# The Dragon in Transcultural Skies: Its Celestial Aspect in the Medieval Islamic World

#### Sara Kuehn

Abstract The dichotomous nature of the dragon is reflected in its chthonic, aquatic, and aerial aspects, allowing it to cross boundaries within its natural environment, metamorphosing from air to land or sea creature and back again, its winged aspect implying an independence from local position and the ability to attain whatever plane of apperception it desires. This quality is revealed in its astral-cosmological, alchemical, astrological, and metaphysical manifestations, glimpses of which can be found in Islamic, Jewish, Christian, and Zoroastrian writings. The intrinsic as well as extrinsic ambiguity of the great beast necessarily entails an element of transcendence, since its mystery can only be explained as flowing from the juxtaposition of two or more levels of reality. Its inherent duality renders the dragon image an embodiment of change and transformation par excellence. Such associations expand its semantic territory as agent of metamorphosis and into the realm of spiritual conceptions.

A wide semantic range of dragon iconography and iconology evolved during its immemorial history in Western Asia. Animated by an endless interplay of dichotomous forces, the creature revealed itself as deliverer or destroyer, regenerator or annihilator, protector or adversary. The dragon thus served to embody the eternal opposition of two distinct forces, one seeking to preserve life, the other to destroy it, a polarity giving rise to a kaleidoscopic diversity of function and symbolism. Owing to this inherent polyvalence and ambiguity, it has been called "one of the most complex symbolisms of the history of cultures" (Le Goff 1980, 162). Its iconography is a recurring and popular image in the architecture and art of the

L'institut d'études avancées d'Aix-Marseille (IMéRA), Marseille, France e-mail: sara@sarakuehn.com

<sup>&</sup>lt;sup>1</sup> The iconography of the dragon is the topic of my Ph.D. thesis, published in revised form (Kuehn 2011). While it discusses different qualities of the great beast, its aerial or celestial aspect has proved to be the most elusive and was not considered in as much detail as it deserves—a lacuna which the present paper attempts to address.

S. Kuehn (⊠)

medieval Islamic world. Yet despite its wide diffusion, the symbolism that survives from medieval Western Asia is often elusive and even cryptic.

As composite mythical creatures, dragons are endowed with features or parts belonging to various animals generally recognizable across cultural-aesthetic boundaries—the reptilian, feline, and raptorial motif being prevalent in the overall composition—and often carry chthonic, aquatic and aerial aspects. Features such as these reveal that the dragon was able to cross boundaries within its natural environment, metamorphosing from air to land or sea creature and back again. The physical changes accompanying such shape-shifting form part of the dragon iconography in medieval Islamic art so that the creature is, for instance, portrayed variously without legs, with two forelegs, or with four legs. Thus a dragon may have a quadruped body, a serpentine body, or a quadruped protome extending into ophidian coils.<sup>2</sup> The avian aspect of the dragon is often expressed through its portrayal with wings, which are associated with the power of flight, a well-known vehicle for the transition from one realm to another.<sup>3</sup>

In its astral-cosmological manifestation, the dragon necessarily has a celestial quality which is all-powerful, as the sage astrologer Jāmāsp relates to Gushtāsp (Av. Wishtāspa, the Greek Hystaspes), the Kayanian king of Iranian traditional history and first Mazdaist on the throne:

No one can safely pass that fateful wheel. Who has by wisdom or by manliness escaped the knife-sharp claws of that celestial dragon? What has to be will be. There is no doubt. The shrewdest man has not escaped his fate.<sup>4</sup>

The early medieval author Muḥammad ibn 'Abdullāh al-Kisā'ī, writing not long before 1200, refers to the authority of Ka'b al-Aḥbār (probably in 17/638) when portraying the creation of the canopy and the throne of God, which encompasses both heaven and earth, and the great serpent that surrounds it:

Then God created a great serpent to surround the Canopy. Its head is of white pearl and its body is of gold. Its eyes are two sapphires, and no one can comprehend the magnitude of the serpent except God. It has forty thousand wings made of different kinds of jewels, and on each feather there stands an angel holding a jewelled lance, praising God and blessing His name. When this serpent extols God, its exaltation overwhelms that of all angels [...].<sup>5</sup>

A related description of the girdling serpent-dragon is given by Abū 'Abd Allāh al-Qurṭubī, the thirteenth-century expert in  $had\bar{\imath}th$ , or sacred tradition, in a commentary on  $S\bar{u}ra$  40 of the Qur'ān:

<sup>&</sup>lt;sup>2</sup> For an in-depth discussion of the reptilian characteristics of the (serpent-) dragon, see Kuehn (2011, 5-9).

<sup>&</sup>lt;sup>3</sup> The composite mythical animal commonly identified as Sasanian-style *sēnmurv*—a distant cousin of the dragon—which has a (pea)cock-like tail (associating it with the motif of flight) is the subject of a detailed investigation in Kuehn, *Ancient Iconography in Western Asia: The Image of the Dragon from 2500 BC TO 650 AD*, forthcoming.

<sup>&</sup>lt;sup>4</sup> Al-Firdawsī, *In the Dragon's Claws*, trans. and ed. Clinton 1999, 33.

<sup>&</sup>lt;sup>5</sup> Al-Kisā'ī, *Qiṣaṣ al-anbiyā*', trans. and ed. Thackston 1978, 7.

When God created the Throne, it said, "God has not created anything greater than myself," and exulted with joy out of pride. God therefore caused it to be surrounded by a serpent having 70,000 wings, each wing having 70,000 feathers in it, each feather having in it 70,000 faces each face having in it 70,000 mouths, and each mouth having in it 70,000 tongues, with its mouths ejaculating every day the praises of God [...], the number of drops of rain, the number of leaves of trees, the number of stones and earth, the number of days of this world, and the number of angels—all these a number of times. The serpent then twisted itself round the Throne which was taken up by only half the serpent while it remained twisted around it. The Throne thereupon became humble. 6

In the Jewish tradition, a great silver serpent likewise encircles the machinery of the throne of King Solomon and, by operating the wheelwork, activates the mechanism.<sup>7</sup> It is of note that Solomon's mechanical throne, which can be likened to a miniature universe, can only be put into motion by the serpent (Jellinek 1967, vol. 2, 83–85).

