



For encapsulating a worldview there is nothing quite like a *world* map. As with other forms of cartography, *mappaemundi*--whether medieval or modern, Asian or Western--tell us about values and attitudes, aims and aspirations, hopes and fears; but they express them on a particularly grand, indeed global, scale. To the extent that such productions in any given society share affinities across space and time, they reveal significant features of that culture's self-image (and, of course, its conceptions of the "other"; and to the degree that they do not, they suggest changes, ruptures, tensions, and conflicts within the larger cultural system. With these considerations in mind, Richard J. Smith of Rice University in his paper entitled "Mapping China's World: Cultural Cartography in Late Imperial Times" (1996) and Laura Hostetler in her book *Qing Colonial Enterprise, Ethnography and Cartography in Early Modern China*, (2001) examine the evolution of Chinese maps of the world during late imperial times - from the 12th to the 20th centuries - focusing on two basic questions: How did changing conceptions of "the world" shape the contours of Chinese cartography, and how did changing

(as well as enduring) cartographic practices affect Chinese conceptions of the world?

Significant methodological and practical problems attend such questions. In the first place, it is often difficult to determine where a map of "China" ends and a map of "the world" begins. Large-scale cartographic representations of space in late imperial Chinese times present us with a number of overlapping political, cultural, and geographical images, identified either by dynastic names (Song, Yuan, Ming, and Qing) or by more enduring, but still fluid, designations such as the Central [Cultural] Florescence (*Zhonghua*), the Spiritual Region (*Shenzhou*), the Nine Regions (*Jiuzhou*), the Central Kingdom (*Zhongguo*), the Central Land (*Zhongtu*), and All Under Heaven (*Tianxia*). The relationship - as well as the distinction - between these time-honored concepts is by no means always clear in traditional Chinese maps.

In examining China's view of the world, Arakawa Masaharu from Osaka University in "China's View of the World" examined how the idea of *tianxia* plays a key role. This idea generally refers to the world as a whole. It is important to understand what the idea specifically signified. The word *tianxia* has been used in two different ways. Firstly it can represent the whole globe. In this all-embracing usage, *tianxia* stretches out beyond China, and the one who rules it is the lord of the world. Alternatively, it is confined to geographical China. Consequently, its extension is limited to the area which actually stood under the rule of the Chinese dynasties.

Most Chinese historical sources, in particular those since the time of the late Former Han (202 BCE - 8 CE) and the early Later Han (25 CE - 220 CE), use the word in the latter meaning. In pre-modern China, *tianxia* often signified the state. Meanwhile, non-Han countries and peoples around China were seen as not belonging to *tianxia* and the inhabitants were called "barbarians". The Chinese differentiated this area depending on the distance from China: (1) the "neighboring regions", to which the Chinese rule

extended, and (2) the “remote regions”, which stood completely outside Chinese influence.

At times, in particular when the territory of the dynasty expanded dramatically, as under the Han, the Tang or the Qing Dynasties, *tianxia* was taken to include the “neighboring regions”. Still, the idea of *tianxia* was related to the sovereignty of the emperor. It delimited the area that he effectively governed by means of the central administration as well as the census registration and the map in the provinces and counties.

There were two views about what relation *tianxia* had with the vast surrounding area including the “neighboring” and the “remote regions”. One regarded the dynasty’s capital in which the emperor resided as center of the whole world. The other, which equally existed through the ages, saw it in the *Kunlun Mountains* to the west of China and positioned *tianxia* to their southeast. The former perspective is often seen as typifying Chinese perspectives on the world, but it is interesting to note that there was also a competing relativistic paradigm.

China conceived of itself as a place where a virtuous person who had received the mandate of Heaven ruled all under Heaven (*tianxia*), and viewing its own sphere of rule as the center of the world, it called this *Zhonghua*; further, it espoused “civilized/barbarian thought”, looking upon the regions surrounding this *Zhonghua*, or China, as the world of barbarian peoples and considering itself to be in a position to bring civilization to the culturally backward world of barbarian peoples. The traditional tributary relations between *Zhonghua* and the surroundings were formed naturally on the basis of the Chinese dichotomic view of the World. This understanding is in itself basically not mistaken, but in order to gain an accurate grasp of China’s perception of the world, it is necessary to elaborate on this in a little more detail.

In China the word *tianxia*, or “(all) under Heaven”, is used to refer to the “world”. It was frequently used in an already well-established meaning during the *Warring States* period (403 BCE - 221 BCE) before the start of the Common Era (CE), and thereafter it continued to be used throughout successive dynasties right down to the end of the Qing Dynasty (1644-1911) in the early 20th century. In order to consider how China has historically viewed the world, it is first of all necessary to have an accurate understanding of the world as denoted by this term *tianxia*.

Broadly speaking, as mentioned above there have until now been two different interpretations of the word *tianxia*. One interpretation considers *tianxia* to refer to the world extending beyond the borders of China. This was first pointed out by Tazaki Masayoshi (1926), the first person to undertake a systematic examination of the notion of *tianxia*. He argued that *tianxia* signified the whole world and referred to limitless land. This understanding of *tianxia* was subsequently adopted by many researchers. For example, Hiraoka Takeo considered *tianxia* to signify the world and to represent an idea transcending ethnicity and regionality, while according to Nishijima Sadao, *tianxia* was literally the world below (*xia*) heaven (*tian*), i.e., everything on earth, and corresponded to the world itself, and being the ruler of *tianxia* was equivalent to ruling over the entire world. Nishijima also pointed out that when this Chinese notion of *tianxia* was introduced to Japan, it no longer signified the entire world and changed into the reduced and limited meaning of all of Japan. He thus argued that the notion of *tianxia* differed in China and Japan. This view of Nishijima’s could be said to have exerted a tacit influence on subsequent researchers of ancient Japanese history and Chinese history.

In contrast to the above interpretation, there is also the view that would understand *tianxia* as referring to China itself. A representative proponent of this view is Watanabe Shin'ichiro. Having carefully summarized past research on the notion of *tianxia*, he examined this notion on the basis of actual historical sources and argued that *tianxia* is a concept referring to China's traditional state. In other words, according to Watanabe, *tianxia* refers to a delimited area circumscribed in the north, south, east, and west and is confined to the area over which China's dynasties had effective control.

It is clear from Watanabe's examination of actual historical sources that *tianxia* appearing in Chinese sources is basically used in this second meaning, and China's successive dynasties also took it in this sense. According to this standpoint, foreign countries and other peoples living on the periphery of China were basically excluded from China's *tianxia*, and China referred to them as "barbarian peoples". But a distinction was drawn in this barbarian world depending on the distance from China. That is to say, it was divided into (1) neighboring states and peoples under the control and influence of China and (2) states and peoples over which China had no control or influence. In particular, it is considered that in the case of (1) China regarded them as states and peoples that had come under the civilizing influence of Chinese culture and so permitted them to bring tribute to China and entered into political relations with them; whereas the states and peoples falling under (2) were regarded as states and peoples to which Chinese culture had not spread and these were left to their own devices. In other words, using the degree of acceptance of its own superior culture as a yardstick, China ranked the barbarian peoples in the surrounding world of barbarians under the aegis of *tianxia* centered on China. In the following, I shall refer to the area covered by (1) as "neighboring regions" and (2) as "remote regions".

As seen in the above, in China's pre-modern society *tianxia* may be regarded as a term that was used in a sense close to the modern word "state". From the *Warring States* period through to the end of the Qing Dynasty, it was the designation that defined most comprehensively old China's political society in spatial and structural terms.

The Chinese historians are interested particularly in the aspect of ethnicity of the theme, that is, what the boundary was between the Han Chinese and the non-Han over time. Moreover, it is a big issue how the extension of the "State in the Middle" (*Zhongguo* or *Zhonghua*), changed in the whole course of Chinese history. It seems, however, that the discussion among Chinese scholars leaves something to be desired. First of all, they are apparently not giving enough thought to the exact definition of *tianxia*. Q. Edward Wang (1999), for example, takes it to signify the entire human world in the concluding remarks of his work. In the introduction, however, he argues that the concept refers to a united Chinese world, based on moral conformity of the society. Similar incongruities can be found with other researchers.

As was explained above, *tianxia* corresponded to the area over which China's dynasties had effective control, but on occasion it also encompassed the neighboring regions immediately outside China. Historical sources indicate that this expansion of the notion of *tianxia* occurred during the time of the Qin (221 BCE - 206 BCE) and Han (202 BCE - 220 CE) Dynasties. This was because, unlike the *Warring States* period when the term *tianxia* began to be used, the area under China's effective control expanded dramatically during the Qin-Han period, and under the rule of the emperor, once the unified Qin-Han state was established in the 3rd century BCE, its territory clearly came to include neighboring regions. In particular, following the active strategy towards other countries adopted by Wudi of the Han, the Han state used investiture to win over

foreign countries in neighboring regions as vassals and positioned them as outer vassals in contrast to inner vassals within China. The emergence of these outer vassals on the outer periphery of China had a decisive effect on the expansion of the notion of *tianxia*. During the Tang Dynasty (618-907) too, which acquired an enormous territory, as had the Han, *tianxia* clearly extended to surrounding regions. In other words, in times when the area controlled by China expanded, there were instances in which *tianxia* went beyond China and encompassed neighboring regions.

Hori Toshikazu (1993), taking note of this phenomenon of the extension of *tianxia* to neighboring regions, argues that *tianxia* was a world made up of China and barbarian peoples arranged concentrically and that it became a reality in the form of a Sino-centric world empire during the *Sui-Tang* period (581- 907). Like Hori, Ishigami Eiichi (1996) has also clearly pointed out that *tianxia* represented a conception of the world as an empire made up of China and barbarian peoples.

But even though the territory designated by *tianxia* may have extended to neighboring regions, *tianxia* was still basically confined to the area under the effective control of Chinese dynasties. For instance, even in the case of the Tang, which brought a vast area under its control, its *tianxia*, which had extended to the world of barbarian peoples, was composed of prefectures and counties located within China and prefectures and counties that had been newly established in areas inhabited by barbarian peoples. *Tianxia* referred, in other words, to the area of effective control that was secured in a concrete form by the dynasty's governing structure and the household registers and maps of prefectures (or *commanderies*) and counties on the basis of actually shared laws. The area encompassed by *tianxia* fluctuated during the course of history in accordance with the ebb and flow of dynastic power, and there were times when the existence of barbarian peoples within the *tianxia* was sanctioned, but its base should be understood to have remained in China.

Therefore, it is not correct to understand *tianxia* as a notion that encompassed barbarian peoples as one of its inherent constituent elements. *Tianxia* corresponded to the area of established effective control governed autocratically by the dynastic authorities through the system of prefectures (or *commanderies*) and counties.

As was explained above, *tianxia* was not a limitless world, but a delimited area. At times *tianxia* also included neighboring regions, but beyond these neighboring regions there was envisioned a vast area where China exercised no control or influence whatsoever. This corresponded to the "remote regions". This idea developed from the late Former Han (202 BCE - 8 CE) to the early Later Han (25 CE - 220 CE) around the start of the Common Era, which also coincided with the period when the formulation of the notion of *tianxia* was brought to completion. It is to be surmised, in other words, that together with the notion of *tianxia* there was also developed a view of the world that extended beyond *tianxia*. Since *tianxia* possessed a delimited area, the establishment of the notion of *tianxia* conceptually demanded of necessity the existence of a world extending beyond it.

It is often said that China's attitude towards this world of remote regions lying far beyond *tianxia* was one that pitied and looked down on it as representing the ends of the earth unreached by Chinese culture. But this has not in any way been proved historically, and it can be inferred from China's official histories that China actually adopted the opposite attitude towards these regions.

For example, it is recorded in the *Hou Hanshu*, an official history, that during the Later Han, when the formulation of the notion of *tianxia* was brought to completion,

there existed a foreign country called *Daqin*. This region corresponded to the eastern part of the Roman Empire, i.e., Egypt and Syria, which clearly belonged to the “remote regions”. As well as recording that *Daqin* produced plentiful gold, silver, and rare and precious goods, the *Hou Hanshu* also includes the following information:

The king of the country of *Daqin* always had an attendant holding a bag follow his chariot, and if anyone wished to express his opinion about something, he was made to place his written opinion in the bag. After having returned to the palace, the king would take it out, examine it, and decide on the merits of the opinion. In addition, there are in this country thirty-six generals, who all gather together to discuss state affairs. The position of king is never hereditary, and wise men are always selected and made king. Moreover, the people are all easygoing, upright, and orderly in appearance and conduct. They resemble the people of China, and that is why this country is called *Daqin*.

It is evident from this account that the writer had no disdain or pity at all for the country of *Daqin*, which belonged to the remote regions, and there has in fact been projected in this account the image of a civilized or utopian country similar to China. It is surmised that since China was constantly receiving elements of an advanced culture from the west via the *Silk Road*, it sought in the remote regions of the west, about which little accurate information reached China, a civilized or utopian country similar to China.

As has already been explained, a vast area called the remote regions was envisioned outside *tianxia*, and there existed two views regarding the position of the area corresponding to *tianxia* within this worldwide area. According to one view, the royal capital governed by the son of Heaven, or emperor, was the center of the world, which extended outwards in a multi-stratified fashion to encompass in succession China, neighboring regions, and remote regions. This was a worldview conceived of with China at its center, and it may be described as a Sino-centric view of the world.

In contrast, there also existed a view of the world that relativized this worldview. This was a worldview that placed the *Kunlun Mountains* to the west of China at the center of the world and positioned China's *tianxia* to the southeast of these mountains. Zhang Heng, a renowned man of letters who lived in the first half of the Later Han and was also well-versed in astronomy, wrote a treatise entitled *Lingxian* in which he set forth his own views on the world and the universe, and in this work he writes about China in the following terms:

To the southeast of the Kunlun Mountains [at the centre of the world] there lies Shenzhou (China). Here there are wind and rain with each season, and heat and cold are suitably regulated. Outside this region, the heat is excessive in the south, the cold is excessive in the north, wind is excessive in the east, and clouds are excessive in the west. Therefore, the sage-kings [of China] do not live in these regions.

According to this account, *Shenzhou*, governed by the sage-kings of China, lies to the southeast of the *Kunlun Mountains* and is the only region in the world blessed with a harmonious climate. The *Kunlun Mountains* were mountains that had been widely believed from the *Warring States* period through to the Qin-Han period to lie to the far west of China, and they were regarded as the source of the Yellow River and also as a jade-producing area where the *Queen Mother of the West*, a mythological goddess, lived. Although China's *tianxia* is here extolled for its environment, it is clearly not the center of the world.

As was noted earlier, it is to be surmised that in the late early Han and early Later Han there developed together with the notion of *tianxia* a view of the world that extended beyond *tianxia*, and this conception of a worldview centered on the *Kunlun Mountains* dates from the same period. This means that at a time when a Sino-centric worldview developed there also existed a view of the world that relativized this Sino-centric worldview.

Especially interesting in this regard is that once Buddhism was introduced to China in the 1st century during the Later Han, *Mount Sumeru*, the center of the world in the Buddhist worldview, came to be identified with the *Kunlun Mountains*. In fascicle 10 of the *Shiyiji* composed by Wang Jia of the Former Qin (351-394) in the 4th century it is stated that “in the west the Kunlun Mountains are called Mount Sumeru”.

Mention of China’s view of the world usually brings to mind only a Sino-centric worldview in which China lies at the center of the world. But it should not be forgotten that, even though it did not become a mainstream view among intellectuals, there also existed along side this worldview another view of the world that relativized this Sino-centric worldview.

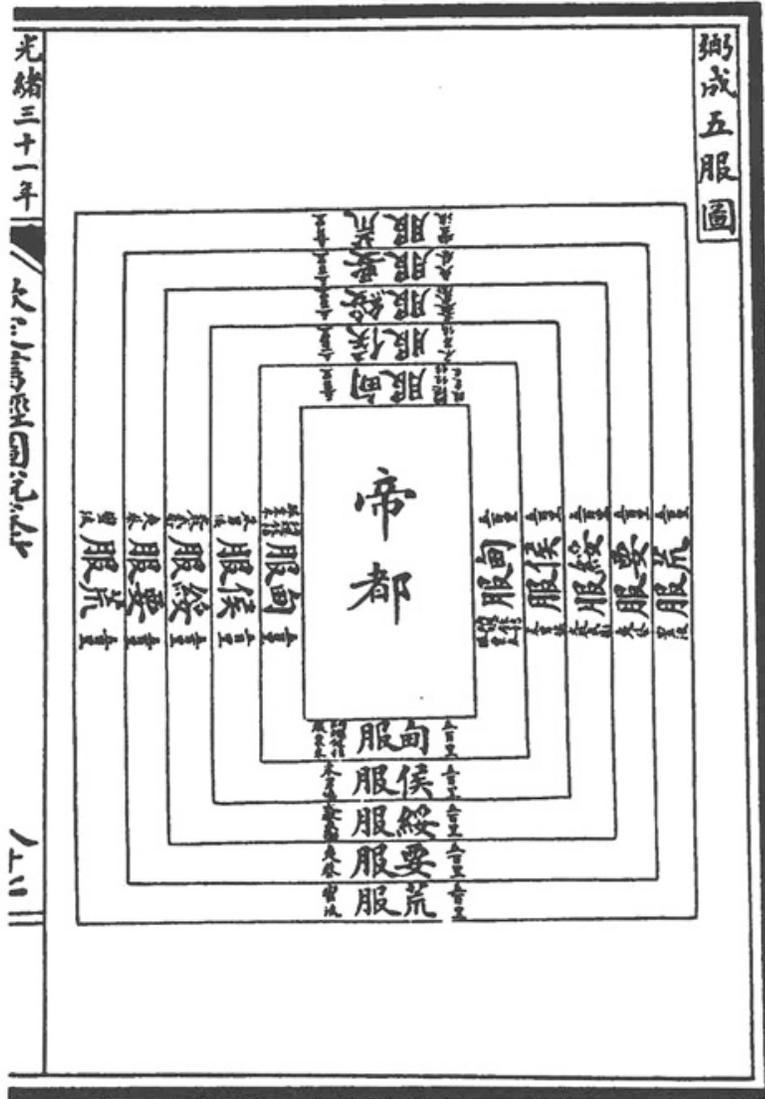
Cartographically

In ancient China, “space” was not perceived as a uniform *quantum continuum* as has been taken for granted in the West, at least since the Renaissance period. Rather, it was understood as a confederation of five directions: north, south, east, west, and middle. Each direction had its own distinction and quality. The Chinese universe was sometimes diagrammed as a grid of nested rectangles with the center occupied by China, whose name means “Middle Kingdom.” The following “map” shows such a symbolic, ideological diagram from about the fifth century B.C. The center of this “map” represents the imperial palace. Reading outward, the next rectangle represents the imperial domains; then the lands of the tributary nobles; then the zone of pacification where border peoples are adjusting to Chinese customs; then the land of friendly barbarians; and finally, the outermost rectangle separates Chinese civilization from the lands of savages who have no culture at all.

In this Chinese example we observe an interesting combination of aesthetics and political iconography. The contemporary Chinese viewer not only would appreciate the decorative composition of his “map” with its nested rectangular borders and extraordinary emphasis on a “positional enhancing” center, but was thereby lulled by those very aesthetic qualities into feeling complacent about his national security. Much later, in the 16th and early 17th centuries, the Jesuit missionary Father Matteo Ricci gained some insight into this peculiar Chinese map mentality. While attempting to convert the gentry of the Ming dynasty, he had published a number of world maps in the Chinese language and artistic style yet still showing the world according to the prevalent European Ortelian cartographic system, with meridians curving toward the north and south poles.

Robert Rundstrom has observed that mapping “is fundamental to the process of lending order to the world.” Yet quite clearly there are many ways of world-making. In Denis Wood’s vivid formulation: “Every map shows this . . . but not *that*, and every map shows what it shows *this way* . . . but not the *other*.” In other words, cartographers construct the world, they do not reproduce it. Places are where they are, but maps represent them where the mapmakers want them (or need them, or think them) to be. Every map, then, has an author, a subject and a theme (or themes). *No map is a neutral*

document. All reflect efforts of one kind or another to impose oneself (or one's culture) on physical space. A map is an interpretation that needs, in turn, to be interpreted.



Ancient Chinese world view, 138 B.C. (#209)

From the Chhin-Ting Shu Ching T'u Shuo

[imperial illustrated edition of the *Historical Classic* chapter 6, Yü Kung]

The traditional conception of the radiation of ancient Chinese culture from its imperial center. Proceeding outwards from the metropolitan area we have, in concentric rectangles, (a) the royal domains; (b) the lands of the tributary feudal princes and lords; (c) the 'zone of pacification', i.e. the marches where Chinese civilization was in course of adoption, (d) the zone of allied barbarians; (e) the zone of cultureless savagery.

The systemization can never have been more than schematic but Egypt and Rome might have used a similar image, all unconscious of the equally civilized empire at the eastern end of the Old World.

Many theorists emphasize the use of cartography as a means of asserting political and social control. J. B. Harley writes, for instance: "Both in the selectivity of their content and in their signs and styles of representation, maps are a way of conceiving, articulating and structuring the human world which is biased towards, promoted by, and exerts influence upon particular sets of social relations. By accepting

such premises it becomes easier to see how appropriate they are to manipulation by the powerful in society.” David Harvey states more succinctly, “command over space is a fundamental and all-pervasive source of social power.” As products and symbols of various kinds of authority (moral, “scientific,” etc.), maps make distinctions that favor certain interests, “culturalizing the natural” through the process of identifying and naming, categorizing and containing. Although maps are usually viewed as representations of space, they can also be taken as spaces of representation - fields of opportunity, waiting to be cultivated by acts of physical or intellectual appropriation or both.

From ancient times maps have served a variety of purposes in China. Many were designed as practical educational tools for scholar-officials, to guide, instruct and edify in times of both peace and war. They were also employed as a concrete means of asserting the emperor’s territorial claims, whether local, empire-wide, or world-wide. Maps became symbolic tokens of exchange in China’s domestic and foreign relations, and were even used to depict a perceived link between the realms of heaven and earth. Significantly, they also provided a means by which viewers could take “spiritual” journeys to distant lands - the cartographic equivalent of “travelling [through a landscape painting] while remaining at rest [*woyou*]”.

The historian Linda Rui Feng states that in the history of Chinese cartography, a millennium-long gap exists from which almost no maps survive. Dating from before the pre-imperial era and the establishment of the Han dynasty (206 BCE–220 CE), maps made variously on metal, wood, paper and silk have been excavated from tombs. From the 12th century onward, a more robust cartographic record survives, which consists of maps engraved on stele as well as printed atlases and regional gazetteers that began to be produced in abundance as the commercial printing culture of the Song dynasty (960–1279 CE) expanded. However, for the period between the second and 11th centuries, the surviving cartographic record is scant, even allowing for the highly inclusive view of maps proposed by J. B. Harley and David Woodward: ‘graphic representation that facilitates a spatial understanding of things, concepts, conditions, processes, or events in the human world’. Rare exceptions in this cartographic gap include a 10th century mural map found in the Mogao grottoes of Dunhuang, depicting the peaks and temples of Wutai Mountain and described in, for example, Zhao Shengliang, *A Study of ‘Wutai shan tu’ in Mogao Grottoes Cave, Dunhuang Yanjiu* (1993): 88–124. Another survivor is the early-Song engraved map showing the Tang dynastic capital of Chang’an attributed to Lu Dafang (1027–1097).

The gap is the result of curtailed transmission rather than any decline of interest in maps or cessation of cartographical practice. In this period devoid of artifacts, and especially during the Tang dynasty (618–907 CE), ample written texts speak to the intellectual, cultural and imaginative histories associated with the contemporary use of spatial knowledge and its illustration in maps. The reasons for the lack of the artifacts themselves may be broadly explained by the fact that in an era when printing was still limited in use and both texts and images circulated as manuscripts, texts lent themselves more readily to transmission because they could be systematically copied by trained scribes.

In contrast, manuscript maps – either as loose sheets or as part of a scroll – were not as easily reproduced or reconstituted by editors and scribes. They were vulnerable assemblages. As Tan Qixiang suggests, even without considering their sensitive nature as political and strategic tools, maps were more difficult to reproduce compared with

texts because of their irregular size and the fact that they were more akin to paintings. Moreover, Cordell Yee has noted that prior to the Song dynasty maps were rarely preserved because they were part of a 'documentary culture' that consistently culled the informational content and then dispensed with the original source materials, which were not considered intrinsically valuable. Even state-sponsored maps vanished, to say nothing of maps born of more modest ambitions.

However, the contexts in which maps were used, engaged with, and transmitted are still retrievable from extant writings from extant writings about maps that are now lost, and from looking closely at a range of sources associated with the making, reading and circulation of spatial knowledge. This is not the same as attempting to reconstitute lost maps; rather, it is to explore the intellectual, visual and imaginative histories associated with cartography.

Maps from pre-modern China were routinely read in conjunction with textual descriptions. As many scholars have pointed out, traditional maps functioned as part of an interface between writing and illustration and participated in what Cordell Yee calls a 'representational complex' that incorporated prose, poetry and painting. Maps were seldom in and of themselves sufficient as transmitters of knowledge or experience; they referred to other forms of representation. The terrestrial map in pre-modern China – *ditu* – was embedded within a larger epistemological concept of *tu*, which also included illustrations, charts, diagrams, paintings, catalogues and prophetic texts. Early medieval writers, who were aware of the term's polysemic nature, did not feel the need to make explicit distinctions between the different types of *tu*. The capacious concept of *tu* has led scholars to define the term as a functional category referring to images that 'encoded technical knowledge' and can be thought of as 'templates for action'.

Chinese terrestrial maps, therefore, lend themselves to being considered and analyzed through other forms of descriptions and through indirect evidence. This opportunity is particularly germane to thinking about maps that have been lost. To examine the cultural logic inherent in the perception of maps and the contemporary 'mental horizon' of both mapmakers and map users who engaged with and handled maps, focusing on the writings by two high-level officials in which they justify creating maps for the emperor, describe the map-making process and envision how the maps are to be viewed. Then move to consider descriptions of map users and the consequences of map viewing.

Beginning in early imperial China, maps presented to a sovereign were often accompanied by writing that anticipated the royal gaze and imparted an understanding of how the map was to be perceived by at least its primary user. Writing in a formal and persuasive genre known as 'memorial to the throne', the minister or official reported on administrative affairs and articulated his positions *vis-a-vis* imperial actions or deliberations, and early maps naturally figured in these addresses to the emperor.

During the Han dynasty, when the royal scion Liu An (179-122 BCE) tried to dissuade his sovereign from sending troops to the distant south, his rhetorical approach rested on the discrepancy between the perceived distance on a terrestrial map [*ditu*] and the actual distance when military action was concerned. He cautioned Emperor Wu (r. 141-87 BCE), whose capital was located in the northern plains of China, not to be falsely reassured by the proximity and flatness between locations in the geographically treacherous south and reminded him that An important mapmaker active in the Jin dynasty (265-316), in contrast, highlighted the same phenomenon as a touted feature rather than a pitfall. The '*Map of the Territory Encompassing the Tributes of King Yu*' created

by Pei Xiu (224–271) has long been lost, but Pei Xiu wrote a preface for the map he presented to the emperor, and in it he articulated six theoretical principles for map making. When these principles are followed, he explained, no topographical detail would escape being included.

Even if separated by high mountains and vast seas and by the great distances and unfamiliar directions of the most remote land, whether it is the routes for climbing and descending or for following elaborate turns and detours—all this can be identified and determined. Once the principle of *zhunwang* is properly applied, the straight and the curved, the far and the near—none of this can hide their forms from us.

Unlike Liu An, with his caution that cartographic representations could be deceiving, Pei Xiu confidently declared exactly the opposite, that cartographical techniques give map users improved vision.

Both Liu An and Pei Xiu wrote (to their respective sovereigns) about reading and making maps, and this practice continued into the Tang dynasty. The prime minister Jia Dan (730–805), famed for his accomplishments in geography or, more literally, ‘terrestrial patterning’, was commissioned by the emperor to compile a country-wide map. Accordingly, in the year 801, he presented Emperor Dezong (r. 779–805) with an enormous map painted on silk and entitled ‘*Map of Chinese and Barbarian Territories within the Seas*’. This monumental map has long been lost, but unlike the map of Pei Xiu of earlier times, which the emperor had ‘kept in secret archives’, Jia Dan’s map appears to have been seen by appreciative members of the cultural elite, who referred to it in a variety of written texts, commemorative prose and poems. One of the earliest extant maps of the Chinese empire, carved in 1136 on a stone stele (#218), also seems to have drawn substantially from the major features of Jia Dan’s map.

In the memorial that introduced the map to the emperor, Jia Dan explained the cartographic practices involved in its production and the map’s intended purpose. After first praising the ruler’s sage governance—as was conventional for addresses of this kind—the map was described in terms of its dimensions and function.

Respectfully [I have] commanded artisans to paint this scroll of ‘Maps of Chinese and Barbarian Territories within the Seas’. It is three zhang wide, three zhang and three chi in height. As for its scale [lu], one cun is equivalent to one hundred li [of land]. [The map] distinguishes the civilized from barbarians; it situates the high peaks and large rivers. It shrinks the four frontiers onto [a piece of] fine white silk; it marks out, in painting, the hundred prefectures. The cosmos may be wide, but the map unfurled does not fill the courtyard. Anywhere that can be reached by boat or carriage can all be taken in by a single glance of the eye.

Here Jia Dan highlighted the four crucial actions he expected his map to perform: to distinguish, to set apart or separate, to situate, and to shrink. He referred to Yu, the legendary sage-king of antiquity who tamed a primordial flood and gave order to the post-diluvian world, as narrated in one of the earliest canonical texts—the chapter ‘Tribute of Yu’ of the *Book of Documents*. In this way Jia Dan established hallowed precedence for his own cartographical endeavor. The verb *dian*, in the context of establishing the major mountains and rivers, was a direct echo from those accounts of articulating and cataloguing geography.

Traditional Chinese maps tend not to be drawn to scale, include a great deal of text and are sometimes pictorial. This generalization is accurate in so far as one acknowledges that a number of kinds of mapping practices, reflecting various epistemologies, did coexist. Distinct technologies and map styles were suited to different audiences and purposes.

The modern term for “map,” whether in Romance, Slavic, Chinese, Indian, or even pre-modern Middle Eastern languages, derives from broader terms relating either to the material on which drawings were made (*mappa*, Latin for cloth; *chartes*, Greek for papyrus), or to pictures or illustrations more generally (pre-modern Middle Eastern languages, Indian languages, Russian, and Chinese). The specific term “cartography,” referring to the drawing of what we now think of as a map, as distinct from other representations of territory and their inhabitants, was not coined until 1839. The modern Chinese word for map is *ditu*, literally a picture, or illustration, of the earth or of land. In classical Chinese the term *tu* alone is often employed. However, *tu* can mean not only map but as a noun can also refer to an illustration, a plan, a chart, or a painting. As a verb it can mean to plan, to scheme, or even to covet.

Chinese mapmakers tended to be broadly gauged scholars and artists rather than narrow technicians. Until the late 19th century there were no professional or specialist cartographers as such in China and most Chinese believed the world to be flat well into the 19th century. The Chinese scholars, like the European medieval cartographers/cosmographers, who created maps saw their productions as part of a larger intellectual and cultural enterprise - one that embraced not only science (especially astronomy and geography) but also history, philosophy, art, literature, and religion (including divination). Again like their European counterparts, “history” was an especially prominent value in Chinese maps. Many cartographic collections, and even individual maps, bear titles indicating that they are concerned with the relationship between the “past and present” [*gugin*], or between successive dynastic periods [*lidai*]. In other words, time and space remained closely connected in imperial China.

The map *Seiki no Chizu* [Map of China and Westward], reproduced below, dating from the end of the eighth century to the mid-ninth century, depicts the 22 countries established on the Eurasian continent at the time. Although described as a “map”, this document displays the territories of the 22 countries in a simplified, rectangular form, enclosed by perpendicular lines. And the names of these countries were noted down in both Chinese and Tibetan characters. Chief among the 22 countries, which have not yet been identified completely, are, from the east to the west, the Tang China (No. 21), Uighur (No. 19), Tibet (No. 17), India (No. 11), the Islamic Caliphate (No.3) and the Byzantine Empire (No.5). This map focused on the countries of Asia with the exception of the Byzantine Empire, of which the Chinese name (in Tibetan characters *Pu-lim*) was derived from Iranian language *From/Hrom* meaning Rome.

It is still unknown who drew the map, but there is a strong possibility that it was drawn by a Buddhist monk. The map was imported from Tang China (618-907) into Japan in the Heian Period (794-1185). Unfortunately, the original of this map has been lost and it has been copied many times: it is uncertain to what extent the repeated copies reflect the lost original.

And what is worse, it is unclear where the last copy is kept now. We can only provide a blurred photo of the last copy. The plates below reproduce a photo of the last copy and a sketch of it, drawn by Japanese scholar Teramoto Enya and printed in his thesis. Nevertheless, the piece retains great value as a map of the world as conceived during the Tang dynasty.

