan place names. *Kangxi chao shilu*, juan 290.

⁴⁵⁰ Chen (1990), 107.

catalogues.⁴⁵¹ In Europe, on the other hand, the sheer quantity and dispersal of extant sheets makes consulting them all quite impracticable. Even though I have not been able personally to consult many of the copies mentioned in this chapter, I still intend to give a comprehensive overview of extant Kangxi-era sheets from the Qing atlas.⁴⁵²

I have been unable to locate a first-edition woodblock atlas, although at least one set reached Paris before 1720 and Fuchs himself allegedly owned one.⁴⁵³ On the other hand, of the very rare revised edition of 1721, I have found only one complete copy, in the British Library.⁴⁵⁴ Other extant copies are incomplete or adaptations: a nearly complete copy resides at the Royal Library of Belgium, given to the Jesuit College at Lille by François Noël (1651–1729),⁴⁵⁵ the Library of Congress possesses a carefully executed manuscript version of fourteen Chinese provinces and the map of Shengjing, clearly based on the woodblock atlas;⁴⁵⁶ and in the National Library of China in Beijing another incomplete copy of the revised edition survives.⁴⁵⁷ The National Library of France, finally, harbors thirteen sheets with a blue silk border, all revised-edition maps of regions outside the Great Wall. The title of each map transcribed into Russian appears on the back, with place names transcribed in French on the front (figure 30).⁴⁵⁸ The lore surrounding it claims it was a gift to Russian ambassador Lev Vasilievich Izmailov (1685–1738) the same year of its production, but it perhaps more likely reached Saint Petersburg via correspondence at a later date.⁴⁵⁹ Decades later, the atlas reached Paris either with Joseph-Nicolas

451 At the time of writing, maps kept in The First Historical Archives of China were unavailable for consultation.

452 An annex to this chapter contains a schematic overview of extant atlas sheets.

453 Fuchs (1943), 125. In this case, a 1717 atlas may still reside at the Peking University Library with the remainder of Fuchs's collection, but I could not confirm this. For the atlas that reached Paris, see Gaubli (1970), 216.

454 British Library (hereafter BL), Maps C.n.D.15. A later reprint of these maps (c. 1850) is at BL OC 15270.E.4; Li (1996), 165–166.

455 Koninklijke Bibliotheek België (hereafter KB), LP VB II 283 E(3); Dudink (2006), 85–87; Li (2004), 13–14. Unclear provenance, perhaps later copies. Viewable in Lin (2013), 75–76; or online at <http://www.loc.gov/item/2002626779/>.

456 *Yaku yaoku* (1997), 38.

457 BNF, Cartes et plans, Ge CC 4461 (RES).

458 Fuchs (1935), 398; Isnard (1917), 177; Cordier (1966), 1284. The extant documents from the Ismailov embassy only mention that Kangxi showed Ismailov a map which they viewed together, initiating a discussion of different European countries. Demidova (1978), 123. I am indebted to Gregory Adnogenov for this reference.



FIGURE 30.1 *The Rehe map from the revised woodblock atlas, with Russian and French transcriptions (c. 38 × 55 cm).* BIBLIOTHÈQUE NATIONALE DE FRANCE, CARTES ET PLANS, GE CC 4461 (RES).

Delisle on his return to France in 1747 or following negotiations on the transfer of maps between the two cities by French cartographer Jean-Baptiste Bourguignon d'Anville during the 1740s.⁴⁶⁰

3.1.2 *The Copperplate Editions*

A stylistically very different version of the Qing atlas was printed from copperplates, a process introduced by the Italian missionary Matteo Ripa. Wang Qianjin has shown that the projection used for this version and, it seems, for the woodblock version as well, is that commonly known as Sanson-Flamsteed, probably introduced by either Joachim Bouvet or Pierre Jartoux in the late 1690s.⁴⁶¹ This sinusoidal projection allows measurement of true north–south

460 Dulac (2002), 265.

461 Wang (1990); Wang (1991); Wang (1995). Bouvet carried a map of Asia drawn on the basis of a Sanson-Flamsteed projection (Chapter 1) with him, whereas we know Jartoux to have occupied himself with the projection and the integration of the draft maps immediately after the land surveys (Chapter 2).

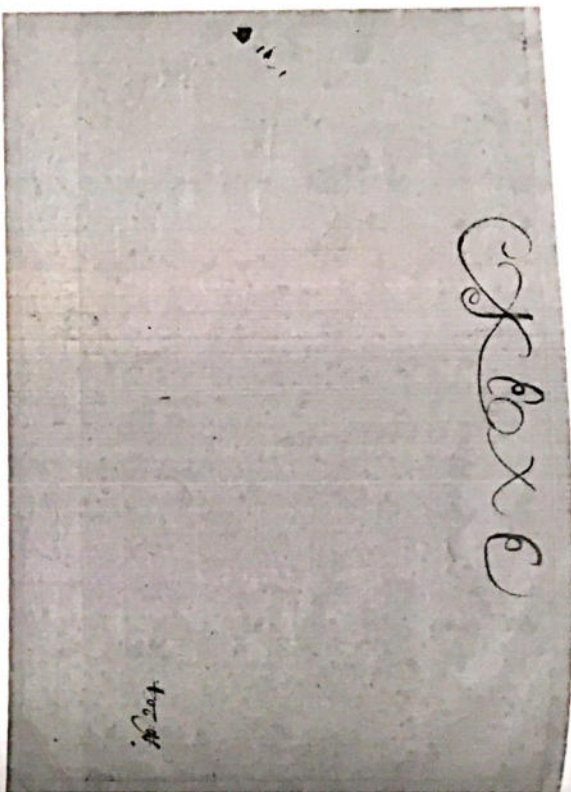


FIGURE 30.2 The *Rehe* map from the revised woodblock atlas, with Russian and French transcriptions (c. 38 × 55 cm), BIBLIOTHÈQUE NATIONALE DE FRANCE, CARTES ET PLANS, GE CC 4461 (RES).

distances or latitudinal distances directly on the map where the parallels intersect with the main meridian.⁴⁶² Thus, another major practical advantage of this projection is that large maps divide readily into rectangular sheets easily reassembled after printing. Most extant copies of the copperplate atlas indeed consist of eight horizontal scrolls further divided into forty-one individual sheets (printed from forty copperplates) of about 40 × 66.5 cm (scale 14,000,000). Some sources mention more sheets, but include those lacking cartographic content. The sheets combine to form one large map of c. 3.2 × 4.7 meters (figure 31). One striking feature of the copperplate atlas is that place names for the fifteen Chinese provinces appear in Chinese, whereas those of areas outside the Great Wall and in Tibet and Korea are in Manchu.⁴⁶³ This feature, when considered alongside the fact that the copperplate atlas is in fact a multi-sheet map rather than an atlas, suggests the Imperial Workshops first

⁴⁶² Meskens (1998).

⁴⁶³ Place names for the Korean peninsula are in fact Manchu transcriptions of the Chinese pronunciations of Korean denominations. Stary (1997), 191.

produced it as a separate empire-wide map for the emperor's perusal, unlike the woodblock atlas that presumably formed a set with the *Imperially Commissioned Overview of Imperial Territories*.⁴⁶⁴ In other words, the copperplate atlas was a Manchu representation of Qing space for the emperor and perhaps the imperial clan generally, while the woodblock atlas and its textual companion catered more towards the court's scholarly officials.

Another feature, also to be found in the woodblock atlas but far more noticeable in the copperplate one, is the empty spaces in eastern Taiwan and in Guizhou province. They appear entirely blank in print, but extant sheets in European libraries and archives often carry explanations added later.⁴⁶⁵ The following note appears in an empty space on one of these sheets:

Land called Miao tsu [sic]. Although it stands in the middle of the Chinese Empire, it is not subject to it. It has its own Prince. The people of this land are much stronger than those of China. They have different customs and language. [This land] is quite mountainous. The same I say of those two other lands lateral to it.⁴⁶⁶

Such manuscript comments on extant copperplate sheets in European institutions come mostly from the hand of Matteo Ripa, often credited as the copperplate atlas' sole author. Ripa's edited diaries, however, give a different perspective on his involvement in their production:

The Emperor had long desired to have someone in his service who could engrave the geographic map mentioned above. He accordingly inquired whether... I understood anything besides music, mathematics, and painting... I said that I knew something of optics, and also the theory, although not the practice, of the art of engraving on copper with *acquafor-tis*. His Majesty was highly pleased to hear that, [and] although I had not

⁴⁶⁴ It remains unclear whether or not the copperplate version or multi-sheet map in fact appeared bound together in a book after printing. Hence, I choose to use the term "atlas" to refer to both the woodblock and the copperplate versions.

⁴⁶⁵ The extant sheets in Naples and London (see below) contain such additions. The sheets kept in Brussels carry notes in Latin, most likely by the hand of François Noël.

⁴⁶⁶ "Miao tsu" stands for the Miao people or *Miaoza* 苗族. "Terra chiamata Miao tsu. Benchè sia in mezzo l'Imperio di Cina, non sià però soggetta all'Imperio della Cina. Ha Principe a parte. La di lei gente è assai più forte della gente di Cina. Ha costume, e favèla diversa, è assai montuosa. L'istesse dico delle due terre à quella laterali." Stary (1997), 191.

practiced the art of engraving, I was ready to attempt it, and he immediately ordered that I should begin to engrave. In the shortest time possible, I, with a point, traced a landscape upon a plate coated over with lamp-black, as a preparation for the *aquafortis*; and I had scarcely done this when the Emperor desired to see it. As subjects on plates thus prepared present a very handsome appearance, the Emperor was delighted with it, and commanded his Chinese painters to draw a landscape, in order that I might afterwards engrave it. As soon as it was done it was shown, together with the original, to his Majesty, who expressed considerable delight and surprise at finding the copy so perfectly similar to the original without this being impaired; for this was the first time that he had seen an engraving on copper, the Chinese making theirs by fixing the drawing on a block of wood and cutting them both at once with a chisel... he ordered me to engrave and arrange together in the same manner the great map of the empire, which I afterwards executed in forty-four plates, as may be seen in the hall of our college.⁴⁶⁷

Ripa's unedited diary dates the imperial order that he engrave the maps onto copperplate to May 22nd, 1714, shortly after he had showcased his engraving skills with the thirty-six views of the imperial retreat at Rehe, but years before the surveys' completion in 1718.⁴⁶⁸ What we do not know, however, is for precisely how long or when Ripa worked on his engravings, even though this date suggests his involvement in atlas production from early on. More unanswered questions exist with regard to Ripa's exact role in the production process. Based on a linguistic analysis of place names north of the Great Wall, Giovanni Stary has argued that Ripa could not have had much knowledge, if any, of the Manchu language, but must have relied instead on the collaboration of two clerks (*baizangga*) from the Imperial Workshops.⁴⁶⁹ When we put

467 Ripa refers to the Collegio dei Chinesi di Napoli, which he founded after his return to Europe. Quote taken from an English-language narrative based on Ripa's writings. Prandi (1855), 66 & 88. English translation from an Italian original. Ripa (1832), 408–409 & 463–464. Ripa's actual diary corresponds to this text but gives the date of the imperial order Ripa (1991–6), 2336. Note that Ripa here mentions forty-four plates, presumably including some of the empty plates that make up the square (figure 31).