According to Islamic traditions, the Kaʿba, the most famous sanctuary of Islam, is closely associated with the serpent-dragon. In his *Qiṣaṣ al-anbiyā* '("Tales on the Prophets"), Abū Isḥāq Aḥmad ibn Muḥammad ibn Ibrāhīm al-Thaʿlabī al-Nīsābūrī al-Shāfʿī (d. 427/1035), describes the Kaʿba in Mecca, the central sanctuary of the Islamic world, as a divine throne that is encircled by a dragon:

Then All $\bar{a}h$  surrounded it by a serpent. [...] this serpent wound itself around the throne and the latter reaches to half the height of the serpent which is winding itself around it. <sup>8</sup>

#### Al-Tabarī describes it as:

 $[\ldots]$  a stormy wind with two heads. One of them followed the other till it reached Mecca; there it wound itself like a serpent on the spot of the sacred house.

The foundation of the Ka'ba is further described as:

[...] a wind called the wind Al-Khadjūdj which had two wings and a head like a serpent's. 10

A similar description is given by Ḥusayn ibn Muḥammad al-Diyārbakrī in his  $Ta'r\bar{\imath}kh \ al-kham\bar{\imath}s$ , in which the foundation is said to possess:

[...] two serpents' heads, one behind the other. 11

<sup>&</sup>lt;sup>6</sup> Al-Damīrī, *Ḥayāt al-ḥayawān al-kubrā*, trans. and ed. Jayakar 1906, vol. 1, 638; see also al-Thaʿlabī, *ʿArāʾis al-majālis fī qiṣaṣ al-anbiyāʾ*, trans. Brinner 2002, vol. 24, 25.

<sup>&</sup>lt;sup>7</sup> See Jellinek (1853–73, repr. 1967, vol. 5, 35). Cf. Ginzberg (1946) and, *idem* (1955, vol. 4, 57–59); Wensinck (1978, 63).

<sup>&</sup>lt;sup>8</sup> Al-Tha'labī, *Qiṣaṣ al-anbiyā'*. *Musammā bi'l-ʿarā'is al-majālis*, 1290, 13, as cited in Wensinck (1978, 62 and n. 3); see also al-Tha'labī, *ʿArā'is al-majālis*, 151. Wensinck (62 and n. 3) notes that there are also Greek images in which the serpent is wound around and ascends above the *omphalos*, which often has a sepulchral character (see also Elderkin 1924, 109–116); for a discussion of the *omphalos* in literature, see Roscher (1914, pl. IX, no. 6); and *idem* (1915, pl. I, no. 1, pl. II, nos. 3, 4, 14).

<sup>&</sup>lt;sup>9</sup> Al-Ṭabarī, *Mukhtaṣar taʾrīkh al-rusul (al-umam) wa 'l mulūk wa 'l-khulafāʾ*, ed. de Goeje (1879–1901, vol. 1, 275, 8–10), cited after Wensinck (1978, 61 and n. 2).

<sup>&</sup>lt;sup>10</sup> *Idem*, 276, 16–17, as cited in Wensinck (1978, 61).

<sup>&</sup>lt;sup>11</sup> Al-Tha'labī, *Qiṣaṣ al-anbiyā*', 98, as cited in Wensinck (1978, 61).

Such traditions endow the great serpent with a sacred as well as mythological character. Its supernatural qualities are manifest in its winged and double-headed appearance. Even more significantly, as Arent Jan Wensinck points out, the Meccan serpent is either the Sakīna or a being sent by God in most traditions, and is hence "not a demoniac but a divine being." <sup>12</sup>

The iconography of the encircling dragon, traditionally known by its Greek name *ouroboros*, was thus known in the Islamic tradition and its imagery vividly described in surviving textual sources. The symbolism is also evident in the visual heritage; it appears on portable artefacts, such as in manuscript illustrations, as well as in sculptural and architectural elements.

Among the large, pseudo-epigraphic alchemical books produced during the medieval period, an Arabic alchemical treatise titled Mushaf al-hakīm Ustānis fī-l-sinā at al-ilāhiyya ("Book of the Wise Ostanes on Divine Art"), attributed to Ostanes (Ustānis), the renowned Median Achaemenid-period author of books on magic and gnosis (Sezgin 1971, 51-54; Ullmann 1972, 184f; Anawati, "Arabic Alchemy," EHAS, 1996, vol. 3, 862; Needham and Wang 1965, 333–335), 13 describes how, in a dream, a creature with a serpent's tail, eagle's wings, and elephant's head devouring its own tail (like a serpent) guides Ostanes up to the seven gates of wisdom, for which it gives him the keys (Reitzenstein 1916, 33–35; Ullmann 1972, 184ff. and ns. 1 and 2; Rashed 1996, 862). The symbol appears in other Arabic alchemical texts, such as the writings of Muhammad ibn Umayl al-Şādiq al-Tamīmī (ca. 287/900-287/960, known in the West as "Senior Zadith"). 14 His most renowned work was the Kitāb al-Mā' al-Waraqī wa 'l-Ard al-Najmīyah ("Book of the Silvery Water and Starry Earth"), known in Latin as the Tabula Chemica (Stapleton and Husain 1933, 117–213), in which a pair of winged creatures holding each other's tails in their mouths is depicted (Fig. 1). 15

It is significant that, in medieval Islamic iconography, the *ouroboros* dragon was doubled and often pictured as two entwined dragons eating one another (or, in other words, threatening and "devouring," as well as "delivering" and protecting one another). In an act simultaneously self-destructive and parturient, the cycle is recreated in the self-devouring.

<sup>&</sup>lt;sup>12</sup> Idem, 65.

<sup>&</sup>lt;sup>13</sup> In Zoroastrian pseudo-epigrapha that include those of Ostanes, the magus is said to have accompanied Khshayārshā (Xerxes) during the great Persian invasion of Greece. Cf. Boyce and Grenet (1991, 494–496).