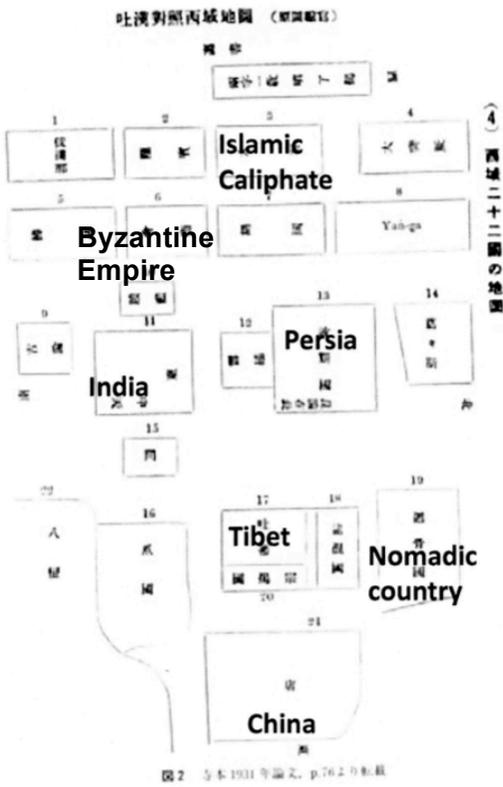


圖2 日本1931年論文, p.76より転載

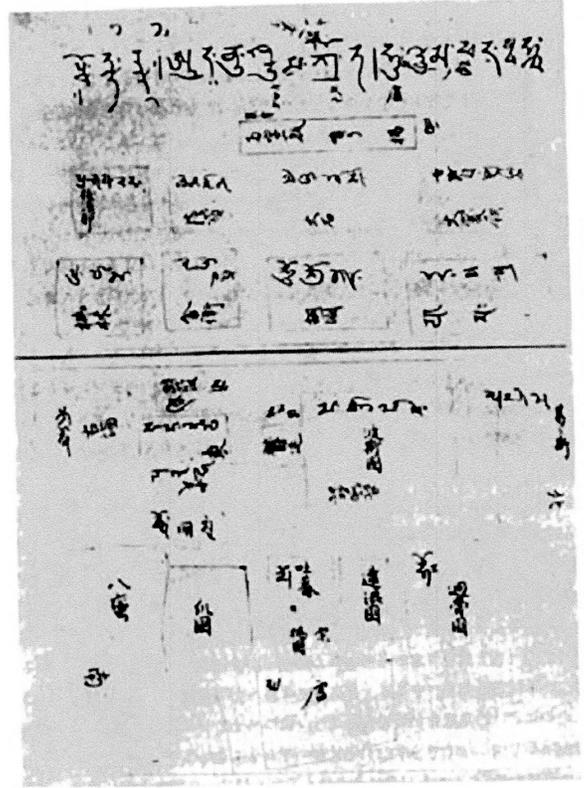
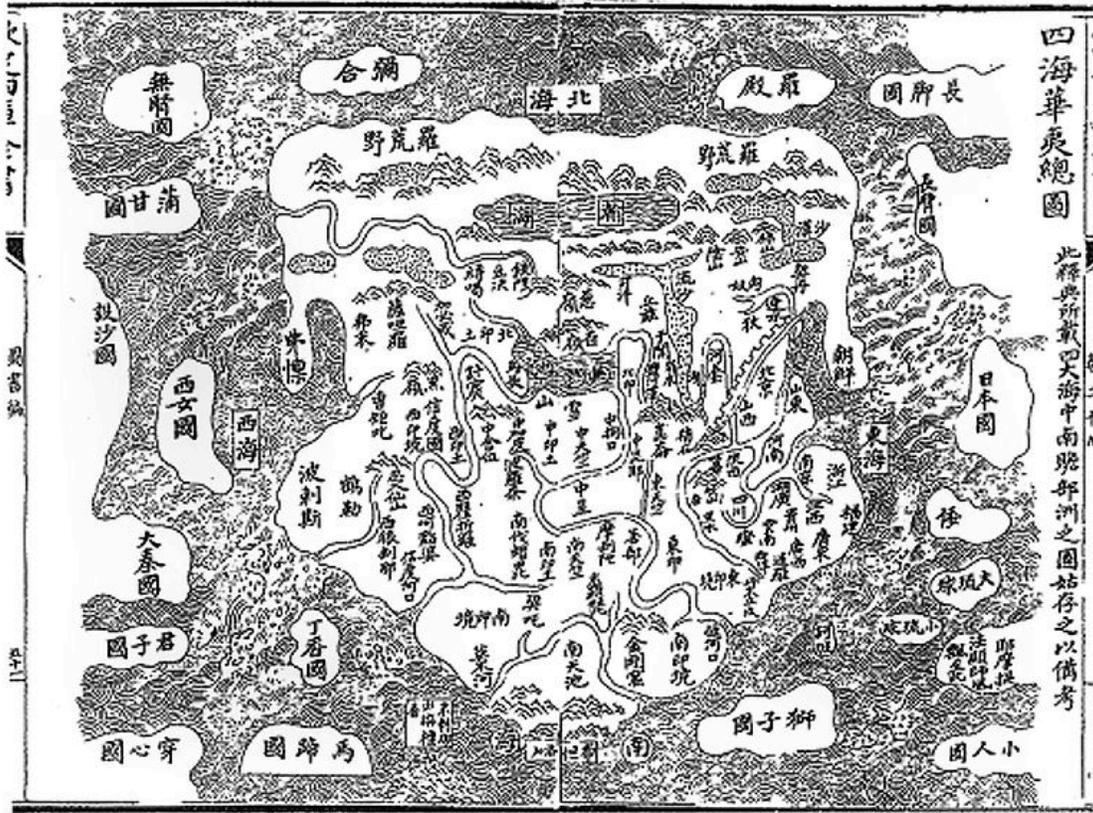


圖1 日本1931年論文の口絵より転載

Seiki no Chizu [Map of China and Westward]

On the whole, explicitly religious maps seem to have been less popular in the Central Kingdom than in other parts of Asia, such as India, Burma, Korea, Japan and Tibet. We do, however, find Chinese cartographic works in both the religious Daoist and Buddhist traditions. One such work shown below, known as the 1532 *Sihai Huayi zongtu* [General Map of Chinese and Barbarian [Lands] within the Four Seas], purports to show the Buddhist continent of *Jambudvīpa* (Chinese: *Nanshanbuzhou*), but replaces India as the principal geographical focus with China. Our habitable world, according to the Buddhist cosmographical view, is a continent called *Jambudvīpa* lying to the south of *Mt Sumeru*. The continent is said to be wide in the north and pointed in the south, having in its center *Lake Anavatapta* from which flow four large rivers. This is to be considered as a topographical reflection of the Indian peninsula, *Lake Anavatapta* symbolizing Lake Manasarovar, the Himalayas and the four rivers representing the Ganges, the Indus, the Oxus and the Tarim and where all of the ordinary people live. The Chinese landscape, with its provinces, major rivers, mountains, and the Great Wall, is depicted in considerable detail, while India recedes to comparative insignificance in the southwest.



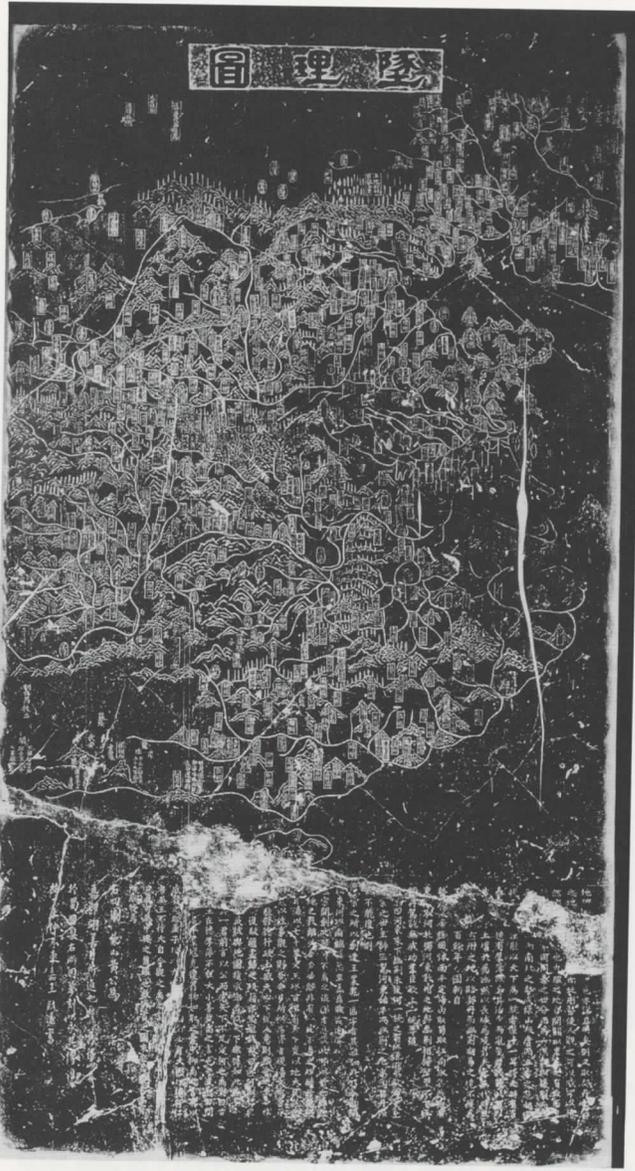
A 1532 Chinese map, the *Sihai huayi zongtu* (四海華夷總圖/四海华夷总图, [General Map of Chinese and Barbarian [Lands] within the Four Seas]. The map displays the various locations of China, Korea (朝鮮) and Japan (日本國) in the East, Siberia in the North (羅荒野), Nepal (天竺) and a vast India (印度) in the South, Persia in the West (波刺斯, modern 波斯), and Rome (Daqin, 大秦) beyond the Western Sea (西海).

A number of Chinese maps indicate, sometimes explicitly, a concern with the principles of “siting” or “geomancy” [*kanyu, fengshui*, etc.]. A central feature of this cosmological system is the belief that certain geographical forms and/or spaces will bring good fortune. Softly undulating rectangular shapes, for instance, are generally considered auspicious, as are lines of protective hills and mountains. Land configurations that envelope important spaces (in the fashion of the flanks of well-positioned gravesites), and waterways that nourish these areas, are also esteemed. As Philippe Foret and others have pointed out, Chinese mapmakers were not above adding such topographical features to their cartographic productions in order to depict (create) a more favorable geomantic environment. And where hills and mountains already existed but were separated by flat expanses of land that seemed to diminish their collective power, mapmakers might edit their rendering of the scene to give it greater geomantic strength. Sometimes places would simply be relocated in maps to give them a more favorable geomantic position, or altered in appearance for similar reasons.

Overall, Chinese cartographers treated large-scale space, including the world itself, as essentially flat. Although mathematical astronomers used ecliptic as well as equatorial coordinates in their celestial mapping, cartographers saw no need to project them on the earth. As a result, they “simply acted as if they were transferring points from a very large flat surface to a smaller one.” At the same time, however, Chinese mapmakers often employed variable perspective and variable scale. Thus, for example, mountains might be drawn in elevation while rivers would appear in plane. Moreover, the size of objects relative to one another, as well as their distance from one another, were usually dictated not by their actual dimensions or by geometrical perspective but rather by the specific purposes for which the map was produced. Heavy annotation provided valuable information that might otherwise have been expressed by graphic images of scale.

Chinese maps often devote more space to the written text than to the actual graphic image. Although the tendency for historians of cartography has been to denigrate heavily annotated maps in favor of more “representational” ones, there is no intrinsic reason for doing so. It was not, after all, lack of skill or backwardness that determined the nature of traditional Chinese cartography. In China, for cultural reasons, the written word, rather than visual images, remained the primary source of representational authority. In the pithy formulation of the well-known third century philosopher, Wang Bi, “Image is what brings out meaning; word is what clarifies image.”

Cartographic texts in China commonly provided technical data concerning roads, waterways, landmarks, distances, and so forth. But they also supplied important cultural information. An excellent illustration can be found in a “geographic map of China” [*Zhuili [Dili] tu*], created by a scholar named Huang Shang in 1247 - several decades after the fall of the Northern Song capital of Kaifeng to the invading Ruzhen people. The map was intended as an illustration for the future Song emperor (Ningzong, r. 1194-1224) of how much land had been lost to the northern barbarians, and as a reminder of the sovereign’s responsibility to reunite the empire. The commentary to the map addresses the perennial problem of keeping China together, observing that “only one out of every ten [rulers] has been able to bring unity to all under Heaven.” This discussion - which constantly emphasizes morality as the key to administrative success - is full of historical allusions to events such as the invasion of China by the Qidan people in the early 10th century and the rebellion of An Lushan in the mid-eighth century, as well as to the noteworthy unifying accomplishments of the sage-rulers Tang and Wen, who, despite having only modest territories to begin with (like the Southern Song), founded the great Shang and Zhou Dynasties, respectively. The commentary naturally includes references to northern landmarks that had recently fallen under “barbarian” control - including the Yellow River, the Great Wall, and “a vast forest stretching several thousands of *li*.”



A copy (rubbing) of the Zhuili [Dili] tu [Geographic Map] by Huang Shang, engraved on stone by Wang Zhiyuan in 1247 and erected at the Suzhou prefectural school, 179 x 101 cm

This map was one of four which Huang Shang had presented to the imperial throne in 1194 A.D. Later, in 1247 A.D., the Zhuili [Dili] tu [General Map of China] was engraved on a stone stele at Suchow by Wang Zhiyuan. The size of the original map was about 3.75 x 3.25 feet. An examination of some of its characteristics will reveal a much earlier source or model than that of the 13th century. The cartographic principles involved here are in the *Hua I T'u* tradition [Map of China and the Barbarians, 1137 A.D., see #218], the mountains and forests being more naturalistically drawn in, with no grid system, and with place-names inserted in cartouches. The coastline and the Shantung peninsula are, however, better represented than in the 1137 map. One of the many scholars who have studied this map, Aoyama, considers that in all its essentials, the *Zhuili [Dili] tu* goes back to Shen Kua's time, a century or more earlier. Indeed it is purported to represent

China as it was before the loss of its capital, Khaifeng, to the Chin Tartars in 1126 A.D.

The textual emphasis of traditional Chinese cartography did not in any way undermine the aesthetic appeal of maps. On the contrary, inscriptions often enhanced it. In contrast to the development of cartography in Europe, where manuscript maps became rather rare following the spread of copper engraving in the late 15th century, manuscript maps continued to be produced in great numbers in China. These documents, like landscape paintings, were tastefully shaded and often complemented by substantial amounts of calligraphy--sometimes even poetry. Printed maps could also be extraordinarily beautiful, with handsome, well-cut cartouches, and carefully colored natural features. Neither type of map could be considered true art, however, for both lacked the qualities of "life force" [*qi*] and "kinesthetic power" [*shi*] that distinguished artistic creativity from mere craftsmanship.

Yet another distinctive feature of Chinese cartography is what Cordell Yee describes as its tendency toward introspection - a self-conscious preoccupation with concrete administrative concerns. Buildings and walls, for example, tend to loom large, quite literally, in many kinds of maps. Paradoxically, Chinese introspection included looking outward. That is, one of the emperor's traditional domestic concerns as the ruler of "all under Heaven" was the management of foreign peoples - whether on the periphery of his realm or beyond. These "barbarians" [*yi, fan*, etc.], although by definition not fully Chinese, were all at least theoretically the emperor's "subjects." Many of them periodically sent him local products, designated "tribute" [*gong*], and, in return, expected the Son of Heaven to protect and nurture them. From a Chinese standpoint, this highly refined system of "guest ritual" [*binli*], which allowed foreigners the opportunity to demonstrate their loyalty to the Chinese emperor, was the logical extension of an ancient feudal structure of lord-vassal relationships. Although the tributary system underwent many permutations over time, what remained constant was a highly refined vocabulary of imperial condescension that at once emphasized the inferiority and encouraged the loyalty of all China's tributaries, far and near. It was this Sino-centric assumption of universalistic overlordship - the idea of a Chinese "empire without neighbors" - that blurred the distinction between maps of China and Chinese maps of the world.

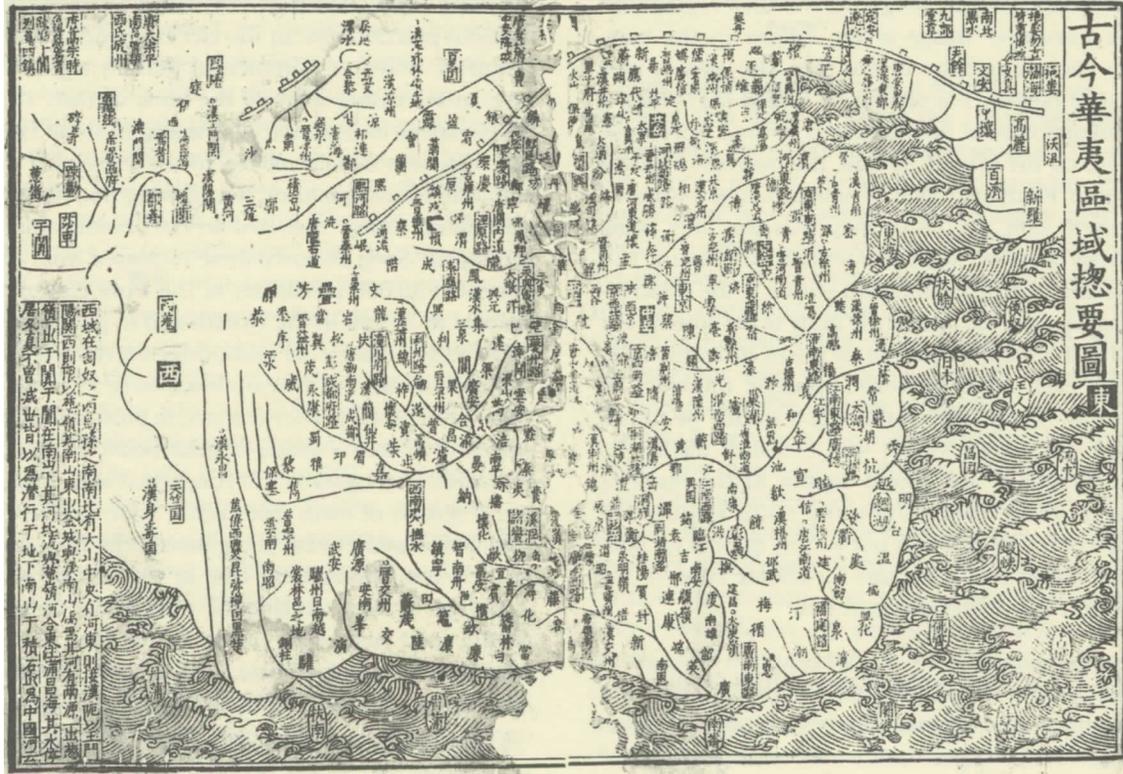
Since the Chinese valued literary training above technical knowledge, mathematicians and astronomers were usually not part of the ruling bureaucratic class responsible for producing maps. Official Chinese mapping was not anti-mathematical; it was more than mathematical. The knowledge of history and literature required of the scholarly administrators fostered a strong sense of social unity. The Chinese visually expressed in many forms their unique society, in which the way of the ancients was the pattern for the present. *Lidai dili zhichang* [Geographical Maps of Successive Dynasties] is the oldest extant atlas. It would have been in use when Marco Polo arrived in China. From the Song period, just before the Mongols' Yuan period, it bears a strong resemblance to *Hua yi tu* [Map of China and the Barbarians; 1136, see #218], the subjective gridless stone map from that same period. This latter work, about three-foot square and carved in stone, supplies approximately 500 place names and identifies a dozen or so rivers and tributaries in China. A few foreign lands are represented visually in the map - notably, Korea and India - but more than a hundred different groups of "barbarian" peoples are indicated only by written notes on the margins of the map near the top, on the northwestern side we learn, for instance, that the area of the formerly called the Qidan people is now called "the Great Liao Country." Several such notes refer specifically to tributary relationships, past and present.

Comprising several volumes, the atlas contains forty-four traditional maps showing the administrative units of twenty-eight different political periods, beginning in the era of legendary kings (twenty-first century BCE). Unsurprising in a literary culture, and as with Islamic maps, text predominates. The first map in the atlas, *Gujin hua yi quyu zongyao tu* [General Map of Territories from the Ancient to Present, of China and Foreign Countries; 1130, shown below] displays the provinces (*lu*) established during the Song period and still in place when Kublai Khan arrived. The topography is less than accurate because it is the boundary changes during the preceding centuries that are the map's concern. It is *Map as Narrative of a Shared Past*. On it, the eye is drawn to China's frontiers. The seemingly unbreachable Great Wall barricades the north from invading barbarians - such as their Mongol conquerors - and while some neighboring

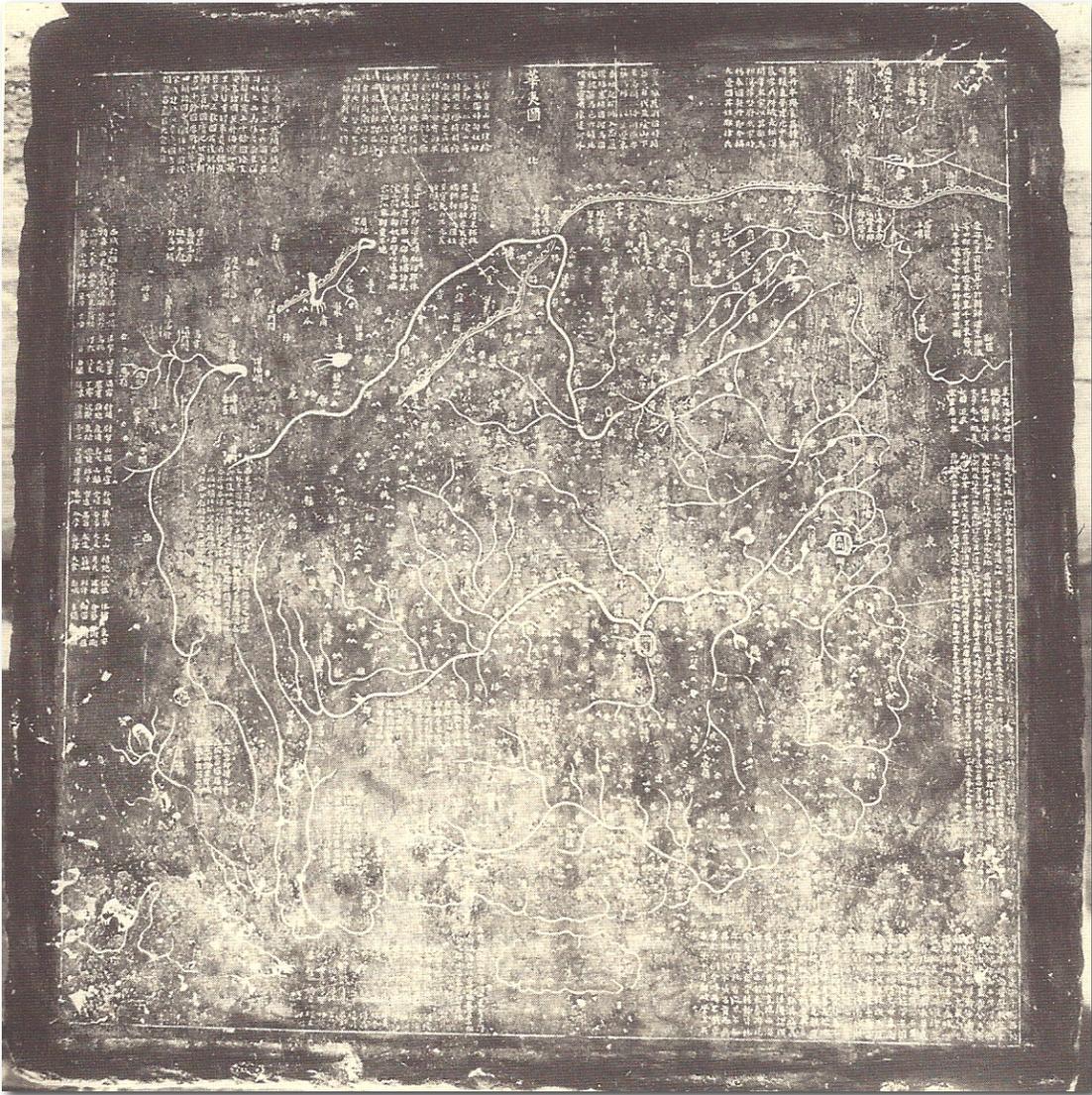
borders and western countries are placed fairly accurately, others, like Japan, Vietnam, and India, are approximately placed to locate economic activities. The expressed self-image is one of power and security, bolstered by the imperial continuity detailed in the atlas's other maps. The Chinese people's admiration for their own culture is dramatized by the dominant Chinese characters. These ideograms were the civilizing instrument for many neighboring countries, and they seem to be on the march westward, carrying the message of Chinese superiority to the rest of the known world.

Not all Song dynasty renderings of space arose from the same source, however. Indeed, inscribed on the reverse side of the *Huayi tu* is an astonishingly "modern" looking version of an ancient work called the *Yuji tu* [a.k.a. *Yü Chi T'u* - Map of the Tracks of Yu, 1136, see #218.1], probably created about 1080. It marks the earliest extant example of so-called "latticework" cartographic grid in China. Each side of each square represents 100 *li* [~ 33 miles], yielding a scale of about 1:1,500,000. The outstanding feature of this map, in addition to the near total absence of written commentary, is its extremely accurate depiction of major landforms. The representation of China's coastline, for instance, looks remarkably like modern 20th century renderings.

One of the earliest extant woodblock-printed maps in China is the *Dong zhendan dili tu* [Geographic Map of the Land of China to the East]. Being included, along with other maps about regions beyond China, in the Buddhist chronicle *Fozu tongji* 佛祖統紀 [General Records of the Founders of Buddhism], dated 1265-1270, the map shows the blending of different cultures and geographic knowledge behind its production. The map (as a part of the book) was made by woodblock-printing, a technology that had been in a wide use at that time. The map's Buddhist author adopted a circulating geographic representation of China but shifted its worldview (especially *axis mundi*, i.e., center of the world) to present China at the eastern periphery of the Buddhist world. During the Song Dynasty, government-sponsored mapmakers placed China at the center and foreign countries at the margins of the world, which is typical of most extant Chinese maps. However, some contemporary Buddhist scholars drew maps from a different perspective, even though they used the same geographic knowledge to create them. Maps like the *Dong zhendan dili tu* illustrate this well. The map also portrays many place names of foreign countries, including some places in West Asia that are shown for the first time. Although few original maps created during the period survive, some maps are preserved thanks to the massive volume of book printing in China, including the *Dong zhendan dili tu*.

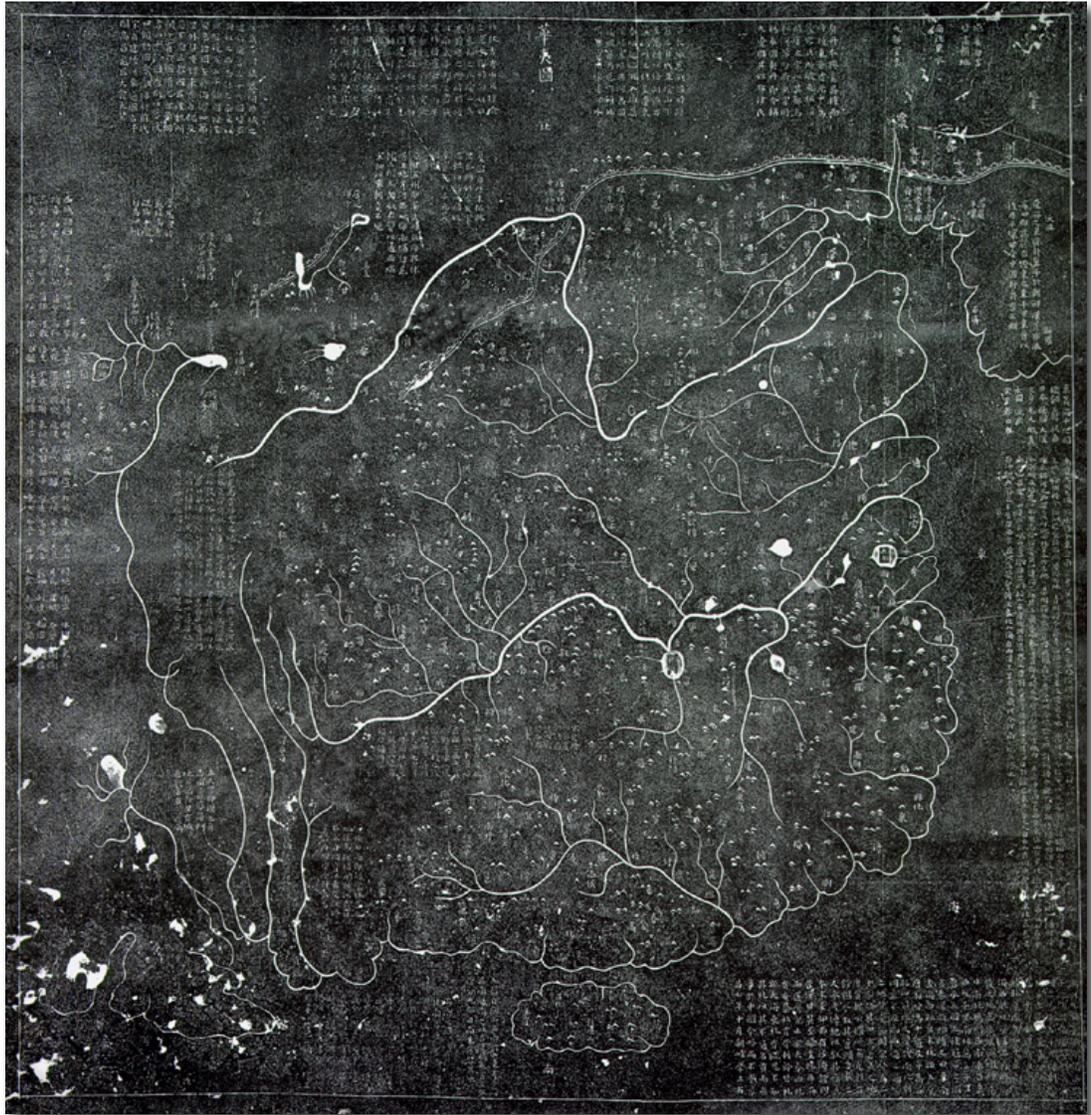


Gujin Huayi quyu zongyao tu
[General Map of Chinese and Barbarian (non-Chinese) Territories, Past and Present], 1130

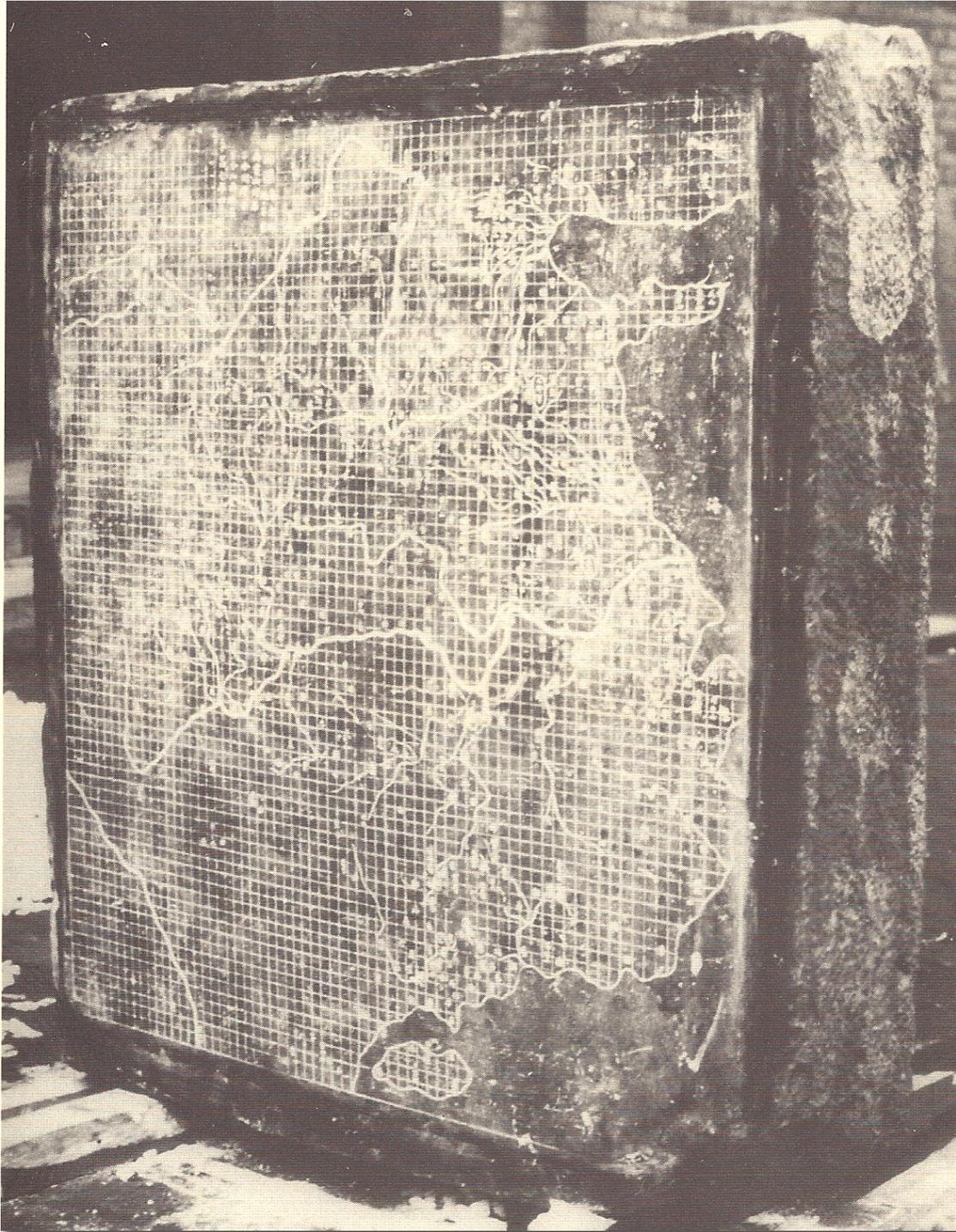


The *Huayi tu* (see #218), measuring 1136.79 x 79 cm, this map is carved on the same stele reproduced in *Yuji tu*. Because the maps are placed in opposite directions on the stone, this particular stele was most likely to have been used to produce rubbings and was not for public display. Based upon Jia Dan's Map of Chinese and Non-Chinese Territories within the Seas of 801, it shows the main natural and administrative features of the Chinese Empire up to the 1120s. The texts arranged around the edges of the graphic part of the map provide quotations from historical and other sources and briefly explain the meaning and history of essential markers such as the Great Wall, the size of the empire, and the states to the west.

Produced more than 300 years after Jia Dan's silk map of the Tang empire. North at the top. Stone-carved maps were durable and could be easily reproduced through such ink rubbings. The silk map of Jia Dan, now lost, would have covered more non-Chinese territories and allowed for more details to be shown. Nonetheless, the stele displays features that probably evolved from Jia Dan's map.