468 Ripa (1991–6), 2336. The thirty-six views of Chengde, which Ripa refers to as "landscapes" in the quote above, have received extensive study. Gray (1960); Li & Wang (2006); Strassberg (2016).

469 Stary speaks of a "total ignorance of the Manchu language." Stary (1997), 188 & 191. For another article on the same subject, see Stary (2006). *Baizangga*, which I translate as "clerks," were helpers at the Imperial Workshops (Chapter 2). Albanese (2006), 57.



FIGURE 31 All forty-one sheets from the 1719 revised edition of the copperplate atlas, printed from forty copperplates and forming one large map (c. 3.2 x 4.7m). The two sheets marked with an asterisk were engraved using the same copperplate. Arrows mark the empty spaces.
DIGITALLY ASSEMBLED BY LIEVEKE OP TEN BERG.

Stary's claim next to the excerpt quoted above, in which Ripa claims to have merely engraved works others had already produced, it seems safe to assume he merely oversaw the technical execution of the copperplate printing process, since he had introduced the technique to the Qing court.

The technique of copperplate printing consists of engraving a design onto plates of polished copper subsequently coated with wax (Ripa claims to have used lamp-black instead). The actual engraving involves a sharp needle-like tool called a burin. The engravers likely executed coastlines, gridlines, and rivers first, followed by vegetation and depth elements such as shadowing along coastlines. Toponyms must have come last, since they constitute the most challenging aspect of copper engraving: the plate is a mirror image, requiring the engraving of all text in reverse. After all the engraving is done, the engraver dips the plate in nitric acid (which Ripa calls "*aquaforis*"), a process that permanently etches all the exposed areas of the copper plate while leaving unmarked those still coated with wax. Ink wiped over the cleaned plate will then adhere only to the etched lines. The printer then finally applies damp paper under pressure, producing a positive image of the plate. Evidence suggests that Ripa experimented with several local types of acid before perfecting his technique.

Whereas I have so far mentioned only the 1719 edition of the copperplate atlas, several elements suggest the existence of two different editions. Fuchs argues for the production of a draft version in 1717, listing important differences among the copies he was able to consult in China.⁴⁷⁰ These discrepancies also appear in different extant copies in Europe. The Italian Geographic Society, the Royal Library of Belgium, and the British Library all possess copperplate sheets containing clear differences from printings of the 1719 copperplates.⁴⁷¹ Most important, these sheets display a rather sketchily executed depiction of Tibetan areas, for example in depicting areas in today's western Sichuan, whereas the 1719 edition contains more precise depictions and even includes routes and important temples (figures 32 & 33). The same is true for areas west of the Great Wall around Hami.

Detailed comparison confirms that these sheets were part of an earlier edition of the atlas lacking the updated data from the Tibetan survey of 1717–1718. This comparison of extant sheets could provide the basis for an attempt at

reconstructing the 1717 copperplate atlas (figure 34), although further consultation of extant sheets could help to improve it. The wall map kept at the Istituto Universitario Orientale in Naples, mentioned in the quote above and donated by Ripa himself, matches this reconstruction almost perfectly.⁴⁷² The existence of this 1717 edition copperplate atlas also corresponds with the evolution of the woodblock atlas, including, as discussed above, entirely revised Tibetan maps after 1717. The fact that Ripa claims involvement in atlas production from 1714 onwards further supports the possibility that the same revision process shaped the different editions of the woodblock and copperplate atlases. Based on these insights, we can construct an improved timeline for atlas production at the Qing court during the late Kangxi years (table 9). The table partly corresponds with the timeline proposed by Fuchs, illustrating that the production processes of both the woodblock and the copperplate atlases played out in parallel.

The annex inserted at the end of this chapter summarizes the extant copperplate sheets forming the basis for my analysis. Regarding those I have been unable to consult personally, I accordingly cannot at present determine whether they are first- or second-edition copperplate sheets. In mainland China, two different sets of unknown quantities of copperplate sheets reside at the Dalian Library, while twenty-eight copperplate sheets are at the Peking University Library, and nine sheets are in the National Library of China. The latter correspond to the two upper rows of the copperplate version and carry a number of Latin transcriptions.⁴⁷³ Reproductions in a number of catalogues show notes in Italian, such as "*pozza*" (well) and "*loco di posta*" (postal station), on different sheets.⁴⁷⁴ The autograph appears to resemble strongly that of Matteo Ripa. On the other hand, several European libraries also preserve incomplete copies of the copperplate atlas: the National Library of France owns twelve sheets, constituting the three upper rows depicting regions north of the Great Wall; the Royal Library of Belgium has an incomplete copy of the first copperplate edition; the Italian Geographic Society harbors two sets mixing both editions;⁴⁷⁵ in Saint Petersburg, finally, three incomplete sets of sheets

472 Compared to the reproduction included in Petech (1953).

473 Dudink (2006), 90; *Yixu yaolu* (1997), 38; Huang (2010), 358–361; *Beijing daxue tushuguan cang guji shanben shumu* (1999), 115.

474 Huang (2010), 358–359 (bottom-middle); KBB, LP VB 11.283 E(2); 5G1, China 170 & 257. See also Dudink (2006), 87–92; Cerriti (2001), 62–63; LI (1996), 163. I am indebted to Ad Dudink for his excellent bibliographical references to extant copies of the copperplate atlas. The Brussels copy includes Latin notes in pencil.

470 Fuchs (1943), 25–27.

471 Società Geografica Italiana (hereafter SGI), China 257. See also Cerriti (2001), 62–63; KBB, LP VB 11.283 E (2). See Dudink (2006), 89–91, Maps K Top 116-15-16a-16b. I compared these sheets to the reproductions of the 1719 copperplate edition in Wang & Liu (2007), vol. 1. See also LI (1997), 127.



FIGURE 32 First edition copperplate atlas, sheet 4 of row 5 (c. 40 × 66.5 cm). Territories in Sichuan (right) include place names in Chinese, while those in the Tibetan highlands (left) are in Manchu and contain large blank spaces. ROYAL LIBRARY OF BELGIUM, LP VB 11.283 E (2), FOL. 14.

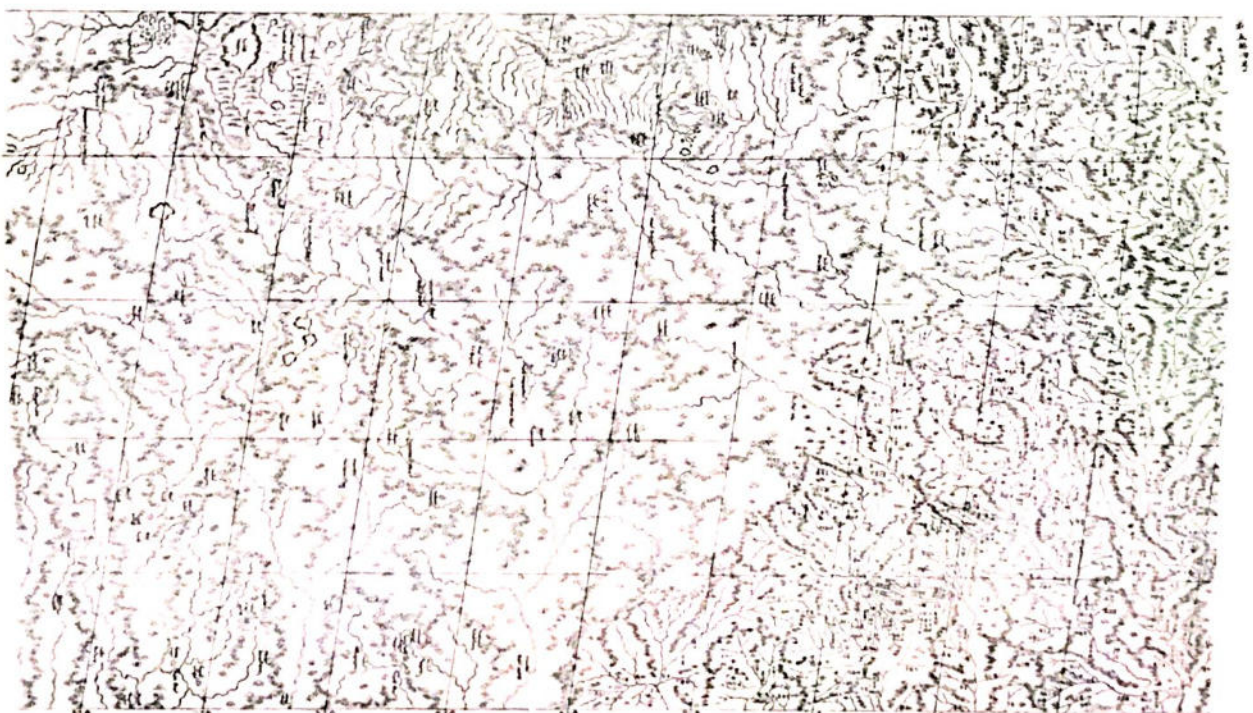


FIGURE 33 Revised copperplate atlas, sheet 4 of row 5 (c. 40 × 66.5 cm). Tibetan areas include more detail compared to the corresponding first-edition sheet in figure 32. Dotted lines indicate routes. TAKEN FROM WANG & LIU (2007), VOL. 1.



FIGURE 34 Attempted reconstruction of the 1717 first edition copperplate atlas, with the Sichuan sheet (figure 32) inserted and unformed by extant sheets. Sheets indicated with an asterisk were replaced in the revised edition. Compare to figure 31.

TABLE 9 Timetable of map production during the late Kangxi years.

1717	– Return to Beijing of the last team of mapmakers including missionaries
–	A team not including missionaries goes to survey Tibet
–	Completion of the first woodblock and copperplate editions
1718	– Return of the team sent to survey Tibet
–	Completion of the revised maps in manuscript form ⁴⁷⁶

⁴⁷⁶ Fuchs (1943), 135–36 & 60.