<sup>&</sup>lt;sup>14</sup> Cf. Sezgin (1971, 283–288); Needham and Wang (1965, 378); Ronca (1998, 95–116, esp. 102–109).

<sup>&</sup>lt;sup>15</sup> The highly stylised illustration is accompanied by an Arabic inscription in the Lucknow manuscript as "...two Birds [with an indication of the position of/the respective heads and the tails]; the Male and the/Female; Two in One". See Stapleton and Ḥusain (1933), pl. IA. A closely related, yet even more stylised, version of the motif is depicted in the Paris Ms. no. 2610, Bibliothèque Nationale, Paris, see *idem*, pl. 2B.

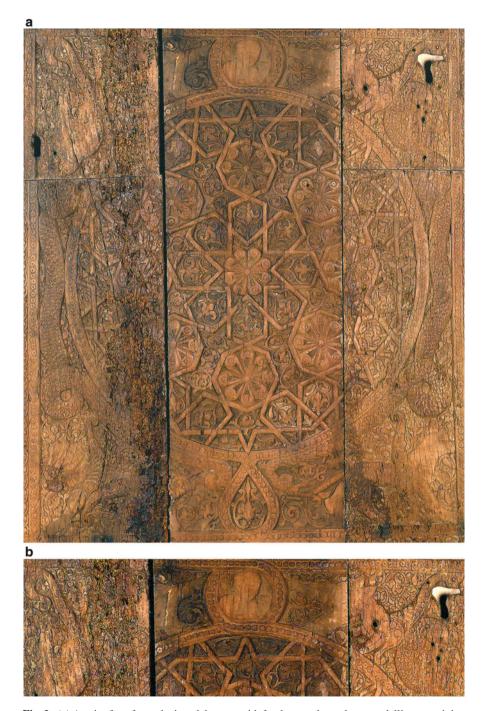
<sup>&</sup>lt;sup>16</sup> Needham and Wang (1965, 378–379) consider this development to have been due to "Chinese influence" on the Hellenistic single tail-eating serpent motif. Cf. also Schütt (2002, 106f).

Fig. 1 A pair of fantastical creatures in a circular arrangement, biting each other's tails. Painting in a copy of Muḥammad ibn Umayl al-Ṣādiq al-Tamīmī's Kitāb al-Mā'al-Waraqī wa 'l-Arḍ al-Najmīyah (ca. 287/900–287/960). Opaque pigment and ink on paper. India, Uttar Pradesh, Lucknow, State Museum. Source: Stapleton and Ḥusain 1933, pl. I A



The motif appears on a carved wooden door, once possibly part of a mausoleum (Hauptmann von Gladiss 2006, 95) (Fig. 2). The door, dated to the first half of the thirteenth century is thought to come from the Tigris region, and is now held in the Museum für Islamische Kunst in Berlin (Meinecke 1989, 54, 58, detail). It is carved with a pair of large dragons surrounding a central medallion set within an arch-shaped frame. The latter contains an interlaced infinite star pattern, outlined by an interlaced pearled band which extends at its apex to a small medallion. The medallion is touched on either side by the sinuous tongues projecting from the gaping mouths of the dragons whose scaly, serpentine bodies with raised slender wings wind tightly around the medallion. Their bodies form a heart-shaped knot and two loops, the ends of their tails tapering to a point to form a tight curl at the base. Due to the surface wear of the door, only the frame of the small medallion is extant, so one can only speculate what it was that the dragons were protecting or threatening.

A similar concept dominates the depiction on a large bas-relief stone fragment carved with a pair of antithetically arranged dragons framing concentrically arranged, patterned circles that carry clear solar associations. Discovered near Alaeddin Tepe in Konya, now in the İnce Minare Muzesi in Konya (Fig. 3), the medallion was probably part of a thirteenth-century Saljuqid monument which no longer exists. Only the head of the dragon on the left is complete, portrayed with a long, curved snout and wide-open mouth, revealing sharp teeth and fangs and a prominent, sinuous tongue, the tip of which touches the edge of the star rosette. The head is punctuated with almond-shaped eyes framed by long, curved lashes and crowned by a small, rounded ear. At the back of the head, the dragon's neck is clasped by paired "collars," the upper part braided, the lower marked with vertical hatching. The dragons' long, scaly ophidian bodies form a loop and then a pretzel-like knot. The bottom section of the stone is broken off, so the tips of their tails are



 $Fig. 2 \quad (a) \ A \ pair of confronted winged dragons with forelegs enclose a large medallion containing a star pattern. Relief carving of a wooden door (central vertical section replaced in the style of the$ 

Fig. 3 A pair of dragons enclosing a large medallion containing a star pattern. Relief carving, Anatolia. First half of the thirteenth century. Konya, İnce Minare Müzesi, inv. no. 5817. Photo by Sara Kuehn



lost. Likewise, only part of the pretzel-like knot of the dragon on the right's body has survived.

The dragon's *ouroboros* aspect is further evident in the double frontispiece of the *Kitāb al-diryāq* ("Book of the Theriac," often referred to as "Book of Antidotes"), dated 595/1199, in the collection of the Bibliothèque Nationale, Paris, on which the encircling dragons are juxtaposed with the personification of the Moon (Fig. 4). <sup>17</sup> Although of course realised in an entirely different medium, the representations in stone and on paper probably share a relatively close geographic provenance and period of production. The astral personification on the Pseudo-Galen double frontispiece, moreover, might provide a link between what appear to be composite stellar symbols on the Berlin door (Fig. 2) and the Konya architectural stone fragment (Fig. 3).