*A rubbing from the Hua I T'u [Map of China and the Barbarian Countries], ca.1137 A.D.
actual size is about three feet square*



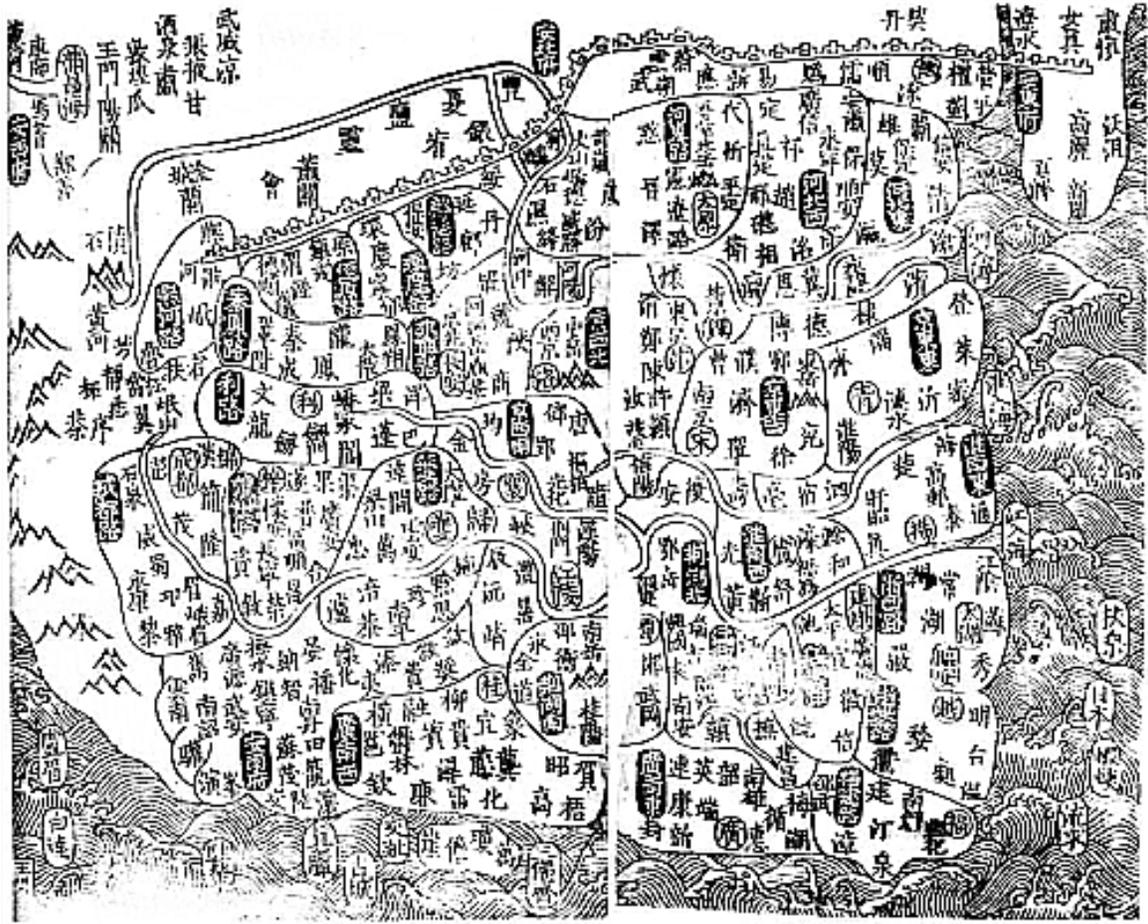
Yü Chi T'u [Map Tracing the Tracks of Yu], 1136.80 x 79 cm (2'9" x 2'8.25")
The map is carved into a monumental stone (stele). North is at the top. The grid was here used as a measure of the distance between administrative nodes. Rivers and mountains are named, prefectures from the past to the late 11th century are also marked.
The stele is in the Shaanxi Provincial Museum, Xi'an, China. (#218.1)



A "rubbing" of Yü Chi T'u
 [Map of the Tracks of Yü the Great], 1137 A.D.
 a rubbing from map carved in stone, actual size is about 3 feet square
 Each square on the grid represents 100 li, or about 50 kilometers (#218.1)

National self-perceptions often reflect their sense of cultural superiority. This was true of Han Chinese, who shared the belief that China was the center of the world and the source of all civilization and learning. Yet the very title of the Buddhist map, *Dong zhendan dili tu*, challenges this tradition by positing a different worldview drawn from Buddhism, a religion introduced to China from India, a foreign country located to the west of China. The term *Zhendan* was mainly used in Buddhist texts as a name for China (*Zhendan* is the Chinese transcription of *Cīna-sthāna*, meaning "the land of China"

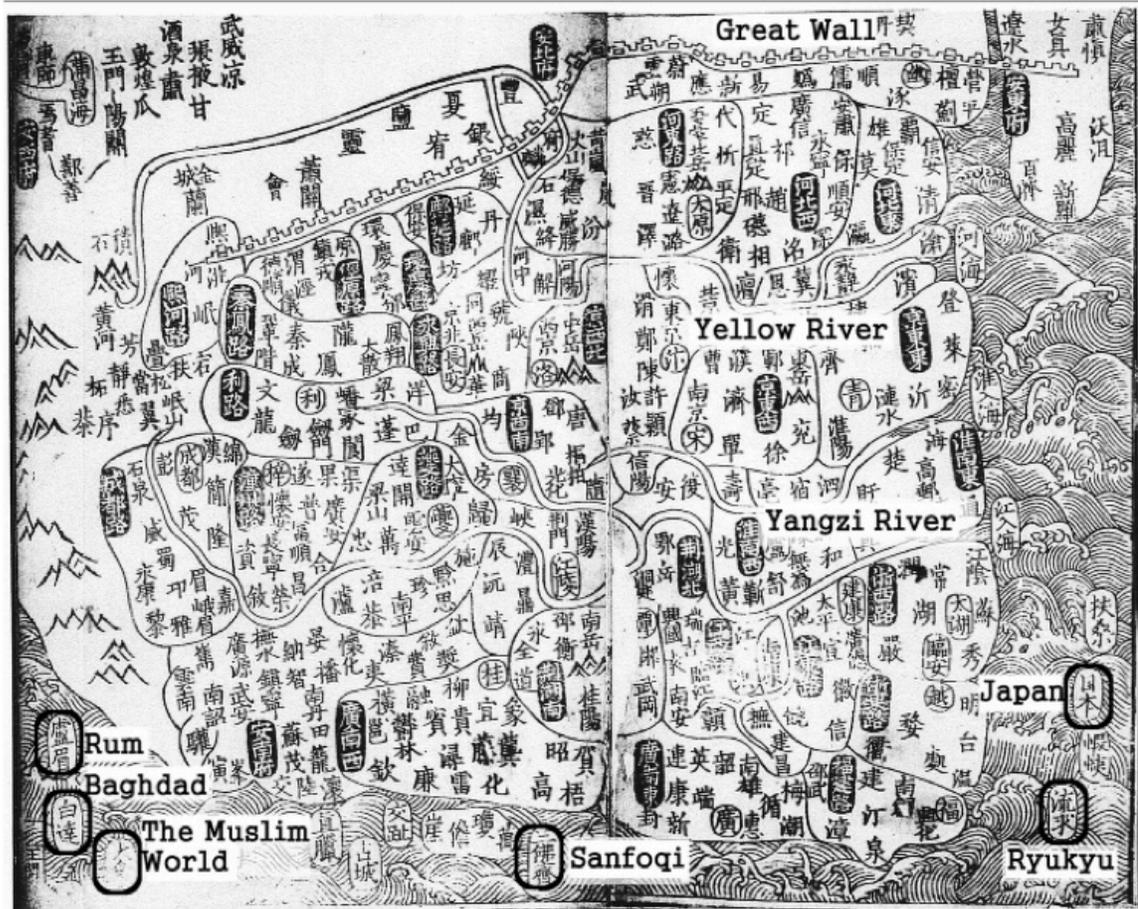
in Sanskrit). In order to understand this alternative cosmology that locates China to the east of the ultimate center of the Buddhist world – the *Lake of Anavatapta* 阿耨達池 – it is useful to look for clues in texts like the *Fozu tongji* and the maps that are contained in this volume.



The *Dong zhendan dili tu* [Geographic Map of the Land of China to the East] in the book *Fozu tongji* [General Records of the Founders of Buddhism]) 1265-70, Map 152. Zhipan, 32:5 l-6r.

The *Fozu tongji* chronicles the history of Buddhism from 581 to 960 CE, and follows the format of Chinese official histories, including Imperial annals (*benji*), genealogies (*shijia*), biographies (*liezhuan*), tables (*biao*), and monographs/treatises (*zhi*). It was written by the Song Buddhist monk and scholar Zhipan, and published in woodblock form between 1265 and 1270. Thirty-six of the original fifty-four sewn chapters (*juan*) survive; these chapters cover general Buddhist knowledge as well as the doctrines of the Tiantai school (*Tiantai zong*), one of the most important schools of Buddhism in China and East Asia at large. Chapters 31 and 32 of the *Fozu tongji*, entitled *Shijie mingti zhi* [An Account of Places and Shape of the World], includes eleven maps as a supplement to the text. Chapter 31 discusses the total image and structure of the Buddhist universe, starting with a description of the greater universe and ultimately focusing on the imaginary *Mount Meru* and *Jambudvīpa* (the realm where ordinary human beings live). The set includes five pictorial maps that illustrate narrative descriptions of Buddhist cosmology,

among which *Sanqian daqian shijie tu* [Map of the Entire Universe] depicts *Mount Meru* and *Jambudvīpa* to the south. Chapter 32 discusses the sensory world and a brief history of China and foreign countries, and includes six maps. Three of the maps, among them *Dong zhendan dili tu*, are geographic maps of the world of the living presented as *Jambudvīpa*.



The "Geographic Map of the Land of China to the East", from *Zhipan's General Records of the Founders of Buddhism*, ca. 1270, Map 152. *Zhipan*, 32:51-6r.

Two geographical maps emphasize parts of *Jambudvīpa* outside China, demonstrating that Buddhist authors held more interest in envisioning territories beyond China than did contemporary Chinese authors. *Han xiyou zhuguo tu* [Map of the States in the Western Regions during the Han Dynasty] charts the western regions known to the Chinese during the Han period (206 B.C. - 220 A.D.), while *Xitu wuyin zhi tu* [Map of the Five Indian States in the West] plots the sites in Central Asia and India visited by the famous Tang Dynasty Buddhist monk Xuanzang 玄奘 (c. 602/603-664) during his nineteen-year pilgrimage to India in the mid-seventh century.



The map Han Xiyu zhuguo tu [Map of the States in the Western Regions during the Han Dynasty] found in the book Fozu tongji



The map *Xitu wuyin zhi tu* [Map of the Five Indian States in the West] found in the book *Fozu tongji*

Zhipan (or the real cartographer of the map) drew the above-mentioned maps based on earlier texts, like *Han xiyu zhuguo tu* and *Da Tang xiyou ji* [The Great Tang Records on the Western Regions], for each map. The locations of countries are relatively accurate compared to the written sources. *Xitu wuyin zhi tu* shows the Buddhist author's direct interest in the original land of his religion, India. Although it clearly bears realistic information about places names and their location in India and surrounding countries, the map is nonetheless drawn from a Buddhist perspective. At an approximate center of the map lies the lake called *Anavatapta*, which is located at the center of *Jambudvīpa*, the world where human beings live according to Buddhist tradition.

In contrast to these two maps, *Dong zhendan dili tu* focuses largely on China. Yet the map, which follows the Buddhist tradition that situates China to the west of the center of the world, clearly differs from contemporaneous Chinese maps with their orientation of China at the world's center. This suggests that Buddhism, a foreign religion introduced to China several centuries earlier, challenged the conventional Sino-centric worldview. A text in *Dong zhendan dili tu* explains all of these challenges: *When we talk about the structure and the size of (or the end of) the entire universe, we can refer to nothing other than Buddhism. (...)*

After explaining the geography of China from this Buddhist perspective, Zhipan criticizes the Confucian worldview.

Confucians always regard this land [the land that Zhipan just described] as China. They only discuss the inside landscapes of China, depending heavily upon what they regard as the land of China. When such Confucians talk about the land [or the earth or the world], however, their knowledge cannot go miles and miles further away [from what they call China]. In other words, they know neither the prosperity of the five [regions] of India nor what the West Sea is like. (...)

Zhipan also criticizes the Daoists' discussion about the world which, he argues, is only bound to the worlds of heaven, earth, and humans and cannot understand the true structure of this world. He concludes his discussion with the following remark:

Accordingly, if those who talk about the structure and the size of (or the end of) the entire universe do not depend upon Buddhism, their knowledge is not enough to describe the world.

In this light, the *Dong zhendan dili tu* shows only a small part of *Jambudvīpa* in the east and a smaller part of a much larger universe.

In fact, *Dong zhendan dili tu* shares a rich geographic knowledge about China with a fairly accurate sketch of the contour of the whole of China and foreign places seen in earlier and contemporary Chinese maps made by earlier Confucian scholar-officials who were mostly sponsored by the Chinese government. Although the map is drawn from a Buddhist perspective, its author drew on China-based geographic knowledge that had accumulated for centuries. Comparing this map with both earlier and contemporaneous extant maps, therefore, will demonstrate what kind of foundational geographic knowledge had been circulating among Chinese scholars by the time of the map's production, and how Buddhist scholars adopted and modified popular geographical knowledge. It also provides an opportunity to contrast Confucian and Buddhist worldviews through maps like the *Fozu tongji*.

The map *Dong zhendan dili tu* largely depicts the political divisions and administrative districts that existed during the Northern Song Dynasty (960-1127). The foundational maps that provided the basis for *Dong zhendan dili tu* were probably maps that reflected these features. Yet no such possible direct foundational maps survive, so we have to compare the map with earlier extant maps.

In fact, *Dong zhendan dili tu* looks quite similar to several Song-period maps that circulated decades earlier. The earliest surviving woodblock-printed maps of China can be found in an atlas entitled *Lidai dili zhizhang tu* [Handy Geographical Maps throughout the Ages], the earliest surviving maps of entire China proper, which dates somewhere between 1098 and 1100. Forty-four maps constitute the atlas. Except for two star charts, each map shows the clear contours of China proper, and focuses on a range of topics that include the administrative systems of different dynasties and basic topography, and provides narrative explanations at the right and left boundaries of the map. The map in question, *Dong zhendan dili tu*, it systematically describes the administrative districts that existed within China at the time, including the names of circuits (*lu* 路) in black and white, and the names of larger prefectures (*fu* 府) within circles. One map in the atlas, entitled *Shengchao Yuanfeng jiuyu tu* [Geographic Map of the Reign of Yuan Feng],

similarly plots the administrative districts that existed during the Yuanfeng reign (1078–1085), without the embellishments of *Dong zhendan dili tu* like foreign places and illustrations of sea waves. Another map in this collection that contains similar features is the first map, entitled *Gujin huayi quyu zongyao tu* [General Survey Map of Chinese and Non-Chinese Territories from the Past through the Present], shown on page 9 herein.

As the title reveals, *Gujin huayi quyu zongyao tu* shows the geographical, historical, and administrative sites that were important to its time. We can assume that the map represents the sum of geographic knowledge accumulated by the time of the map's production. It might not have been easy for readers to identify which geographic information belongs to which period in history without the help of narrative explanations set on the accompanying text in the left side that gives us information from earlier periods. For example, the note in the upper left-hand side of the map cites place names of the western regions, some of which, it explains, were conquered by Tang Taizong and Gaozong (r. 649–683); these include *Kucha* 𤄎兹, *Wusun* 烏孫, *Loulan* 樓蘭, *Kashgar* 疎勒, *Shache* 莎車, and *Khotan* 于闐 in Central Asia. Therefore, these particular place names obviously date back to the Tang dynasty or even earlier. The map also portrays other foreign countries in East, South, and Southeast Asia that had some commercial (and for some, even close diplomatic) relations with China; these include *Jurchen* 眞, *Bohai* 渤海, the three kingdoms of Korea (*Silla* 新羅, *Baekje* 百濟, *Go[gu]ryeo* 高[句]麗), Japan 日本, *Ryūkyū* 流求 (modern 琉球), *Ezo* 蝦蟇 [an old name for the northern part of Japan], Sumatra, Java, *Champa* 占城 [Vietnam], and India [Tianzhu]. A separate set of annotations attached to the map provides further geographic information that served as a foundation for this map; among the hundreds of foreign place names it lists are *Bosi* 波斯 [Persia] and *Dashi* 大食 [Arabia] in West Asia.

When did the Chinese acquire such rich geographic knowledge as reflected in *Gujin huayi quyu zongyao tu*? Although no map of all China proper from the first millennium survives (not to mention foreign regions), the written geographic accounts of official histories show that the Chinese accumulated geographic knowledge of China and some territories beyond it through continuous contacts that facilitated during the first millennium (or even earlier). This comprehensive geographic knowledge advanced enormously during the Tang Dynasty (618–907), which helped to solidify the reunification of China and promote the cosmopolitan culture it gained by its political expansion and cultural influence in neighboring countries. The most representative geographic works produced in this historical context are treatises and maps written by Jia Dan 賈耽 (729–805), the most prominent figure in the history of early Chinese geography. Jia Dan was a prime minister and renowned geographer at a time when the Tang Dynasty was at its prime. According to his biography in the *Xin Tangshu* [New History of the Tang Dynasty], he himself never traveled to foreign countries, although he was interested in geography from childhood. Yet, while he was serving as a minister of the *Honglu si* [Court of State Ceremonial], which received visitors from foreign countries under the tribute system, he collected information in order to write geographic works about various regions. Only pieces of his geographic accounts survive by being included in the geography section (*dili*) of the *Xin Tangshu*. His thorough accounts of the routes that existed between China and foreign lands at the time show how knowledgeable and familiar he was with the geography of foreign lands. In addition to his geographic treatises, Jia Dan also drew maps like the *Hainei huayi tu* [Map of Chinese

and Non-Chinese Territories in the World]. A written description in *Xin Tangshu* states that the map measured approximately nine meters in width and ten meters in length. While this map does not survive, we have clear evidence that Jia Dan's map greatly influenced the creator of the *Huayi tu*. For example, an annotation states that the map only shows the most important foreign places out of hundreds of these names that were listed by Jia Dan.

The prime minister Jia Dan, famed for his accomplishments in geography or, more literally, 'terrestrial patterning', was commissioned by the emperor to compile a country-wide map. Accordingly, in the year 801, he presented Emperor Dezong (r. 779–805) with an enormous map painted on silk and entitled *Map of Chinese and Barbarian Territories within the Seas*. This monumental map has long been lost, but unlike the map of Pei Xiu of earlier times, which the emperor had 'kept in secret archives', Jia Dan's map appears to have been seen by appreciative members of the cultural elite, who referred to it in a variety of written texts, commemorative prose and poems. One of the earliest extant maps of the Chinese empire, carved in 1136 on a stone stele, also seems to have drawn substantially from the major features of Jia Dan's map (see map on pages 10 - 13 above).

In the memorial that introduced the map to the emperor, Jia Dan explained the cartographic practices involved in its production and the map's intended purpose. After first praising the ruler's sage governance—as was conventional for addresses of this kind—the map was described in terms of its dimensions and function.

Respectfully [I have] commanded artisans to paint this scroll of 'Maps of Chinese and Barbarian Territories within the Seas'. It is three zhang wide, three zhang and three chi in height. As for its scale [lu], one cun is equivalent to one hundred li [of land]. [The map] distinguishes the civilized from barbarians; it situates the high peaks and large rivers. It shrinks the four frontiers onto [a piece of] fine white silk; it marks out, in painting, the hundred prefectures. The cosmos may be wide, but the map unfurled does not fill the courtyard. Anywhere that can be reached by boat or carriage can all be taken in by a single glance of the eye. [A Tang-dynasty *zhang* is approximately 300 centimeters, one *chi* 30 centimeters, one *cun* 3 centimeters and one *li* is about half a kilometer.]

Here Jia Dan highlighted the four crucial actions he expected his map to perform: to distinguish, to set apart or separate, to situate, and to shrink. He referred to Yu, the legendary sage-king of antiquity who tamed a primordial flood and gave order to the post-diluvium world, as narrated in one of the earliest canonical texts—the chapter "Tribute of Yu" of the *Book of Documents*. In this way Jia Dan established hallowed precedence for his own cartographical endeavor. The verb *dian*, in the context of establishing the major mountains and rivers, was a direct echo from those accounts of articulating and cataloguing geography.

Two maps drawn a little later in time were probably also based on Jia Dan's map. These are the two distinct maps mentioned earlier (pages 10-13) that are engraved on the two sides of a stone tablet in 1136, called *Yü Chi T'u* [The Tracks of Yu] and *Huayi tu* [Map of Chinese and Non-Chinese Territories], see #218 and #218.1. Although *Yü Chi T'u* provides a fairly precise sketch of coastline all the way to Indochina and the outlines of river systems, it does not contain specific geographic information about foreign places. In contrast, *Huayi tu*, the map engraved on the backside of the 1136 tablet, lists foreign place names on its margins. Interestingly, a note at the bottom-right corner of the Song-

period *Huayi tu* mentions clearly that the mapmaker took the place names for well-known foreign sites from Jia Dan's *Hainei huayi tu*, see pages 10-11 herein.

By comparison, a note on *Gujin huayi quyu zongyao tu* mentions that the map lists only the most important foreign places out of the hundreds of names listed by Jia Dan. These two notes from two different maps serve as two independent pieces of evidence that Jia Dan's *Hainei huayi tu* was indeed big and comprehensive, and served as the foundation for all later Chinese maps of China and foreign countries. We can find similarities between these two surviving maps as well. For example, the upper left-hand note about foreign places supplementing the map is similar to that found in *Huayi tu*, an indication that they used the same foundational map. The coastline of China and depictions of rivers in the two maps are also similar to each other, as they are to the later *Dong zhendan dili tu*. The *Dong zhendan dili tu* was not simply a copy of maps from the 1130's: it incorporated updates from the early 13th century as well. The twenty-eight circuits (*lu*) shown in the map were established only in 1225, which provides the earliest date for the map's composition. This map was drawn between 1225 and 1270.

The map's foreign place names are also up to date. Among a total of 430 place names, about 20 are the names of foreign countries. Except for the Korean peninsula, the foreign countries are all drawn as islands in the surrounding western sea. These foreign place names include those found in *Huayi tu* and *Lidai dili zhizhang tu*, such as *Fusang* 扶桑, [Japan], *Ezo*, *Ryūkyū*, *Sanfoqi* [the base of the Straits of Melaka centered Srivijaya realm at Palembang], *Champa* [mid-southern Vietnam], *Jiaozhi* 交趾 [Northern Vietnam], *Zhenla* [Cambodia], *Dashi* [Arabia], and *Shepo* 闍婆 [Java]. These also include *Baida* [Baghdad] and *Lumei* 盧眉 [*Rūm*: The Roman (Byzantine) Empire] that do not appear in the previous maps, yet they are described in contemporary written sources as important foreign countries in the west with which China enjoyed trade relations.

For example, the two most important Song-period sources about China's maritime relations, Zhou Qufei's *Lingwai daida* [Notes from the Land beyond the Passes, 1178] and Zhao Rugua's 趙汝适 *Zhufan zhi* [Description of the Foreign Lands, 1225], both have sections that describe countries in the Western Indian Ocean, including Baghdad and *Rūm*. These accounts, which provide rich information about trading countries, trade goods, sailing navigation, and the geography of sea routes, show that the scale of Chinese participation in foreign trade rose high during the period. Clearly, the Buddhist author of *Dong zhendan dili tu* incorporated recently acquired Chinese knowledge about foreign countries that he found in contemporary geographic works and used to update this map. It also suggests that books containing this kind of geographic information circulated widely. The *Dong zhendan dili tu* and its contemporary sources may be taken as a hint that the extensive circulation of geographical books arose from the development of Chinese woodblock-printing publication.

The *Dong zhendan dili tu* was published in the *Fozu tongji*, a Buddhist compendium that was not printed under the sponsorship of the Chinese government or any influential scholar-official. However, the map received a genuine opportunity to circulate widely thanks to the large distribution (200,000 copies) of the *Fozu tongji*. The earliest surviving version preserved by the National Library of China is one made between 1265 and 1270 during the Southern Song period (1127-1279). Thanks to the woodblock printing of all these maps that favored their larger distribution, substantial geographic knowledge circulated widely throughout China at the beginning of the second millennium. Chinese literati were not the only ones who benefitted from this

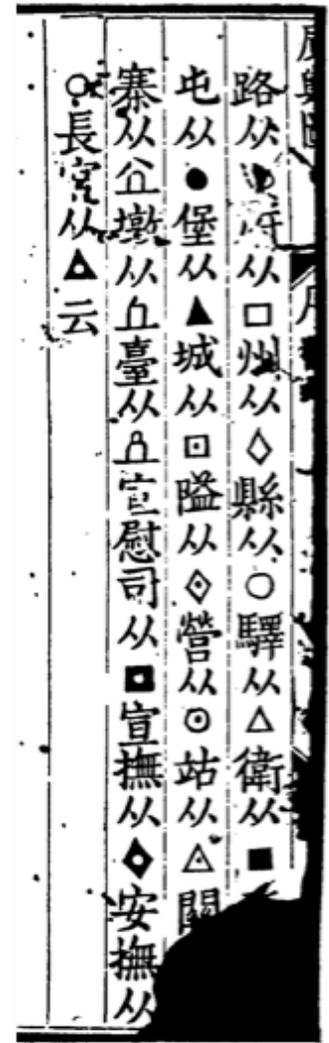
chance to read the work and enlarge their geographic knowledge of China and other countries. The *Fozu tongji* was among many works that were exported to other countries in East Asia, especially Japan.

All the extant maps from the later Song Dynasty show that, while map productions were led mainly by the government during the Tang and early Song Dynasty, this trend changed by the 11th and 12th centuries, and map production became largely the domain of local elites, a trend that ultimately led to a gradual increase in geographic knowledge about wider regions at broader class levels. While most of these maps apparently helped Confucian scholars to perceive China's geography from a Sino-centric perspective, maps of other types created by some specific religious groups distributed less biased knowledge about China and beyond by incorporating elements from other cultures. *Dong zhendan dili tu* serves as a representative case of the effects of Buddhist influence.

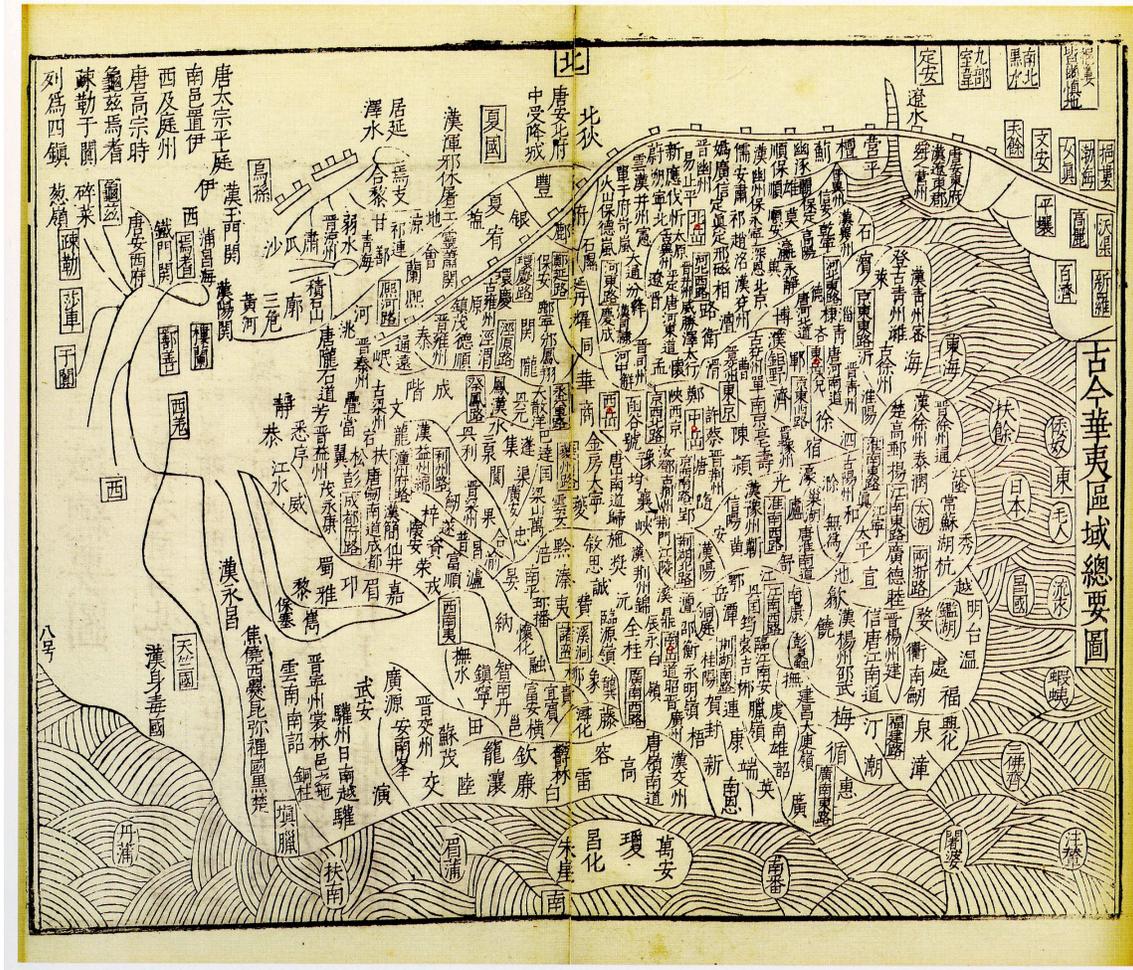
Both early and contemporary geographic treatises and maps, as well as woodblock-printed books and stone tablets, reflect a general geographic knowledge about China that cartographers shared during the 12th and 13th centuries. The Tang Dynasty geographer Jia Dan first systemized this knowledge in the early ninth century. The development of the woodblock-printing technology allowed the production of multiple copies, which further expanded the potential. Not only did Song authors draw upon earlier maps in order to construct their maps, they but also modified them, based on geographic knowledge about other cultures and on contemporary influences. All of these complex dynamics are accurately reflected in one map, the *Dong zhendan dili tu*. This particular woodblock-printed map suggests that Chinese cartographers had access to maps that showed the basic administrative divisions of Chinese territory and that they drew another type of map from the perspective of Buddhism. In the Buddhist worldview, China was no longer situated at the center of the world but to the east of the center of the world, as the title of the map indicates.

The development of the grid system of the *Yü Chi T'u* (see #218.1) is credited to Pei Xiu 裴秀 (224-271), who is considered "the father of geography" because his systematic principles for drawing precise maps were adopted by later geographers. There have been scholarly debates on the question whether Pei Xiu's six standards for map-making included the use of a grid system, yet available evidence suggests that the use of a grid as a general measure of distance developed perhaps even before Pei Xiu lived. In any case, the method was later continuously adopted by Chinese cartographers.

The key to the symbols in the legend associated with the Kuang Yü Tu are shown on the right. Cities of the first order were indicated by a white square, those of the second order by a white lozenge, and those of the third by a white circle; post-stages by a white triangle and forts by a black square, etc.



Since the Chinese valued literary training above technical knowledge, mathematicians and astronomers were usually not part of the ruling bureaucratic class responsible for producing maps. Official Chinese mapping was not anti-mathematical; it was more than mathematical. The knowledge of history and literature required of the scholarly administrators fostered a strong sense of social unity - "Do unto others as you would have them do unto you" (Confucius). The Chinese visually expressed in many forms their unique society, in which the way of the ancients was the pattern for the present. *Lidai dili zhichan!* [Geographical Maps of Successive Dynasties] is the oldest extant atlas. It would have been in use when Polo arrived in China. From the Song period, just before the Mongols' Yuan period, it bears a strong resemblance to *Hua yi tu*, (#218) the subjective gridless stone map from that same period.



Gujin hua yi quyu zongyao tu
 [General Map of Territories from the Ancient to the Present, of China and Foreign Countries]
 Oriented with West at the top

Comprising several volumes, the atlas contains forty-four traditional maps showing the administrative units of twenty-eight different political periods, beginning in the era of legendary kings (21st century BCE). Unsurprising in a literary culture, and as with Islamic maps, text predominates. The first map in the atlas, *Gujin hua yi quyu*

zouyao tu [General Map of Territories from the Ancient to Present, of China and Foreign Countries]; shows the provinces (*lu*) established during the Song period and still in place when Kublai Khan arrived. The topography is less than accurate because it is the boundary changes during the preceding centuries that are the map's concern. It is Map as Narrative of a Shared Past. On it, the eye is drawn to China's frontiers. The seemingly unbreachable Great Wall barricades the north from invading barbarians - such as their Mongol conquerors - and while some neighboring borders and western countries are placed fairly accurately, others, like Japan, Vietnam, and India, are approximately placed to locate economic activities. The expressed self-image is one of power and security, bolstered by the imperial continuity detailed in the atlas' other maps. The Chinese people's admiration for their own culture is dramatized by the dominant Chinese characters. These ideograms were the civilizing instrument for many neighboring countries, and they seem to be on the march westward, carrying the message of Chinese superiority to the rest of the known world.

Kublai Khan's rejection of the Chinese language, script, and rituals, and Polo's subsequent ignorance of them, blinded the Venetian to the depth of Chinese cultural and historical unity made manifest in many artful ways, particularly with maps. His detachment was due not only to the language barrier, he spoke the Mongols' preferred Persian, but also to the reality of conquest: the Chinese were banished from Mongol court life. Thus, this most curious of men never came to comprehend the many functions served by mapping (*di tu*) in China.

The Silk Road was the Eurasian channel for East-West trade, as well as the link for exchanges between the civilizations of East and West. There is a long history of cartographic exchanges along the Silk Road and the compilation of maps of the Silk Road has a long history. The period from the 14th to the 17th century was an important period as world history moved in the direction of modernization and integration, and the corresponding Yuan and Ming dynasties in China were a flourishing period for map exchanges between East and West, and it was a glorious age for the compilation of maps of China, and especially those of the Silk Road.