- 1719 – Completion of the revised copperplate edition
- Presentation of the revised copperplate edition to the emperor⁴⁷⁷
- 1720 – Thorough revision of Chinese renderings of Tibetan place names⁴⁷⁸
- 1721 – Completion of the revised woodblock edition and route book companion

covering areas north of the Great Wall are at the Institute of Oriental Studies of the Russian Academy of Sciences.⁴⁷⁹ According to Giovanni Stary (I have not been able to verify this), Ripa personally handed one of these sets over to an Italian member of the Izmailov mission as a gift to the Russian Tsar.⁴⁸⁰

European institutions own at least four other copies brought back by Matteo Ripa himself, who returned to Europe aboard an English ship in 1724. These copies contain personal annotations and borders often traced in colored pencil. One such, a mixed copy on three large scrolls that Ripa donated to King George I (r. 1714–1727) as he passed through London, is at the British Library.⁴⁸¹ One of these scrolls forms part of a 1717 edition, thus including the first-edition Sichuan sheet (figure 32). The other two scrolls simply add parts of the revised edition to the 1717 sheets. All scrolls include notes in Ripa's own hand. Ripa also separately drew the coastlines as depicted on the copperplate atlas on four large sheets.⁴⁸² Second, a copy resides in Bologna alongside explanatory documents regarding the several experiments conducted before Ripa's perfecting of the printing process, identifying the Bologna copy as an early specimen Ripa kept for himself.⁴⁸³ Third, as mentioned in the excerpt quoted above, the Istituto Universitario Orientale in Naples (formerly the Collegio dei Chinesi di

⁴⁷⁷ In the quote cited at the beginning of this chapter, the emperor asks grand secretary Jiang Tingxi to check the atlas for mistakes. A memorial to the Qianlong emperor credits Jiang Tingxi with responsibility for the production of the woodblock atlas. AGS, 177892–001.

⁴⁷⁸ Fuchs (1943), 143–44.

⁴⁷⁹ Described in a catalogue by Tajana Pang, Pang (2001), 168–170.

⁴⁸⁰ Stary (2001).

⁴⁸¹ BL, Maps K Top u6 15-15a-15b. Gray (1960), 40; Li (1996), 163; Albanese (2006), 64.

⁴⁸² BL, Maps K Top u6 18.2 TAB.

⁴⁸³ This perhaps explains further inconsistencies in the sheets extant in Europe. Dudink (2006), 89–90. “ventò egli l’impresa, e doppo varj esperimenti fattu prima coll’acqua forte, e poi col Bolino, le riuscì finalmente di intagliarla col Bolino, ed indi impressa al modo Europeo presentarla all’Imperadore, ritenendo per se pochissimi Esemplari, dei quali uno è il presente.” Albanese (2006), 62.

Napoli) harbors a first-edition copy donated by Ripa, the college's founder.⁴⁸⁴ Ripa himself transliterated place names, traced provincial borders in color, and wrote explanatory notes where he felt necessary. Finally, a copy in forty sheets donated to Holy Roman Emperor Charles VI (r. 1711–1740) on August 21st, 1726 in an effort to elicit financial support for the College in Naples resides in Vienna.⁴⁸⁵

Last, the original copperplates for the revised copperplate atlas came to light in Shenyang in the 1920s, enabling new prints published in 1929 and 2007.⁴⁸⁶ The recent facsimile publication appeared in a set including both the Yongzheng and Qianlong editions discussed below and has attracted scholarly attention to the revised copperplate atlas. In contrast, scholars seldom consider the woodblock editions.

3.1.3 *Imperialy Commissioned Compilations and Later Renditions*

The woodblock and copperplate versions of the Qing atlas described above, each of which appeared in two different editions, were not the only maps directly linked to the land surveys of the late Kangxi reign. A number of later compilations included strongly reduced maps, no less based on data from the surveys, often alongside textual descriptions of (parts of) Qing territories. The earliest version, dating from 1726, the *Comprehensive Collection of Books and Pictures of the Past and Present* or *Gujin tushu jicheng* 古今圖書集成,⁴⁸⁷ includes maps of the different provinces and regions, strongly reduced and without gridlines, as well as 216 prefectural maps printed from woodblocks. Separate publications of maps included in the *Comprehensive Collection* occurred, it seems, throughout the eighteenth and nineteenth centuries, with titles such as *Maps from the Inner Palace* (*Neifu yu ditu* 內府輿地圖), *Maps of Qing Territories* (*Da Qing yu ditu* 大清輿地圖) or *Maps of the Unified Qing* (*Qing yitong yutu* 清一統輿圖).⁴⁸⁸ These works sometimes include all

484 Petech (1953). The map carries the title *Yuzhi da Qing yitong quantu* 御制大清一統全圖, which does not appear in contemporary Qing sources. The handwriting of these characters is rather bad, suggesting Ripa wrote them himself. See also Li (1996), 163; Fatica (2006), 206–208; Albanese (2006), 62.

485 Albanese (2006), 66.

486 Wang & Liu (2007). The 1929 print, which I have not consulted personally, carries the title *Man-lan hebi Qing neifu yitong yudi mitu* 滿漢合璧清內府一統輿地秘圖.

487 Fuchs (1943), 1: 48–56 & 60. Note that Jiang Tingxi, one of the grand secretaries and mentioned in the quote at the beginning of this chapter, was responsible for compiling these volumes.

488 The National Library of China (*Zhongguo guojia tushuguan* 中國國家圖書館, hereafter NLC) holds two copies, carrying the titles of *Neifu yu ditu* 內府輿地圖 and *Huangyu*

prefectural, provincial, and regional maps from the *Comprehensive Collection* or only contain the provincial and regional maps, sometimes with added gridlines but never with degrees of latitude and longitude. We should also note the adjustment of the maps in these later publications reflecting administrative reforms implemented during the Yongzheng and Qianlong years.

Manuscript adaptations are also extant. The National Library of China, for example, harbors a set of twenty-eight manuscript maps, including one rare general map of Tibet and one schematic map of Mongolian banner areas, the *Map of Princely Territories beyond the Passes* or *Kowwai zhuwang tu* 外語王國, neither of which exists in a known printed version.⁴⁸⁹ The only other maps from this set that I have found reproduced in catalogues are those of Shandong and Tibet.⁴⁹⁰ On the other hand, a highly similar set survives in the Peking University Library within a much larger collection of maps and recently enjoyed publication.⁴⁹¹ Some of these maps seem to be similar to the woodblock atlas of the Kangxi period, whereas the *Map of Princely Territories beyond the Passes* certainly had its origin in a time preceding the land surveys. These observations presumably led the volume's editors to date them back to "1719 at the latest."⁴⁹² However, several elements suggest a (much) later date. The map of Yunnan, for example, includes the prefecture of Zhaozong 昭通, meaning the map must date from after 1728, when administrative reform ended this prefecture's subordination to Sichuan province. Thus, if the two sets at the National Library of China and the Peking University Library are indeed as similar as my limited comparison suggests (I have not been able to consult these maps), both must date from a later period, reflecting administrative reform under subsequent emperors, particularly in the southwest.

The Imperial Workshops produced more thorough revisions of the Qing atlas over subsequent decades and under different emperors. Most important of these were the different Yongzheng and Qianlong-era renditions of the Qing atlas. Today we know the Yongzheng-era atlas, printed from woodblocks, as

quantan tu fensheng tu 皇輿全覽圖分省圖. They contain only the 15 Chinese provinces, the map of Shengjing and, only in the latter, a general map. Neither copy includes grid lines. *Yutu yaolu* (1997), 39 [0390 & 0391]. Another version of the *Neifu yu ditu* dating back to 1876 resides at BNF, Ge FF 14550 (RES); LI (1996), 168–169.

489 *Yutu yaolu* (1997), 38 [0384]. For more on the unique *Kowwai zhuwang tu*, see Ha-si-ba-gen & Cheng (2010).

490 Yan (1998), 186–187.

491 As part of Yao (2008), 1–65. This set only contains 18 maps. The Tibet map, included in the NLC set, is one of those missing here.

492 Yao (2008), 1. This volume reproduces all maps.

the *Yongzheng Map in Ten Rows* or *Yongzheng shipai tu* 雍正十排圖, but contemporary documents referred to it as *Complete Maps of Imperial Territories* or *Huangyu quantu* 皇輿全圖. It builds entirely on the style of the Kangxi copperplate atlas in including place names in Chinese and Manchu and in forming one large map by combining sheets, one hundred in total. The map includes areas far beyond the scope of the Kangxi-era copperplate atlas, essentially adding the entire Russian Empire from Kamchatka to Riga.⁴⁹³ Even though apparently drawn on the basis of the grid system, with each square representing about 200 *li* on the ground, the Yongzheng edition also indicates latitudes on the left of each row and longitudes on the bottom of every sheet. This renders readings of latitude and longitude incorrect, suggesting the court's chief concern must have been the reading of distances. Even so, much of the data came directly from the Kangxi-era copperplate atlas, while European cartographies, route books, and accounts of imperial envoys supplied the raw data regarding areas not included in that atlas. Other differences with the Kangxi-era editions of the Qing atlas include an increase in the number of place names, the incorporation of administrative reforms in the Chinese provinces, and the depiction of historically significant journeys using dotted lines.⁴⁹⁴

Several Jesuit missionaries at court during the 1720s consulted on the revision process. For example, in 1725 the Yongzheng court asked Régis and Fridelli, two Kangxi-era mapmakers, to make a map of the lands between Qing territories and the Caspian Sea. Later, in the first months of 1727, André Pereira (1689–1743), de Mailla, and Gaubil compiled a depiction of Russian territories from Kamchatka all the way to Saint Petersburg and prepared it as a separate map.⁴⁹⁵ In essence, these maps seem to have covered most of the lands the Yongzheng edition added to the scope of the Kangxi atlases (figure 36), although none of the missionaries appear to have been directly involved in the material production of the final sheets.⁴⁹⁶ The Yongzheng revision finally reached print in late 1727 or early 1728 but, like the Kangxi-era atlases, was never available for sale.⁴⁹⁷ It did, however, circulate more widely within Qing China than its predecessors: in the first half of 1728 the emperor personally

493 Reproduced in Wang & Liu (2007), vol. 2.

494 One example is the 1698 journey of Qing envoys to Khalka lands after the defeat of Galdan (Chapter 1).

495 Gaubil (1970), 182–183.

496 Gaubil (1970), 171–175; Pfister (1932), 1532.

497 Yan (1998), 190–191.

sent copies to most provincial governors.⁴⁹⁸ Yu Fushun has claimed that yet another Yongzheng version printed in 1729 followed further administrative reform in the Chinese provinces (I could not verify this independently).⁴⁹⁹ Although a few Yongzheng editions have turned up in mainland archives and libraries, it is rare and no sheets appear to be extant in Europe, confirming the lack of missionary involvement in the material map's production as a whole and the Yongzheng court's general suspicion of them.⁵⁰⁰ What is certain is that the production of the Yongzheng edition was inextricable from the multiregional exchange of cartographic knowledge among Beijing, Paris, and Saint Petersburg in the aftermath of the circulation of the Kangxi-era atlas, as discussed in the third part of this chapter.