The dragon's manifestly dual nature confers it an intermediate status. The world encircling *ouroboros* marks the boundary between the ordered world and the chaos around it and thereby appears as an exponent of liminality situated upon the ambiguous dividing line between the divine and the demonic. Thus intrinsically linked with the idea of the threshold, dragon imagery appears around openings and entry points of secular and religious architectural monuments, where it serves as a

Fig. 2 (continued) original), Tigris region, the Jazīra. First half of the thirteenth century. Berlin, Museum für Islamische Kunst, inv. no. I.1989.43. Photo courtesy of Staatliche Museen zu Berlin Preußischer Kulturbesitz, Museum für Islamische Kunst, Berlin. (b) A pair of gaping dragons' mouths, confront each other and flank a small central medallion enclosing a human bust (?). Detail of the relief carving of a wooden door, Tigris region, the Jazīra. First half of the thirteenth century

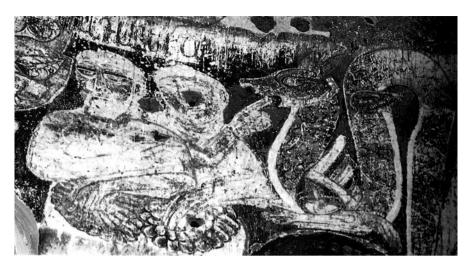
<sup>&</sup>lt;sup>17</sup> Paris, Bibliothèque Nationale, Ms. Arabe 2964; current pagination 36–37; dated Rabī al-awwal of the year 595/31 December 1198–29 January 1199.



**Fig. 4** A personification of the Moon enclosed by interlaced dragons. Four winged figures, of presumably honorific and celestial significance, frame the medallion. Detail of the right half of the double-page frontispiece in the *Kitāb al-diryāq*, possibly Mosul (?), the Jazīra. Rabī al-awwal of the year 595/31 December 1198–29 January 1199). Opaque pigment and ink on paper. Paris, Bibliothèque Nationale, Ms. Arabe 2964; current pagination 36–37. Photo courtesy of the Bibliothèque Nationale, Paris

liminal marker and apotropaic device in the role of a guardian imbued with protective and talismanic power, warding off the dangers and inimical forces inherent to such places.

In the discussion of the story of primordial heavenly Paradise in post-Qur'ānic canonical traditions, the serpent-dragon's inherent ambivalence is also expressed: Before the expulsion from the Garden of Eden, the Genesis serpent is described as a winged creature with legs. Such a giant winged quadruped serpent is portrayed, for



**Fig. 5** The Genesis serpent. Wall paintings showing events related to the book of Genesis on the drum of the dome (far right) in the Armenian church of the Holy Cross at Aght'amar. Eastern Turkey, Lake Van. 915–921. Source: After Thierry (1987, 384, Fig. 266)

instance, in the wall paintings showing events related to the book of Genesis on the drum of the dome in the Armenian palatine church of the Holy Cross at Aght amar on Lake Van (now in Eastern Turkey), built between 915 and 921 (Mathews 1982, 245–257; Thierry 1987, 384, Fig. 266) (Fig. 5). In Islamic lore, the serpent is described as the most beautiful and strongest of animals:

The serpent was shaped like a camel and like the camel, could stand erect. She had a multicoloured tail, red, yellow, green, white, black, a mane of pearl, hair of topaz, eyes like the planets Venus and Jupiter, and an aroma like musk blended with ambergris. Her dwelling was in the aqueous Paradise, and her pond was on the shore of the River Cawthar. Her food was saffron, and she drank from that river; and her speech was exaltation of God, the Lord of the Universe. God had created her two thousand years before he created Adam, and she had told Adam and Eve about every tree in Paradise.

A narrative ascribed to Wahb ibn Munabbih (b. 34/654–5), a Yemenite descendant from a family of Persian origin, describes the Fall which led to the expulsion from the Garden:

<sup>&</sup>lt;sup>18</sup> The fact that the Genesis serpent is winged is also mentioned in the Jewish *Apocalypse of Moses*, 26; Ginzberg (1909–38, repr. 1946) and *idem* (1955, vol. 5, 123f, n. 4). The Armenian dragon *vishap* is discussed in Kuehn (2011, esp. 6, 9, 29, 38, 41, 52, 54, 66, 67, 74, 89, 90, 121).

<sup>&</sup>lt;sup>19</sup> Cf. Wheeler (2002, 25).

<sup>&</sup>lt;sup>20</sup> Al-Kisā'ī, *Qisas al-anbiyā*', 38.

When Iblīs wanted to cause [Adam and Eve] to slip, he entered into the stomach (*jawf*) of the serpent; the serpent [then] had four legs and was like a Bactrian [camel] (*bukhtīya*), one of the most beautiful creatures God had created. When the serpent entered the garden, Iblīs came out of its stomach (*jawf*); he took [a fruit] from the tree [the Tree of Immortality (Qur'ān 20:116–21)] that God had forbidden to Adam and Eve and brought it to Eve.<sup>21</sup>

As a consequence of the service rendered to Iblīs, the serpent is not only banished from the heavenly Paradise, but loses her legs, which reenter her body; she will dwell in dark places and only earth will be her food;<sup>22</sup> she is condemned to crawl on her belly, becoming "malformed and deprived of the power of speech, mute and forked-tongued."<sup>23</sup>

The serpent-dragon in Zoroastrianism, the religion of ancient Iran, also experienced a "fall from grace." A decisive change in its iconology was brought about by the rise of a rigid Zoroastrian cosmological dualism. A more robust symbolism was needed and the serpent-dragon accrued a range of negative aspects. The Zoroastrian evil principle of the universe, Angra Mainyu, known in later times as Ahriman, is likened to the serpent in the *Great Bundahishn* ("Book of Primal Creation")—Pahlawī translations based on lost Avestan scriptures of the third century CE and earlier, and their commentaries written after the Arab conquest (Watkins 1995, 58). It describes him as having sprung:

[...] like a snake, *out of the sky* down to the earth... thereby *the sky* [emphasis added] was as shattered and frightened by him, as a sheep by a wolf.<sup>24</sup>

The inherently powerful and combative serpent-dragon aptly came to represent the Zoroastrian evil spirit who declares to God:

I shall destroy you and your creatures forever and ever. And I shall persuade all your creatures to hate you and to love me. 25

At the same time, it has to be pointed out that in spite of the negative associations brought about by Zoroastrian cosmological dualism, the Greek writer Philo of Byblos (ca. 64–141 CE) records a saying attributed to the magus Zoroaster, according to whom the serpent is not only immortal but:

<sup>&</sup>lt;sup>21</sup> Al-Ṭabari, *Mukhtaṣar*, vol. 1, 108; see also *idem*, *Jāmiʿal-Bayān*, I, 235, cited after Katz (2002, 179). Jewish Midrashic literature similarly records that the serpent of the Garden of Eden originally had feet; Gray (1906, 186).

