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.

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. The tendency, however, has been to focus on the best-known cartographers and scientists such as Matteo Ricci, Martino Martini and Ferdinand Verbiest, although in recent decades, the cartographical work of less notable Jesuit missionaries in the Far East has been revealed

Francesco Sambiasi was a man of many talents. He was a tactful diplomat and a learned scientist. His world map shows him to be a skilful adapter of earlier knowledge, which he passed on to future generations. The six known copies of his map are in two versions, printed from two sets of wood blocks (c. 1639). A text at the top of one version explains why the world must be seen as a sphere, which demonstrates how these maps were meant to convince the Chinese public of European scientific findings.

Ricci's third edition of his world map, the 1602 *Kunyu wanguo quantu* [Complete Map of all Nations on the Earth, *see* #*441*], became the main reference map for many later geographers and cartographers. It was also one of Sambiasi's main sources. Initially, Ricci's maps had little impact, and the spread of European geography in China owed more to later works that enjoyed a wider reception. Two such texts were Giulio Aleni's *Zhifang waiji* (1623) and Ferdinand Verbiest's *Kunyu tushuo* [Illustrated Discussion of the Geography of the Earth] Beijing 1674. Both continued to be used as sources for Chinese intellectuals, military men and diplomats who needed information about European countries.

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.

Francesco Sambiasi's world map (c.1639), Turin version. Printed from wood blocks on a single sheet of rice paper measuring approximately 113 x 59 cm.

Sambiasi's apostolic, scientific and diplomatic activities indicate how frequently he would have been in contact with scholars who shared his interest in geography, and how deeply he was involved in the Chinese high society. In his lifetime, he gained a reputation as an active missionary, an intelligent astronomer and a skilful diplomat. Subsequently, however, in the shadows of Matteo Ricci, of his fellow missionary Giulio Aleni, and of the later Ferdinand Verbiest (1623–1688), his activities have remained largely unknown. His world map is barely mentioned in the official biographies, possibly also as a consequence of the political troubles at the end of the Ming dynasty.

The fact remains, though, that he produced a world map that intelligently combined the data of his predecessors Ricci and Aleni and that helped to pave the way for Ferdinand Verbiest's cartographical activities.

Like his famous predecessor Matteo Ricci (1552–1610) and his fellow missionary Giulio Aleni (1582–1649), Sambiasi undertook to make a Chinese-language map of the world. Six copies of the map survive, three with an explanatory text. While the geographical works of Ricci and Aleni are widely known and studied, Sambiasi's world map has largely escaped the attention of researchers.

Like his famous predecessor Matteo Ricci (1552-1610 and his fellow missionary Giulio Aleni (1582-1649), Sambiasi undertook to make a Chinese-language map of the world. Six copies of the map survive, three with an explanatory text. It is cartographically similar to the Ricci map of 1602. One small difference in the text on the heavens, however, is of interest for our present research. It shows that Sambiasi must have known the 1603 version of Ricci's map, for he used the comment on the heavens in his own world map.

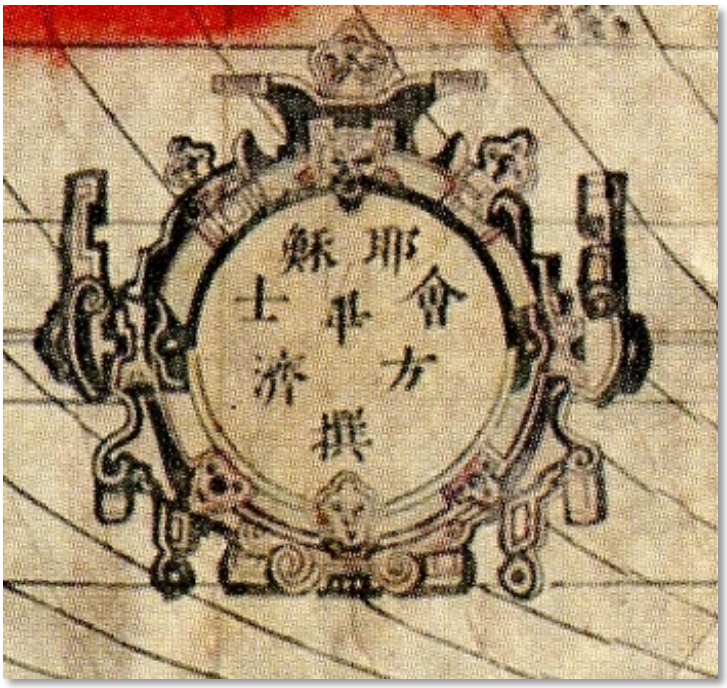
Sambiasi added descriptions of the oceans, islands and their shores, as well as the products of each country. Along with the text, he included a small world map, a map for each continent and two polar projections. Aleni's *Zhifang waiji* was widely available. According to Goodrich and Fang, Sambiasi probably compiled it while he was in Nanjing, that is, sometime after 1631. Since Sambiasi presented a world map to emperor Chongzhen in 1639, it may be surmised that his map was made (or finished) in 1639. In the absence of archival references, however, we cannot be certain.