In the 1750s, the Qianlong emperor called for yet another new edition of the Qing atlas, including depictions of lands as far afield as Asia Minor, the Arabian Peninsula, Persia, and the Indian Subcontinent (figure 36). New surveys conducted, for the first time, to the west of Hami, greatly improved the depiction of those areas, reflecting Qianlong's control over them following his defeat of the Zunghars and incorporation of their lands, Altai Mountains down to Kashgar into the Qing Empire. He asked several Jesuits to assist in the mapmaking efforts for these areas, although it seems they encountered more suspicion than under Kangxi, sensitive information kept carefully from their hands. A team of mapmakers, including Portuguese Jesuits Felix da Rocha (1713–1781) and José d'Espinha (1722–1788), two lamas, and two officials from the Directorate of Astronomy, He Guozong 何國宗 (d. 1766) and Mingghatu 明安圖, left Beijing for Hami on March 21st, 1756. They prepared a map of Qing-controlled northern Xinjiang as far west as the Ili River before returning to Beijing. In 1759, the same two Jesuits plus Ferdinand Augustin Haller von Hallerstein (1703–1774), another Jesuit, again embedded within a team of several Qing officials including He Guozong and Mingghatu, traveled to Xinjiang for a second round

498 A search in the online database *Yishi cang Kangxi Yongzheng chao man han wen zhubi zouzhe hubian mulu* — 史館藏康熙雍正朝滿漢文殊批奏摺匯編目錄 shows memorials by governors and governors-general acknowledging the arrival of the *Complete Map of Imperial Territories* and mentioning the atlas' adaptation from the Kangxi-era atlas. E.g. Henan: yz 6/III/25—Shandong: 6/III/27—Zhejiang: 6/IV/6—Shaanxi & Sichuan: 6/IV/15—Yunnan: 6/IV/26—Jiangnan: 6/IV/10—Guzhou: 6/XI/6.

499 Yu (1983), 75.

500 The 2007 reproduction in Wang & Liu (2007) relies on a copy kept at the Library of the Chinese Academy of Sciences. Other versions have turned up in *The First Historical Archives of China*. Yan (1998), 190–191.

of land surveying, this time mapping the more southern Qing-controlled regions around Kashgar. In both surveys, the mapmakers apparently followed practices dating back to the Kangxi period, determining the positions of major cities and major routes while filling in the blanks using existing maps and geographic information provided by local informants.

The different editions of multi-sheet maps produced under the Qianlong emperor using the Yongzheng-era (and thus the Kangxi-era) maps as a basis incorporated new data from the two Xinjiang surveys. The depictions of parts of Asia Minor, Persia, the Arabian Peninsula, and the Indian Subcontinent depended entirely on European cartographies and second-hand data on the routes connecting these lands to Xinjiang and Tibet.⁵⁰¹ Extant Qianlong editions of the Qing atlas listed in catalogues suggest it used both the Kangxi copperplate atlas with its Sanson-Flamsteed projection and the Yongzheng woodblock edition with its grid-based system as prototypes. First, there are indications of updating of the Yongzheng woodblock edition in ten rows around 1757, including place names in Manchuria for regions outside the Great Wall.⁵⁰² If this is correct, it is possible the Imperial Workshops produced an update of the Yongzheng edition after the first team of surveyors had returned to the capital but before the second team went to survey southern Xinjiang in 1759.

Other Qianlong-era editions, recording all-new data from both Xinjiang surveys, reside in Beijing, London, and Rome. Three closely related versions of this edition are extant, all most likely produced with the assistance of Jesuit missionary Michel Benoist (1715–1774). In a letter dating back to 1773, Benoist mentions that he had engraved the same map at three different scales, with 1, 2 and 2.5 inches, respectively, between the lines of latitude.⁵⁰³ Matthew Mosca, who reconstructed parts of the production process of the Qianlong multi-sheet maps based on Qing documents, also distinguishes among three versions, albeit

501 Millward (1999).

502 Extant copies seem to be in Beijing and Saint Petersburg, but I could not consult them personally. *Yutu yaolu* (1997), 35 [0393 & 0394]; Yao (1998), 200–201; Huang (2010), 365–366. The copy in Saint Petersburg is incomplete. Pang (2001), 170–171. Most catalogues date these copies back to 1757–1759.

503 Li (1996), 173–181. On their [the Jesuits'] return from this distant expedition Kihien-lung caused new maps, of different dimensions, to be made of the whole empire and the contiguous countries; they were on scales of 1 inch, 2 inches and 2.5 inches for each degree of latitude respectively. The superintendence of this work was assigned to Father Benedict [F. Benoist], *Journal asiatique*, Vol. 9, 325; as quoted in Baddeley (2006), cxvii.

of 1.8, 2 and 2.5 inches, respectively.⁵⁰⁴ The largest of these, the best-known of all three extant editions, commonly called the *Qianlong Map in Thirteen Rows* or *Qianlong shisan pai tu* 乾隆十三排圖 and most certainly linked with Benoist, was engraved on 104 copperplates using the Sanson-Flamsteed projection also used for the Kangxi copperplate editions. All place names are in Chinese only, but a poem by the emperor appears on the first sheet in both Chinese and Manchu.⁵⁰⁵ A woodblock version of the same size that must have been the basis for this map consists of 103 sheets (lacking that bearing the emperor's poem) resides in the Vatican Library.⁵⁰⁶ A second edition, identical in scope and content to the 104 copperplate edition but reduced to 78 sheets, is in the

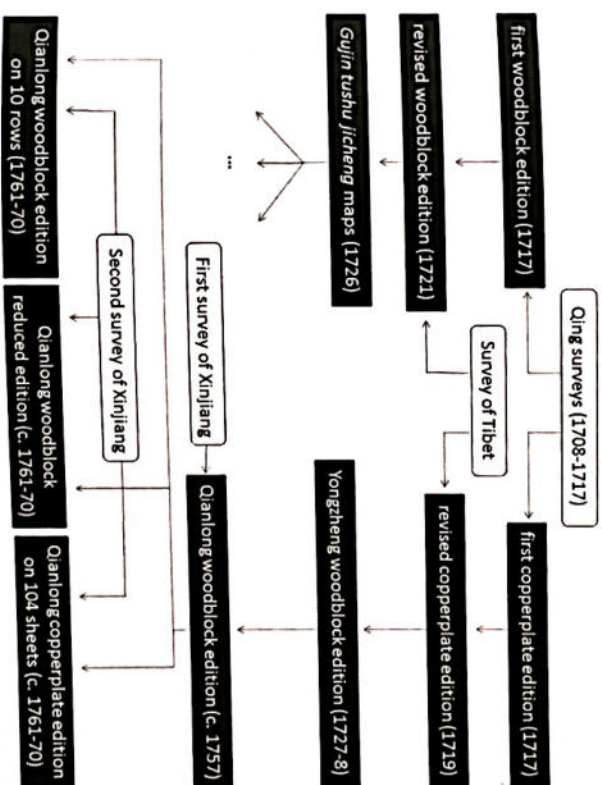


FIGURE 35 Basic genealogy of most of the Qing editions mentioned above in relation to the land surveys.

504 Mosca (2013), 112–113.

505 *Yutu yaolu* (1997), 40 [0395]. BL, Maps 7A.1b. A 1932 reprint was published by the Imperial Museum of Beijing. Reprint copies are in Taipei's Palace Museum at 021049-021165; and in Beijing, London, and Washington. Li (1996), 178–179; Li (2004), 14; *Yutu yaolu* (1997), 40 [0396]. This is also the atlas reproduced in Wang & Liu (2007), vol. 3.

506 Li (1996), 175–178.

National Library of China.⁵⁰⁷ The third, also known as the *Qianlong Map from the Inner Palace in Squares* or *Qianlong fangge neifu yutu* 乾隆方格内府舆图, the *Inner Palace in Squares* or *Qianlong fangge neifu yutu* 乾隆方格内府舆图, grid-based in the style of the Yongzheng edition and printed on ten rolls, includes Manchu place names for regions outside of the Chinese provinces.⁵⁰⁸ Further study of extant copies will hopefully specify the production process of these different versions and determine whether or not they correspond with the findings of Mosca.

This overview of printed editions, all of which directly incorporate data gathered during the 1708–1718 land surveys, has confirmed the initial production of two different versions of the Qing atlas at court: the first carved from woodblocks, the second engraved on copperplates. Each version appeared in two editions, the second including a revision for the Tibetan areas and the region around Hami. Throughout the eighteenth century, the Imperial Workshops under the Yongzheng and Qianlong emperors again revised the copperplate version into different editions using various modes of representation (figure 35). Although none of these large atlases were available for sale, imperially commissioned compilations and more popular publications included strongly reduced versions of the woodblock maps.

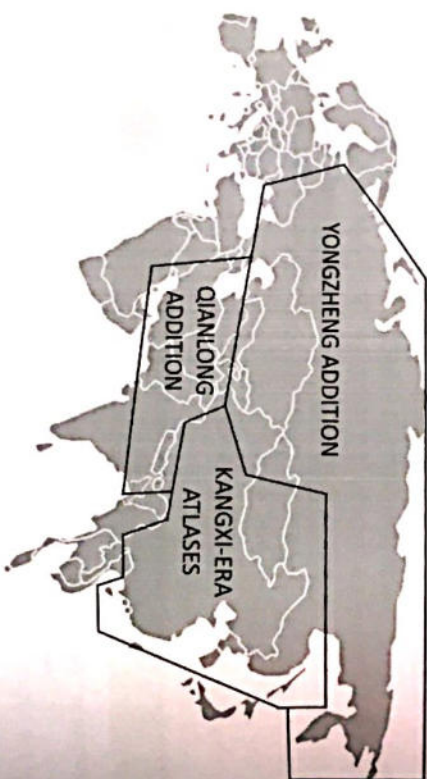


FIGURE 36 The gradual increase in geographic scope from the Kangxi-era atlases to the Yongzheng and Qianlong editions.