<sup>&</sup>lt;sup>22</sup> Al-Tabari, *Mukhtasar*, vol. 1, 525f; cf. al-Kisā'ī, *Qisas al-anbiyā*', 53.

<sup>&</sup>lt;sup>23</sup> Al-Kisā'ī, *Qiṣaṣ al-anbiyā'*, 46. See also the second-century BCE Hebrew work, *Book of Jubilees* 3.28, as well as Philo of Alexandria, *De Opificio Mundi* 55.156.

<sup>&</sup>lt;sup>24</sup> Bundahishn 6.10–11 (Sacred Books of the East, trans. West, vol. 5, Oxford, 1897). Cf. Zaehner (1955, repr. 1972, 262); Boyce (1984, 50).

<sup>&</sup>lt;sup>25</sup> *Idem*, 46. This may be compared with the antagonism between Jahweh and the serpent in the Genesis narrative (2–4); see the interpretation by Rhodokanakis with addendum by Ehrenzweig (1921, 76–83).

- $[\ldots]$  the director of everything beautiful  $[\ldots]$  the best of the good, the wisest of the wise
- [...] the father of order and justice, self-taught [...] and perfect and wise [...].<sup>26</sup>

The link between these statements and historical Iranian Zoroastrianism seems tenuous. Nevertheless, in addition to reflecting the Hellenistic reception of Zoroastrian ideas, these passages may suggest that the Iranian definition of the serpent-dragon as unequivocally maleficent was perhaps not always as cut and dried as it appears from surviving scriptures.<sup>27</sup>

Hence in its new guise—that is, after the rise of Zoroastrian cosmological dualist notions—the dragon assumed the mantle of eschatological opponent, the evil principle who would be destroyed, following a millennium of conflict, in a final battle that would usher in a new age and a new creation. Serpents and dragons thereby came to be classified as noxious beings (*khrafstras*), creatures of Ahriman, the Zoroastrian evil principle of the universe and, as such, evil and deserving of death.<sup>28</sup>

Astrology also offered support for Zoroastrian apocalyptic ideas, according to which the planetary bodies were regarded as evil. The "good" luminaries, the Sun and the Moon, were removed from the category of the seven planets, whose intrusion brought injustice into the world (Khareghat 1914, 129; Brunner, "Astronomy and Astrology in the Sasanian Period, s.v. Astrology and Astronomy in Iran," EIr). Consequently, the Sun and the Moon were substituted by two "demonic" opponents, the head and tail of the dragon (Pahl.  $G\bar{o}chihr$  which stems from the Avestan  $gao\ chithra$ , "holding the seed of cattle," formerly the stock epithet of the Moon<sup>29</sup>). According to the Bundahishn,  $G\bar{o}chihr$  is portrayed as "similar to a snake with the head in Gemini ( $d\bar{u}$ -pahikar, the twins) and the tail in Centaurus ( $n\bar{e}masp$ ), so that at all times there are six constellations between its head and tail."

The idea that these phenomena were caused by a body whose head and tail intercepted the Sun and Moon's light was probably related to the emergence of definite ideas as to the nature of the orbits of the Sun and the Moon and their

<sup>&</sup>lt;sup>26</sup> Philo of Byblos' *The Phoenician History* (as quoted by Eusebius, *Praeparatio Evangelica* 1.10.52), trans. and ed. Attridge and Oden Jr. (1981, 67). Cf. *idem* (95, n. 161), for reference on Zoroaster in this text.

<sup>&</sup>lt;sup>27</sup> This supposition is further corroborated by the ongoing Zoroastrian practice of ophiomancy (see n. 32) which is in striking contradiction to the classification of serpents as noxious beings (*khrafstras*).

<sup>&</sup>lt;sup>28</sup> Cf. Boyce (1975, repr. 1996, 90f). The special stick used by the Zoroastrians to kill noxious creatures of various kinds is called a *mār-gan* ("snake-killer"); Russell (1987, 461). The custom of killing *khrafstras* is also mentioned by Plutarch (*De Iside et Osiride 46*; *De Invidia et Odio* 3.537B; *Questiones Conviviales* 4.5.2.670D).

<sup>&</sup>lt;sup>29</sup> See Zaehner (1955, repr. 1972, 164, n. E); MacKenzie (1964, 515, n. 26).

<sup>&</sup>lt;sup>30</sup> Bundahishn ch. 5, A. 5, 52.12–53.1, cited after Brunner, EIr. Cf. Hartner, "Al-Djawzahar," EI<sup>2</sup>, 501b.