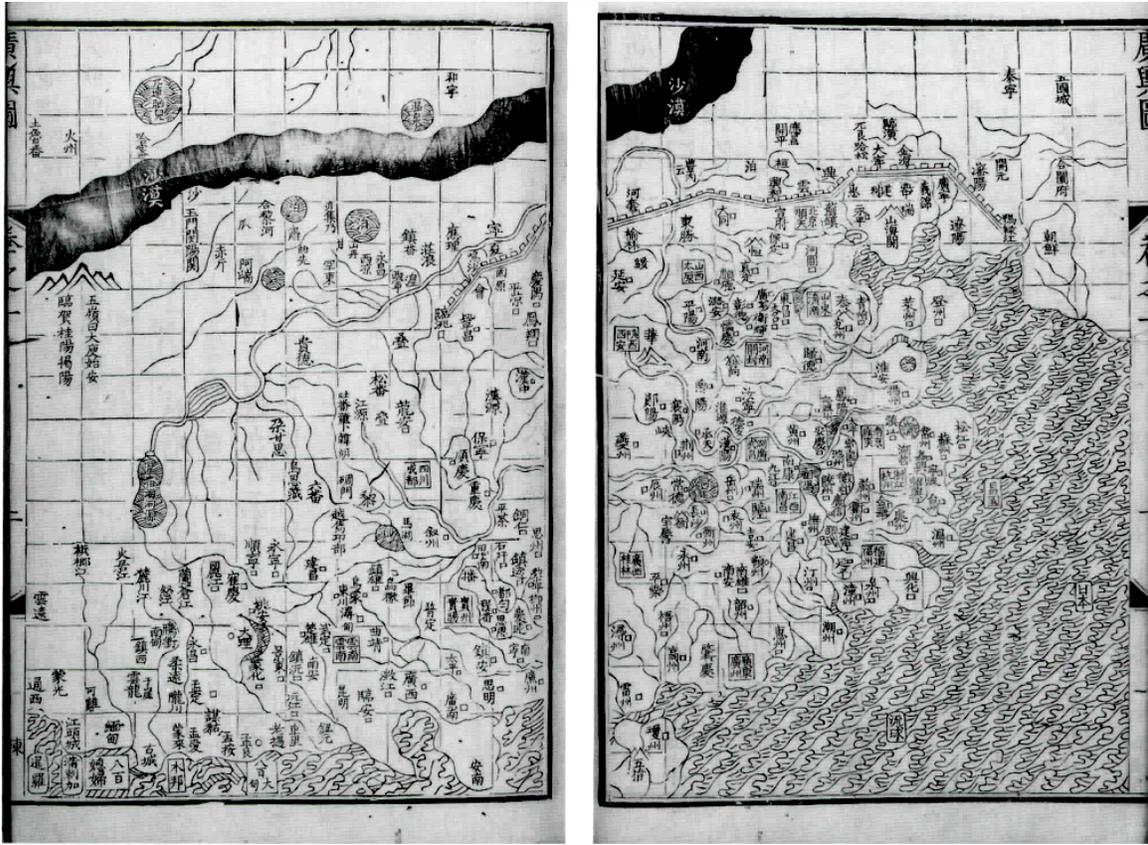
Eurasian transport opened up in the Yuan dynasty, and Islamic scholars took the knowledge of Islamic, and even European, maps to China. The spherical terrestrial sphere and the map Colorful General Geographical Map of "the world" (Chinese title: *Tianxia Dili Zong Tu*) both made by the Persian scholar Jamal ad-Din Muhammad ibn al-Bukhari (variously transcribed Jamal ud-Din, Jamal al-Din, etc., Chinese name used hereafter: Zhamaluding) had a profound influence on the history of China. The Early Ming inherited the legacy of the Sino-Islamic cartographic exchange of the Yuan dynasty, and with the direct Sino-European map exchange of the Mid-Late Ming, and according to Xi Huidong at least six maps of world significance remain to us today: (1) *Da Ming Hunyi Tu* [Amalgamated Map of the Great Ming Empire] 1398 that provided the contours of Europe, Asia, and Africa, and reflected the interchange of Sino-Arab cartographic cultures; (2) Zheng He's *Hanghai Tu* [Nautical Charts] 1425-1430 that reflected Zheng He's voyages to the "Western Seas" in the early 15th century and documented the maritime Silk Roads of the Ming across the Pacific and Indian Oceans, as well as the Mediterranean; (3) *Xiyu Tudi Renwu Tu* [Map of the Land and People of the Western Regions] 1523-1541 that reflected the overland Silk Road of the 16th century; (4) the comprehensive set of large format maps titled *Guang Yu Tu* [Enlarged Terrestrial Atlas, 1555] (#227) that reflected the best of Yuan and Ming dynasty maps and the overall geographical situation of 16th century China and Asia, and which

influenced Japanese and Korean maps as well as European geographic concepts; (5) *Kunyu Wanguo Quantu* [Complete Map of all Nations on Earth, 1602] (#441) that was drafted by the 17th century Italian Jesuit scholar in China Matteo Ricci, and reflected European geographic discoveries, the view that the world is spherical, and the Sino-Western interchange of cartographic cultures; and (6) *Da Ming Jiangli Fenye Dong Xi Yang Tu* [Map of Territorial Demarcation and East-West Oceans of Great Ming Empire, 1619] (#236) a color map that reflected early 17th century independent ocean voyages by people from south-east China, as well as Asian sea routes and East and Southeast Asian nations. These six maps were the crystallization of the East-West exchange of knowledge about geography and mapping and reflected the interchange and influence of East-West civilizations, and promoted the process of integration in world history.

The next prominent geographer to follow Pei Xiu's principles was the aforementioned Jia Dan, who probably used a grid system for his map-making. One can, therefore, trace back the origins of geographical information: Jia Dan's cartographic information and techniques influenced later mid-Song-period maps like the *Lidai dili zhizhang tu*, the stele maps, and late Song-period maps like *Dong zhendan dili tu* in *Fozu tongji*. These predecessors apparently provided the model for Zhu Siben's influential *Kuang Yü T'u* [Terrestrial Map; c. 1320, see #227]. The only extant version of this work is Luo Hongxian's *Guang Yutu* [Enlargement of the Terrestrial Map], first published in 1579. Luo's production takes the form of an atlas, with more than forty separate maps--including a *General Map [of China]* [*Yudi zongtu*] and a *General Map of China and the Barbarians* [*Huayi zongtu*, see #227]. Like the *Yutu*, the *Guang Yutu* employs a grid system, but unlike Zhu's map, Luo includes a number of cartographic legends - twenty-four in all - for mountains, rivers, boundaries, roads, and other landmarks.

Luo's atlas obviously reflects, not least in its abundant written texts, the expansion of Chinese knowledge about the rest of the world gained in the course of the eunuch-admiral Zheng He's extensive naval expeditions during the early 15th century - voyages which took him as far west as the shores of east Africa. As one measure of its comprehensive scope, the *Guang Yutu* includes an elaborate chart that distinguishes the residents of over 120 foreign countries by area: *Eastern Barbarians* (Koreans and Japanese), *Southeastern Barbarians* (Liuqiu Islanders), *Southern Barbarians* (Southeast Asians), *Southwestern Barbarians* (Filipinos, Indians, Westerners, etc.), *Barbarians of the "Western Regions"* (including various Turkic peoples) and *Northwestern Barbarians* (Mongols and other such tribes). Many of these peoples are designated "tributaries," not only in the chart but also on some of the maps themselves.

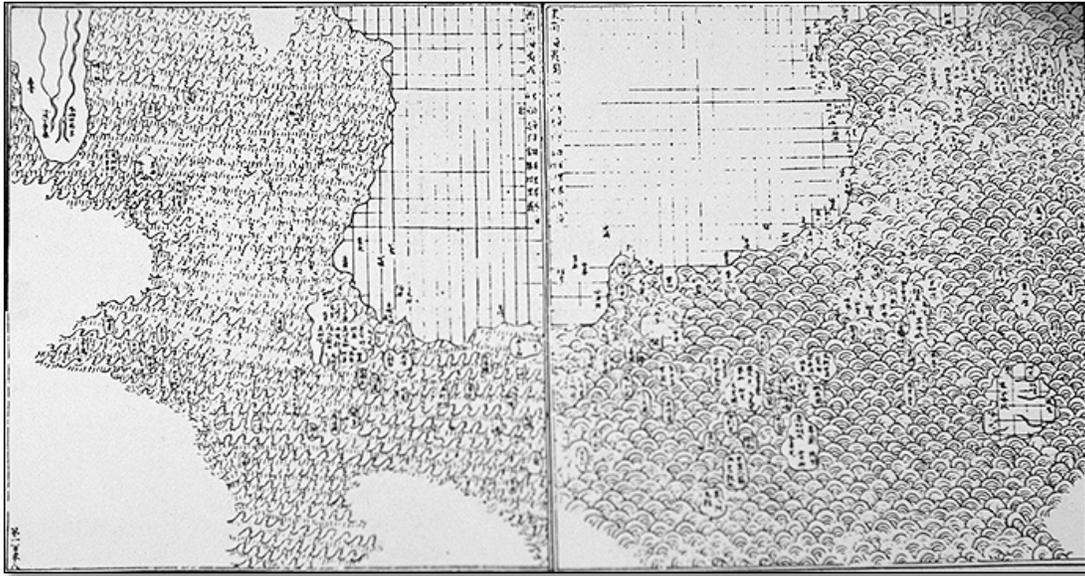
In addition to those referenced by Chu Ssu-Pen, Luo Hung-hsien naturally drew upon many other Yuan and Ming sources in his revision, including the schematic grid-map *Hsi-Pei Pi Ti-Li T'u* [Map of the Countries of the Northwest], in the *Yuan Ching Shih Ta Tien* [History of Institutions of the Yuan Dynasty], 1329.



Luo Hongxian's General Map of China, the *Guang Yü T'u*, 1320/1579; 28.5 x 41 cm (British Library, London, 15261.e.2, 1b-2a). Based on the Map of China by Zhu Siben of Yuan Dynasty, the map was completed by Luo Hongxian around 1541 (the 11th year of Jiajing's reign of Ming Dynasty), who had spent more than ten years on mapping. According to the accompanying text, this general map of the empire is drawn so that each side of a square represents one hundred li [~33 miles]. The whole map contains two volumes, including 45 maps and 68 attached maps, 113 maps in all are characterized by careful and neat painting and delicate carving, and the map was the first one to adopt the 24 kinds of map codes, a part of which had been abstract. The map was in the form of an atlas, with abundant information, which was not only practical and scientific but also easy to be preserved, so it was copied six times. Therefore, parts of the lost Map of China were able to be preserved in it. What's more, it became the master copy, based on which many traditional maps since Ming and Qing Dynasties were drawn, for it was accurate and easy to obtain. The atlas contains one key map; detail maps including maps of Northern Zhili, Zhisu in Henan, Shanxi, Shaanxi, Henan, Jiangxi, Hubei and Hunan, Sichuan, Fujian, Guangdong, Guangxi, Yunnan, Guizhou, the frontiers in Liao and Song Dynasties, the frontiers of Jizhou (ancient Ji Prefecture), the frontiers of Juyong Pass, Zijing Pass and Daoma Pass, the frontiers of Xuanfu, the strategic post, the frontiers of Datong and Yanmen Pass, Ningwu Pass, and Piantou Pass, the frontiers of Gulan in Ningxia, the frontiers of Shandan in Gansu and the frontiers of the Taohe River, 24 detail maps in all, attached with descriptions illustrating military affairs, administrative offices, salt administrations and other record events. (#227)

In spite of Chu Ssu-Pen's caution about far-distant regions, it is remarkable that, as Walter Fuchs has pointed out, Chu and his contemporaries had already recognized the triangular shape of Africa. Among the map sheets of Luo Hung-hsien's atlas, one is entitled *The Countries in the Southwestern Sea* that covers a considerable portion of the Indian Ocean and a large part of Africa. In European and Arabic maps of the 14th century the tip of Africa is always represented as pointing eastwards (*see monographs #246, #247 and #249*), and this is not corrected until the middle of the 15th century; the atlas revised by Luo Hung-hsien, however, has it pointing south, and other evidence shows that Chu Ssu-Pen must have drawn Africa in this way as early as 1315. His map is the first one that I have found to point Africa towards the south. There are several extant copies of the map, however, not all have the same inscriptions. On the map 35 names are given for Africa. In the interior of Africa the cartographer shows two rivers flowing north, one emptying into a large body of water and the other leading further north, terminating at the margin of the map. (One copy of the map however does not have the big lake). The last river is called *Ha-na-i-ssu-chin* [ford of Hanais]. Which might be the Arab *Al-Nil-Azrak*, [The Blue Nile (in Abyssinian called *Abai*)]. On the west side of the continent is *San-pa nu* (the source of the Zanzibar slaves) and on other copies this is *Sang-ku-pa* this means *Zanguebar* (wrongly put on the west coast). Below the inland water area and to the southwest of the river discharging into the lake is a name pronounced as *Che-pu-lu-ma* or *Zhebuluma*. The first three syllables combined are recognizable as a corruption of the Arabic word *djebel*, meaning "mountains". An obvious conjecture is that it is an elevated area that the Arabs called the *Ma Mountains*, corresponding closely to the titled plateau of the Drakensberg, and evidenced by a later map produced in 1402 by the Ming cartographer named Ch'üan Chin (*see the Kandingo, #236*).

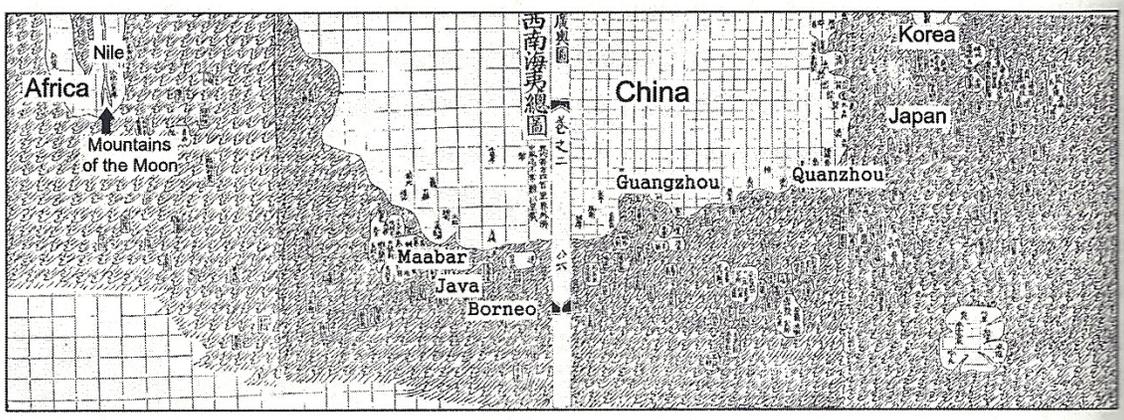
On the upper left corner of the map, the coastline turns sharply westward, suggesting the orientation of what appears to be the Guinea coast. Between the west coast and the inland water body, one sees an area named *Sang-ku*, a Chinese transliteration of the Arabic term *Zangue*, or the *Black People*, hence the Congo. Also on the east coast is an island called *Ti-pa-nu* [Island slaves, *Ti-pa* from *diva* and *nu* meaning slaves) and *Shih-a-la t'u-li-ch'ih* meaning *Siela-diba* being Ceylon/Sri Lanka.



The Countries of the Southwestern Sea

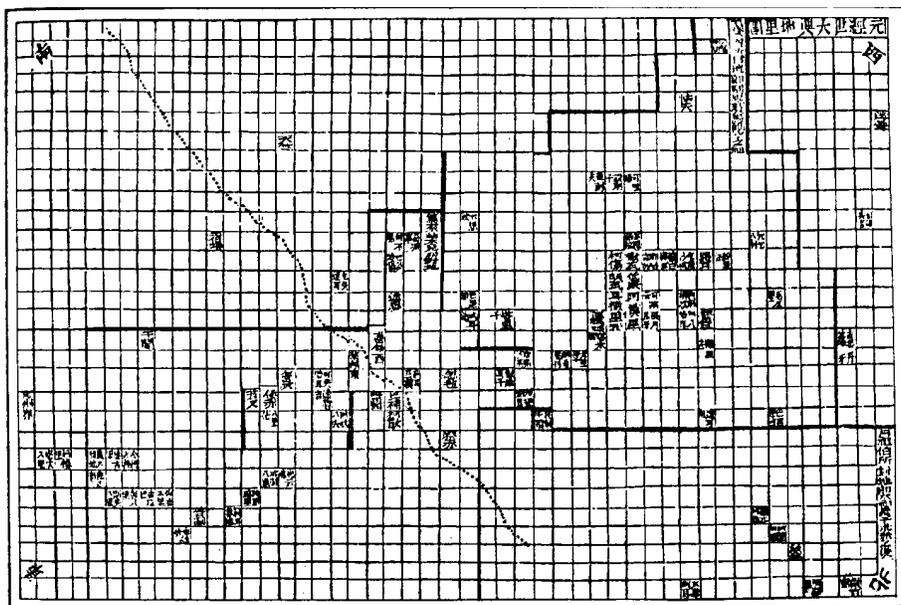


Detail: Africa

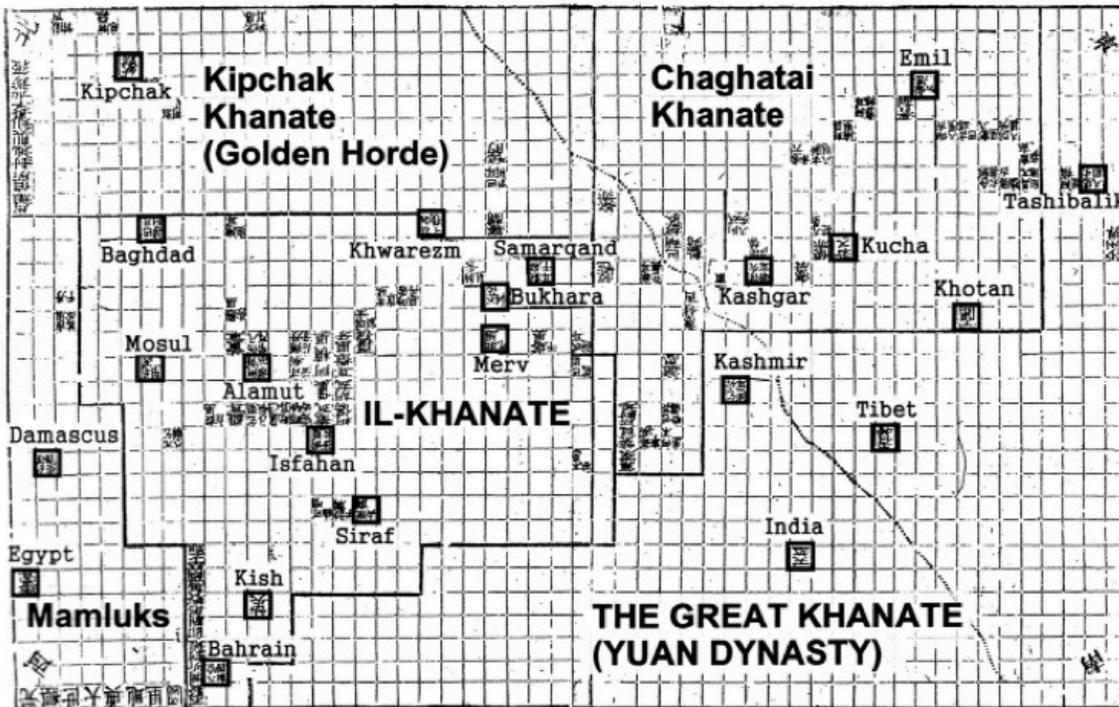
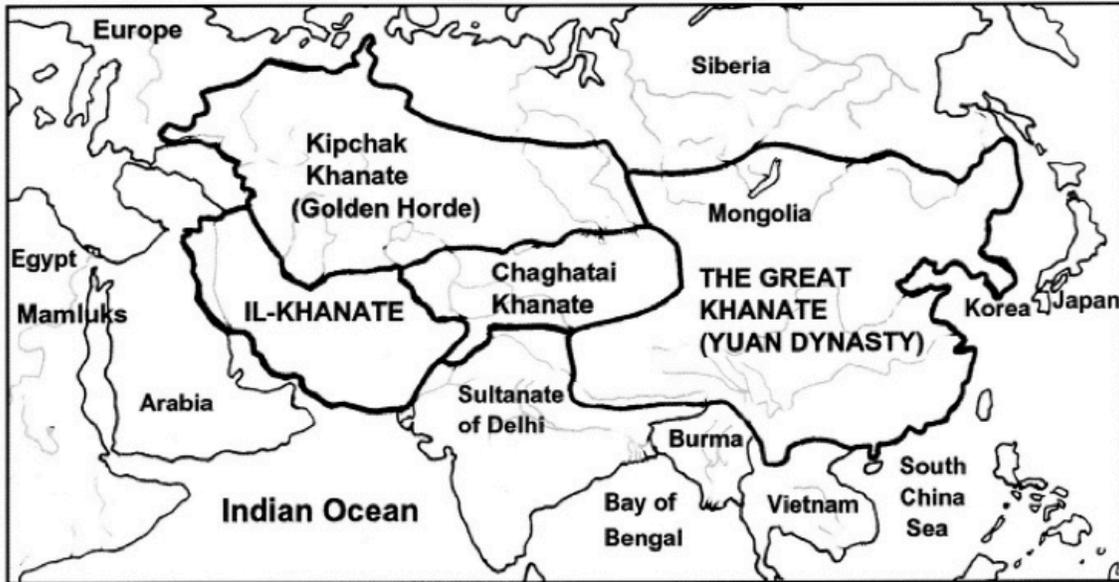


On the upper right-hand corner of this map, one sees the southern portion of Asia, gridded by vertical and horizontal lines and bulging out toward Sumatra, the largest island on the map, with Java next on the right. Near the edge of the continent are marked such places as *Chan-ch'eng* [Champa or Vietnam], *Mien-tien* [Burma], *Hsien-lo* [Thailand] and *Meng-to* [the Tenasserim Coast]. Areas covered by a wave pattern are ocean waters stretching from the South China Sea in the lower right to Africa on the upper left and containing a score of island names. The empty portions in the lower left and at the bottom of the map naturally suggest areas totally unknown.

In the absence of longitudinal and latitudinal estimations, distance between places is represented in two ways. On land, it is measured by unit lines forming grid-like squares. In the case of this map, the grid system is imposed only upon the Asian continent, each division or square representing 400 *li*, or the equivalent of about 133 miles. The locations of major cities and states can best be ascertained in terms of their positions relative to major rivers and, to a lesser degree, mountains as well as coastlines. These methods, again, date back to the time of P'ei Hsiu, the most renowned cartographer of the Chin Dynasty (266 - 420 B.C.), and the publication of the *River Classics* by an unknown author of the third century and elaborately annotated by Li Tao-yuan in 527 A.D. Although P'ei Hsiu's work has long since been lost, the established tradition is, again, reflected in the previously mentioned source of Luo Hung-hsien, the *Hsi-Pei Pi Ti-Li T'u* grid map and is further evidenced in the *Yü Chi T'u* also previously mentioned as a source used by Chu, which employed the same unit scale as P'ei Hsiu, 100 *li* (see #218.1, p. 12). As distances increased and knowledge became more scanty, the location of far away places becomes increasingly relative to the then known major rivers and mountains as well as water bodies and coastlines. These, then, are the principles underlying Luo Hung-hsien's atlas and, indeed, those of others such as Ch'uan Chin's early 15th century map of the world (see #236) that conceivably could have been seen by Luo Hung-hsien, especially with regards to its portrayal of Africa.



Hsi-Pei Pi Ti-Li T'u [Map of the Contries of the Northwest]
 (oriented with South at the top) see also #227



The four Khanates of the Mongol Empire (top); a geographical map from The Encyclopedia of Yuan Dynasty Institutions [Yuan Jingshi dadian], ca. 1330 in Wei Yuan's Illustrated Treatise on the Sea Kingdoms [Haiguo tuzhi, 1842 (re-oriented with North at the top with some place names)]

However, for distances over the ocean, the above methods are impractical in making approximations. Chu Ssu-Pen admitted in his brief annotation under the caption of his map that 'currents in the outer seas are difficult to predict and so is the estimation of

distance.' Also, it is curious to note the absence of the grid-system on the portion of Africa that is depicted. Possibly this follows from the philosophy expressed by Chu that it is better not to relay any information unless it can be reliably confirmed.

A small island to the south east of Africa is rendered as *Ha-pi-la* [Kerguelen island?]. Note: the coast of South Africa is rounded, slightly indented in the middle.

A map based on the work of two other Chinese cartographers which appeared in Korea (Ch'uan Chin and Li Hui) in 1402 (the *Kandingo*, see #236) even adds a stream emerging on the continent's southwest coast in the approximate position of the Orange River. Both maps place the southern part of Africa immediately opposite the Indonesian islands, with a string of smaller islands in between, and the tip of India tucked far away to the north. This could suggest that whoever supplied the data on Southern Africa did not get there from the Persian Gulf, by the established Muslim sailing route. But crossed from Sumatra and followed the chain of southerly islands, Maldives, Chagos and Mascarene, which stretch across the western Indian ocean at conveniently short intervals all the way to Madagascar. There is really a good chance that this information came from Malay sailors going to their settlements in Madagascar and Africa.

Luo's work spawned a number of imitations, including the *Da Ming guangyu kao* [An Examination of the Enlarged Terrestrial [Map] of the Great Ming Dynasty; 1610] and Chen Zushou's *Huang Ming zhifang ditu* [An Administrative Map of the Ming Dynasty; 1636], banned during the Qing period. It is important to remember, however, that most large-scale Chinese maps of the late imperial era continued to conform to the gridless *Huayi tu* cartographic model. The most striking and expansive example from the early Ming period is the magnificent, multicolored *Da Ming hunyi tu* [Amalgamated map of the great Ming empire; c. 1390] shown below. Drawn on a horizontal scale of 1:820,000 and a vertical scale of 1:1,060,000, it covers an area extending all the way from Japan to the Atlantic Ocean (including both Europe and Africa), and from Mongolia to Java. Although the section on China seems to be derived primarily from Zhu Siben's *Yutu*, the renderings of Africa, Europe and Southeast Asia appear to have been based at least in part on Li Zemin's *Shengjiao guangbei tu* [Map of the Vast Reach of [China's Moral] Teaching; c. 1330], no longer extant.

Subsequent maps based on the *Da Ming hunyi tu* model tended to be somewhat more restricted in geographical scope, but still impressive in their coverage. The best 16th century example is Yu Shi's *Gujin xingsheng zhi tu* [Map of Advantageous Terrain, Past and Present; 1555] shown below. This beautifully colored and heavily annotated work - representing an expanse of territory stretching from Samarkand, India and Arabia in the west to Japan in the east, and from present-day Mongolia in the north to Java and Sumatra in the south - lacks any sort of grid. It elongates Korea, treats the Shandong peninsula as if it were an island, and, like the *Huang Ming yitong dili zhi tu*, refers to the existence of several mythical places derived from the ancient *Shanhai jing* [Classic of Mountains and Seas]. This work - the earliest Chinese illustrated account of "barbarians" - describes a great number of foreign lands with all sorts of exotic inhabitants: societies consisting of women, or giants, or dwarfs; people with multiple heads or bodies; creatures with the heads of humans and the bodies of snakes.

The Early Ming inherited the Mongol Yuan era world view; reflecting the 15th century East Asian world view were *Da Ming Hunyi Tu* drawn in the Hongwu reign-period (1368-1398), which included the three continents of Europe, Asia and Africa, and *Hunyi Jiangli Lidai Guodu Zhi Tu* compiled by a Korean scholar in the Jianwen period

(1399-1402) of the Ming on the basis of Chinese maps and maps drawn by Korean and Japanese scholars.

The First Historical Archives of China hold a copy of *Da Ming Hunyi Tu* painted on silk and dated to Hongwu 22 (1389). However, in the Early Qing all Chinese notes on the map were covered with labels in Manchu. The map measures 386 cm in length and 456 cm across, and is a Ming map of “the world” (*tianxia*) based on a Yuan map.

The map oriented with north at the top and the west on the left encompasses the three continents of the Old World (Europe, Asia and Africa), and extends from Japan in the east, to Europe and Africa in the west, to Java in the south, and to Mongolia in the north, a map of the entire world known in the Ming dynasty. The map has the Ming dynasty at its center, emphasizing the Ming dynasty’s territorial frontiers and administrative regions. Prominently shown are important elements of human geography, such as market towns, stockade towns, fortresses, and post-stations, as well as irrigation canals, ponds and salt mines; natural geographic features such as mountains, rivers, lakes, and swamps are also marked. In all, more than one thousand toponyms are noted. The key elements of the legend are relatively unified. The thirteen Provincial Administrations of the Ming dynasty are shown and their dependent prefectures, sub-prefectures, and counties, the names of which are provided in pink rectangular cartouches, while the names of various other settlements are directly indicated. The “Imperial Capital” (Nanjing, Jiangsu) and “Central Capital” (Fengyang, Anhui) are shown in square blue cartouches with red lettering; mountain ranges are shown in the style of Chinese landscape painting; the Yellow River is denoted with a crude yellow curving line, while all other bodies of water are shown with gray-green wavy lines. Subsequently, the Qing dynasty covered all Chinese text on the Chinese Central Plains section of the map with Manchu labeling of different sizes, for the use of the Qing court and to make known the Qing’s power to govern the world.

Da Ming Hunyi Tu was not drafted strictly according to scale, but deliberately magnified the territory of the Ming dynasty, using differently colored toponym cartouches for the names of places inside and outside Ming territory. The most detailed description of places outside Ming territory was for Central Asia, followed by Europe and Africa; the location of South Africa’s Cape of Good Hope was accurately shown, indicating that this map was influenced by Islamic geographic knowledge. On the basis of the map’s content and documentary speculation, it would seem that the domestic parts of the map were based on Zhu Siben’s *Yudi Tu* and the extraterritorial sections were influenced by Zhamaluding’s terrestrial globe and color map of the world (*Tianxia Dili Zong Tu*) 1303 and other Islamic maps, as well by the Late Yuan Li Zemin’s *Shengjiao Guang Bei Tu*; as a result, rivers and freshwater lakes on the map are colored blue, and the oceans and salt lake are painted green, which is consistent with the coloring method of slightly earlier Islamic maps and globes, Xi Huidong suggesting that this map was influenced by Islamic maps. Available information suggests that after Islamic maps of the Mongol Empire were introduced into China, China began producing large numbers of color painted maps.

Da Ming Hunyi Tu is the largest, earliest, and best preserved Chinese language world map; it not only preserves a great deal of long lost Yuan dynasty geographic knowledge and knowledge of Yuan cartographic typology, but also reflects the Chinese “world view” and the results of Sino-foreign map exchange of the Yuan-Ming period; it had far-reaching influence in the Mid-Late Ming on the “world view” of East Asian Confucian cultural circles and their maps of the world, by reasonably accurately

presenting for the first time the shape of Africa in a world context. In the history of Chinese and world maps, *Da Ming Hunyi Tu* has an important position.



Da Ming Hun Yi Tu [The Great Ming Amalgamated Map], 1389

(Chinese: 大明混一; pinyin: *dāmíng hùnyī tú*- characters in left-to-right order, Manchu: *dai ming gurun-i uherilehe nirugan*) is a world map created in China. It was painted in color on stiff silk and measures 386 x 456 cm. The original text was written in classical Chinese, but Manchu labels were later superimposed on them. It is one of the oldest surviving world maps from East Asia although the exact date of creation remains unknown. It depicts the general form of the Old World, placing China in the center and stretching northward to Mongolia, southward to Java, eastward to central Japan, and westward to Africa and Europe.

The horizontally oriented version of Yu Shi's map, entitled *Gujin tianxia xingsheng zhi tu* [Map of the Advantageous Terrain under Heaven, Past and Present] appears in Zhang Huang's *Tushu bian* [Compilation of Illustrations and Writings; 1613]. Like Yu's production, it is full of historical references, including information on the activities of China's "barbarian" neighbors, the development of the Chinese tributary system, and various administrative changes within the Chinese empire. To an even greater extent than Yu's map, the *Gujin tianxia xingsheng zhi tu* identifies the homes

and/or exploits of China's great culture heroes, ranging from Confucius and his followers, to the Tang poet, Li Bai, to the founding emperors of the Tang, Song and Ming Dynasties. It also refers to the activities of several prominent Chinese loyalists, including Zhuge Liang of the Three Kingdoms period and both Yue Fei and Wen Tianxiang of the Song.



Yu Shi's map titled *Gujin xingsheng zhi tu* [Map of Advantageous Terrain, Past and Present] 1555. This map represents territory from Samarkand in Central Asia to Japan and from present-day Mongolia to Java and Sumatra in Southeast Asia. The map was printed with black ink from a woodblock and colored by hand afterward. 115 x 100 cm. Archivo General de Indias, Sevilla

In the fourth year (1402) of the Jianwen reign period of the Ming, the Yi dynasty Korean scholar Kwon Kun drew up *Hunyi Jiangli Lidai Guodu Zhi Tu* on the basis of the Late Yuan dynasty Li Zemin's *Shengjiao Guang Bei Tu* and the Buddhist monk Qingrui's *Hunyi Jiangli Tu*, as well as combining information from Korean and Japanese maps. The scope and content of this map were similar to *Da Ming Hunyi Tu*, the main difference being that this map shows the Great Wall while Korea and Japan are proportionately larger and have a more accurate outline. Several painted copies of this map have been handed down in Japan and Korea, the main examples being in the collections of: Ryukoku University Library, Tokyo; Honko-ji [temple], Shimabara, Japan; Honmyo-ji [temple], Kumamoto, Japan (called *Da Ming Guo Ditu*); and, Japan Tenri University Library (called *Da Ming Guo Tu*). These copies are all part of the pedigree of *Hunyi Tu*, and reflect the cartographic exchange between East Asia and the Islamic world.



Da Ming yu di tu from the Atlas of the Ming Empire

The Chinese historian Joseph Needham argues that there was a general advance in Chinese mathematical cartography from the Song period (960-1279) into the 17th century. In fact, however, according to Professor Richard J. Smith and Laura Hostetler, the evolution of map-making in China should not be characterized as simply a linear process of progressive improvement. Rather, Chinese cartographers continued to produce two distinctly different types of maps - one based on relatively precise mathematical measurements, and one based primarily on cultural data - without explicitly recognizing the existence of two competing traditions. If a characterization is required, it would have to be that maps of the latter sort greatly outnumbered those based on more mathematical models - not only up to the 17th century but well beyond. On the other hand, as we shall see, a number of cartographic documents of the late Ming (1368-1644) and Qing (1644-1912) periods placed the two types of maps together, in the spirit, one suspects, of the complementary maps engraved on the two sides of the Song stele of 1136 (*see #218 and #218.1 and pages 10-13 herein*).