⁵⁰⁷ *Yutu yaolu* (1997), 40 [0397].

⁵⁰⁸ BL [108] X[3265- LI (1996), 179–181.

3.2 The European Incorporation of a Qing Atlas

The year 1735 saw the Parisian publication, more than a decade after the Imperial Workshops printed the Kangxi-era editions of the Qing atlas, of forty-one maps of the Chinese provinces, Tartary, Tibet, and Korea within the four large volumes of the *Description géographique, historique, chronologique, politique et physique de l'empire de la Chine et de la Tartarie chinoise*. In the preface, Jean-Baptiste du Halde, editor of this encyclopedic work on continental East Asia, confirms that most of these maps were adaptations of Chinese originals produced at the behest of the Qing emperor with assistance from European missionaries. Jean-Baptiste Bourguignon d'Anville, who also composed four new general maps of these regions, had executed the adaptations. Despite much scholarly attention to d'Anville's maps in past decades, we yet know little about the general context of their production. How did the original maps reach Europe? Why did more than fifteen years pass before their publication there, and to what extent were the Qing originals the basis for the published maps? In this section I will answer these questions by closely comparing d'Anville's maps to the different editions of the Qing atlas and reconstructing the production and publication processes behind different sets of d'Anville's regional maps.⁵⁰⁹

I begin by tracing the initial transmissions of the Qing atlas to Europe, where controversy immediately engulfed plans for a European adaptation. Next, a brief biography of d'Anville kicks off the story behind the actual publication process, reconstructing the lines of communication from the Beijing missionaries to d'Anville via du Halde. In a last step, I analyze the French cartographer's adaptations in detail, identifying the specific sets of maps sent from Beijing to Paris at different times—that d'Anville used. This leads to the conclusion that d'Anville employed different versions of the Qing atlas in producing his celebrated maps of continental East Asia, all eventually inserted into du Halde's monumental *Description de la Chine*.⁵¹⁰

3.2.1 Early Transmissions and Reception in Europe

Not long after the presentation of the Qing atlas to the emperor, and certainly before 1720, Pierre Jartoux managed, perhaps secretly, to dispatch copies of the

⁵⁰⁹ This section of Chapter 3 is a reworked version of an article published in *Imago Mundi*, *Cams* (2013).

⁵¹⁰ Scholars sometimes assume the revised woodblock atlas was the main basis for d'Anville's maps. Wilkinson (2000), 148; Landry-Derron (2002), 143; Dudink (2006), 92.

first woodblock atlas (or its manuscript revision) to his confreres in Paris. As discussed above, Jartoux was part of the team of editors who reworked the draft maps at the Imperial Workshops. He included personal notes and translated the most important place names directly onto the copies he sent to Europe, most likely aboard a French ship.⁵¹¹ Once in France, the maps proceeded to the Jesuit College in Paris, to the chamber of du Halde, scriptor of the French Jesuits and editor of the multi-volume *Lettres édifiantes et curieuses*, making edited correspondence from Jesuit missionaries across the world available to the European reading public.⁵¹²

Xavier Ehrenbert Fridelli, another of the original mapmakers, in 1719 initiated a second early (and traceable) transmission. He sent maps to fellow Jesuit Coenraad Janning (1650–1723) by way of Ostend, then one of the more reliable sea routes between East Asia and Europe. Living in Antwerp, Janning was well-connected, on the one hand to the Ostend Company via the Maelcamp family, and on the other to the European Jesuit community.⁵¹³ Fridelli therefore suggested that Janning forward the maps to François Noël, a missionary who had returned from Asia and fully capable of transliterating place names, who lived in Lille.⁵¹⁴ The copperplate atlas sheets now at the Royal Library of Belgium presumably constituted one part of this transmission, but only Noël's one-time ownership of them substantiates this claim.⁵¹⁵ One source even claims that João Francisco Cardoso forwarded another set of maps to Lisbon, but no others

511 Gaubil (1970), 216.

512 One letter in this series, written by de Mailla, describes an episode of the mapping project in detail, discussing mapmaking operations on the island of Taiwan. du Halde et al. (1702–76), 141–85.

513 In the years 1718–1728, Antwerp became a dispatch center for all kinds of material to and from Qing China, as the “Via Ostendana” had become one of the most reliable sea routes between Western Europe and East Asia. Golvers (2014). The Jesuit College at Antwerp and the Maelcamp family played a major role in the exchange.

514 Fridelli wrote: “Ich wird (geliebt es Gott) folgendes Jahr die Tartarische Land-Carten, so Eur Ehrwürden sehnlich begehren, nach Europam überschicken, nachdem ich dieselbe bereits letzterwichenes Jahr [1719] mit einem Ostendischen Schiff dem Pater Janninge also, wie sie allhier zu Peking ist gedruckt worden, nach Niederlanden zugefertigt hab; allwo sie Pater Noël aus der Simtschen in die Europaeische Sprachen überzetzen kann.” Fuchs (1943), 142; Dudink (2006), 91.

515 These copperplate sheets once belonged to Noël and remained at the Jesuit College in Lille. They constitute first-edition sheets, depicting only the Chinese provinces. The Tartary sheets appear to be missing, perhaps because Noël sent them to du Halde (see below). Dudink (2006), 91.

confirm this.⁵¹⁶ Later on, well into the 1720s, further transmissions, discussed below, would follow.

Nearly a decade passed before du Halde took the first steps towards publishing the maps Jartoux had sent, provoking the impatience of French Jesuits in both Paris and Beijing. As early as 1722, the treasurer of the Jesuit missions to Asia in Paris, Louis-François Orry, wrote thus to Beijing missionary Antoine Gaubil:

I have not been able to see [the maps] for myself. They think they must keep everything secret out of fear that [others] will deprive us of the glory of discovery, so we only communicate through our *Lettres édifiantes*. Yet, everyone leaves us be and nobody supports us. This is what one gains from always wanting to play one's own game.⁵¹⁷

When Gaubil himself wrote to the head of the French mission about the delay, he explained du Halde had explicit orders not to publish the maps immediately:

Some complaints have been voiced here about Father du Halde: first, about how he keeps the maps for so long without having them published... they are wrong, and I say this in plain terms, because in 1720 Father Jartoux wrote [to ask him] not to publish these maps until further notice, due to several difficulties... I saw these letters myself in Paris before my departure, in the room of Father du Halde.⁵¹⁸

According to Gaubil, one key reason behind the delay was fear that the maps, once published in Europe, might serve other Europeans as gifts for the Qing emperor, undermining the French Jesuits' credibility in his eyes. If this was

516 de Moÿriac de Mailla (1777–1785), rcdxxxi; Pfister (1932), 1523.

517 “Je n'ai pas pu les voir moi-même, on croit qu'il faut tout retenir serré de peur qu'on ne nous enlève la gloire de l'invention, ainsi que nous ne communiquons rien que par nos lettres édifiantes. Cependant, tout le monde nous laisse et personne ne nous soutient. Voilà ce qu'on gagne à vouloir toujours faire bande à part.” Quoted from a letter of 21 December 1722 and kept at the Bibliothèque de l'Observatoire (80), B.1/1017. The letter was also addressed to Jean-Baptiste Jacques (1688–1728), who reached Asia together with Gaubil.

518 “on a fait ici quelques plaintes du P. du Halde 1° de ce qu'il garde si longtemps les cartes sans les faire paraître... on a certainement tort, et je l'ai dit nettement, car en 1720 le P. Jartoux écrit positivement de ne pas publier les cartes jusqu'à nouvel ordre à cause de plusieurs difficultés... je vis moy-même les lettres à Paris, avant de partir, dans la chambre du P. du Halde.” Gaubil (1970), 216. The delay is partly covered in Landry-Deron (2002), 120–121.

truly an important motive behind postponing the publication, it seems more than likely the Jesuits transported the Qing atlas to Europe secretly, without the Kangxi court's knowledge. Gaubil further states that du Halde wrote to the head of the mission in 1723 asking for permission to publish the maps, either under pressure from his critics or because news of the Kangxi emperor's death in 1722 had reached him.

The Parisian Jesuits only presented the different Qing maps in their possession (with the missionaries' hardwon permission) to the French king in 1725. Six Had du Halde not deferred the publication of the atlas when the Qing maps first arrived, Guillaume Delisle, *Premier géographe du Roy* and member of the *Académie royale des sciences*, would have been the obvious choice to edit them. After all, the first French missionaries to the Qing had received their training at the *Académie* and entertained frequent contacts with some of its members, as well as with Joseph-Nicolas Delisle, Guillaume's brother who later became an astronomer for the Russian Empire in Saint Petersburg. Guillaume himself also frequently corresponded with different missionaries to the Qing, most notably with Czech astronomer Karel Slaviček (1678–1735), who had composed a detailed map of Beijing in 1718.⁵²⁰ The celebrated cartographer passed away, however, in 1726, two years before the agreement between du Halde and the promising young cartographer d'Anville. We do not know whether Guillaume Delisle ever got to see the maps sent from Beijing.

3.2.2 Contracting Jean-Baptiste Bourguignon d'Anville

Jean-Baptiste Bourguignon d'Anville (1697–1782) was born in Paris at the end of the seventeenth century. He supposedly composed his first map at the age of twelve, based on information he had distilled from a number of historical texts. Whether or not this is more than legend, it certainly characterized his later work, for d'Anville, a typical early-eighteenth-century cartographer, never left his office to conduct or lead land surveys, relying instead on others' observational and descriptive work in drawing his maps. Nevertheless, d'Anville apparently had an eye for trustworthy data, making a point of excluding information not confirmed by other sources. He never blindly copied from earlier maps, as many cartographers of his time commonly did, but rather scrutinized every text he could lay hands on to extract and compare geographic data.

Having published his first map at fifteen and notwithstanding his relatively humble background as a tailor's son, d'Anville received the title of *Géographe*

du Roy at the age of twenty-two in recognition of his service to the crown as geography tutor to the young Louis XV (r. 1715–1774).⁵²¹ At the same time, he found a patron in Louis d'Orléans (1702–1752), son of the Regent.⁵²² Through his connections at court, d'Anville soon attracted the attention of Parisian elites, including Claude Bertrand Taschereau de Linières (1658–1746), the king's Jesuit confessor, who later introduced d'Anville to du Halde. As a result of these contacts, the young cartographer won the contracts to compose maps for a number of travel accounts and compilations throughout the 1720s and early 1730s. Thus consolidating his reputation and income, d'Anville could afford not only to continue in cartography, a costly occupation, but also to begin making his own choices himself regarding his maps' subject matter. Even so, not all his work was equally successful. While he was able to rectify earlier mistakes concerning Italy's geography solely on the basis of literary data, which a detailed survey subsequently and surprisingly confirmed, contemporary scientific field practice squarely refuted his writings on the shape of the earth. In 1775, however at the end of his life, having drawn nearly two hundred maps, his reputation resounded across Europe.