<sup>&</sup>lt;sup>31</sup> Bundahishn ch. 5 A. 5. P. O. Skjærvo, "Aždahā I," *EIr*. Cf. Zaehner (1955, repr. 1972, 164, n. E). Also MacKenzie (1964, 515, 525).

opposite points of intersection between the Moon's orbit and the ecliptic (Khareghat 1914, 129). The classical theory of the dragon myth seems to have been modified in accordance with developments in astrological doctrine from late Arsacid and Sasanian times onwards. Sasanian astrologers received the notion of Rāhu, a celestial serpent whose head (*siras*) and tail (*ketu*) cause solar and lunar eclipses, from India. In Pahlawī, Rāhu was referred to as Gōchihr. In contradistinction to the original meaning of *gao chithra*, the Moon's light and fecundity attributes, the dragon's head (*gōchihr sar*) and tail (*gōchihr dumb*), came to represent the demon of eclipses that intercepts the light of the luminaries, the personified dark principle and direct antagonist of the luminaries (Hartner 1938, 153). This shift in meaning led to the concept of a polarity of good and evil throughout the cosmos, the eclipse demon being referred to as Dark Sun and Dark Moon, "dark" meaning "obscured" and "eclipsed." Thus, according to the *Bundahishn*, the serpent-like (*mār homānāg*) Gōchihr and Mūsh Parīg (Av. Mushparīkā), with tail (*dumbōmand*) and wings (*parrwar*), are said to be the

<sup>&</sup>lt;sup>32</sup> See Panaino (2004, 196–218), and *idem* (2005, 73–89, esp. 74f), who discusses the Zoroastrian practice of deducing omens through ophiomancy (that is to say, divination by serpents) which was linked to astral elements. It is noteworthy that this practice was known by the great eleventh-century polymath al-Bīrūnī in the *Kitāb al-Āthār al-Bāqiya*, trans. and ed. by Sachau, 1876–8, 218. In this connection it is interesting to consider the reference of the fifth-century Armenian theologian, Eznik of Koghb (*Elc alandoc* '("A Treatise on God") 1959, 641, ch. 291) to the pre-Christian belief which associated the heavenly bodies with deities when they worshipped venomous creatures, whereby he implicitly appears to associate astrolatry with ophiolatry. The practice probably goes ultimately back to the Mesopotamian world (Panaino 2004, 2005), since the heavenly bodies follow patterns that are comparable to Babylonian hemerologies. Cf. Zaehner (1972, 107–9).

<sup>&</sup>lt;sup>33</sup> For an analysis of the origin of the concept of Rāhu, see De Mallmann (1962, 81); Markel (1995, 55–64); Pingree (1989, 1–13, esp. 3–7, 11–13), and *idem* (2006, 240). In the Rigveda (5.40.5–9) Rāhu is known as a demonic being, *Svar-bhānu-*, which is said to have pierced the Sun with darkness. In post-Vedic mythology, *Svar-bhānu-* is replaced by *Rāhu-*, his name sometimes being conferred upon the latter; *Svar-bhānu-* perhaps meaning "who has the effulgence of the sun" or "who is affected by the effulgence of the sun." Advanced knowledge of periodical eclipses of the sun and the moon led to the belief in two demonic beings, the red *Rāhu-* and the black *Ketu-*. See Scherer (1953, 100f).

<sup>&</sup>lt;sup>34</sup> Cf. Duchesne-Guillemin (1990, 17–19). The great treatise on horoscopic astrology of the first-century Hellenistic astrologer Dorotheus of Sidon, which was first translated into Persian in the third century and into Arabic in the eighth century, contains a chapter (V, 43) entitled "on clarifying the phases of the moon and the head of the dragon and its tail …" It states that "the head is called the 'ascending' and its tail the 'descending' and the signs which those learned in the stars call 'obscured' are from Leo to Capricorn …" *Dorothei Sidonii Carmen Astrologicum*, trans. and ed. D. Pingree (1976, 322), cited by Beck (2004, 172). Jews writing in Hebrew utilised the terms *ro'sh* or rather *zanav hat-t*e' li or *hat-tannin* for *ra's* and *dhanab*, whereas it was known in the Byzantine tradition as  $h\bar{e}$  kephalē or  $h\bar{e}$  ouratou drakontos. See Schlüter (1982, 138).

<sup>&</sup>lt;sup>35</sup> Bundahishn (ch. 5.4, 49.13–5) and the late ninth-century catechism Shkand-gumānīg wizār ("Doubt Dispelling Exposition") 4.46, cited after Brunner, "Astronomy and Astrology," EIr.

evil opponents of the stellar constellations and are therefore bound to the Sun's path, which restrains their capacity for harm.<sup>36</sup> The expulsion of evil from the sky, from heaven, is manifested by the plunging to earth of Gōchihr,<sup>37</sup> who sets the earth on fire and whose permanent body will only be destroyed by resurrection.<sup>38</sup>

In Manichaean astrology, two dragons make the firmament turn with the aid of two angels:

He [i.e. the Living Spirit] fastened the Seven Planets; and he bound and fettered two Dragons, and bound them on high to that which is the lowest heaven; and, in order to make them turn the firmament at call, he placed over [them] two Angels, a male and a female. <sup>39</sup>

In Manichaeism the eclipse dragon also played a part as the ascending and descending nodes, anabibazon and catabibazon, which stand for the head and the tail of the dragon.<sup>40</sup>

In Islamic astronomy, the Persian *gōchihr*, called *al-jawzahar* or *al-tinnīn* (also *aždahā*, "the giant dragon"), was sometimes represented as a bipartite or double-headed dragon. It is the circumpolar constellation Draco, "represented as a very long serpent with many convolutions; it is coiled around the north pole of the ecliptic," which is sometimes metaphorically applied to the Milky Way. In a verse by the late eleventh-century Iranian poet Labībī, the seven heads of the dragon represent the heavenly spheres and the universe. 43

Individual depictions of *jawzahar*—Draco as eighth planet next to the seven traditional planets—often portray a cross-legged figure holding a dragon in each hand (Fig. 6). This image is featured on an inlaid copper-alloy inkwell of the late twelfth or early thirteenth century, which depicts a cross-legged figure crowned by a pointed headdress and flanked by dragon-headed staves. The dragons have gaping mouths with particularly long tongues, oriented towards the figure's head. Importantly, the dragons' undulant bodies descend diagonally from the staves and thus

<sup>&</sup>lt;sup>36</sup> "[The Sun's opponent, the "tailed Mūsh Parīg"] is tied to the sun's chariot but occasionally becomes loose and does great harm"; *Bundahishn* ch. 5.4.5 A. 6–7, 50.6–7, 53.1–5, and *Shkand-gumānīg wizār* 4.46, cited after Brunner, "Astronomy and Astrology," *EIr.* Cf. Jackson (1932, 30–32), Hartner (1938, 151), Zaehner (1955, repr. 1972, 164, n. E). MacKenzie (1964, 513, 516).