Although the Turin version may be generally more correct than the Ghent version in respect of its toponyms, the same cannot be said for the mathematical errors. These are found on both versions of the map. One error concerns the information on the length of daylight given within the double half-circle that frames the map on its western and eastern sides.

All six examples of the Sambiasi map have been printed from woodblocks on single sheets of rice paper. The map has an oval projection, with lines indicating parallels and meridians. The equator and the Tropics of Cancer and Capricorn are marked. As on Matteo Ricci's map, the prime meridian runs through Ferro in the Canary Islands, but the central vertical meridian is at 170 degrees east of Ferro, which places Europe and Africa in the west, Asia in the centre and the Americas in the east. At the north pole are four large islands and several small ones. Other islands are dispersed about the seas, in which there are also two ships and various marine animals. New Guinea is shown in the southern hemisphere. Legends and toponyms, the latter mostly identifying regions and countries, are written in Chinese.

Across the full width of the Ghent map, at the top and written from right to left in Chinese with characters arranged in columns, a lengthy text explains why the world has to be seen as a sphere. This highly artistic panel is missing from the Turin map. The oval shape of the map is enclosed on its eastern and western sides by a double border within which is recorded, in Chinese characters, the length of day and night (outer border) at different latitudes (inner border). Prominent in the corners between the map and the rectangular frame are four circles containing astronomical diagrams. In the southwestern corner the solar and lunar eclipses are shown; in the northwestern corner, the movement of the heavens; in the northeastern corner, the concentric layers of the cosmos; and in the southeastern corner, the quarters of the moon. Two more two circles are placed on an extensive southern continent. These illustrate the sphericity of the

world and the relationship between the four elements (warm, cold, dry and humid). As shown below, to the left of the diagram of the elements is a decorated cartouche enclosing a number of Chinese characters and indicating the author of the map: *Yesu hui Bi Fangji shi zhuan* [compiled by Father Francesco Sambiasi of the Society of Jesus].



Locations:

In so far as we are aware, only six copies of Sambiasi's map survive. A detailed comparison of these maps has revealed that they fall into two groups. One group has a compass rose in the centre of the map and a text at the top, describing the shape of the world, that is headed *Kunyu quantu*. The three maps in this group are respectively in the

- Biblioteca Vaticana (Borgia Cinese 529),
- Bibliothe`que nationale de France, Paris (BNF DCP Ge AA 2565 Re s.) and the
- Library of the University of Ghent (map 928),.

The second group lacks the compass rose, text and title. These maps are in the

- Archivio di Stato, Turin (j.b. VI. 12),
- the Osterreichische Nationalbibliothek, Vienna (K III 96930; the lower part is badly damaged), and the
- map now in private hands that was recently sold in Tokyo by the Japanese bookseller Isseido.

Three exemplars—Ghent, Turin and one sold recently by Isseido booksellers— are colored, but the coloring is done differently on each. Apart from the compass rose, text and title, the two versions of the map display only a few other significant differences, mainly in the names of some regions and countries.

Reference:

Heirman, Ann , De Troia, Paolo and Parmentier, "Francesco Sambiasi, a Missing Link in European Map Making in China?", *Imago Mundi*, 61: 1, 29 — 46.