D'Anville's repeated expressions of interest in the Qing atlas, news of which had reached the Parisian elites, led de Linières to recommend him to du Halde for the Qing maps' adaptation.⁵²³ This was one of d'Anville's first major assignments, an important step in his career that contributed a great deal to his later fame. They agreed the cartographer would reduce and redraw the maps of the Chinese provinces (fifteen maps), Tartary (twelve maps), Tibet (nine maps), and Korea (one map) sent from Beijing, as well as compile four new general maps, all for insertion as fold-out maps in du Halde's books. Later, the list of cartographic material for the *Description* expanded through the acquisition of the maps of thirty-eight Chinese cities (on seven sheets) and a chart of the travels of Vitus Jonassen Bering (1681–1741) through indirect contacts from Saint Petersburg.⁵²⁴ D'Anville's contract included not selling any of his adaptations elsewhere, individually or atlas form, without du Halde's explicit permission.

⁵²¹ AN, Maison du roi, O¹ 63257.

⁵²² Dacier (1802), 3–4. Du Halde later became the Jesuit confessor to Louis d'Orléans.

⁵²³ d'Anville (1776), 8.

⁵²⁴ For the city maps, see Destombes (1976), 85–97. D'Anville corresponded with Joseph-Nicolas Delisle about the discoveries of Bering, but the king of Poland sent the chart itself to du Halde (discussed below).

⁵¹⁹ Gaubil (1970), 216–217 & 302.

⁵²⁰ For a general overview of the scientific activities of this missionary, see Liu (2002).

Three separate documents spell out the specifics of the agreement. The first contract, drawn up between du Halde and d'Anville in 1728, stipulates the cartographer's duties regarding the maps of the Chinese provinces and Tartary, his remuneration in cash, books, and maps, and du Halde's right to correct the printer's proofs. This first contract also addressed intellectual rights: "[I, du Halde] will be happy to oblige the said Sir [d'Anville] by referring to his work in the prospectus that I have to give to the public of my books, and in the books themselves," ensuring full recognition of the cartographer's contribution.⁵²⁵ Following common practice, the cartographer was also responsible for the engravings, for which he contracted the workshop of Delahaye, whom d'Anville elsewhere describes as "the most able [engraver] known to me."⁵²⁶ At du Halde's request, however, a Mr. Humblot (said to be familiar with the techniques of Chinese painting and who had also supplied fourteen illustrations of cultural and ethnographical interest for du Halde's *Description*) designed the cartouches.⁵²⁷

3.2.3 *Intercultural Adaptation: d'Anville's Regional Maps*

Within a year of signing the contract, d'Anville had finished reducing and redrawing the maps of the fifteen Chinese provinces.⁵²⁸ He based these entirely on the corresponding maps from the first woodblock edition of the Qing atlas Jartoux had sent to Paris: both sets of maps match closely and leave the territories outside the provincial borders blank (figures 37 & 38).⁵²⁹ D'Anville made copies of these maps on oilpaper, which he then used in producing his own versions.⁵³⁰ The only substantial difference is that d'Anville's maps lack place

names for some of the localities plotted, presumably because Jartoux had not transliterated all of them.⁵³¹

At the same time, d'Anville certainly had access to one of the copperplate editions of the Qing atlas as well. Unlike his maps of the Chinese provinces, most of the regional maps of Tartary descend directly from the copperplate version (figures 39 & 40). The place names are clearly transliterations from Manchu, the language used only in the copperplate atlas, and eleven of the twelve maps of Tartary match precisely the corresponding copperplate sheets in terms of land coverage. The only exception is the map of the region near the lower Amur River, combining two copperplate sheets into one larger map, probably because of the large blank space on one of the copperplate sheets.⁵³² In turn, d'Anville's map of the region surrounding Hami reflects unambiguously the use of copperplate sheets from the first 1717 edition. This further bolsters, although not conclusively, the hypothesis that François Noël forwarded to du Halde the Tartary sheets Fridelli had sent to Europe by way of Ostend which d'Anville would use for his adaptations.⁵³³

Whereas d'Anville based his maps of the Chinese provinces and of Tartary on different versions of the Qing atlas, his map of Korea appears to combine the woodblock and the copperplate versions in one and the same map: the scope of the map is nearly identical to that in both woodblock editions, but it also depicts the lands beyond the border with Manchuria, as only the copperplate version does. Moreover, the place names are apparently transliterations from Manchu but with Chinese pronunciations, another indication that d'Anville used the copperplate atlas.⁵³⁴ However, d'Anville did not combine the two versions of the Qing atlas himself. He used a map called the *Map on Oilpaper of the Kingdom of Korea Given to the Jesuits by the Chinese*, which he copied onto Parisian oilpaper and which now resides in the National Library of France (figure 41).⁵³⁵ Its title refers to the fact that Jean-Baptiste Régis, one of the original mapmakers, received permission to consult maps and textual

- 525 "[Moi, P. du Halde] me ferai un plaisir d'obliger ledit Sieur en faisant mention de son travail, dans le plan que je dois donner au public de mon ouvrage, et dans l'ouvrage même." All contracts between du Halde and d'Anville are available in Cordier (1905), 391–400. The originals reside at the Bibliothèque de l'Institut (hereafter B1), Ms 5401:245–247.
- 526 "l'attention que j'ai eue de ne confier la gravure de mes Cartes qu'au plus habile qui me fit connu." d'Anville (1776), 46. For an overview of d'Anville's work, see Haguet (2010), 88–101.
- 527 For his designs, Mr. Humblot consulted Chinese paintings provided by du Halde. A certain du Velaer, who had spent time on the island of Hainan as a director of the French Compagnie des Indes, had given the paintings to du Halde. du Halde (1733), 121lx.
- 528 Cordier (1905), 394.
- 529 I compared d'Anville's adaptations in du Halde's *Description* with the 1721 woodblock maps in Brussels, KB, LP VB 11.283 E (1–4). D'Anville's draft maps of the Chinese provinces are preserved at BNF, Cartes et plans, Ge D 10669–83.
- 530 Fuchs (1935), 398. I could not find d'Anville's copies of the Chinese provinces, but identified those for Korea and Tibet at BNF (discussed below).

- 531 The first-edition woodblock atlas sent to Paris is no longer extant, but according to Fuchs its maps covering the Chinese provinces are identical to those in the revised version. Fuchs (1943), 15–16.

- 532 See above (figure 31—asterisk).
- 533 See above. Fuchs (1943), 128; Dudink (2006), 92.
- 534 Stary (1997), 191. Only the copperplate editions of the atlas used Manchu.
- 535 BNF, Cartes et plans, Ge DD 2987 (7323B): "Carte huilee du royaume de Corée fournie aux Jésuites par les chinois." The map consists of two pieces of paper glued together. Gauthil (1970), 205. I am indebted to the BNF's Département des Cartes et plans for their help in determining the provenance of the oilpaper.

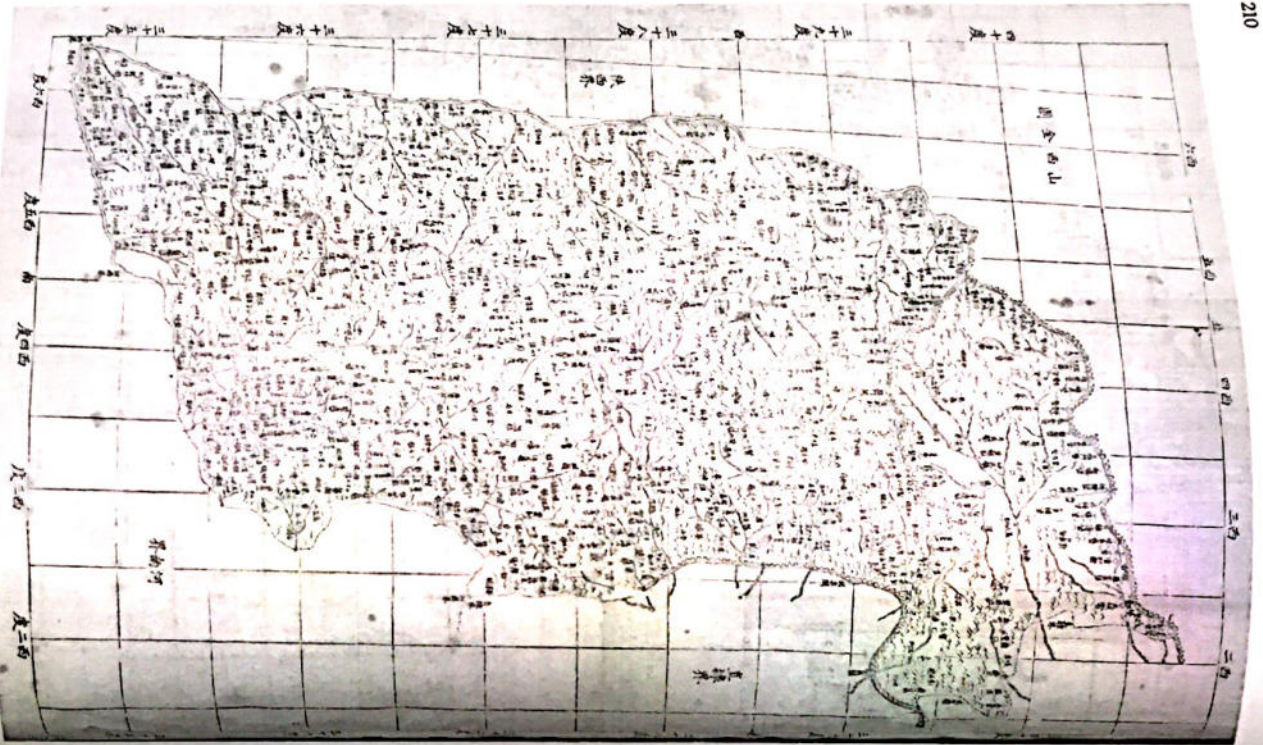


FIGURE 37 The map of Shanxi province in the revised woodblock edition of the Qing atlas (c. 38 x 23 cm), identical to the Shanxi map in the first woodblock edition. Territories beyond the borders left blank.
ROYAL LIBRARY OF BELGIUM, LP VB II.283 E (3), F. 11.

