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Visualization and Material Cultures of the Heavens in Eurasia and North Africa (4000 BCE–1700 CE)

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This project seeks to understand how Sagittarius mutated from a centaur into a cat with a dragon's head on its tail. This depiction appeared in twelfth-century Iran as a tiger (?), shooting at the dragon's head. In China a similar figure, throwing a fiery ball towards the tail, graced a vase in the second century. Did the Chinese motif inspire the Iranian archer? In 1188, this image of Sagittarius surfaced in a Georgian translation of Persian astrology: the dragon's head represents Rahu, the cause of eclipses in India. However, Rahu is not a dragon—although a snake causing eclipses was already known of in sixth-century Western Asia. Where and when these motifs became interlinked are two of the enigmas that this project seeks to resolve.

Another enigma has already been deciphered. The blue celestial map (Figure 1) was previously identified as a product of an anonymous fifteenth-century artist or astrologer from Iran. However, a careful analysis of the image tells us that it was actually produced there in the seventeenth century.

The first pointers to a foreign background of the map are its nude figures—showing Andromeda, Perseus, Auriga, Gemini, Serpentarius, Aquarius, Cassiopeia, and the human torso of Sagittarius—and the depiction of Aquarius from behind. Clear evidence for a



Fig. 1: Anonymous celestial map of the northern hemisphere, seventeenth century. Bonhams' catalog *Islamic and Indian Art*, October 11, 2000, p. 37.



Fig. 2: Detail, Illustrated Manuscript of a Jung (Miscellany) commissioned by Shah Suleyman (1666–1692), c. 1669–c. 1670. Harvard Art Museums/ Arthur M. Sackler Museum, 1984.463, gift of Philip Hofer.

Western European predecessor is the presence of Medusa’s head and the inclusion of Berenice’s hair. Berenice’s hair does not belong to the pictorial canon of star constellations in Islamicate societies, which was established by the astrologer ‘Abd al-Rahman al-Sufi (903–

986) for ‘Adud al-Dawla (r. 949–983), the head of the Buyid dynasty (945–1055). For his book, al-Sufi relied on an Arabic translation of Ptolemy’s *Almagest*, globes, a book on constellations (9th c.), as well as information on star constellations used by Bedouin tribes on the Arabian Peninsula. But al-Sufi was unfamiliar with Greek mythology. This may explain the transformation of the female head with snakes into the head of a bearded male demon (Figure 2).

Indicators of a possible Dutch background are the fish tail of Pegasus, the flowers held by Cassiopeia, the giraffe below Cassiopeia, and the placement of Lyra on top of Corvus. Except for Pegasus’s fish tail, these elements are all found in Andreas Cellarius’s (1596–1665) map of the northern celestial sphere (Figure 3).

Pegasus’s fish tail, an optical misunderstanding resulting from a map on which Pegasus and Pisces were drawn too closely together, can be seen on an anonymous and undated Dutch celestial map (Figure 4). However, this map is not antecedent to the blue map because it lacks



Fig. 4: Anonymous celestial map, seventeenth century. Leiden University Library, COLBN Port 169 N 3.



Fig. 4b: Detail, pegasus with a fish tail.



Fig. 3: A. Cellarius's map of the northern celestial hemisphere, 1660 [1708], echo.mpiwg-berlin.mpg.de.

some of its other elements. 'Abd al-Rahman al-Sufi's pictorial canon is a prime example of a creative mixture of pictorial elements from a wide range of Eurasian cultures. Near Eastern, Greco-Roman, and pre-Islamic Arabic star constellations, zodiac signs, names, and heavenly coordinates appear in early copies of al-Sufi's book in combination with Zoroastrian, Central Asian, Buddhist, and possibly also Chinese human depictions, dress, jewelry, hairstyles, and headdresses. The cultural transformation of Medusa into a demon moved widely through Western Asia, North Africa, and parts of Europe with the

book's translations into Persian, Turkish, Latin, Castilian, and Hebrew. However, there is no sign that this book was ever translated into an East Asian language. Nonetheless, an East Asian planetary image could possibly be related pictorially, albeit not conceptually, to al-Sufi's Perseus. The image in question was produced in Khara Khoto, the capital of the Tangut Xi-Xsia dynasty (r. 1038–1227), in the thirteenth or fourteenth century. The pictorial similarity between al-Sufi's Perseus and the Tangut image of the Huibei pseudo-planet (or comet) (Figure 5) is a further enigma to be explored.



Fig. 5: HuiBei (Yuebo) Planet, thirteenth to fourteenth century, St. Petersburg, Hermitage, XX-2450.

Other Tangut images combine Indian pictures of nine luminaries (the sun, the moon, the five planets, and the two pseudo-planets Rahu and Ketu), images of the Mesopotamian zodiac after modification and transformation in the Greco-Roman world and South Asia, and depictions of Buddha. A text on rituals for protection against cosmic calamities recommends such images to “all monarchs, their great ministers and dependents, and the

common people as a whole, who may suffer the oppression of the sun, moon, five planets, Rahu, Ketu, comets, (or other) portents and malign stars.”

Research on the heavens requires a wide range of thematic and regional expertise, which is why this project involves collaboration between Departments I and III of the MPIWG. Researchers at universities in Berlin, and further afield in China, Korea, Japan, India, the US, the UK, and France are also contributing to this endeavor. They study types of images from various regions, their similarities and transformations, and the educational, linguistic, political, and artistic components of their journeys through Eurasian and North African cultures.

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