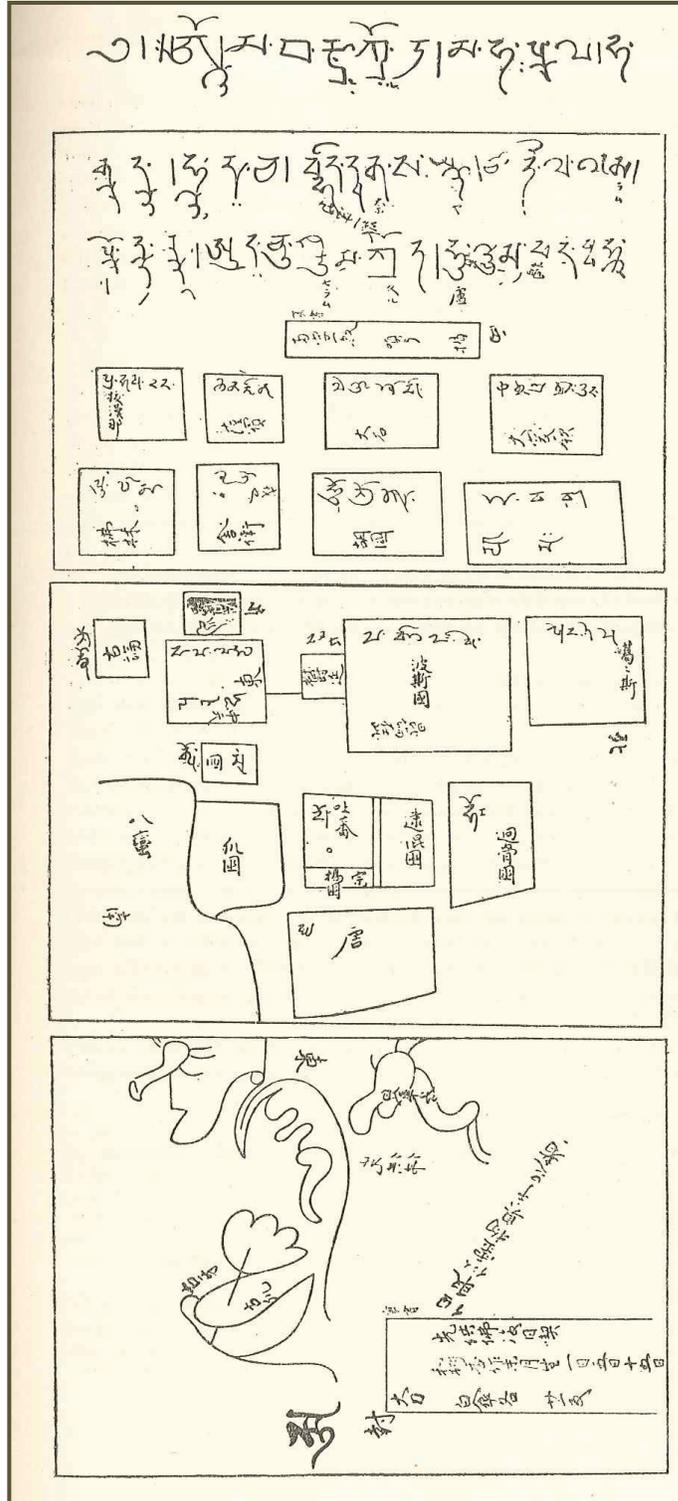
Many modern scholars, both Western and Chinese, have seen the arrival of the Jesuits in China during the late 16th century as a landmark in the history of Chinese map-making. In fact, however, again according to Professor Richard J. Smith, their influence was rather limited. To be sure, Jesuit scientific methods, including sophisticated surveying techniques, enabled the Qing Dynasty to create a far more mathematically accurate map of the Chinese empire than had ever been produced before - the *Huangyu quanlan tu* [Map of a Comprehensive View of Imperial Territory; 1718]. This massive work, the product of many years of dedication by both the Jesuits and Qing scholars, provided China's Manchu rulers with an important instrument of political and military control, and it remained the most authoritative atlas of the realm for nearly two centuries.

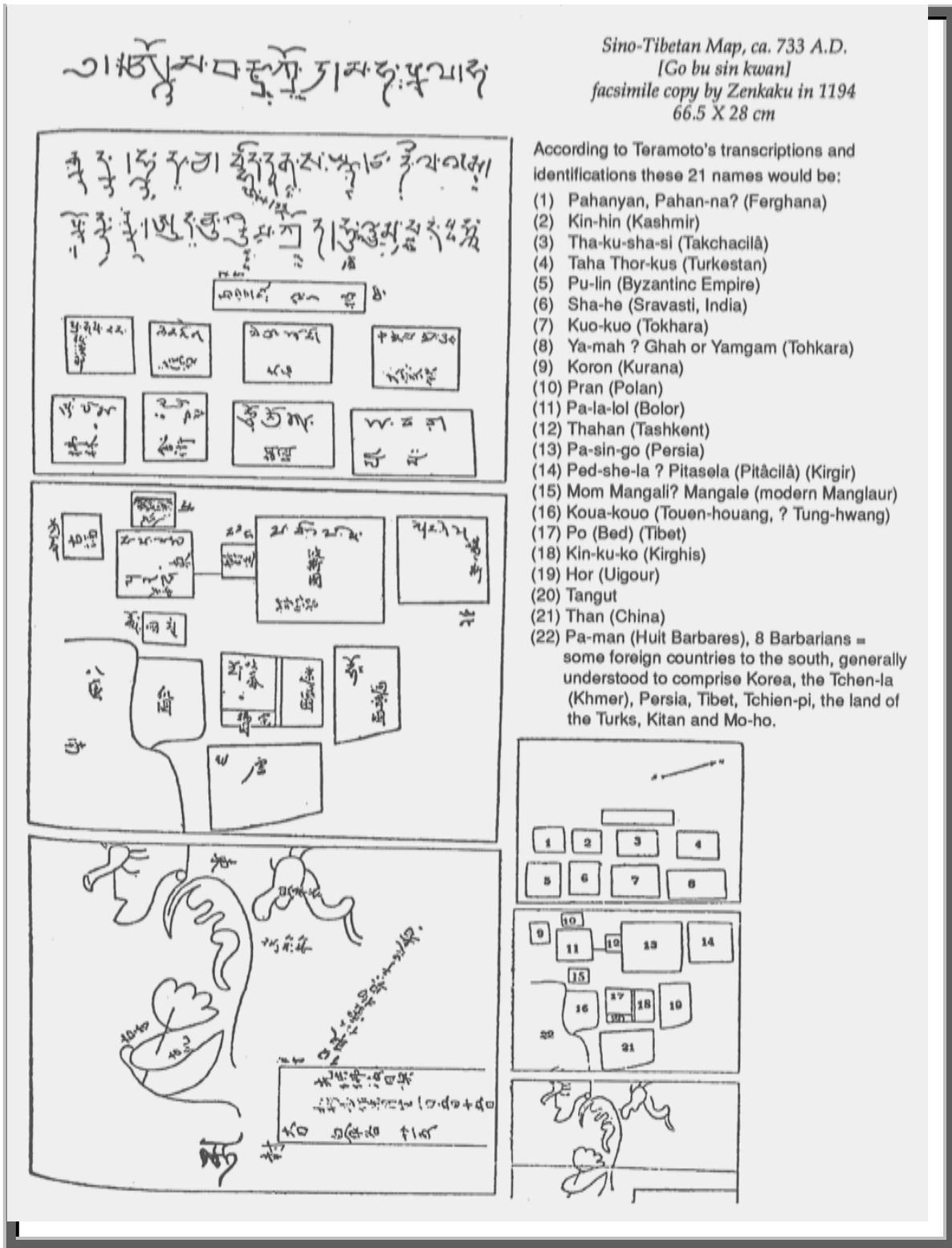
The following map, known as the *Sino-Tibetan* world map, when found, was originally part of a volume of documents in scroll form and in three parts, whose dimensions were respectively: 31.5 x 994 cm, 30.7 x 932 cm, and 29.5 x 217 cm. The first and third parts each contain two modern leaves, those of the first part being the preface by Onson Kosugi, 1834-1910, a well-known classicist and those of the third, a Government certificate. The overall document, therefore, is a scroll about 30 cm high and 18 meters long. The map itself takes up only three pages of the volume, each 20.5 x 28 cm (61.5 x 84 cm overall), the remainder of the volume is concerned with Buddhist iconography.

This unique map, like the *imago mundi* of the European Middle Ages, is a simple and stylized representation of the world. A score of rectangles artificially arranged, represent the various countries. The names of 21 countries, written in the rectangles, are in Chinese and Tibetan characters. No one succeeded in deciphering these until Professor Teramoto did so, publishing his findings at the end of 1931 in an article entitled *Relations between Japan and Tibet in the History of Japan*. M. Teramoto had ten years previously studied a very old copy then in the possession of Professor B. Matumoto, but this was destroyed in the great fire following the September 1923 earthquake at Tokyo. Matumoto saved, however, a manuscript facsimile copy made in 1890.

The map covers almost the whole of Asia, from the extreme east to Persia and the Byzantine Empire in the west, from the countries of the Uigours, the Kirghis and the Turks in the north to the Indies in the south, an area incomparably wider than that covered by such accounts as Hiuen-tchoang's travels. Therefore, according to H.

Nakamura, this map proves that maps such as the *Gotenjuku Zu* [Map of the Five Indies], (see #231.1), does not represent the whole of the known world to the Chinese at the time of the T'ang Dynasty (618-907), but that their knowledge extended into the west and north beyond the areas indicated by the *Si-yü-ki* [a geographical encyclopedia].





The geometrical form of the *Sino-Tibetan* map is a design that was certainly foreign to China during this time (the Tang Dynasty), so that it must owe something to possibly a western influence. According to Teramoto's study the original map may

represent the earliest example of Arabian maps introduced to China under the Tang Dynasty through Central Asia. For it is a historical fact that, under the Tangs, the Chinese, having conquered the eastern Turks, annexed an immense territory stretching from *Tarbagatan* in the north to the Indus in the south, and their national prestige was then at its zenith. They were constantly in touch with Tibet, Persia, Arabia, India and other countries, both by land and sea, diplomatically and commercially. The names on this map, given the assumed general communication among these countries, seem to be based on Chinese and translated, for political and administrative purposes, merely to make their understanding easier for the Tibetans.

These two facsimile copies, ancient and modern, were formerly in the possession of Zyensuke Nanbu. In a letter quoted by Teramoto, Onson Kosugi gives Nanbu information about the document, telling him that the original was in the Onzyozi Temple, bearing the title *Go bu sin kwan*, that it was carried from China to Japan by a priest named En-tin (better known by his posthumous title of Ti-syo Daisi, 814-891), and that he, Kosugi, had seen a copy of part of it in the Tozi Temple at Kyoto. In 1893 Nanbu presented the new copy to the Bureau for Enquiry into the National Treasures for examination. This committee gave both dates and names, carefully written by the editors and collators, and these enabled future scholars to trace the source of the map.

According to modern authorities, the map was copied in the Mii Temple (Onzyozi) by Zenkaku (died 1214) between the 1st of January and the 6th of February in the year of the lunar calendar, 1194, from a document borrowed from the Taihoin temple. The copyist, being unable to decipher the "Sanskrit", i.e., Tibetan characters, copied them exactly as they were so that later he might make a more careful study of them. At the same time his master, Sinen (died 1204), 45th chief priest of the Onzyozi Temple, had collated this copy with another preserved in the Zisso-bo convent and also with that of the library of their own temple, but the unfamiliar characters baffled him. After three separate attempts at collating he confesses despairingly that the matter of deciphering and correcting them was beyond him. He therefore left them as they were. In 1200, the 26th of February by the lunar calendar, Zenkaku made a final attempt, using the Taihoin map. Still later En-zyo, 1189-1256, 56th chief priest of Onzyozi, made three attempts at editing the map, the last one being dated February 26th, by the lunar calendar, in 1220.

Thus by the end of the 12th and the beginning of the 13th centuries several copies of the document were in existence. The original copy at Onzyozi, thought by Teramoto to have been made around 733 A.D., was brought from China in 858 A.D. by En-tin, to Japan. It had been formerly in the possession of the priest Huei-kuo, in the *T'sing-loung-tseu* [Blue Dragon] Temple at Tch'ang-ngan, then capital of China, and passed to his successor, Tchoan-kiao, who made a present of it to his Japanese disciple En-tin, along with other Buddhist documents.

But from the standpoint of world maps, the Jesuit Chinese *mappaemundi* - including Matteo Ricci's *Shanghai Yudi Quantu* [Complete Map of the Earth's Mountains and Seas; 1584], his *Kunyu wanguo quantu* [A Complete Map of the Myriad Countries of the World; 1604, see #441 and below], Giulio Aleni's *Zhifang waiji* [Notes on (World) Geography, 1623, see #460.2], and Ferdinand Verbiest's *Kunyu tushuo* [Illustrated Discussion of the Geography of the Earth; 1674, see #441] - had little long-term influence according to Professor Richard J. Smith. Whereas precise maps of the empire had obvious strategic value, especially for the expansive but alien and somewhat insecure Manchus, world maps had a different function altogether. They were designed

primarily as visual statements about a great and glorious culture, a universal order focused squarely on the Chinese tributary system. Indeed, one gains the impression that most Chinese world maps were constructed as if they were to be seen by the emperor himself.

Any scholar who studies the history of cartography in China cannot avoid noticing the continual production of Chinese maps, atlases and geographical texts compiled by a succession of Jesuit missionaries from the end of the 16th century onwards. A question that has often been raised is why a group of European Jesuits, whose aim it was to diffuse Christianity in China, spent time and effort to produce geographical material in the Chinese language. The answer lies at the heart of the Jesuits' strategy for the conversion of China, in which, as is well known, they deployed their scientific knowledge as a way of gaining the trust of their Chinese counterparts by non-direct means. Cartography, together with astronomy and technology, was considered to be one of the best means of demonstrating the intellectual standing of Europeans and, in consequence, the value of the European faith.

When the Jesuit missionaries began to work in China, they attracted the attention of the Chinese by introducing European knowledge. This is the context in which Jesuits such as Matteo Ricci, Giulio Aleni, Francesco Sambiasi and Ferdinand Verbiest made their Chinese-language world maps.

It was Ricci who found the key to open the door of China to his fellow Jesuits. As already noted, the key was European science. Also important was the way it was introduced, with flexibility and empathy. Ricci is generally considered to be the first geographer to make the Chinese aware of the division of the world into continents, of the existence of America and, possibly, of the sphericity of the earth. He noted the Sino-centric vision of the Chinese and accordingly positioned Asia in the middle of his map so that it would not be rejected by Chinese scholars. By structuring his map according to European ideas of projection, he introduced the Chinese to the Ptolemaic-Aristotelian organization of cartographic space. He also translated, for the first time, many toponyms into Chinese, some of which are still used in modern Chinese.

It is not surprising, then, to find that a number of contemporary Chinese scholars bitterly attacked the Jesuits for misrepresenting the world and China's place in it. According to one Ming scholar, Wei Jun, Ricci's map not only contained "fabulous and mysterious" information that could not be verified, but in locating China to the west of center and inclined to the north, it dislodged the "Central Kingdom" from its rightful position at "the center of the world." How, Wei asked, "can China be treated like a small unimportant country?" Similarly, the *Huangchao wenxian tongkao* [The Imperial Dynasty's Comprehensive Examination of Source Materials; 1787] denounced Ricci's account of the world as full of contradictions, misguided statements and "boastful lies" (*dankuang*). It accused him of belittling China, aggrandizing his own culture, and spreading misinformation in the course of his cartographic work.

In the collection of the Nanjing Museum is a copy of the *Kunyu Wanguo Quantu*, a map compiled in the 36th year (1608) of the Wanli reign-period of the Ming dynasty by a group of Chinese and foreign scholars working under the Italian Jesuit Matteo Ricci. The map is painted in color on paper, and measures 192 cm in length and 346 cm in width. The map uses Western geographic concepts and schemata and it integrates Chinese cartographic information into a Chinese language map of the world.

Kunyu Wanguo Quantu uses equal area projection and meridians of latitude and longitude and presents the world as two adjacent hemispheres. It depicts the five

continents known at that time: Asia, Africa, Europe, America, and Antarctica. With the exception of Antarctica, the land and sea outlines of all the continents conform to the measurements taken by European navigators and so they are comparatively accurate. Antarctica was drawn according to European legend of that time and is thus larger than its actual size; Oceania was yet to be discovered and so it does not appear on the map. At each corner of the frame are small circular cartouches, supplementing the map of the five continents. Of them, the upper right corner cartouche shows a map of the heavens, in the upper right is a picture of an armillary sphere, in the upper left cartouche is the northern hemisphere, and in the lower left corner is the southern hemisphere, pictorially and directly reflecting the European view of the Earth.

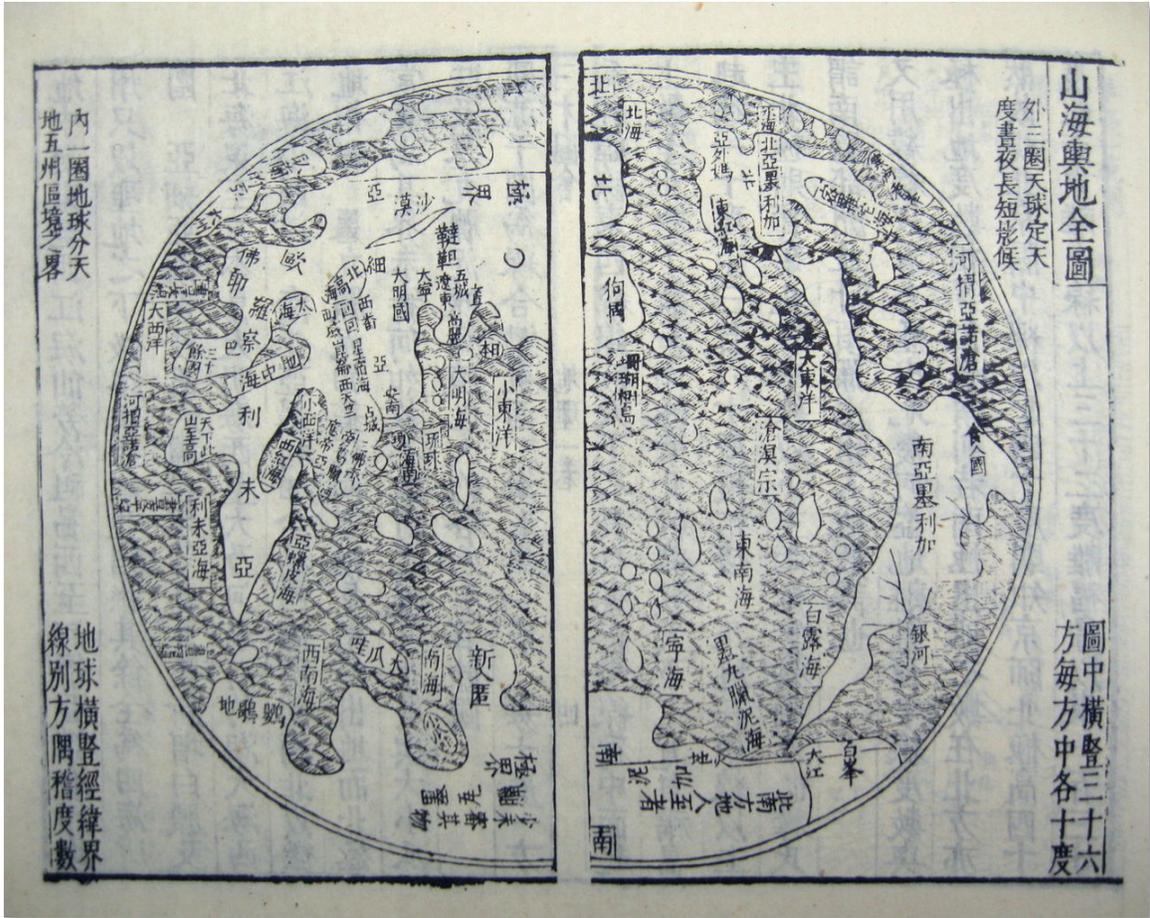
The map uses three colors to represent the five continents, blue-green three-dimensional figures to depict the mountain ranges, double wavy lines to show the rivers, and light blue wavy lines to show the sea. At the same time, the map uses the typical cartographic painting methods in Europe at that period, with sailing ships, large marine animals such as whales and sea monsters painted on the oceans, and images of tropical animals such as lions, elephants, rhinos, and ostriches imaginatively depicted in Antarctica, vividly reflecting both European maritime exploration and the unknown world of the imagination. Larger and smaller font sizes are used for the names of the five continents and other place names, respectively, and under each toponym are notes describing local history, customs, and special products, allowing readers to quickly understand basic facts about the world.

Regarding its sources, this map integrates cartographic data used to draft maps in Europe at that time. The map uses the renowned Abraham Ortelius' (1527-1598) Latin map of the world *Theatrum Orbis Terrarum* as its model, combining it with Chinese maps compiled in the Ming dynasty such as *Guangyu Tu*, *Da Ming Yitong Zhi*, and *Gujin Xingsheng Zhi Tu*. In order to facilitate Chinese officials and scholars more readily accepting the map, Matteo Ricci put Ming China at the center of the world at variance with European maps that placed the Atlantic Ocean at the center. Ricci also provided very detailed description of the East Asian region. On both sides of the map are Ricci's explanations, epilogue, and preface, providing detailed knowledge about the Earth and the method of Western mapping projection. There is also Wu Zhongming's preface to Ricci's map *Shanghai Yudi Tu*, a preface written by Li Zhizao, and colophons by Chen Minzhi, Yang Jingchun, and Qi Guangzong, that provide important reference material regarding Ricci's compilation of the map, the processing of printing the map of the world, and its block-printing.

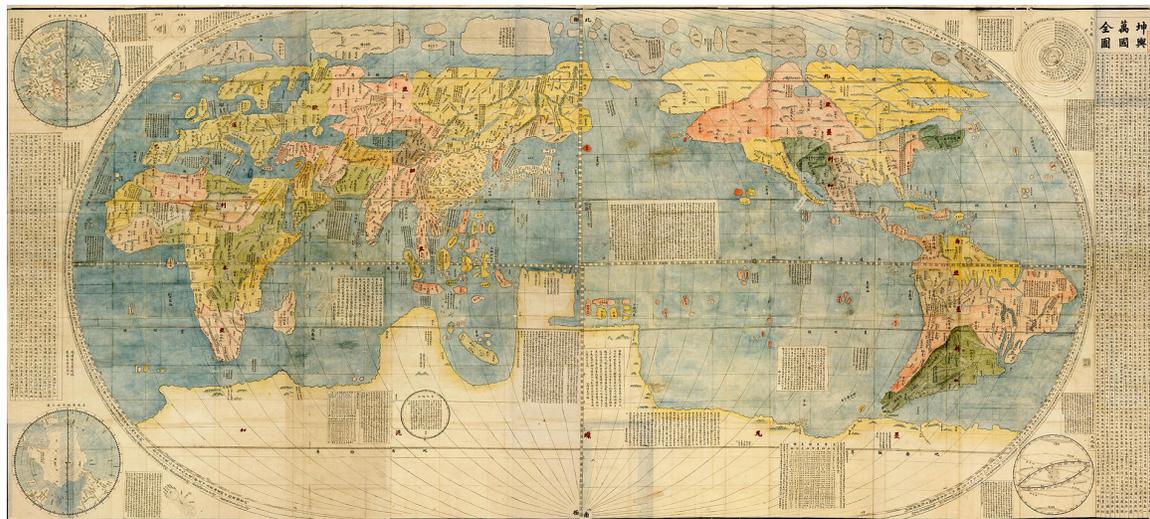
In Wanli 29 [1601] Matteo Ricci went to the capital and presented his *Kunyu Wanguo Quantu* to the Wanli Emperor, and it attracted the attention of Chinese officials and scholars. Under its influence, some Chinese scholars began to cooperate with the Jesuits or they independently prepared world maps adopting Ricci's method of showing the two hemispheres. In this phase of Sino-Western cartographic interchange, the following Chinese scholars and their world maps all showed the influence of Western knowledge of geography and cartographic methods: Wang Qi's *Shanghai Yudi Quantu* in *Sancai Tuhui*; Zhang Huang's *Yudi Shanghai Quantu* in *Tushu Bian*; Xiong Mingyu's *Kunyu Wanguo Quantu* in *Gezhi Cao*; Pan Guangzu's *Dong Xi Banqiu Tu* in *Yudi Beikao*; and, Cheng Bai'er's *Shanghai Yudi Quantu* in *Fangyu Shenglulie*. Among these maps, copies of *Kunyu Wanguo Quantu* and *Liangyi Xuanlan Tu* would have a profound and widespread impact on the Korean peninsula and in Japan. In his diary, Ricci recorded the reactions of his mandarin friends upon first seeing this map (in translation):

It was the best and most useful work that could be made at that time for placing China and giving credit to all things of our Holy Faith. But the Chinese had already printed many world maps ... in which the entire space was filled with the fifteen provinces of China, and around them a little sea in which they indicated certain little islands called by the names of all the kingdoms, as many as they knew, and these united all together made only a small province of China. With this image of the size of their kingdom, and the smallness of the rest of the world they were proud, and it appeared to them that the rest of the world was barbarian and uncouth in comparison. Nor did they expect to be subject to foreign masters. When they saw the world so large, however, and China appearing so small in a corner, the more ignorant made fun of the map; but the wiser people, seeing the beautiful order of graduation of parallels and meridians . . . could not abandon the belief that all this was true ... our land so far from their kingdom, and the immense sea that interposes itself between us. With this, they abandon the fear ... of our people coming to conquer their kingdom. This [fear] is one of the major impediments the Fathers have in converting these people.

The publishing and dissemination in China of *Kunyu Wanguo Quantu* greatly widened the Chinese vision of geography, with knowledge that the earth is spherical and such geographic concepts as the five continents, the four oceans, and climate that were all the outcome of the great geographical discoveries of Europe, as well as the introduction of knowledge of field measurements and mapping projection into China, all had a great impact on Chinese scholars at that time. Matteo Ricci's translations of the terms for Asia (*Yaxiya*), the Mediterranean, the Nile, the South Pole, the North Pole, and the Equator are still in use as geographic terms. Ricci's success in compiling *Kunyu Wanguo Quantu* and subsequent maps synthesizing Chinese and Western geography made up for the deficiencies and inaccuracies in mapping East Asia in the European maps of the world at that time, promoting the development of cartography in China and of cultural exchanges between China and the West and playing an important role in the history of the map in China and even in the history of the development of world maps.



Shanghai Yudi Quantu Quantu [Complete Map of the Earth's Mountains and Seas] 1584



Father Matteo Ricci's 1604 world map Kunyu Wanguo Quantu 坤輿萬國全圖 (#441)

Chinese depictions of foreign lands prior to the mid-19th century were extremely varied, reflecting a wide variety of motives and methodologies. But on balance the emphasis in Chinese cartography was clearly on the “cultural” and “administrative” functions of maps rather than on the “scientific” representation of space. A noteworthy exception in the early 19th century was Li Mingche, a well-known Daoist priest and scientist with foreign contacts, who included two relatively “modern” illustrations of the Eastern and Western hemispheres - complete with lines of latitude and longitude - in his *Huantian tushuo* [Illustrations of Encompassing Heaven; 1819]. Although much more work has to be done on the production, dissemination and ownership of maps in late imperial China, it has become increasingly clear that the dominant form of cartographic representation in the Qing period was the *tianxia quantu* genre, derived from models dating back to the 16th century. These provided the concrete images that most Chinese had in their minds when they thought about the shape of “the world.” Even individuals who claimed to have been directly inspired by the Jesuits often borrowed little of cartographic substance from them. One noteworthy example shown below is a map by the scholar-official Liang Zhou, titled *Qiankun wanguo quantu gujin renwu shiji* [Universal Map of the Myriad Countries of the World, with Traces of Human Events, Past and Present; c. 1600]. This work - which appears to have been created more out of defiance than admiration - bears no trace of meridians and arranges foreign locations topologically rather than topographically. About eighty transoceanic lands outside of China appear in this form, in addition to a hundred or so additional foreign places to the north and west. Locations such as North America (on the upper right-hand side of the map) and South America (on the lower right-hand side) - like the *Land of Tall People*, the *Land of Small People*, the *Land of Women*, and many other places drawn directly from the pages of the *Shanhai jing* - are shown as inconsequential islands surrounding the large nucleus of the Chinese empire.

The geographic category “Asian” did not exist in the worldview of the Chinese Ming and Qing governments. The term “Asia” was introduced as a feature of the “five-continent” tradition of geography brought by the Jesuits in the late Ming period, but before 1840 the validity of this concept was not widely accepted. Indeed, the European view of an expansive Asia covering all lands to the east was a precise inversion of the Ming and Qing view that China was bordered by several overlapping “wests” (notably the Western Regions [*Xiyu*] and Western Ocean [*Xiyang*]) extending to the Atlantic Ocean. It could be argued that, even without the concept, Ming and Qing observers in practice distinguished Asian from European countries. Such an argument would highlight the role of what has been called the “tributary system,” referring to a mode of foreign relations in which all formal contact, including legal trade, included the obligation to undertake practices acknowledging the superior position of the Chinese emperor. In the Ming period, newly arrived Europeans were pointedly excluded from this mode of relations, although they (like many Chinese merchants) were able to trade by resorting to various semi-legal expedients. Early in the Qing period, these European and Chinese merchants benefitted from new policies allowing maritime trade without political relations; a separate system devised for Russia also allowed trade without tributary forms. By contrast, virtually all states in Asia that had formal contact with the Qing remained at least nominally subject to the tributary framework developed in the early Ming. If this commonality provides some justification for treating Ming and Qing relations with Asian states as a coherent subject, it must be stressed from the outset that these tributary relations are simply an institutional lowest common denominator: actual

political, economic, and cultural relations were extremely diverse, and in many cases the ideology of the tributary system had little or no practical significance for relations between these countries and China.

In the Late Ming Sino-European cartographic exchange became a two-way street. At the same time as Matteo Ricci and other Jesuits were taking European knowledge systems of modern geography and cartography to China, the Italian Jesuits Michele Ruggieri (1543-1607) and Martino Martini (1614-1661), as well as the Polish Jesuit Michel Boym (1612-1659) and others who continued to come to China were taking Ming maps such as *Guangyu Tu* back to Europe, and on the basis of this edited atlases of China in Latin, including *Atlas Sinensis* and *Novus Atlas Sinensis*. These greatly changed European views of Chinese geography and promoted European understanding of Chinese geographical knowledge and geographic mapping style.

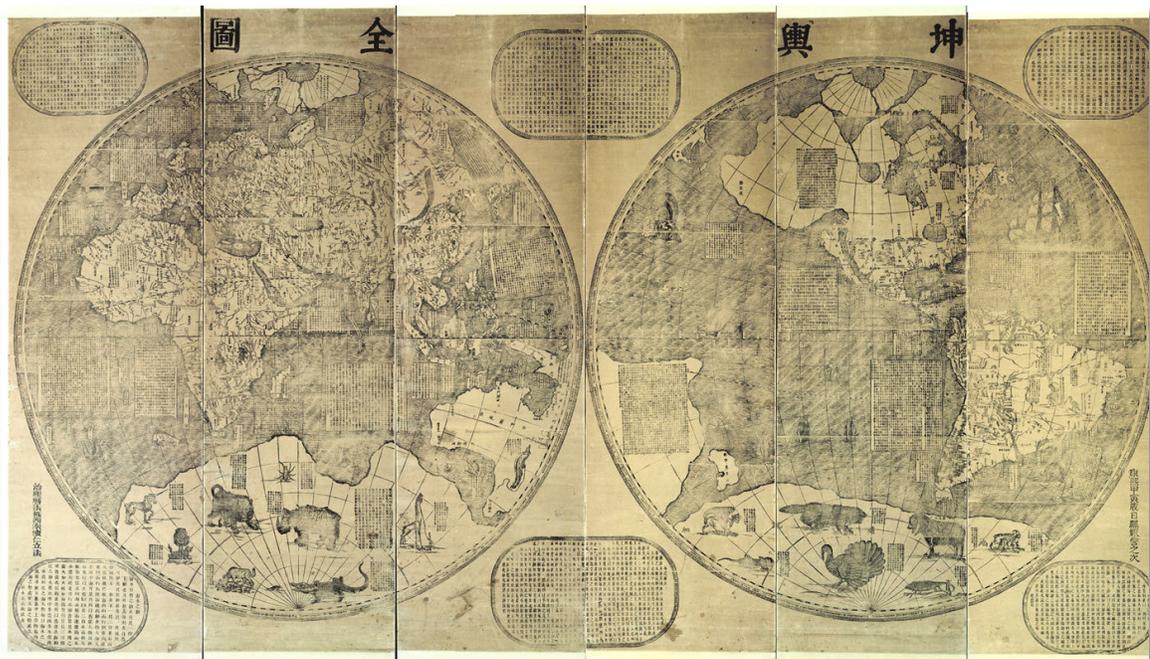
In 1584, Abraham Ortelius (1527-1598) of Flanders compiled the first modern atlas of the world, *Theatrum Orbis Terrarum*, and this included a map of China by the Portuguese mapmaker Luiz Jorge de Barbuda (1520-1580) (#410), which was the first European single map of China. It remained the blueprint for a European map of China for more than sixty years after its publication. China as depicted in the map is a mixture of classical European geographical knowledge, Marco Polo's medieval recorded tales, and the fruits of early modern European colonial adventures in Southeast Asia, while the outline and river systems of China are seriously distorted.



1620's Wanguo Quantu map, by Giulio Aleni, whose Chinese name (艾儒略) appears in the signature in the last column on the left, above the Jesuit IHS[disambiguation needed] symbol.



Francesco Sambiasi's world map (c.1639), Ghent version. Printed from wood blocks on a single sheet of rice paper measuring approximately 108 x 72.5 cm.



Kunyu Quantu in two hemispheres, 1674, by Ferdinand Verbiest

This is a sino-centric map showing China as the center of the universe. Flemish scientist Ferdinand Verbiest joined the Jesuit order in 1641; he traveled to Macao in 1659, where he studied Chinese and Confucian classics and took his final religious vows. He was a polymath best known for this Chinese world map, a revised Chinese calendar, and astronomical works in Chinese and Latin. Notwithstanding his status as a foreigner he developed an unusually close relationship with the Kangxi emperor, who conferred mandarin rank on Verbiest and granted him an official funeral. For the emperor, cartography was a significant expression of his control over the regions under imperial domain. Verbiest's world map drew from contemporary Dutch maps and Chinese sources, but it presented the world in a format appropriate to a Chinese audience. Counter to western map-making traditions that focused on Europe, the *Kunyu quantu* deferred to local conventions by placing China at the symbolic center, surrounded by countries that could be construed as tributary states.