<sup>&</sup>lt;sup>37</sup> Bundahishn 34.17, 225.1–3, cited after Brunner, "Astronomy and Astrology," EIr.

<sup>&</sup>lt;sup>38</sup> Bundahishn 30.31, cited after Khareghat (1914, 128).

<sup>&</sup>lt;sup>39</sup> Manichaen Cosmological Fragment M. 98–99 in Turfan Pahlavi; Jackson (1932, 30–31, 38–39, ns. 1–7). See also Boyce (1975, repr. 1996, 60 text y 1 with note); Skjærvo, "Aždahā I," *EIr*.

<sup>&</sup>lt;sup>40</sup> For instance in the Coptic *Kephalaia* (ch. 69), cited after Beck (2004, 177f).

<sup>&</sup>lt;sup>41</sup> Al-Bīrūnī, Kitāb al-Tafhīm li-Awaī'l Sinā'at al-Tanjīm, 71.

<sup>&</sup>lt;sup>42</sup> MacKenzie, "Zoroastrian Astrology," 521–2, n. 53, 525. *The Mystical and Visionary Treatises of Suhrawardi* 1982, 113, n. 42.

<sup>&</sup>lt;sup>43</sup> M. Dabīrsīāqī, *Ganj-i bāz yāfta*, Tehran, 2535/1355 Sh., cited after Khāleqī-Moţlaq, "Aždahā II," *EIr*.



**Fig. 6** "A ruler on a dragon-throne," sign of the zodiac featuring the eclipsed pseudo-planet (*al-jawzahar*). Detail on the base of an inkwell. Western Central Asia. Late twelfth or early thirteenth century. Copper alloy, silver inlay. Location unknown. Source: Pugachenkova et al. (1960, Fig. 196)

directly associate the depiction with the entire body of the dragon; the latter representing an abbreviated reference to the astrological "head" (*ra's*) and the "tail" (*dhanab*) of the dragon.<sup>44</sup>

While the dragon is often associated with eclipses and, hence, the "devouring of light," its positive aspect as giver of light and, consequently, as protector of light is more difficult to gauge, although numerous references are found in poetry and in Iranian works in particular. Accordingly the polymath Asadī Ṭūsī writes of the sunlight in his epic *Garshāsp-nāma*:

<sup>&</sup>lt;sup>44</sup> For a discussion of the astronomical and astrological aspects of the dragon, see also Caiozzo (2009, 419–439, esp. 424–430).

[...] the dragon that gives the sun also takes it back by its poison. 45

The simile "the sun is delivered from the dragon" in the romantic epic,  $W\bar{\imath}s\ u$   $R\bar{a}m\bar{\imath}n$ , <sup>46</sup> almost certainly of Arsacid Parthian origin, expresses a related stance. Translated and versified by Fakhr al-Dīn Gurgānī around 440/1050 for the first Saljuq *sulṭān* Ṭoghrıl I, his minister Abū Naṣr ibn Manṣūr, and his governor Abu 'l-Fatḥ ibn Muḥammad of Iṣfahān, this notion is echoed by the great twelfth-century Persian poet Afdal al-Dīn Khāqānī (520/595–1126/1199), who writes in his  $d\bar{\imath}w\bar{\imath}n$ :

The dragon of the emerald (heavens) wreathes, [And] spews out the sun from the tip of its tongue.<sup>47</sup>

These references reflect the circular nature of the dragon's heavenly motions, as well as his agency of transformation that both devours and restores.

A double-headed celestial dragon is evoked in the description of the Persian poet Kamāl al-Dīn Abu 'l-'Aṭa' Maḥmūd ibn 'Alī Khwājū Kirmānī (689/1290–753/1352):

Two-branched head like two branches of a tree, Wrapped around one another knot by knot [...].

The poet then goes on to elucidate this imagery by explaining that "the universe is lit with the eyes of this dragon." This visual description is echoed in the  $d\bar{\imath}w\bar{a}n$  of Rashīd al-Dīn Wāṭwāt (d. 573/1177–9 or 578/1182–3), who was born in either Balkh or Bukhara, but spent most of his life in Gurganj, the capital of Khwārazm, and who describes the dragon's eyes as astral bodies. 49

The east-west aspect of the bipartite dragon and its light symbolism is further evoked in a passage of the fables and anecdotes of the early thirteenth-century *Marzubān-nāma*, with the allegorical allusion:

At dawn, when the black snake of night casts the sun's disc out of the mouth of the east  $[\ldots]_{*}^{50}$ 

This passage once again implies a double-headed dragon delivering the luminary and creating the light.

The paired and dualistic aspects of the dragon, for instance his beneficent/destructive or light/dark aspects, which represent a fundamental polarity on which the cosmic rhythm is based, are affirmed by Ṭarsūsī's twelfth-century compilation of prose narratives, the  $D\bar{a}r\bar{a}b$ - $n\bar{a}ma$ . He describes the following episode that happened to the hero:

<sup>&</sup>lt;sup>45</sup> Garshāsp-nāma, 475–6, cited after Daneshvari (1993, 21).

<sup>&</sup>lt;sup>46</sup> Translation cited after *idem*.

<sup>&</sup>lt;sup>47</sup> *Dīwān*, ed. 'A. 'Abdulrassūlī, Tehran, 1977/1356, 507; after Daneshvari (2011, 65).

<sup>&</sup>lt;sup>48</sup> Dīwān, Sanāyi' al Kamāl wa Badāyi' al-Jamāl; Malek Library Ms. Sh 5980, Tehran; printed A. Suhaylī-Kh"ānsārī, Tehran 1336/1957, 189–193; cited after *op.cit*. (61 and n. 21).

<sup>&</sup>lt;sup>49</sup> *Dīwān*, ed. S. Nafīsī, Tehran 1960/1339, 157; cited after *op.cit*. (80 and n. 69).