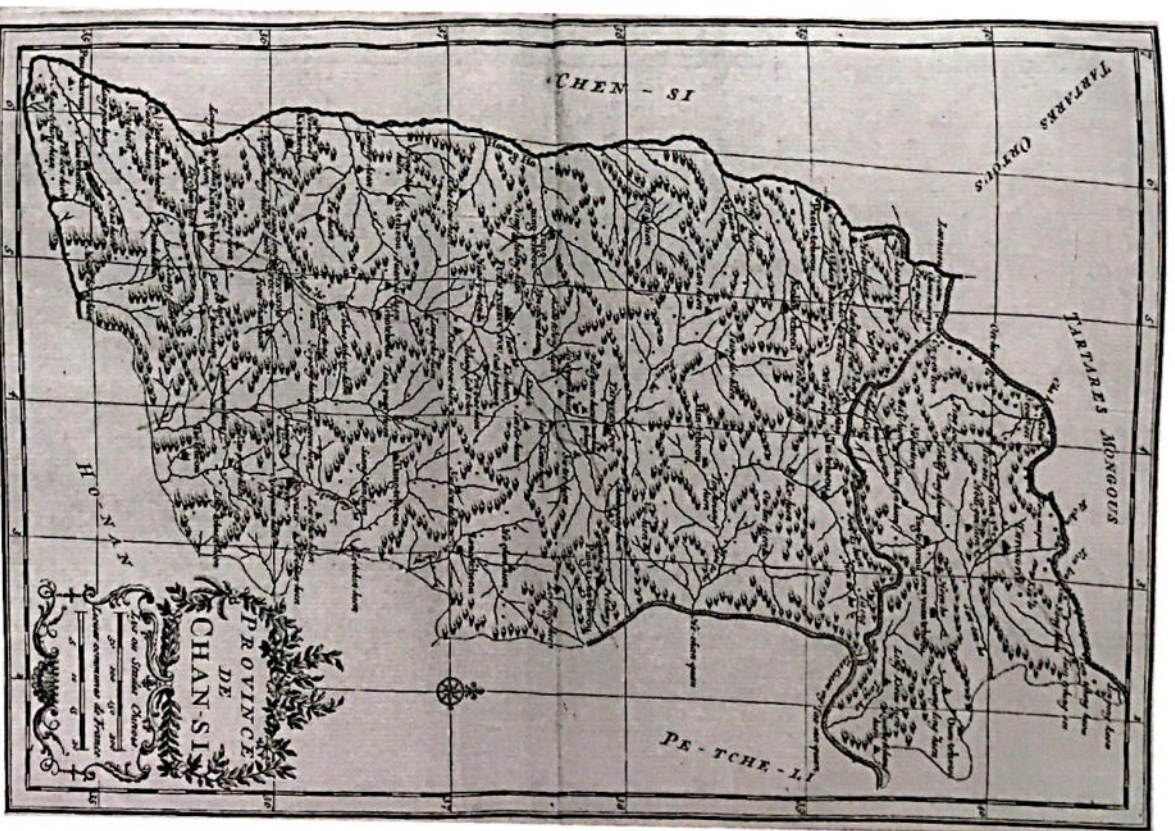


FIGURE 38 The map of Shanxi province as adapted by d'Anville (c. 35.5 x 23 cm). Not all plotted localities carry place names, presumably because *fur-toux* had not transliterated them.
TAKEN FROM DU HALDE (1735), VOL. 1. MAURITIS SABBEIBIBLIOTHEEK (UNIVERSITY OF LEUVEN).

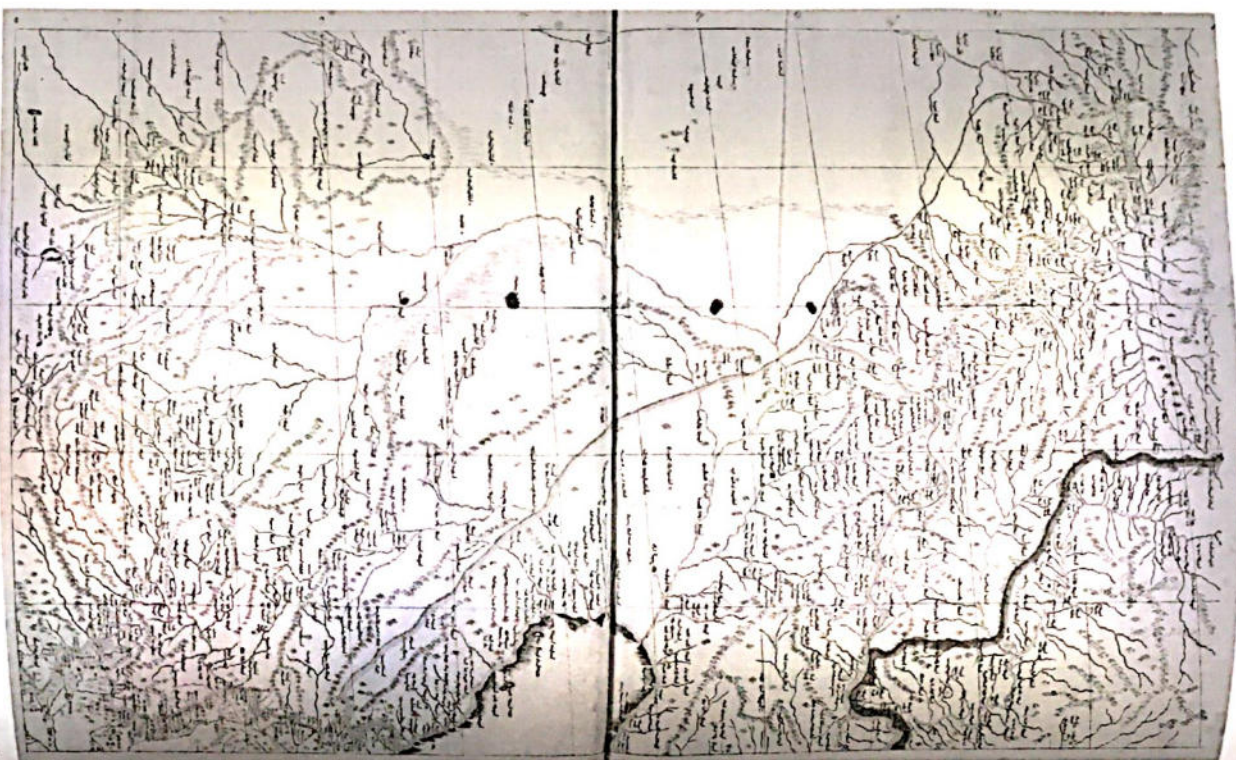


FIGURE 39 The region of Shengjing in Tartary (today's Liaoning province) in the copperplate edition of the Qing atlas (c. 40 × 64 cm). Place names north of the Great Wall are in Manchu, those to its south in Chinese.
ROYAL LIBRARY OF BELGIUM, LP VB 11.283 E (2), F. 10.



FIGURE 40 The region of Shengjing as adapted by d'Anville (c. 29.5 × 48 cm). Place names north of the Great Wall are transliterations from Manchu.
TAKEN FROM DU HALDE (1735), VOL. 4. MAURITZ SABBERIBLIOTHEEK (UNIVERSITY OF LEUVEN).

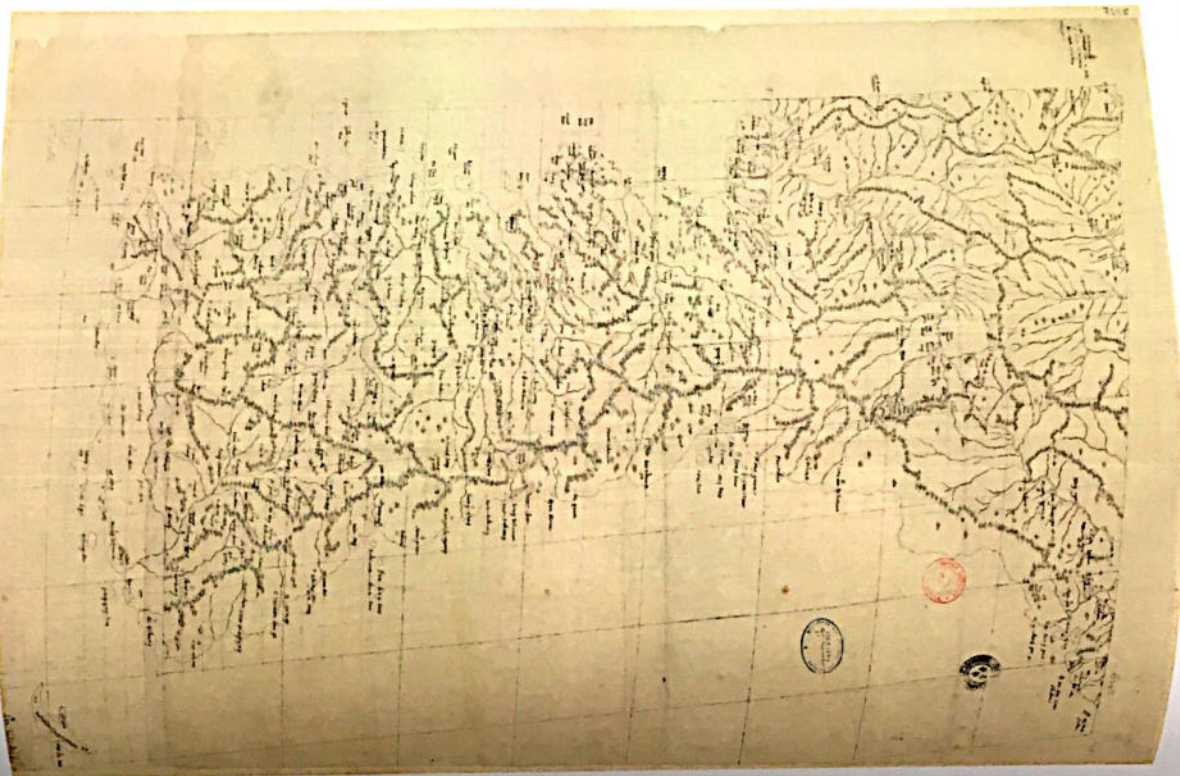


FIGURE 41 Map of Korea on oilpaper used by d'Anville for his adaptation (c. 78.3 × 53 cm). The map combines different versions of the Qing atlas, constituting a copy of a map the Beijing missionaries sent to Paris. It includes a legend of Manchu toponyms (top-left).
BIBLIOTHÈQUE NATIONALE DE FRANCE, CARTES ET PLANS, GE DD 2987 (7325 B).