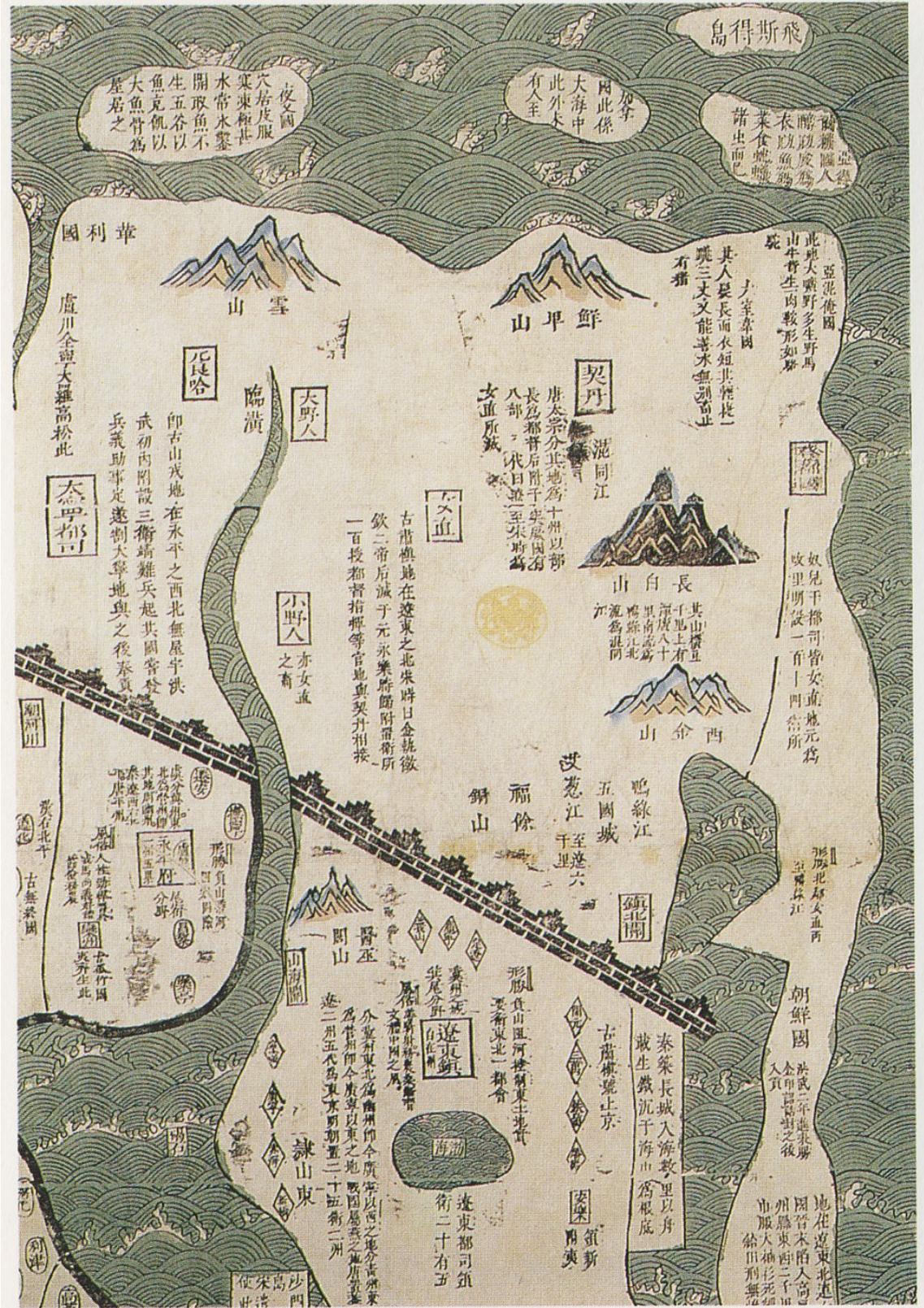
In 1647 Ferdinand Verbiest produced one of the largest double hemisphere maps of the world to date. It was made for the second Qing Emperor of China, K'ang-hsi (1662-1722) and was part of a larger geographical work called *K'un-yu t'u-shuo* [Illustrated Discussion of the Geography of the World]. Approximately eight copies survive of the original map. Verbiest's unique map was primarily made for Chinese use and designed to open China's eyes to the rest of the world. It incorporates Chinese text with European cartographic knowledge of the globe at that time. In keeping with Chinese tastes and their belief that Peking was the cultural and political center of the world, China is placed at the center of the map with the rest of the world flanking it. The map is drawn using Mercator's projection. Descriptive cartouches explain geographic details and peculiarities of countries and oceans, as well as describing natural phenomena such as eclipses and earthquakes. Columbus' discovery of America is also discussed. The likely source for Verbiest's map was Joan Blaeu's monumental world map of 1648, *Nova totius terrarum orbis tabula* (10'x7', see image below). Although the delineation of China differs, the maps are similar in size and a comparison and a concordance of geographical names shows clearly the relationship between the two maps. In total twenty-three different animals, believed to be unknown or little-known in China, decorate the margins. The illustrations were derived from Konrad Gessner's *Historia animalium* (1551) and this part of the map became most influential - the illustrations and their descriptions were copied into the imperial encyclopedia *T'u-shu chi-ch'eng* of 1723 and the transliterated names included in Chinese and Manchu dictionaries.



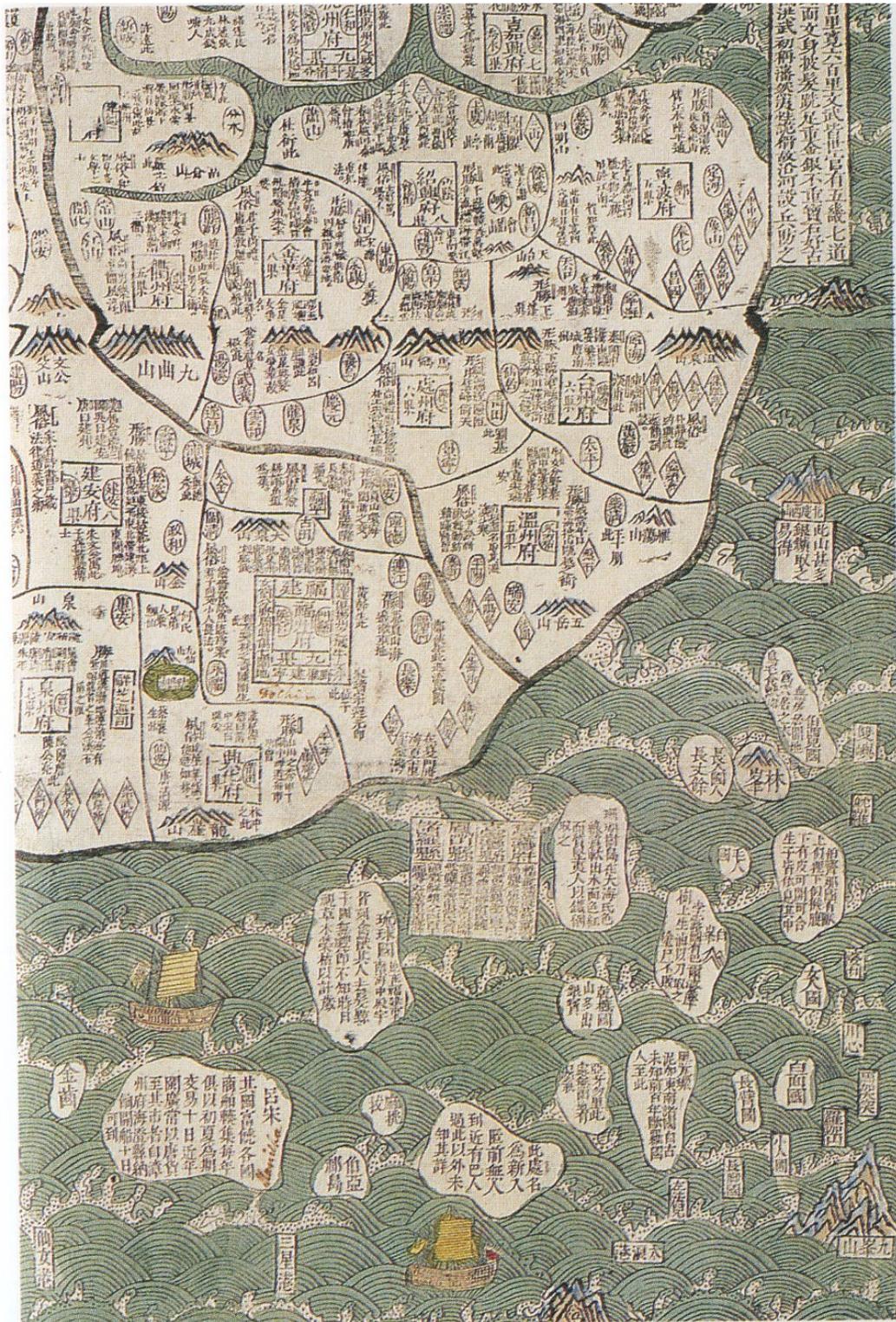
*Created by celebrated Dutch cartographer Joan Blaeu in 1648, the 10' x 7' map titled *Nova totius terrarum orbis tabula*, is commonly known as the *Blaeu world map*. This grand map is composed of 21 hand-printed engraved images that show the known geography of the earth at that time along with images of the zodiac constellations and diagrams of the solar system. The image has been embellished with hand-applied watercolors and silk ribbon trim. There is also a ten-sheet letterpress-printed informative text along the bottom edge of the map that describes the nature of various landforms, climates around the globe, and navigational information.*



Liang Zhou's *Qiankun wanguo quantu gujin renwu shiji* [Universal Map of the Myriad Countries of the World, with Traces of Human Events, Past and Present] c. 1600.



Upper right-hand portion of the world map of 1743. Here, the Great Wall appears prominently as it crosses the Liaodong peninsula and seems to stop just before intersecting with Korea.



Lower right-hand portion of the world map of 1743. Luzon and the Liuqiu Islands lie almost side-by-side in the south-west corner of this section. There are also several mythical countries from the Shanhai jing scattered about. The threatening aspect of the sea is especially noticeable in the southern seas.

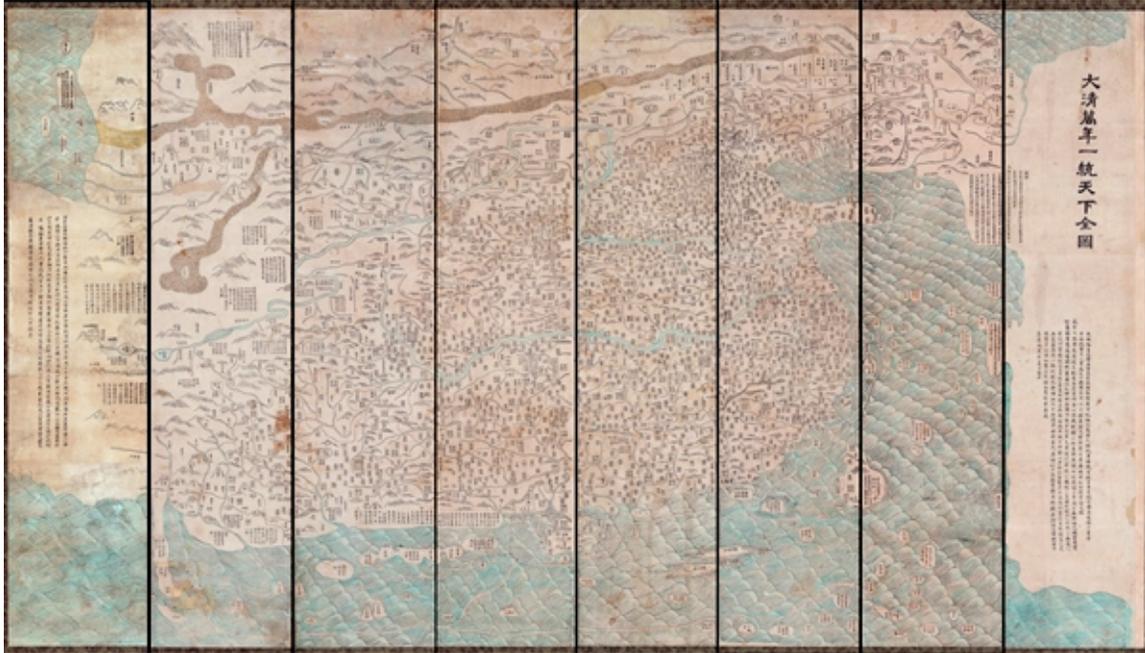


Upper left-hand portion of the world map of 1743. Most of this corner of the map identifies Chinese territory historically associated with the 'Western Regions'. The Jade Gate Pass appears prominently in the middle, well above the end of the Great Wall. The 'Great Western Ocean [Country]', usually identified with Italy and/or Portugal, is represented by a small square off the western coast.



Lower left-hand portion of the world map of 1743. This section of the map focuses on South-West China (principally Yunnan province), with a thin strip of land to the far west that contains rectangles with the

names of various countries such as India and Arabia. One rectangle conspicuously marks the spot 'where Buddhism arose'.



*Da Qing Wannian Yitong Tianxia Quantu [All-Under-Heaven Complete Map of the Everlasting Unified Qing Empire] Qing Chinese Huang Qianren Map of China, 1806
A cartographic expression of the Qing tribute system*

A seminal 1806 (Jiaqing 11) Qing Dynasty Chinese map of utmost importance and rarity, the map shown above is the earliest known printing of Huang Qianren's (黃千人, 1694–1771) grand and spacious map of the Great Qing Empire of China. Huang Qianren first drew this map during the Qianlong Reign in 1767, but unfortunately no examples of that edition survive. The map was reintroduced in manuscript form by Huang Zhengsun in the year 1800 to memorialize the Qianlong Emperor's life. The 1800 manuscript issue exists in only one example at the Beijing National Library. Afterwards, revised woodblock printings were issued to celebrate important moments in the expansion of Qing influence. Issued five years before the famous 1811 "blue map," the example shown above is the earliest known printing of Huang's map. This series of Qing maps, generally referred to as *Tianxia Quantu*, dominated Chinese cartography during the Jiaqing Reign (1760 – 1820) and persisted well into the reign of the Daoguang Emperor (1820 – 1850). The term *Tianxia Quantu* refers to that portion of the title that most eloquently summarizes their underlying purpose as "unified under heaven," heaven being Qing China.

An initial examination of the easily recognizable portions of the map suggests an expansive coverage extending from Siberia to Borneo and from India to Korea. Closer examination, nonetheless, reveals that this is in fact a map of the world, scaled not in terms of distance, but rather in terms of degree of subjugation to and importance to Qing China. The map is read, like traditional Chinese texts, from right to left, with the most densely detailed regions corresponding to the eastern shores of China. The detail shown here on the left is from the far west, in the distant upper left hand corner of the map,

European countries like Holland, Portugal (*Land of the Great Western Sea*), possibly Italy, Arabia (*Homeland of Islam*), Africa (*Land of the Black Ghosts*), the Mediterranean (*Little Western Sea*), and even the Atlantic (*Great Western Sea*) are ambiguously identified. Surrounding the map are textual annotations describing the subject peoples of various regions. The annotations identify not only the people, but the great distances their leaders travel, the great hardships they endure, and the gratefulness with which they suffer, to pay tribute to the mighty and culturally superior Qing.



Thus the map takes on meaning as a ceremonial and administrative embodiment of Qing rule and the tribute system. The Manchu Qing were a nomadic people who did not visualize themselves limited by geopolitical boundaries - and aptly there are none on this map - rather, their territorial dominion extended to wherever they exerted influence, and the significance of all other lands correspondingly diminished or increased according to that influence.

This “complete” map minimizes the European notion of a map of the world, its centralized and marginalizing construct confirm the Qing/Chinese notion of the “Central Kingdom”.

A key to the right of the map helps to understand the map and identify its iconography. The translations are from Richard Pegg.

- *Sheng* - provincial capital - square topped by a rectangle.
- *Fu* - prefecture - a square.
- *Ting* - sub-prefecture - oval.
- *Zhilizhou* - independent magistrate - small house with triangle roof.
- *Zhou* - department - rectangle.
- *Xian* - district - circle.
- *Guan* - frontier station - shaped like a small house. In the key, this icon is missing a roof, but the roofs are present on the map. This omission was corrected in the 1811 issue (*see below*).
- *Guanzhen* - meaning unclear - double circle.
- *Tusi* - indigenous official.

Through this legend the practical purpose of the map becomes evident. This is how the Qing Emperor would have wanted to see his world. Here Qing power and culture are extensive, extending via a well run administrative and tribute system throughout the entire empire and beyond. Practical, ceremonial, and administrative needs are thus

addressed and magnificently amalgamated into an astounding and influential masterpiece of cartography. (see also the *Da Qing wan nian yi tong tianxia quantu*, 1811, on page 52).

While mapping in China may be nearly as old as Chinese civilization itself, Qing pursuit of accurate, to-scale, cartographic representation of the empire and its expanding colonization of frontier areas are contemporaneous with similar developments in early modern Europe. We know that the development of cartography in Europe paralleled the growth of national consciousness and an era of exploration abroad. Similar processes taking place in 17th and 18th century China are only beginning to be examined by historians. According to Laura Hostetler, contextualizing the mapping of the Qing within the larger (international) early modern project of geographical learning allows us to see that the Qing Dynasty was more closely linked to the early modern world than heretofore recognized.

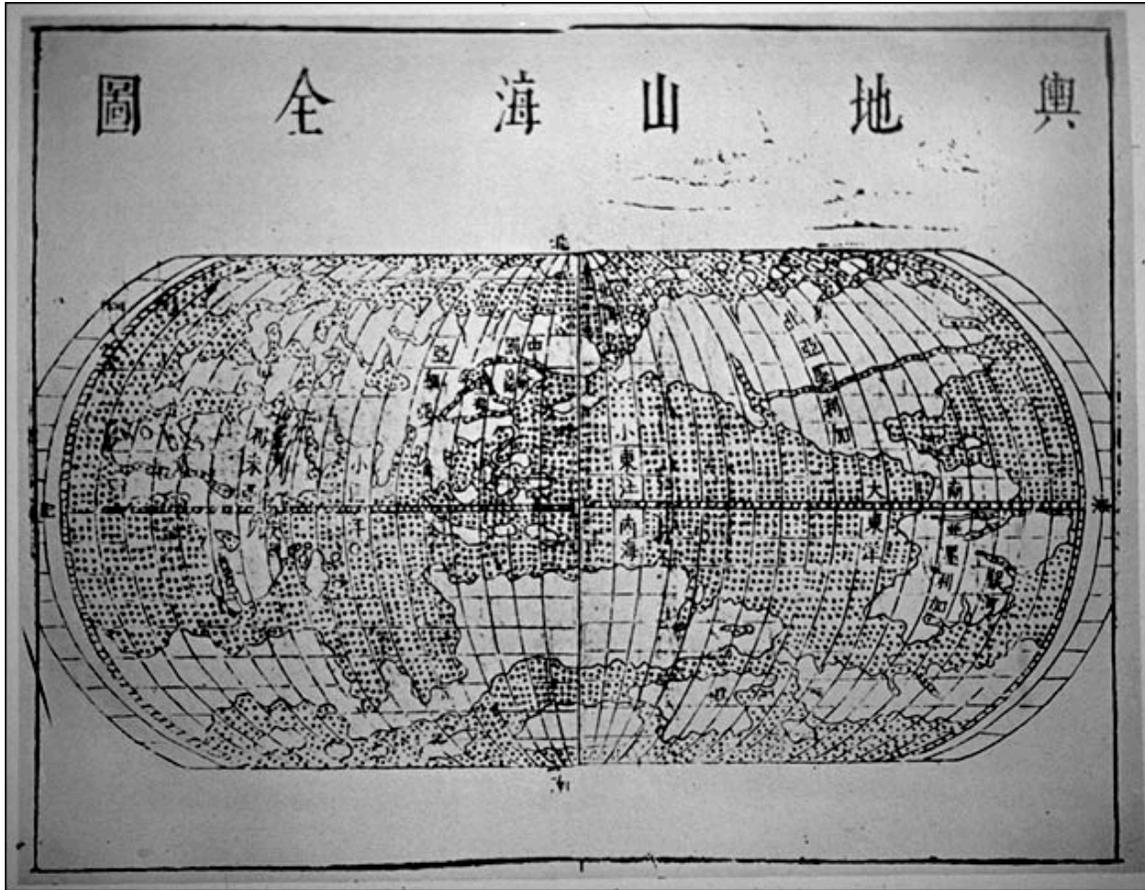
One might well think that scholars of empirical research [*kaozheng xue*] in the 17th and 18th centuries would appreciate Jesuit learning, and indeed many did; but most Chinese intellectuals drew quite selectively from the available pool of Western scientific knowledge. Ironically, a deep distrust of symmetry and regularity on the part of *kaozheng* scholars hostile to traditional cosmography led them to reject the notion of a lawful, uniform, and mathematically predictable universe. Thus, for instance, the great Qing intellectual, Wang Fuzhi, dismissed the round-earth concept of the Jesuits.

Meanwhile, a turn inward in Chinese thought after 1644 diverted attention away from Jesuit-style conceptions of the external world. Gu Yanwu, a towering figure in early Qing scholarship, makes no mention of Jesuit world maps in his otherwise comprehensive *Tianxia junguo libing shu* [Treatise on the Advantages and Disadvantages of the Commandaries and States of the Empire], 1662. This lack of a serious interest in the Western world encouraged Gu to describe Portugal [*Fulangji*] as simply a one-time tributary state, located “south of Java,” whose early contact with China was for the purpose of studying trade routes and “buying small children to cook and eat.”

Of course, cartographic decisions do not necessarily involve either/or choices. In fact, a spirit of compromise animated a number of Chinese mapmakers in late imperial times. Beginning in the waning years of the Ming Dynasty (1600's), Chinese scholars tried various techniques designed to unite Jesuit-inspired knowledge and more traditional Chinese cartographic renderings of space. An excellent example can be found in Cao Junyi's ambitiously titled *Tianxia jibian fenye renji lucheng quantu* [A Complete Map of Allotted Fields, Human Events and Travel Routes (Within and Without) the Nine Borders Under Heaven] 1644, (shown on page 46). This handsome cartographic document, which continued to serve as a model for cartographers during the Qing Dynasty period, acknowledges the existence of Europe, Africa, the Middle East and India, but the two latter areas are represented primarily by cartouches, and Africa - which appears only about one-tenth the size of China - hangs down on the west side of Cao's map as if it were little more than a protective flank. Europe, tiny and even more marginal, is barely recognizable in the upper northwest portion of the map. Most of the place names in these distant areas have been derived from Jesuit sources; but in the southeastern seas there are a number of mythical countries taken directly from the *Shanhai jing*.

As Hostetler describes the situation, in the expansive Chinese empire of the 17th and 18th centuries, as in early modern Europe, the “race for territory” came increasingly to be based on scientifically verifiable claims about physical space. In Hostetler's words:

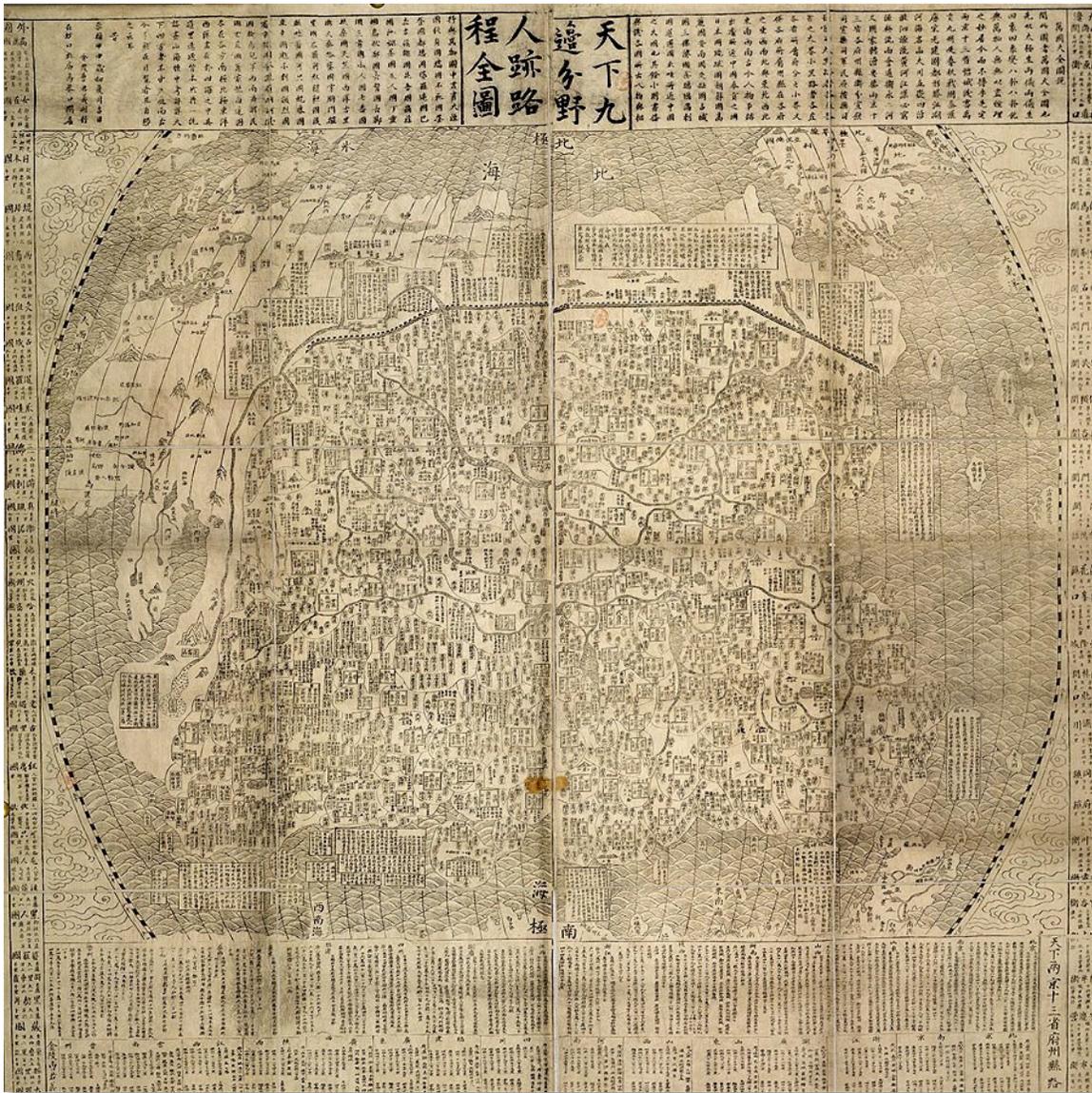
“Multiple sovereignties possible earlier, where small states may have paid tribute to more than one neighboring country, became conceptually impossible as maps gradually came to demarcate fixed borders between states.”



The Yu Ti by Chang Tou-Chin, 1623



Chinese world map by Pi Fang Chi, 1648



Cao Junyi's *Tianxia jiubian fenyue renji lucheng quantu* [A Complete Map of Allotted Fields, Human Events and Travel Routes (Within and Without) the Nine Borders Under Heaven] 1644 (#236)

The map shown above gestures toward mathematical accuracy by providing longitudinal lines and degrees, and by supplying the estimated distances of various “barbarian” countries from the southern Ming capital (modern-day Nanjing). Moreover, in his extensive written commentaries, Cao provides a great deal of solid administrative data and historically grounded information on China’s strategic rivers, lakes, mountains and seas. At the same time, however, he is reluctant to locate his discussions of world geography within the traditional confines of both the Chinese tributary system and Chinese cosmology. Furthermore, in his discussions of “barbarians” he does not differentiate clearly between actual foreign countries and the lands and peoples described in the *Shanhai jing*.

The *Tian Xia Jiu Bian Fen Ye Ren Ji Lu Cheng Quan Tu* [A Complete Map of the World] is 125 x 121 cm printed and published by a native of *Jinling* (now Nanjing) by the name of Cao Junyi in the 17th year (1644) of the *Chongzhen* period during the Ming Dynasty, the above map is a map of the world printed in ink from a folk wood engraving. Apart from the large amount of notes and tables in the map, the central part is a world map 92 by 116 cm in the shape of an ellipse and roughly drawn with meridian lines and latitudes. However, the geographical positions of the map do not agree with the coordinates shown in the network of longitudes and latitudes. In the map China is located in the center, covering an area bigger than all other countries of the world put together. The section on China makes use of Yu Shi's *Gu Jin Xing Sheng Zhi Tu* [Map of Past and Present Topography and Scenic Views] as its chief source with notes more detailed than the latter. The section on foreign countries has its basis on Matteo Ricci's *Kun Yu Wan Guo Quan Tu* [A Complete Map of All Nations on Earth] (#441), and is inaccurately drawn with the approximate locations of the countries of different continents of the world. For instance, in the map the west section only gives the rough outline of Europe, Africa and the Mediterranean Sea and the names of neighboring countries, the northeast section deals with North America, and the southeast section is drawn with South America, but the two Americas are not contiguous and only *Hispaniola* (now Haiti island) appears in the sea between them. Moreover, in the oceans of the south and southeast section of the map are indicated names found in ancient Chinese legends like the kingdom of inhabitants born with two bodies, kingdom of inhabitants born with three heads, kingdom of inhabitants with golden teeth, kingdom of females, kingdom of pygmies, kingdom of hairy inhabitants and kingdom of heart-piercing inhabitants.

In a word, this map is a compilation of the geographical knowledge of China and other countries. The obvious improper arrangement of the network of longitudes and latitudes reveals that the author of the map does not fully understand the scientific content of the network, but all the same the map might be China's first attempt to introduce meridian lines and latitudes in its maps. The map is now kept in the National Library of China in Beijing.

Another kind of cartographic compromise appears in the form of a large anonymous scroll known as the *Sancai yiguan tu* [Illustrations of the Unity of the Three Powers (Heaven, Earth, and Man)]; 1722, archived in the British Library. Although this document consists primarily of a written text dealing with history, morality, cosmology and military affairs, it includes two red planispheres, a “Comprehensive Map of Heaven and Earth,” and a “Perpetual Map of the Unified Qing Empire.” The former map is quite clearly based on Jesuit cartography, while the latter seems to represent an unusual amalgamation of the Song *Huayi tu* and *Yuji tu* traditions.



Detail from the *Jingban tianwen quantu*, showing a world map derived from the *Sancai tuhui* [Illustrated compilation of the Three Powers]; 1607, The Library of Congress Map Room

A similar approach appears in the map (shown on page 52) produced by Ma Junliang, a 1761 *jinshi* degree-holder who was well-known for his skill as a mapmaker. In the 1780s or early 1790s, Ma produced a large and widely distributed woodblock print titled *Jingban tianwen quantu* [Capital Edition of a Complete Map (of the World Based on) Astronomy], which featured a traditional-style rendering of “the world” based more or less on the time-honored model of Liang Zhou. But Ma also offered on

the same sheet of paper a pair of global maps - one derived from a loose rendering of Matteo Ricci's *mappamundi* that appears in the Ming encyclopedia *Sancai tuhui* [Illustrated Compilation of the Three Powers] c. 1607 and one borrowed from a similarly structured Chinese map of the eastern hemisphere, first published by Chen Lunjiong in his *Haiguo wenjian lu* [Record of Things Heard and Seen in the Maritime Countries] 1730.

Ma Junliang's production may be considered an innovative offshoot of a genre of "complete maps of all under Heaven" [*Tianxia quantu*] that arose in the late 17th century and seems to have dominated Chinese visual representations of the world until at least the mid-19th century. Different editions of these attractive, often delicately tinted maps were produced by a series of Qing scholars, including Ma, at least two predecessors - Yan Yong (fl. c. 1710) and Huang Qianren (fl. c. 1770) - and at least one successor, Zhu Xiling (fl. c. 1820). Of these individuals, only Yan is known to have employed a grid system, following the lead of the great Qing scholar, Huang Zongxi, who produced a rather stark map of China [*Zhongguo ditu*] in 1673.

Most maps of this variety go by the title *Da Qing yitong tianxia quantu* [Complete Map of the Comprehensive Great Qing Empire] or a close equivalent. Some, however, bear significantly different names as a way of highlighting certain additions to the basic cartographic format. For example, in addition to Ma Junliang's *Jingban tianwen quantu* we find an anonymous work titled *Jingban tiandi quantu* [Capital Edition of a Complete Map of Heaven and Earth], which includes a round star chart above the standard terrestrial image. There are also certain minor differences in quality, color, commentaries and a few place names in *Tianxia* maps.

Some discrepancies appear to be simple scribal mistakes, such as writing "ten thousand li" instead of "twenty thousand li" (the usual figure) for the extent of the Russian empire. Others involve the expansion or contraction of information - the inclusion or omission of a certain source of authority, or varying degrees of specificity regarding time periods and other minor details. Once in a while there is a major discrepancy. For instance, on some maps the characters "Small Western Ocean" appear where the characters "Great Western Ocean" would be expected. Occasionally, delicate coloring gives way to much darker and less attractive tones. On the whole, however, the similarities are far more striking than the differences.



Complete Map of the Nine Border Towns of the Great Ming and of the Human Presence and Travel Routes of the Ten Thousand Countries. 大明九邊萬國人跡路程全圖
Dà míng jiǔ biān wàn guó rén jì lù chéng quán tú.
 1663 / 1680 (dated), 54 x 49 in (137.16 x 124.46 cm)

Shown above is a rare and extraordinary 1663 (Kangxi 2) xylographic map of Ming China, and indeed the entire world, by Wáng Jūnfū issued during the reign of the Kangxi Emperor (1661 - 1722). This massively proportioned map focuses on China, which, bounded on the north by the Great Wall of China, on the west by the Yellow River, and on the east and south by oceans, occupies some three fourths of the map. As is characteristic of most Chinese world maps, the less detailed surrounding regions

illustrate the rest of the world, but on a much reduced and often hard to interpret scale. This world map's focus on China to the diminishment of all other lands is neatly summed up by the 17th century Chinese cartographer Chen Zushou.

All the barbarian people within the Four Seas should come to pay tribute to the Chinese emperor. Although they [the Jesuits] might describe the world as comprising Five Continents, yet four of them should surround the nucleus of China.

Jūnfǔ's map is a hybrid incorporating western knowledge drawn from Jesuit sources as well as traditional Chinese cartography. The cartography of China itself is derived from earlier traditional sources. As the title suggests, this is a map attempts to illustrate the "nine border towns" of the Great Ming - a subject that would have been much on the mind of Ming supporters who, in 1662, just one year before this map was issued, were finally driven from southern China to exile in Japan and Taiwan. The map's secondary focus, as described by the title "Human Presence and Travel Routes" refers to extensive text at the base of the map that describes Chinese provinces, travel routes between regions, and commerce.

Beyond China, the bordering kingdoms with which China would have had the most active commerce, Japan, Korea, the Ryukyu Kingdom, India, and Southeast Asia, are represented only textually, in large blocks situated in a manner loosely analogous to their physical proximity to China. The blocks feature notes on regional political structure, industry, and commerce in relation to China. Some small islands to the east of China bear interesting floral descriptions of the local inhabitants, such as the "Land of the Hairy People," a traditional Chinese reference to the Ainu of modern day Hokkaido. Also referenced is the "Land of Women," an archaic term that some speculate was used in Chinese legends to refer to the Aleuts (indigenous people of the Aleutian Islands, Alaska), whose women were traditionally left to manage villages for long period while the men-folk hunted and fished for months on the ice packs.

In contrast, the cartographer does actually attempt to map foreign lands such as Europe, America, and Africa. Africa appears as a large peninsula at the extreme west of the map. While the general form and placement of Africa is vague, the Nile River, with a clear Ptolemaic dual lake model, is very much in evidence. Further north, a large body of water is recognizable as the Mediterranean Sea, with the Black Sea apparent and well formed just to the northeast. Europe is vague but the forms of Italy, Greece, Spain, France, and even Denmark are recognizable. Off the coast England (but not Ireland) is identified as *Pueliya*, an erroneous linguistic derivative of *Aneliya* or *Anglia*. Further north, the cartographer identifies the "Land of Dwarves", a concept drawn from the 1602 Chinese-Jesuit Matteo Ricci map *Kunyu Wanguo Quantu* (see above and #441).

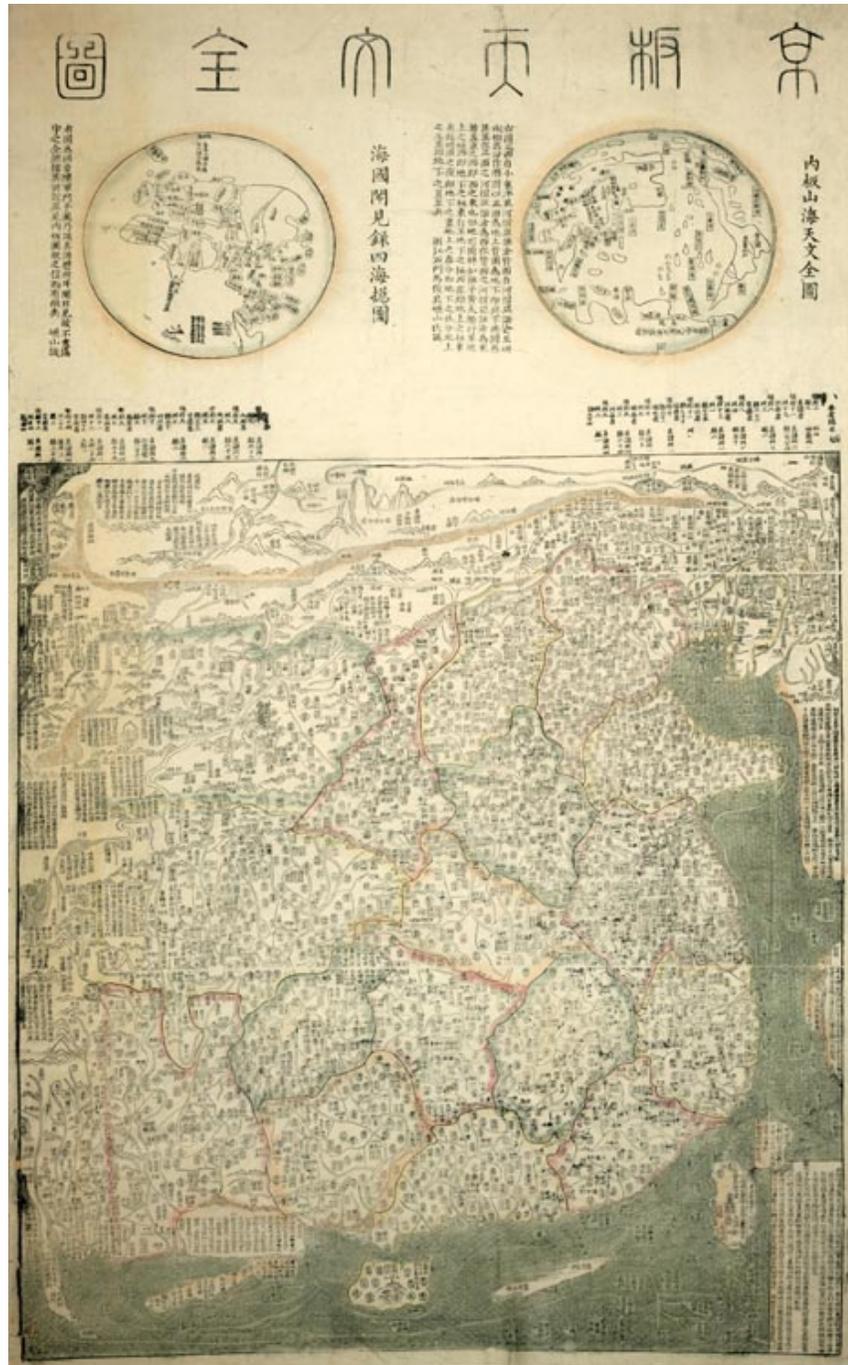
On the opposite side of the map, in the extreme northeast we can find a colorful mountainous island. This is Cuba. To the northwest there is another seemingly insular mass that, with some imagination, can be understood as North America. Florida, Mexico, Baja California, the Chesapeake Bay, Nova Scotia, and the St. Lawrence are all identifiable. At the bottom of the map, another island mass is South America, which is identified as the "Land of Giants", another reference to Ricci, and in turn to Magellan's stories of giants in Patagonia.

Cartographically this map is based upon the 1644 map of Cao Junyi (Nanjing) – considered to be the last great map of Ming China. The two maps are visually similar with a few exceptions. The Wáng Jūnfǔ map does not have Cao’s meridian lines and features additional decorative styling to symbolize clouds at the map edges. Otherwise the text at the top and the bottom, and the cartography itself, is strikingly similar. We find it curious and possibly significant that Cao’s map of 1644 was issued within one year of the fall of the Ming Dynasty, and this map, by Wáng Jūnfǔ appeared within one year of the fall of the Southern Ming in 1662. Shortly after the fall of the Ming the Qing begin an active program of cultural suppression, including censuring all use of the term “Great Ming.” Nonetheless, with nearby Nanjing being a stronghold of Ming power, it is not surprising that loyalist publications out of Suzhou, such as this map, remained in circulation.

The map features heavy textual annotation in classical Chinese. The text at the upper part of the map offers a brief overview of all the countries of the world, as well as the history of the map and offers references to Wáng Jūnfǔ’s sources, including Cao Junyi. The right hand text identifies 29 militarized border crossings and defensive points. The left hand text briefly describes some 33 foreign peoples, some of which are fictional, but all of whom are considered “barbarians.” The text below the map provides details of the two capitals of empire (Beijing, the northern capital and Nanking, the capital of the south) as well as the 13 provinces, involving population distribution, travel routes to and from, the tribute system, and the main commercial products of each: rice, wheat, silk, salt, cotton, etc.

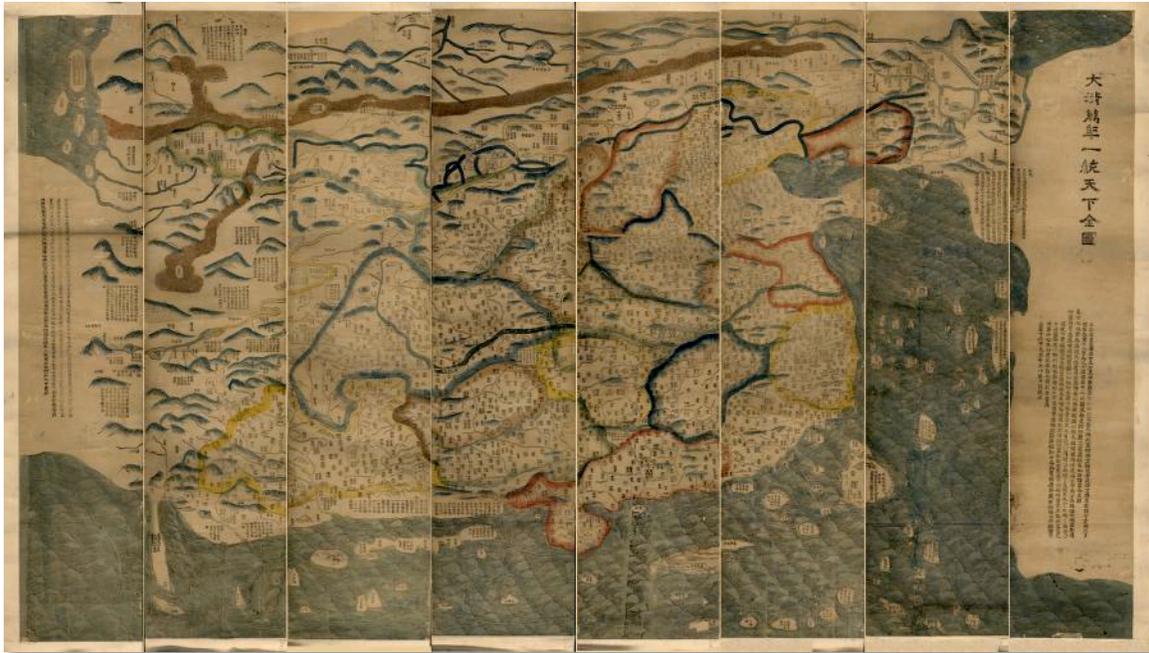
Only three known examples of Wáng Jūnfǔ original map of 1663 survive. These are held in the collections of the Soongsil University, Seoul, South Korea, Harvard University, and the National Library of Taiwan.

Wáng Jūnfǔ (fl. c. 1650 – 1680) was a Chinese printer and publisher active in the 17th century and based in Suzhou, China. His work suggests that he may have been a Ming loyalist. He produced only two known maps. Umemura Mihaku (fl. c. 1680 – 1690) was a Japanese publisher active in the late 17th based in Kyoto.



The Jingban tianwen quantu reflects a Sino-centric world view in which every country but China is relegated to the periphery. At the top is a panel with two side-by-side hemispheric world maps.

Korea and the islands of the East Indies are illustrated to the east and south of the China landmass, while a shrunken Europe is squeezed into the upper left corner. The Jingban tianwen quantu was produced in the 1780's or early 1790's by a Chinese scholar named Ma Junliang, who received the prestigious jinshi civil service examination degree in 1761. He was well-known for his skill as a mapmaker.



Da Qing wan nian yi tong tianxia quantu [Complete Map of the Comprehensive Great Qing Empire], 1811, Library of Congress gm71005018.

Like virtually all large-scale Chinese maps, works of the *Tianxia quantu* genre convey a vivid sense of China's vast and varied landscape: its mountain ranges, overland travel routes, river systems, lakes, coastal communications, and deserts (particularly the Gobi), as well as other prominent landmarks - notably the Great Wall and the Sea of Constellations [*Xingxu hai*] - the legendary source of the Yellow River. An intriguing feature of almost every *Tianxia* map is a prominent stone tablet [*bei*] erected to Zhuge Liang in the far southwest, presumably out of appreciation for his role in pacifying China's borders during the Three Kingdoms period (222-265). This is the only example of an individual so honored in these maps; even the birthplace of Confucius at Qufu has only a general reference to the Kong family graveyard (Konglin), not a specific tablet.

Maps of the *Tianxia quantu* variety pay close and careful attention to administrative changes within China's provincial boundaries - changes resulting from divisions, consolidations and other adjustments. All maps of this sort employ sets of eight or so cartographic symbols to indicate important administrative centers such as provincial capitals [*sheng*], prefectures [*fu*], departments [*zhou*], districts [*xian*], passes [*guan*], garrison towns [*yingzhen*] and so forth. They also mark the presence of local headmen [*tusi*] - members of ethnic minorities responsible for supervising their own people and for reporting periodically on them to regular Qing officials.

Of particular importance to the authors of *Tianxia* maps are changes in the size and shape of the Chinese empire occasioned by Qing military conquests during the 17th and 18th centuries. The introduction to every new edition of these maps begins with exactly the same proud phrase: "The land ruled by the present dynasty is unprecedented in its extent." Each cartographer then proceeds to describe the specific political and military developments that made a new map necessary. For the most part, these developments had to do with campaigns by either the Kangxi or the Qianlong

emperor which brought large areas of the Inner Asian frontier under direct Qing control. But they also involved negotiations between the Chinese and representatives of various “outer” peoples, from Tibetans to Europeans.

Significantly, “outer” areas are not at all well defined in maps of the *Tianxia quantu* genre. Representationally speaking, there are no obvious borders separating China from Russia or clearly delineating the individual kingdoms and territories of, say, Central Asia, India, or mainland Southeast Asia. In a few cases boundaries are suggested by written inscriptions; but only the oceans and seas allow certain countries to appear fully detached from the Central Kingdom. On three sides of the mainland such places are represented as islands, with written descriptions of varying lengths. There is no effort to show the relative size of foreign realms pictorially, however. Rather, the size of foreign territories often appears to be a function of the amount of text deemed necessary to tell the viewer what needs to be known about them. Most inscriptions provide useful historical background on the “barbarians” in question, including place-name changes and changes in their relationship to China over time. Sometimes they also supply data on distances, including travel routes and the length of an occasional border.

All works of the *Tianxia quantu* genre - and indeed all large-scale maps that deal with “barbarians” of any sort - refer to the Chinese tributary system. Some include textual information on the background and evolution of important Sino-foreign tributary relationships, the frequency of certain missions, and major tributary routes. In so doing they reveal a rich lexicon of tributary terminology. The preface to each map refers explicitly to the process by which barbarian envoys come to China and offer themselves as vassals of the Qing dynasty. This process of symbolic submission is always described as an arduous one, involving “the scaling [of mountains], the sailing [of seas], and several stages of translation [*ti hang chongyi*].”

Although some cartographers working in the *Tianxia quantu* tradition seem relatively unconcerned with representing foreign lands and peoples accurately, not all were. In a lengthy introduction to his map of 1714, Yan Yong candidly admits that limitations of both information and cartographic space prevent him from showing the actual locations of far away places. Nonetheless, he has tried to indicate their relative positions and to include textual information on their approximate distance from China. Although most later maps of the *Tianxia quantu* genre do not bother to make this point or to offer systematic data on distances, Ma Junliang’s *Jingban tianwen quantu* (shown on page 49) offers an interesting approach to the problem. By combining two radically different types of maps in one document, he gives his viewers an epistemological choice. Rather than trying to reconcile the two versions, Ma leaves the issue open - a cartographic compromise reminiscent of a Song dynasty stele-bearing two radically different maps of 1136, one basically “mathematical” and the other fundamentally “cultural.”

Chinese cartographic clichés reflect deep-seated attitudes expressed in a number of official documents, including the *Huang Qing zhigong tu* [Illustrations of the Tribute-Bearing People of the Imperial Qing; 1761], the *Huang Qing fanbu yaolue* [Essentials of the Vassal [Tribes] of the Imperial Qing; 1845], and the *Chouban yiwu shimo* [Management of Barbarian Affairs from Beginning to End; 1880]. The prefaces to each of these compilations display the same condescending tone. The first emphasizes how “within and without the empire united under our dynasty, the barbarian tribes have submitted their allegiance and turned toward [Chinese] civilization [*xianghua*].” The second, by the great Qing geographer, Li Zhaolu, refers to the way the emperor “nourishes [his

dependencies] like their father and their mother,” and “illuminates them like the sun and the moon.” And the third, using much the same language as the first, describes the historic process by which foreigners gravitate to China, become “cultivated” and learn “elegance and etiquette.”

The ten volumes of the *Huang Qing zhigong tu* provide a detailed picture of the Qing tributary system in its heyday. Most of these volumes deal with the peoples of Inner Asia and the ethnic minorities of Southwest China. The first, however, focuses on China’s overseas tributaries, listed in the standard order: Korea, the Liuqiu Islands, Annam, Siam, Sulu, Laos, Burma, and the Great Western Ocean [*Da Xiyang*]. These discussions are followed by sections on the Small Western Ocean [*Xiao Xiyang*], England, France, Sweden, Holland, Russia, and the Philippines.

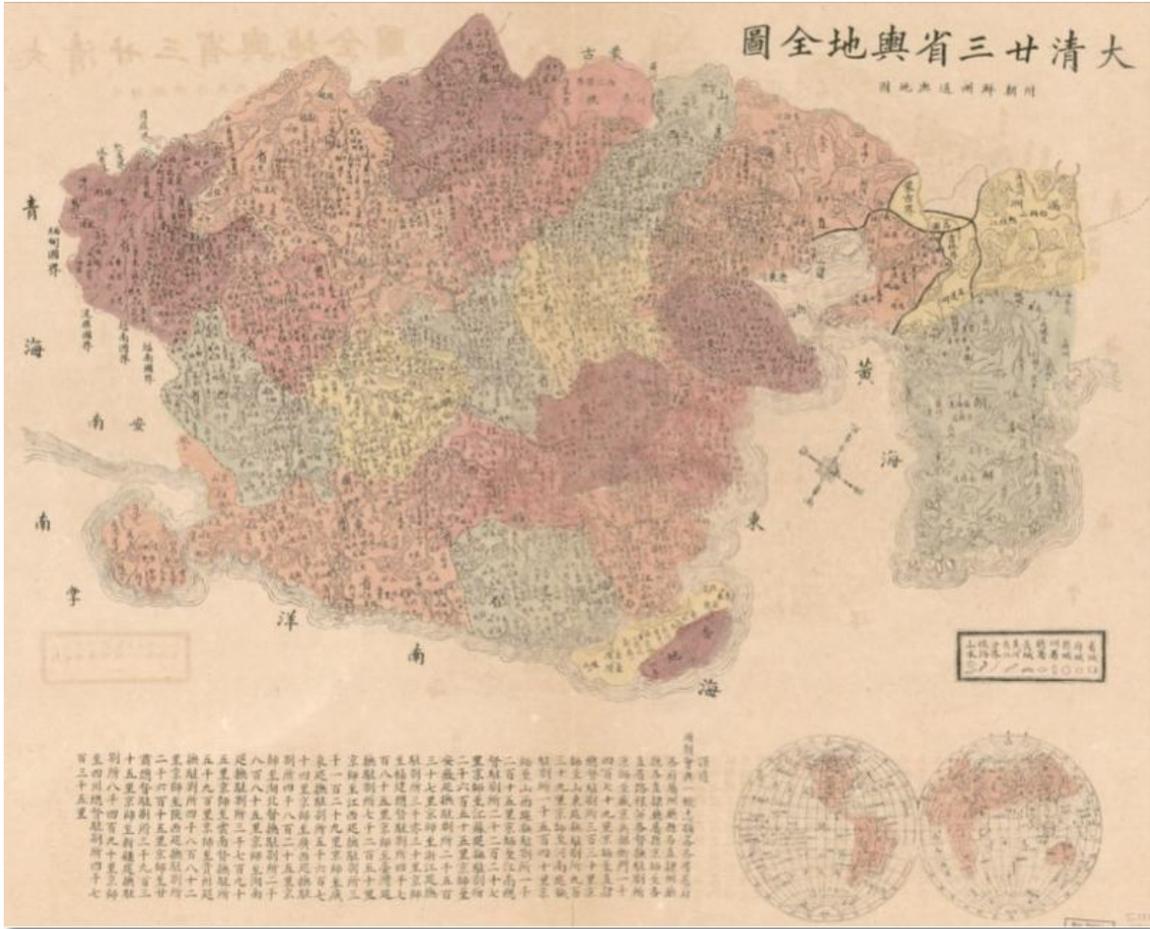
Here, without benefit of cartographic representation, the so-called *Great Western Ocean Country* is located vaguely in the Atlantic region and identified both with Italy and Portugal. Other Western nations, including England, France, Sweden, Holland, and Russia are lumped together indiscriminately with Asian countries such as Japan, Borneo, Cambodia, Java, and Sumatra. Modern France is confused with Ming Dynasty Portugal; and England and Sweden are recorded as countries dependent on Holland. According to the *Huang Qing zhigong tu*, Italy presented tribute in 1667 (it was actually Holland that did so) and the Pope himself is reported to have once brought tribute to China. In religious matters the *Huang Qing zhigong tu* informs us that the Portuguese/French were Buddhist countries before they accepted Catholicism.

The same kind of misinformation can be found in the section on “tributary states” in various editions of the *Da Qing huidian* [Collected Statutes of the Great Qing Dynasty]. Thus we read in the *Collected Statutes* of the Jiaqing reign (1796-1820) that “Portugal [*Gansila*] is in the northwestern sea near England,” and that “France [*Falanxi*], also called *Fulangxi*, is the same as Portugal [here, *Folangji*].” After absorbing the Philippines [*Lusong*], this account goes on to say, “they [the French/Portuguese] divided their people and lived there, still governing it at a distance. . . . The sea route from this country to China is more than 50,000 *li* [c. 17,000 miles].” Sweden [*Ruikuo*], we are told, is in the northwestern sea; the distance by sea is calculated to be over 60,000 *li* [c. 20,000 miles]. Denmark [*Lianguo*] is [also] in the northwestern sea, and its route to Guangdong province is the same as that for Sweden. Small wonder, then, that Chinese mapmakers found it difficult to acquire accurate data on foreigners. In fact, some of the same misinformation cited above is repeated in maps of the *Tianxia quantu* variety - for example, that the Portuguese [*Gansila*] “absorbed” the Philippines.

More reliable information was, however, available, as we can see from a large, hand-colored cartographic scroll produced by a scholar named Zhuang Tingfu in 1794. The title of Zhuang’s production is *Da Qing tongshu zhigong wanguo jingwei diqiu shi* [Model of the Myriad Tributary States of the Great Qing Dynasty from around the globe]. Although this work borrows certain cartographic elements from Ma Junliang’s *Jingban tianwen quantu* - specifically, the *Sancai tuihui* version of Ricci’s map and Chen Lunjiong’s depiction of the eastern hemisphere - it pointedly ignores the lower part of Ma’s map. Instead, it provides two extremely modern-looking renderings of the Eastern and Western hemispheres, both produced by Zhuang himself. These latter two maps were reprinted by Western-oriented Korean exponents of “practical learning” during the 1830’s.

A pair of long written inscriptions, totaling about five thousand characters, illustrate Zhuang's two major themes: one, the transmission to China of new Western scientific knowledge by the Jesuits; the other, the historic process by which foreigners came to be ruled [*laiwang*] as vassals; that is, they "knocked on [China's] gates," "sincerely offered tribute," and asked to become "attached" [*shu*] to the Central Kingdom. The interesting feature of Zhuang's document is the way it accommodates simultaneously the idea of embracing new knowledge from the West and the notion of enrolling Westerners as traditional-style tributaries.

From a scientific standpoint, Zhuang seeks to show that he has learned a great deal from the Jesuits about geography, cartography and astronomy, which, indeed, he did. He waxes at length about latitude and longitude, time and seasonal change, the circumference of the earth (90,000 *li*, ~29,700 *miles*), the north and south poles, and so forth. He also writes knowledgeably about how different cartographic projections yield different pictures of the world. According to Zhuang, previous maps, including those offered by the Jesuit fathers, Matteo Ricci and Ferdinand Verbiest, distorted China's size by placing it too far north, thus compressing it (making China appear too small and the foreign countries, too big). His map, drawing upon the work of the famous Qing scientist Mei Wending, provides, he says, a more accurate picture. Significantly, Zhuang cannot resist remarking on how, cosmologically speaking, the Chinese are fortunate to have been born in the Central Land [*Zhongtu*], where the radiance of the sun nourishes them like a sovereign or a father - unlike those people whose misfortune it is to be in far northern or southern regions, where beneficial *qi* is less direct and therefore not very helpful.



The Da Qing sanshi sheng yudi quanshu [Complete map of the twenty-three provinces of the Great Qing [dynasty] 1885-1894. A particularly striking feature of this map - in addition to the two hemispheres drawn to scale on the bottom right - is the strategic emphasis on the trouble-spot of Korea, looming disproportionately large to the east of China proper as an "appendix." The Sino-Japanese War of 1894-95 began over competing claims of suzerainty over Korea, The Library of Congress Map Room



This rare Chinese map of the world is an important example of Chinese cartography from 1818. The map is a hand-colored wood-block print, first published in Beijing by Zhu Xiling. China is at the center of the map, which shows the Great Wall, Lop Nur Desert, provincial divisions, provincial and regional capitals, military outposts, local settlements, and the main waterways and rivers. Hainan, Taiwan, Java Island, Brunei, Johore, Vietnam, and Cambodia are delineated.

America and other Western countries are represented as an array of amorphous and inconsequential islands bordering the main landmass. The map also shows "Eluosi guo," [Russia Country]; "Yingjili guo jie," [England Border]; and "Helan guo," [Holland Country]. The Indian Ocean is described as the "Small Western Ocean."

The Tributary System. Although Zhuang devotes a great deal of attention to science, his primary concern is a cultural one: the Chinese tributary system. The *Da Qing tongshu zhigong wanguo jingwei diqiu shi* commemorates the well-known Macartney embassy of 1793, which, in turn, marked what Zhuang considers to be the high-water mark in the development of China's age-old system of hierarchical foreign relations. This system, he notes, expanded significantly during the Kangxi and Qianlong reigns to include many new parts of the "Western Regions." The peoples of these areas, Zhuang goes on to say, have been registered as part of the Chinese empire [*ru banji*], and have offered tribute to the Qing Dynasty along with the British, who had engaged in no official communication with China prior to 1793.

Earlier maps, Zhuang tells us, did not include all of China's tributaries; but the Macartney mission, together with the "coming to court" of other tributaries, and the "return" [*laigui*] of various tributary peoples from the "Western regions" during the 18th century, offers a fitting moment to celebrate the transformative effect of the throne's glory [*shenghua*] with a set of maps. His renderings, then, are respectfully offered on this magnificent occasion. Significantly, but not at all surprisingly, Zhuang's remarks about the civilizing role of the Chinese emperor [*shengjiao*] correspond closely to those provided in the major cartouche of Ma Junliang's *Jingban tianwen quantu*.

The late 18th century maps by Ma, Zhuang, and others bring into sharp focus the issue of how best to characterize the Qing tributary system. James Hevia's stimulating book, *Cherishing Men from Afar* (1995), which deals with the Macartney embassy, emphasizes the flexibility of the Chinese system, and argues that Qing guest ritual "does not appear to deal in crude distinctions between civilization and barbarism."

Richard J. Smith's research on China's foreign relations, including recent work on maps and other forms of visual representation, suggests that in late imperial times there was something that could indeed be called a Chinese tributary "system" in Qing times, universally recognized by all Han people, marked by the generic term *zhigong* (signifying the offering of "regular tribute"), and expressed in a wide range of elite as well as popular writings and illustrations. This system, although by no means the only mechanism for the conduct of Sino-foreign relations, was highly sophisticated, remarkably flexible, and perfectly "rational" - particularly in the light of Chinese cultural assumptions about imperial overlordship, the transformative effect and power of ritual, and the "nature" of both foreigners and Chinese.

Pictorial maps relying on text, not scale, to communicate distances constitute the overwhelming majority of Qing maps. Nonetheless, similar trends can be identified on certain types of maps. The *Huangyu quanlan tu* [Map of a Complete View of Imperial Territory, a.k.a. the *Kangxi Atlas*] commissioned under the Kangxi emperor and later revisions commissioned under the Qianlong emperor share qualities consistent with 18th century European maps. Like their European counterparts they are devoid of pictorial elements. The maps are based on astronomical points used to calculate latitude and longitude, and accordingly are drawn to a precise scale. Furthermore, unlike the majority of earlier Chinese maps, there is no accompanying text beyond the labeling of place names. With to-scale cartography based on astronomical surveys, texts detailing the exact distance between various points became, like pictorial illustrations, superfluous.

On the eve of the first Anglo-Chinese War of 1839-42, world maps of the sort produced by individuals such as Cao Junyi and Zhuang Tingfu were at best a dim memory for most Chinese scholars. From the late 17th century into the 19th, the vast

majority of Chinese mapmakers ignored Jesuit constructions of the world almost entirely. Most did not even choose to pattern their cartographic productions after Luo Guangxian's grid-oriented *Guang Yutu*. Far more popular were maps of the *Tianxia quantu* variety, or those based on the rhythmic and colorful cartography of Yu Shi. A striking example of the latter type is an untitled and anonymous world map of 1743 that is now housed in the Oriental Manuscripts Division of the British Library.

Summary

According to Xi Huidong, the establishment of the Mongolian empire in the 13th century and the feat of Zheng He's seven voyages in the 15th century promoted Sino-Islamic cartographic exchange from the 14th to the 16th century. The great European geographical discoveries and the Reformation of the 15th and 16th centuries promoted direct Sino-European cartographic exchange from the 16th to the 18th century. The Mongol Yuan empire (1279-1368) established a Trans-Eurasian empire with unimpeded passage along the overland Silk Road, and created excellent conditions for exchanges in science, technology, and culture between East and West. With the opening of East-West transport routes, many Islamic scholars born in Central Asia and West Asia began arriving in China, and they brought Islamic maps and the geographical knowledge and world concepts of the Arabs and Europeans to China. For example, the Persian Zhamaluding responded to being summoned to the Yuan court and there presided over the compilation of *Da Yuan Yitong Zhi*, the production of armillary spheres (globes) and the drafting of the color map titled *Tianxia Dili Zongtu*, substantially broadening the geographical horizons of the Chinese. Thereafter, maps of the lands beyond the Central Plains, including Central Asia, West Asia, Europe, and Africa, began to appear. Moreover, because the Mongols stressed the unity of the world, the distinction between Chinese and foreigners was diluted and the concept of an amalgamated or integrated world map (*hunyi tu*) replaced the Tang and Song notion of a map of Chinese and barbarians (*hua yi tu*), so that people of the Yuan came to know of the world map as a cartographic category.

The Early Ming empire (1370's) inherited the geographic knowledge and cartographic heritage of the Yuan period, with a geographic vision based on the whole of Eurasia and Africa. In the Hongwu reign the Ming dynasty, on the basis of the Yuan comprehensive or amalgamated maps (*hunyi tu*), oversaw the drafting of *Da Ming Hunyi Tu* encompassing all of the Old World (Asia, Africa and Europe). In 1402 the Korean Yi dynasty scholar Kwon Kun drafted *Hunyi Jiangli Lidai Guodu Zhi Tu* (#236), which was based on the Late Yuan Chinese map of Li Zemin titled *Shengjiao Guang Bei Zhi* and the Late Yuan Tiantai monk Qingrui's *Hunyi Jiangli Tu*, as well as combining Korean and Japanese cartographic drafting. This generated many copies reflecting the view of the world and geographic knowledge in East Asian Chinese cultural circles in the 14th and 15th centuries and East Asia and Islamic cartographic exchanges.

The era from the 15th to the 17th centuries is renowned in world history as the age of great ocean voyages and geographical discoveries. The Arab Empire which had controlled East-West trade routes and the Indian Ocean sea routes from the 7th to the 13th century was in decline. In the early part of the 15th century, to proclaim its state power the Ming dynasty sent Zheng He on "seven voyages" to the Western Seas, before the era when the Europeans opened the world to the age of sail, and he absorbed the knowledge of Arab nautical charts and created Zheng He's *Hanghai Tu* that constitutes a brilliant chapter in the history of Chinese navigation and Sino-Islamic cartographic

exchange.

In the Late Ming period, European Jesuits came to China via the maritime Silk Road, bringing modern European astronomy and geography with them as part of their missionary work, gradually winning the trust of Chinese bureaucrats, scholars and the Emperor. The Italian Jesuit scholar Matteo Ricci (#441) during the Wanli years (1572-1620) prepared a Chinese language map of the world with two hemispheres and with China at the center of the world titled *Kunyu Wanguo Quantu*, and the Italian Jesuit scholar Giulio Aleni used this as the basis for his *Wanguo Quantu*, while the Spanish Jesuit scholar Diego de Pantoja translated many Western maps of the world into Chinese, so that geographic knowledge of, for example, “the spherical earth”, climate zones, the four oceans and the New World of the Americas, as well as methods of field measurement and projection mapping were introduced to China, where they had an impact on Chinese scholars.

At the same time in China, the Italian Jesuit Martino Martini, on the basis of *Guang Yu Tu*, drafted his geographical atlas of China, *Novus Atlas Sinensis* in Latin, which transformed European views of Chinese geography and promoted European understanding of China’s geography and the style of geographic maps. From the 16th century on, European maps of China moved from crude approximation to accuracy and from vagueness to specificity, and this evolution from spatiotemporal displacement to synchronicity reflected the deepening of Sino-European cartographic interchange.



Martino Martini, *Theatrum Orbis Terrarum, Sive Novus Atlas, Pars Sexta* ([Amsterdam], [1655])

It was mostly with Martino Martini's maps that the term *Sifan* started to circulate in Europe. His Atlas starts by mentioning the many names for China at the time, like *Serica*, *Sinam*, *Chinam*, *Tartari Catayum*, and *Mangin* (*Mangin* refers to *Manzi* in Chinese) – the latter coming from the language of the “barbarians” (Marco Polo's *Mangi* uses the Latin transcription of the Chinese term, *manzi*, referring to southern China – usually translated into English as “Southern barbarians”). *Cathay* is the name given to China by Turks, Moors, and Saracens travelling in embassies through Lahore and Kashmir, Martini explains. *Tibet* and *Sifan* seem to be represented in Martini's maps somewhat unclearly. In the map *Imperii Sinarum. Nova Descriptio*, Tibet is contained within the larger kingdom of *Sifan* – *De Regno Sifan* – on the western borders of China, which in turn comprises three kingdoms: Tibet, Kiang, and U-Tsang – *Usucang Regnum*. There are brief references to its ethnicity, geography, and religion. However, in the map of Sichuan province, Tibet is represented on the left with the legend “*Sifan Regnum sive Tibet*” – the kingdom of *Sifan* or *Tibet*, as equivalent terms. Another of his maps, of the Shensi province, shows the *Sifan Regni* on the left with “*the Kingdoms of Geo and Cangingu, which M. Paulo Veneto – Marco Polo – calls those of Preste Ioan – Prester John*”.

East-West exchanges also promoted the compilation of maps of the Silk Road, such as *Xiyu Tudi Renwu Tu* that depicted the overland Silk Road between Istanbul and Jiayuguan in the 16th century, Zheng He's *Hanghai Tu* that illustrated the feat of Zheng He's voyages to the Western Seas and the ocean routes between Ming China, the Pacific and Indian Oceans, and the Mediterranean in the 15th century, and *Da Ming Jiangli Fenye Dong Xi Yang Tu* that reflected Asian sea lanes in the 17th century, all becoming media and witnesses of the interchange between Eastern and Western civilization. In these four centuries, the East Asian Confucian, Islamic and Christian cultural spheres effected cartographic exchanges via the overland and maritime Silk Roads, promoting the dissemination and exchange of geographical knowledge of Eurasia and the New World, and accelerating the process of world modernization and integration.

Concluding Remarks

It should be noted that indigenous maps are almost entirely autochthonal in their outlook and composition. The system of meaning they encode and in which they speak would not necessarily be interpretable by persons outside of the language and cultural community. They might be based on either a cosmological or a more practical geographical basis, but recognition and use would be limited to the society by which they were created. Viewing matters from one angle, we might say that Chinese cartography in late imperial times (1644-1911) impeded a more “realistic” understanding of foreign lands and peoples. Certainly it both expressed and reinforced a tributary-based perspective on Sino-foreign relations - one that probably over-estimated the submissiveness and dependency of foreigners/non-Chinese. Moreover, the emphasis in so many Chinese “world maps” on the great military conquests and unprecedented territorial expansion of the Qing Dynasty may well have contributed to an exaggerated sense of self-confidence on the eve of the Western intrusion.

The overwhelming majority of Chinese *mappaemundi* - including works produced after the Jesuit interlude - depicted “the world” as if the foreigners inhabiting it existed precariously on the fringes of the Chinese empire. Whole continents appeared either as tiny offshore islands or as inconsequential appendages to China's landmass - terrestrial afterthoughts, so to speak. It is not at all clear, however, that a more realistic depiction of

foreign lands would have produced a greater sense of military threat. Indeed, some scholars argued that Jesuit-style maps were designed quite deliberately to mislead the Chinese into thinking that the aggressive, avaricious people from “the Great Western Ocean” were farther away than they actually were.