descriptions of Korea at the imperial palace in the second half of the 1720s, copies of which he sent to Paris.⁵³⁶ Régis appears to have had a keen interest in Korean geography, even discussing the matter with a Korean embassy in Korea in 1720.⁵³⁷ The map includes a small legend of Manchu toponyms, indicating copperplate sheets of Korea had been used in rendering place names. The original behind d'Anville's copy on oilpaper, composed by Régis, is also at the National Library of France. The two maps differ somewhat in the spelling of place names (figure 42).⁵³⁸

In 1729, before the completion of the adaptations of the maps of Tartary and Korea, d'Anville and du Halde signed a second contract increasing the cartographer's remuneration in exchange for also reworking the regional maps of Tibet and for compiling the *General Map of Tibet*.⁵³⁹ Remarkably, d'Anville's set of regional maps of Tibet includes a second map of the region around Hami differing in scope and content from the Hami map among d'Anville's regional maps of Tartary. Comparing these two Hami maps shows that d'Anville must have based his maps of Tibet on the revised copperplate atlas, whereas first-edition copperplate sheets had served d'Anville in producing his regional maps of Tartary as discussed above. However, the Tibetan maps match neither of the copperplate editions precisely in scope, but seem to be cut-and-paste versions, with each map made up of two or more sheets. A closer look reveals substantial differences in detail, even from the revised copperplate atlas: areas left blank in the revised Qing atlas are not blank and the map places Lhasa at c. 29°30' N/24°30' W (*vis-à-vis* Beijing) rather than the c. 30°30' N/25° W in the revised copperplate edition. Such discrepancies stem from the fact that Régis had sent a reworked map of Tibet to Paris in 1726 just as he had done for Korea.⁵⁴⁰ After this scroll map arrived in Paris, d'Anville copied it onto the same type of Parisian oilpaper. It now resides in the National Library of France in three separate parts and, like the map of Korea, includes a legend and

536 In exchange for copying these maps, European missionaries provided the Yongzheng court with cartographic information from Europe (discussed in the third section of this chapter).

537 Lim (2012). Note that they also exchanged surveying instruments.

538 BNF, Cartes et plans, GE C-5323. The orthography of some of the Latin transcriptions differs. We can attribute this to the heated discussions on the orthography of East Asian place names at the time (discussed in the third section of this chapter).

539 The Tibetan maps also depict lands now part of western Sichuan and Xinjiang.
540 APF, Brotier 148:47-47v; Cordier (1915), 516-517; Gaubil (1970), 187; d'Anville (1776), 14-17.



FIGURES 42.1 & 42.2 The missionaries' map of Korea (left), from the copperplate atlas, and d'Anville's copy on oilpaper (right).

BIBLIOTHÈQUE NATIONALE DE FRANCE, CARTES ET PLANS, GE C-5323 AND GE DD 2987 (7325B).

explanatory notes.⁵⁴¹ Content-wise, we can attribute the discrepancies between Régis' map and the copperplate atlas to Régis and his fellow Beijing missionary Gaubil's involvement in atlas production at the Yongzheng court in the 1720s and thus their access to improved data on Tibet.⁵⁴² In sum, close analysis of d'Anville's regional maps reveals he employed both the woodblock and the copperplate versions of the Qing atlas, in their different editions, as bases for his adaptations (figure 43). In a response written several years later, attempting to refute criticism voiced against his work, d'Anville explicitly confirmed that his regional maps were true to the originals sent from Beijing:

I am glad to announce, before anything else, that the regional maps of the provinces of China, of parts of Tartary, and even those of Tibet, all drawn to be included in the Description de la Chine by Reverend Father

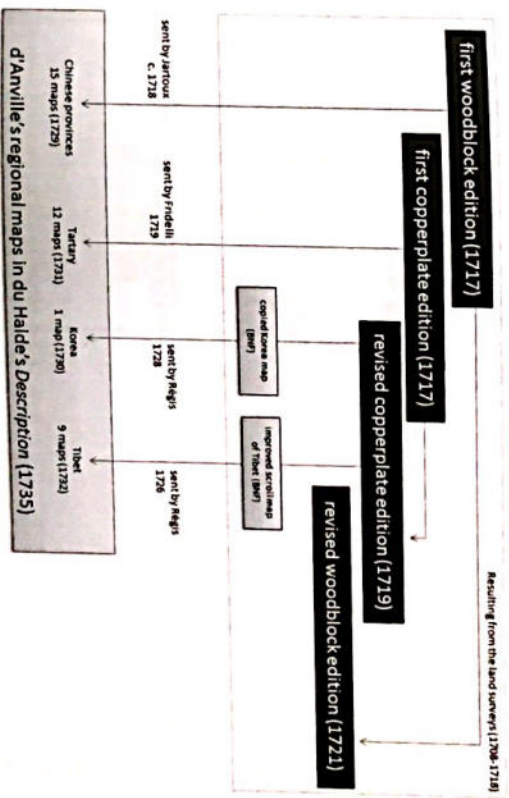


FIGURE 43 D'Anville's use of different-edition Qing atlases for his regional maps.

541 BNf, Cartes et plans, Ge DD 2987 (7348B) and Ge DD 2987 (7349B-50B). As described by d'Anville (1776), 17. One part appears to be missing.

542 Gaubil later met with court officials, trained by Jartoux during the Kangxi-era surveys, who had made new maps of Tibet. This meeting took place during the Yongzheng court's preparations to revise the Qing atlas. The court also solicited Régis and Gaubil to provide cartographic data in preparation for the Yongzheng revision. Gaubil (1770), 182-183.

du Halde S.J., are moderate and servile (if I may use this epithet) reductions of maps that were sent from China. It was thought necessary to retain even the style of the original design, so that this large and beautiful work could be communicated or presented to the public with the greatest faithfulness [to the originals].⁵⁴³

Another indication and direct consequence of d'Anville's close adherence to maps from different editions of the Qing atlas is that none of his regional maps includes the southernmost tip of Shengjing (the Liaodong Peninsula), which all Qing editions cover in one map or another. Instead, the French cartographer opted for the geographic scope of the copperplate version map for the region of Shengjing (figure 40), while using his oilpaper copy for the map of Korea (figure 41). As the copperplate and the woodblock versions of the original atlas determined, respectively, the geographic scopes of these two maps, d'Anville lost the southernmost tip of Shengjing between sheets (figure 44). In

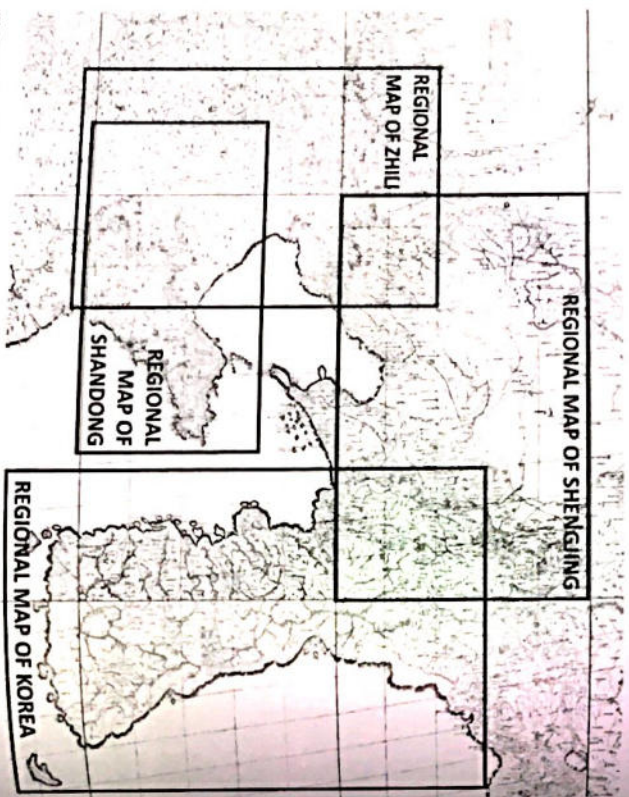


FIGURE 44 The coverage of some of d'Anville's regional maps. None of these includes the southernmost tip of Shengjing (center).

543 "Je suis bien aisé qu'on soit prévenu avant toute chose que les Cartes particulières des provinces de la Chine, les parties de la Tartarie, celles du Tibet même, selon que le tout a

spite of this lacuna, d'Anville completed all the regional maps du Halde had commissioned by 1733.

3.3 Beijing, Paris and Saint Petersburg: Negotiating the Gaps

With the thirty-seven regional maps of the Chinese provinces, Tartary, Korea, and Tibet completed, in 1733 d'Anville finally finished the reduction and redrawing of all regional maps du Halde had commissioned. Both men realized, however, that they could do more to increase the public's interest in the four-volume *Description* and its maps. They needed carefully to exploit their connection to Saint Petersburg, reaping new data on Siberia, Central Asia, and the overland routes to Beijing to include among the *Description's* wealth of textual and cartographic material. On the other end of the Eurasian continent, at the court of the Yongzheng emperor, administrative reform and Qing expansion beyond Hami had created the need to revise the Kangxi-era atlas, and so the Yongzheng emperor asked the missionaries contribute their knowledge of regions beyond the scope of the Qing surveys. Here too, the missionaries' connection to Saint Petersburg proved of utmost importance. In exchange for providing information, the missionaries received permission to copy information from route books, travel accounts, and maps kept at the Qing court, some of which would of course eventually travel back to Europe. Last but not least, the expansion of the Russian Empire into Siberia meant that Saint Petersburg also desired more precise cartographic information of the lands along its southern borderlands. In the 1720s, Beijing, Paris, and Saint Petersburg thus came to rely on each other in their shared interest in filling the gaps in maps of Central and Northeast Asia.

This section argues that d'Anville's general maps and the Yongzheng-era atlas were products of an intercontinental exchange of cartographic knowledge via an extended web of personal connections connecting individuals in Beijing, Paris, and Saint Petersburg, amidst which stood the French Jesuits. First,

été dessiné pour entrer dans la *Description* de la Chine donnée par le R.P. Du Halde Jésuite, sont une réduction modérée et servile (si je puis employer cette épithète) des Cartes qui ont été envoyées de la Chine. On a cru devoir conserver le goût même du dessin original, pour que ce grand et bel ouvrage fut communiqué ou remis au Public avec plus de fidélité." Archives départementales de l'Orne, SNAO 2521224. Images of the document published on 10 January 2012 on the *projet d'Anville's* website by Lucile Hagnet (<http://danville.hypotheses.org/1271>). Elsewhere, d'Anville mentions having copied the regional maps of Tartary and Tibet "without applying any changes." d'Anville (1776), 17.

East and West

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