Moreover, we should remember that “barbarians” were not always marginalized in Chinese world maps - even those with certain traditional features. Scholars such as Cao Junyi, Yan Yong, Chen Lunjong, Ma Junliang, and Zhuang Tingfu, for example, made concerted and largely successful efforts to depict foreign territories accurately; and the Manchus, for their own political reasons, produced excellent maps of the Qing Empire with Jesuit assistance. In fact, it seems clear that reliable cartographic information existed for those scholars who wanted it, despite Manchu efforts to keep certain types of knowledge to themselves, and notwithstanding the understandable confusion produced by so many different renderings of the “barbarian space”. But the incentive to seek this knowledge out, like the incentive to disseminate it widely, does not seem to have been particularly powerful - at least not until the rise of Western imperialism in the mid-19th century. Quite the contrary, there were political incentives to support the status quo.

This line of analysis assumes a certain pragmatic approach to cartography that obscures other ways of thinking about maps. For many Chinese scholars, maps - world maps in particular - were designed to be appreciated, not simply employed. Although such works had a certain (limited) practical value, they had a much greater emotional appeal. As Liang Zhou put the matter in the introductory remarks to his highly influential map of 1593: “[This work] deals with the grandeur of China’s mountains and rivers as well as the excellence of its people, past and present.” Emperors and officials may have required certain kinds of finely wrought maps for specific military and administrative purposes, but they also needed large-scale maps as a means taking “spiritual journeys [*shenyou*] across vast space,” in the poetic words of Zhuang Tingfu. Indeed, we know that certain *mappaemundi*, such as the *Liangyi xuanlan* [Map for the Profound Observation of Heaven and Earth; 1603] were designed and used expressly for such purposes.

By combining aesthetics, cosmology, history and culture in particularly creative and compelling ways, the makers of Chinese world maps often sought to blur the conventional distinction between actual, lived space and imaginary, idealized space. To put the matter a bit differently, the works they produced played something akin to the role that Geertz ascribes to ritual, linking “the world as lived with the world as imagined.”

It is sometimes said that traditional Chinese landscape paintings are not so much depictions of nature as they are statements about the “nature of nature.” Similarly, many traditional Chinese *mappaemundi* are not so much “renderings of the world” as they are cultural statements about the “nature of the world.” Their purpose, at least in part, was to reinforce certain abiding cultural myths which, in turn, sustained China’s self-image - stories about the Central Kingdom’s advantageous geographical and cosmological location, its glorious conquests; its impressive explorations; its heroes, its, famous landmarks, and its powerful influence on other lands and peoples. Many of the places depicted or referred to in Chinese maps of the world provoked powerful reactions - regardless of whether they were actual locations or purely mythological sites.

In short, Chinese world maps particularly in late imperial times had several purposes - not all of them either pragmatic or scientific. Unlike works in the *Huangyu*

quanlan tu tradition, specific claims of territorial jurisdiction in Chinese *mappaemundi* took a back seat to more general claims of feudal overlordship. And until the 20th century, mathematical precision was never considered a cartographic end in itself. To be sure, Chinese mapmakers understood the utility and appeal of accurate measurement, and their colleagues in astronomy developed sophisticated instruments that made possible the projections and coordinate systems that Westerners associate with Ptolemaic cartography. But throughout most of the imperial era, they found no compelling reason to conceive of the world as spherical, nor did they see any special merit in drawing all maps to scale. After all, in the early 15th century the eunuch-admiral Zheng He made his way to the coast of Africa without much difficulty. Besides, cartographers knew that textual commentaries could always provide precise geographic details, if they should prove necessary.

Despite a long tradition of sophisticated geographical and cartographic scholarship, an equally long history of foreign exploration (and conquest), and the systematic acquisition of information on “barbarians” of various kinds, the “outer” world as a whole remained relatively unimportant to the vast majority of Chinese - elites and commoners alike.

Also, historians such as Smith, Yee and Hostetler acknowledge that during the mid-Qing period a number of kinds of mapping practices, reflecting various epistemologies, coexisted, and that distinct technologies and map styles were suited to different audiences and purposes in China. Hostetler also states that pictorial maps, relying on text, not scale, to communicate distances, constituted the overwhelming majority of Qing dynasty maps.

More than eighty years before Columbus’ voyages, the Chinese admiral Zheng He began leading expeditions of ships from China through the Indian Ocean to as far as the eastern coast of Africa - this at a time when European ships had yet to round the southern tip of that continent. The longest of Zheng’s voyages spanned more than 6,000 miles each way, about one and one-half times the length of Columbus’ trips across the Atlantic. Such long-distance journeys were not unusual in Chinese history. In the second century B.C., the general Zhang Qian was dispatched on a diplomatic mission westward to the Yuezhi people and reached as far as Afghanistan. In succeeding centuries, Chinese writers produced a vast corpus of geographic literature, from accounts of foreign lands to descriptions of the entire empire to gazetteers devoted to particular localities. As Joseph Needham pointed out more than thirty years ago, the geographic records in the dynastic histories and Chinese geographic literature would not have been possible without “the accumulated observations of countless travelers and explorers.”

According to Cordell Yee much of the literature on Chinese geography since Needham began his seminal work on the history of Chinese science has tried to make it resemble that of the West. This is perhaps nowhere so true as for the subject of Chinese mapmaking. It can be and has been written that Chinese cartography was a science that strove for mathematical accuracy. Insofar as it was a mathematical science, it was eventually surpassed by that of the West, but not until the 15th century or so. Until that time, the quantitative tradition is said to have been stronger in China.¹

If this view of Chinese cartography is accepted, then it is possible to speak of “universal” history. In this view, the history of science, as exemplified by the history of cartography, is really one story. Under the view that science is objective knowledge, Yee contends that the history of cartography is part of the story of the human desire for knowledge. It is the story of increasing technical competence in the production of map

images, competence measured by freedom from verifiable error and resulting from a wish to improve understanding of the world. On the other hand, if science is the product of ideology and political and economic interests, the history of cartography is the story of how maps were instrumental in the spread and exercise of political and economic power. Maps are primarily instruments of exploitation. Yee states that what spurs the development of improvements in cartography is not the desire for knowledge for its own sake but the increased political and economic advantages such improvements can bring. There is evidence for both these views from European and Chinese history, and between them there are, of course, any number of intermediate positions.

If the history of cartography and its adjunct fields is one story, whether scientific or economic or a combination of the two, then those who study the history of Chinese cartography may be justified in asking whether the attention lavished on European cartography is warranted. There is no denying the meticulousness with which imperial China gathered geographic information about its own territories and contiguous areas. There is also no denying that the Chinese had by at least the 12th century laid the foundations for a mathematical cartography - one predicated on the belief that geographic knowledge depended on the ability to measure the earth. From the universalist perspective, what kept traditional Chinese cartography from advancing as far as European cartography was a conception of the earth as essentially flat. A coordinate system similar to latitude and longitude thus could not develop, nor could techniques of projection for the transference of points on a spherical surface to a plane surface.

In the West, the great voyages of discovery from the late 15th century onward ignited interest in "capturing the world as a single ordered image." But Zheng He's earlier - and in some ways much more impressive - sea voyages had no such effect in China; in fact, they were a source of embarrassment. And whereas the possession and display of a world map or globe from the Renaissance onward in Europe signified that the owner was "a knowledgeable and world-wise citizen," it meant no such thing in imperial China. Thus, until forced to reconsider their craft by new political and cultural priorities, Chinese mapmakers generally made the choice to depict the world not so much in terms of how it actually was, but rather in terms of how they wanted it to be.

Below are salient observations on Chinese cartography by Massimo Rossi that capture significant differences between Chinese and European cartographic evolutionary development.

We must begin by integrating the western periodization that divides time from the Christian era onwards and by discarding the conventional western art-historical categories (Antiquity, Middle Ages, Renaissance, Modern Age and so on) because they have no equivalent in Chinese history where thousands of years are organized by dynasty.

Although there are some analogies with the West, Chinese 'cartographic materials', in both manuscript and printed form, tend to use different media - stone, bone, metal, wood, silk, paper and others - requiring us to broaden the concept of 'geographical map' to meet the ambiguity of the sinograph *tu*, which may refer without distinction to pictures, drawings, charts, or paintings.

Recent archaeological finds (1986) dating from the 3rd century BC (Qin dynasty) include a series of maps on boards depicting mountains, rivers, roads, passes, various kinds of trees, place names, and annotations giving distances in present-day Gansu province (see monograph #111.1). In 1973, three silk maps were found in a tomb at Mawangdui, Hunan province. These maps, dating from the mid-2nd century BC (Han dynasty), probably have military applications and show features in the surrounding territory using different scales within the same image, revealing the absence of the concept of scale in this period (see monograph #112.1).

According to a Chinese historian, the grave goods found in the Qin Shihuang mausoleum, in Lintong district, Xian (Shaanxi province), a vast necropolis containing the partially excavated tomb of the First Qin Emperor and his celebrated terracotta army, not only include a reproduction of the night sky but a model of the earth with mercury rivers that were made to flow by a mechanical system.

Between the end of the Han dynasty (AD 220) and the 9th century, there were no major discoveries of cartographic materials compared to the high levels of production in the Ming and Qing periods (1644-1911).

During the Song period (12th century), cartographic representation acquired a monumental, celebratory, didactic significance, becoming a shared value to be transmitted to posterity: this material includes large-scale maps carved on stone stelae like the *Jiu yu shouling tu* (Map of the prefectures and counties of the nine districts) dated 1121 (130 x 100 cm), which illustrates the territory of the empire and was located in the courtyard of the local prefectural school (in present-day Sichuan province); or the *Hua Yi tu* [Map of Chinese and foreign lands, #218], 79 x 79 cm), which was carved in 1136 but compiled between 1117 and 1125. Both stelae contain hundreds of place names, rivers, lakes, mountains and annotations.

Carved on the opposite side of the latter stele is the *Yuji tu* [Map of the tracks of Yu, #218.1], also dating from 1136 (80 x 79 cm). This last map stands out for the first appearance of a cartographic grid that contributes to the extraordinary accuracy of the geographic design and of the calculation of the distances between places; in fact, an inscription states that one square represents 100 *li* meaning that the entire grid, converted to the decimal metric system, has a scale of approximately 1:4.500.000. The name of this map refers to the mythical figure of the mythological hero Yu, also considered to be the first geographer, creator and reorganizer of the geographical space evoked, maybe nostalgically, by the Song dynasty by means of a map stele with an ideal depiction of a territory without boundaries.

The development of woodblock printing during the 8th century contributed to the diffusion of maps in the local gazetteers although they were usually more generic and less detailed in their representation of the territory. Examples of woodblock maps were the *Lidai dili zhizhang tu* (Easy-to-use maps of geography through the dynasties, 1098-1100, supplemented 1162; see illustration herein on page 18), a series of maps published in the same period as the *Yuji tu*. Rich in annotations and less geographically realistic, the function of these woodblock maps was to accompany the texts that were the true object of these publications.

These initial reflections suggest that we should avoid applying European concepts to Chinese cartographic concepts or classifying them through a constant positivist comparison with similar historical periods in the West. Cartographic documents must be considered with regard to their contexts and functions, bearing in mind their differing purposes – military, religious, administrative, fiscal, devotional, political, artistic, either singly or combined. This approach is also useful for the comprehension of the temporal co-existence of cartographic depictions that are qualitatively very different in terms of values and cultures. Most importantly, we must remember to always consider maps as the social product of a community in a given historic period.

The 1903 work by Edouard Chavannes as well as inologist Joseph Needham's paradigmatic publication of the 1950s both played an important role in guiding the interpretation of these artifacts towards a positive comparison between western and Chinese scientific and cultural products, with a particular emphasis on the pioneering Chinese discoveries that, according to their interpretation, would serve as drivers for Western culture.

The innovative study published by Cordell Yee in 1994 makes an important contribution to our reflections on the cultural paradigm shift with regard to Chinese mapping practices. Yee believes that the presence of a grid in Chinese maps is not based on a system of calculation of geographic coordinates but is intended to assist the user in estimating distances between different places and does not therefore support the assertion of Chinese primacy in the scientific-mathematical use of a cartographic grids.

The American historian suggests that we also consider Chinese maps as artistic or pictorial artifacts, emphasizing their *otherness* with respect to Western criteria. In the West, mathematization of cartography first began with the Humanists' rediscovery of the 2nd century *Geography* of Ptolemy, which regarded places as homogeneous geographical objects with equal geometric significance that could be expressed by numbers, coordinates of latitude and longitude, unlike the Chinese conception of cartography, which gave little importance to homogenization of space while tending to consider the human presence as a vital element in maps.

Until at least the first decades of the 20th century, Chinese cartography did not experience the same scientific advance and even the influence of the Jesuit scholars from the 16th century onwards would not lead to major changes. The pictorial style favors realism and is not concerned with map scale or abstract conventional symbols. In an article written in 1992, Yee documents the profound differences between a sampling of Chinese maps from the Qing dynasty (19th century) and the contemporary western products.

The Chinese maps use different symbols and do not adopt conventional standards. An example of this is their use of color: "the Yellow River is colored yellow [...] salt fields [...] are colored white to correspond to the color of salt, and on other maps

mountains appear as green, presumably to match the vegetation.”¹⁰ One persistent trait in Chinese mapmaking was the presence of numerous annotations and adjoining texts. In addition to their narrative function regarding places, such notes helped users to identify map functions and contained quantitative information on distances, heights, measurements, details that would normally be derived when maps were drawn to scale.

Another feature that persisted in Chinese cartography and that was, as mentioned, also present in Western maps in the Middle Ages and Renaissance, involved the use of variable scale, whereby objects were represented at different scales within the same image.

Roads, waterways, boats, towns or other objects were enhanced or distorted, and their size exaggerated in relation to their importance in the final context of the image. They were also shown from different perspectives, forcing the reader to adapt to continuous changes in orientation and causing the maps to resemble forms of poetic or artistic expression. “Maps contained both informational and emotive content,” in clear contrast with the western conception of maps, which adopted a univocal point of view and used symbols to represent objects.

Unlike 18th-19th century mapmaking in the West, Chinese cartography maintained a sort of representative coherence, never breaking its deep ties to art, calligraphy, and painting until the eve of the 20th century, melding them into a single representation and placing aesthetic values above scientific values. The main focus of the western interpretation, in scientific terms, of Chinese cartography originates in the exegesis of the six principles of cartography developed by Pei Xiu, government official and Minister of Works in the Western Jin dynasty or “pere de la cartographie scientifique en Chine,” as he was defined by Chavannes. In his mid-3rd century work (now lost) called *Yu gong diyu tu* [Regional maps for the tribute of Yu] he developed a cartographic technique employing a square grid that was orientated so as to permit the measurement of distances between two points. In 1978, Chen Cheng-siang, a Chinese geographer from Hong Kong, would reiterate the western point of view of the history of Chinese cartography, agreeing with Chavannes and Needham with regard to China’s primacy and Pei Xiu’s role in founding scientific cartography in the 3rd century. Despite the spatial accuracy stated in the principles by the imperial official, Cordell Yee believes that these skills were never fully developed in China to obtain a system of cartographic projection with geographic coordinates similar to the one used in the West, because Chinese intellectuals conceived the world as having a flat surface meaning that a system for the calculation of distances sufficed for their needs. In fact, the celebrated *Yuji tu* cartographic stele is square and the conception of a square earth and round heaven dates to the Zhou period (5th century BC), establishing a paradigm that would resist for centuries, despite the coeval theory of the round earth referred to by the Jesuits Matteo Ricci (1552-1610) and Giulio Aleni (1582-1649) in their works.

Maps of the Chinese empire must be read hierarchically: from the center of power towards the periphery with diminishing sovereignty the further one moves from the capital, away from civilization towards the borders with its barbarian wilderness. In these maps the details become increasingly vague at the margins and textual annotations integrate the lack of geographic description.

The location of the *Other*, the diverse, on the edge of the known world – similarly to the monstrous beings depicted at the margins of the medieval European *mappaemundi* – is echoed by sinographs reflecting cultural prejudices towards the non-Han through the use of ‘pejorative signs’ including animals – jackals, dogs, reptiles, sheep – to identify

the populations at the confines of the Chinese world: “the border between humans and animals was blurred. ‘The Rong are birds and beasts.’ This was not simply a derogatory description: it was part of a worldview that integrated civilization with the notion of humanity, picturing the alien groups living outside the pale of Confucian society as distant savages hovering on the edge of bestiality.

The names of outgroups were written in characters with an animal radical, a habit that persisted until 1930s: the Di, a northern tribe, were thus assimilated with the dog, whereas the Man and the Min, people from the south, shared the attributes of reptiles. The Qiang had a sheep radical.”

Some maps reflected philosophical principles, similar to the geo-deterministic Ptolemaic tradition, codifying astrological and astronomic influences upon specific regions, populations, and single individuals.

Information about celestial phenomena, geographical facts related to villages, waterways, mountains, roads, military garrisons, postal stations, administrative news concerning provinces, prefectures, and counties, were all collected in the local gazetteers (*difang zhi*) that were already compiled prior to the Song dynasty (10th - 13th centuries).

These printed booklets often contained rough maps that were a necessary complement to the textual descriptions. It must be pointed out that this vehicle of information remained in use until the 19th century when Chinese geographical information became profoundly westernized.

The *Atlas Sinensis* of Martino Martini. The scientific contribution made by the Jesuit missionaries remained within the confines of the imperial elites and included the diametrically opposed endeavors of Matteo Ricci, Giulio Aleni and Martino Martini. While Ricci and Aleni exalted European scientific supremacy, using it, together with their geographical knowledge, as an instrument of persuasion, as a “weapon or conjuring trick to arouse wonder,” gliding over the religious wars and acting as if there were a unitary Europe governed by the *pax christiana*, Martini sought to discover more about Chinese knowledge, informing the European public about this alternative point of view to the western approach.

Matteo Ricci’s 1602 world map, *Kunyu Wanguo Quantu* [Map of the myriad countries of the world, see page 52 herein] is the outcome of a misunderstanding. Although his map initially followed the Eurocentric *Typus Orbis Terrarum* of the Flemish cartographer Abraham Ortelius (1527-1598) published in the 1570 *Theatrum Orbis Terrarum*, Ricci, who introduced the concept of projection in China, was later obliged to change the design, placing the ‘Middle Kingdom’ in the centre of the map; this sino-centric point of view clearly emerges in the celebrated Korean *Kangnido* map dated 1402 (#236), which situates Europe on the furthest edges of the known lands. Martino Martini (Trent, 1614-1661) embarked upon a very different type of endeavor. Using a variety of Chinese sources, he proposed to publish a Chinese atlas for the European public. The *Atlas Sinensis* was a milestone in the transmission to the West of the ancient culture of the great oriental empire. The ambitious scope of his project emerges in his search for a publisher who would guarantee the best possible diffusion of his work. Martini set off for Amsterdam to visit Joan Blaeu (1596-1673), a Protestant cartographer at the service of the East India Company who had established “the standard for printed European and therefore world cartography in the mid-17th century.”²¹ In 1665 the *Novus Atlas Sinensis* appeared as part of the *Atlas Maior* (volume 9) and of the *Atlas Novus* (volume 6), and for a century at least it played a vital role in the diffusion of knowledge about the East within European cartographic culture.

The design of the maps of the fifteen Chinese provinces is based on local bureaucratic sources and the accompanying texts describe the habits, customs, resources, and peculiar characteristics of the various provinces and their inhabitants.

The following comment by Martini throws light on the difficulties involved in drawing up cartographic documentation for all the cities:

“I will refer only to those [walled cities] of that quality in my Geography because the Chinese geographers do not specify open places in their maps and books and that is no surprise given their large number; we will only refer to the most important of them in the maps in our work because not even limiting them would all their names fit in and the lack of space does not permit a longer narration.”

Between the second half of the 19th century and early 20th century, Chinese cartographic representation underwent a process of westernization.

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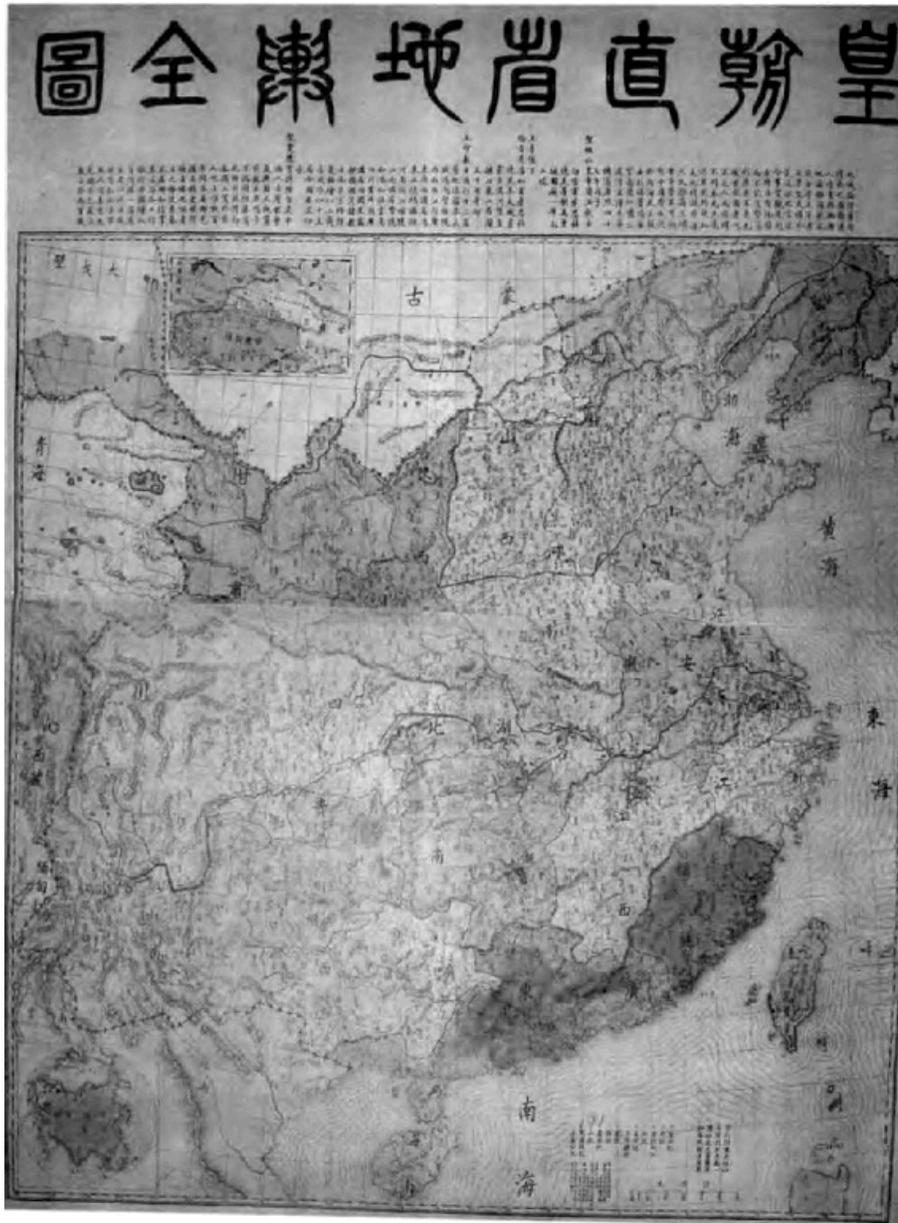
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- 218 *Hua I T'u*
- 218.1 *Yü Chi T'u*
- 220 *Ti Li chih T'u*
- 220.1 *Fu Yin's Yü Kung Shuo Tuan [Discussions and Conclusions Regarding the Tribute of Yü]*
- 220.2 *Ti Li T'u*
- 227 *Kuang Yü T'u [Guangbei tu] or The Mongol Atlas; Hsi-Pei Pi Ti-Li T'u [Map of the Contries of the Northwest]; The "Geographic Map of the Land of China to the East", from Zhipan's General Records of the Founders of Buddhism; Chu Ssu-Pen's The Countries in the Southwestern Sea*
- 231 *Ch'onhado [Map of the world beneath the heavens] (wheel maps)*
- 231.1 *Asian Religious Mappaemundi*
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- 441 *Father Matteo Ricci's Kunyu Wanguo Quantu, 1602*
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- 458 *Chinese Terrestrial Globe*
- 510 *Nansenbushu Bankoku Shoka No Zu [Outline Map of All Countries of the Universe]*



Kangxi huangyu quanlan tu [Map of a Complete View of Imperial Territory], the Atlas of the Empire of the Kangxi Era, 1721. Library of Congress (G7820.L8), see also British Library for Matteo Ripa's version of 1719 (location: Maps 37.e.28).

The accurate mapping and representation of the Qing empire's territories and borders in the *Kangxi huangyu quanlan tu* served the purpose to protect the state's interests against the threats that existed in its interior (Mongolia and Tibet) and its exterior (Russia and possibly beyond). The map combined newly gathered surveying data and existing information from the 32 provincial and regional maps that were collected by Jesuit Pierre Jartoux. Regis, Jartoux and Fridelli were sequentially responsible for sending the map to France and for disseminating the new geographical knowledge to Europe. The map was later (1735) reproduced by Duhalde in his *Description géographique, historique, chronologique, politique, et physique de l'empire de la Chine et de la Tartarie chinoise* which in

turn was (1738) translated into English under the title "A Description of the Empire of China and Chinese-Tartary, Together with the Kingdoms of Korea, and Tibet" by John Green.

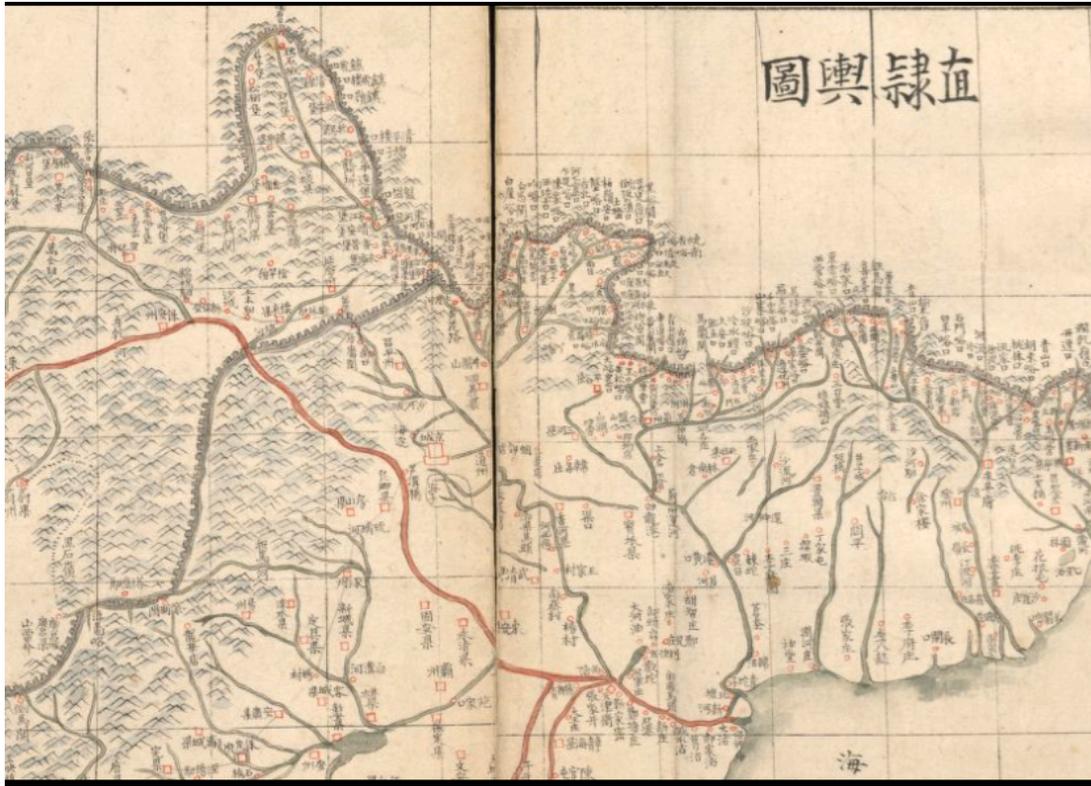


Chōi Ichiran [Map of China and Outlying Countries] by Seitaien, 1835, woodcut print, 65.5 x 58.5 cm

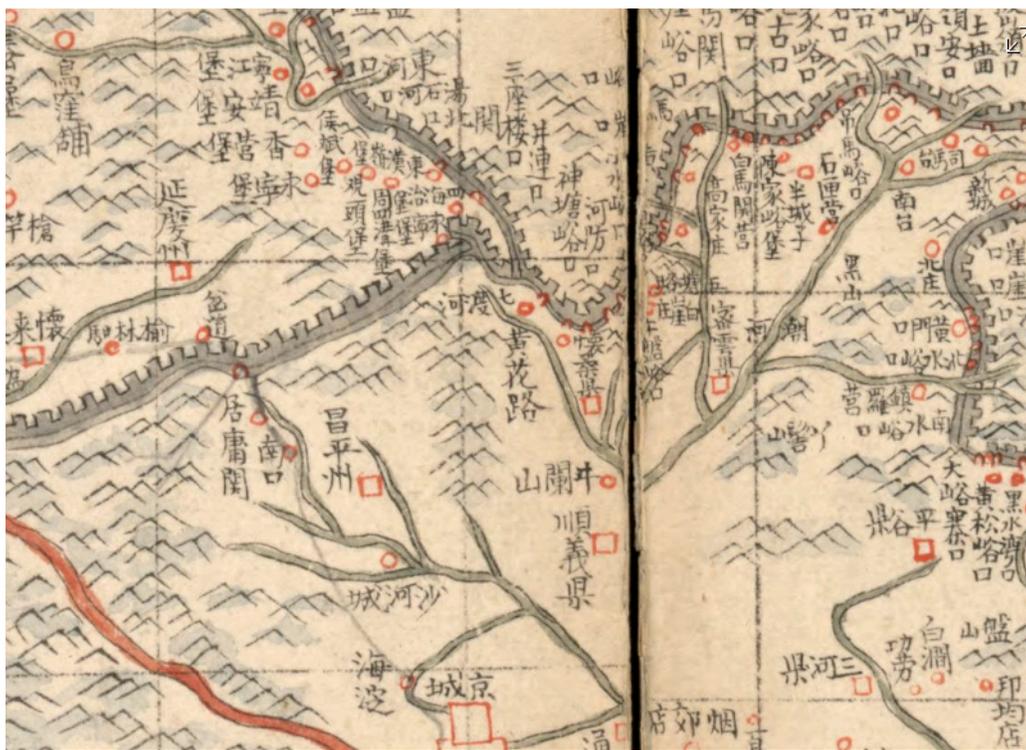


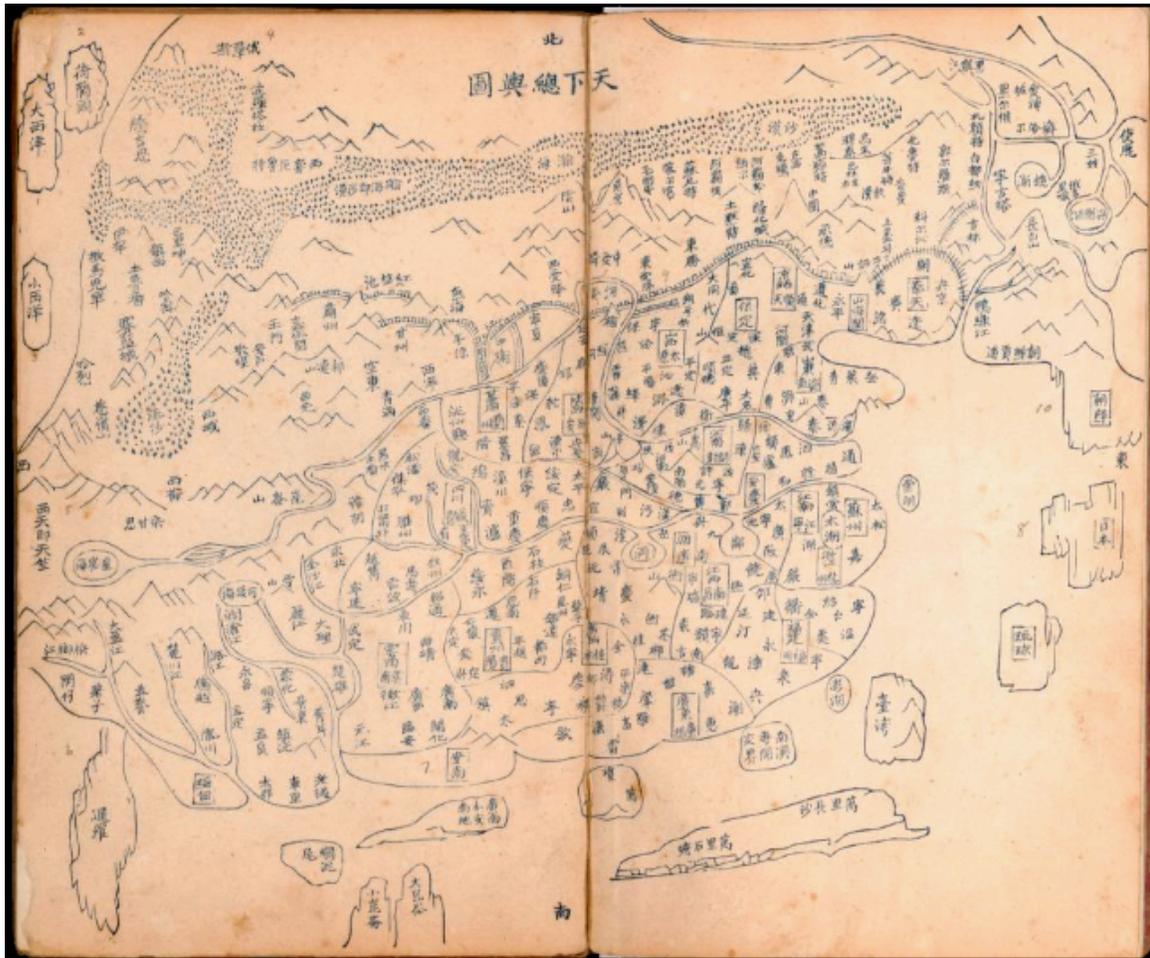
1719 map by Matteo Ripa

The original of this map was written in Chinese for interior places and in Manchu for exterior space. Matteo Ripa later annotated the map in Italian (see *BL Maps K.Top.116.15, 15a, 15b*). Ripa's map was similarly, to the one produced for the Kangxi emperor, drawn to a scale of 1:1,400,000. Matteo Ripa's 1719 spectacular map, based on the original *Huangyu quanlan tu*, was presented to King George I and its beautifully illustrated three rolls can now be found at the British Library (*Maps K.Top.116.15, 15a, 15b*).



Detail of the map for Zhidi yu tu from the 1722 Huang yu quan lan fen sheng tu [Kangxi provincial atlas of China] showing the Great Wall in the northeastern province





The Tian xia zong yu tu, a wood block print 1890 that illustrates the administrative system during the Jiaqing period (1801-1820) and covers the world, 17 provinces of Qing Dynasty, Xinjiang, and Mongolian tribes. Library of Congress G2306.F7 T43 1890

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