<sup>&</sup>lt;sup>50</sup> Sa'īd al-Dīn Warāwīnī, *Marzubān-nāma*, 51. Cf. Warāwīnī, *Marzubān-nāma*, ed. M. Rūshan, 2 vols., Tehran 1978, 96f, cited by Daneshvari (1993, 20f).

Tamrūsiyeh, while deep in thought, saw a snake as white as milk with two wings on its sides ... and a human face ... An hour passed and he saw another snake similar to the first one but black as the wings of a crow .... Tamrūsiyeh said: "The black snake should not be allowed to kill the white snake." So hurriedly he awoke the white snake and when the white snake saw the black one they began to battle .... Tamrūsiyeh rushed [into the fracas], took a large rock and hit the black snake on the head and killed it ... the large snake ... then disappeared. [Later] two snakes appeared and greeted Tamrūsiyeh and paid homage to him. They said, "The white snake was our offspring and God Almighty made you victorious. You aided our son and killed that demon."

Țamrūsiyeh retorted, "What kind of creatures are you and which [tribe] do you come from?" The snakes answered, "We belong to the angels [ $parīy\bar{a}n$ ] but the black snake was a demon [ $d\bar{\nu}\nu$ ] and they live behind the mountains and raise their heads above it . . .. These are not dragons but demons who make themselves look like dragons. <sup>51</sup>

This account seems to access a very deep substratum in that it confirms the existence of angelic and celestial dragons vis-à-vis demonic and ecliptic dragons. It also shows the inherent ambivalence of the great dragon beast, its white versus black attributes (or light against darkness), and its delivering versus devouring aspects. This conceptual pairing of opposites is also reflected in the symmetrically doubled dragons, in other words by their paired portrayal, on the architectural compositions discussed below.

The esoteric conceptualisation of the cosmic dragon is illuminated in the allegory of a hero's spiritual journey in *A Tale of Occidental Exile*, written by the mystic Shihāb al-Dīn Yaḥyā Suhrawardī (d. 587/1191), known as the *shaykh* of the Philosophy of Illumination (*ishrāq*):

If you desire to be delivered along with your brother [i.e., speculative reason, the guide  $(\bar{a}sim)$ ], do not put off traveling. Cling to your rope, which is the dragon's tail (jawzahr) of the holy sphere that dominates the regions of the lunar eclipse [the realms of the eclipse denoting the world of ascetic practice].<sup>52</sup>

The hero passes beyond the material world and reaches a light, the active intellect, which is the governor of this world. He places the light in the mouth of the dragon, the world of the elements, that "dwelt in the tower of the water-wheel [i.e., the sky which turns like a wheel], beneath which was the Sea of Clysma [i.e., the water below the sky] and above which are the stars the origin of whose rays was known only to the Creator and those 'who are well-grounded in knowledge'."

<sup>&</sup>lt;sup>51</sup> Ed. Dh. Ṣafā, Tehran, 1965/1344, vol. 1, 188; cited after Daneshvari (2011, 61 and n. 22). It is interesting to consider the white/black aspect of the serpent-dragon in the light of a tradition according to which "God struck Adam's back and drew forth from his all his progeny. The men predestined for heaven came forth from the right side in the form of pearl-like white grain; those doomed to hell came forth from the left side, in the form of charcoal-like black grain." Al-Ṭabarī, Mukhtaṣar taʾrīkh al-rusul wa 'l-mulūk wa'l-khulafāʾ, vol. 1, 1879–1901, 125–127; cited after Chelhod (1979, 240). For related symbolism in the Vedic scriptures, see Coomaraswamy (1935, 402).

<sup>&</sup>lt;sup>52</sup> The Mystical and Visionary Treatises of Suhrawardi, 102 and ns. r and s.

<sup>&</sup>lt;sup>53</sup> Idem, 105 and ns. uu, vv, ww.

Reminiscences of ancient cosmogonical notions may be gauged from Armenian lore recorded by the Armenian historian Moses of Chorene (Movsēs Khorenatsi), in his *Patmut'iwn Hayoc'* ("History of the Armenians"), <sup>54</sup> which relates the story of the Median king Astyages, the Armenian archenemy referred to as Aži Dahāka, the archetype of evil misrule, whose first wife, Anoysh, was called the "mother of the dragons" (Mahé 1995, 183). Her name, Anoysh, literally means "immortal, luminous, perfumed." Moreover, her association with the monstrous dragon, to whom she gives numerous offspring, recalls certain cosmogonies in which one of the two primordial entities is "infinite light, serene and joyous" and the other "a frightening and dark obscurity, coiled up in twisting spirals akin to those of a serpent." <sup>56</sup>

It is also interesting to note that the original meaning of the Sanskrit word *ketu* is "light" or "clarity" (synonymous with the etymologically related adjective *citra* of the Pahl. *gōchihr*), which is in apparent contradistinction to the light-devouring function of Ketu as eclipse demon (Hartner 1934, 152f).

The celestial association of the dragon is alluded to in one of the monumental entrance gates to the citadel of Aleppo, which was legendary for its impregnability. A pair of monumental, intertwined double-headed dragons tops the entrance gate (Fig. 7a, b). A large, relief-carved frieze with interlaced dragons surmounts a pointed archivolt with a raised frame at the main portal known as "Serpent Gate" (Bāb al-Ḥayyāt, re-built probably around 606/1209–10)<sup>57</sup> at the eastern tower of the citadel, which was rebuilt under the Ayyubid ruler al-Malik al-Zāhir ibn Salāh al-Dīn (568/1173–613/1216). Their two heads, one at the spring of the arch and two at the apex, are crowned by a pair of cusped ears and punctuated with small, round eyes; their pointed snouts reveal a row of prominent, pointed teeth with bifid tongues thrusting out. Scaly, ruff-like collars from which project what appear to be tiny, upswept, cusped wings accentuate the base of their necks and delineate their bodies. Their slender, serpentine bodies are thrice knotted on either side into evenly spaced, pretzel-like shapes. Their entwined necks at the apex result in an addorsed position of the dragon heads that, with their wide-open jaws, appear to grasp or attack their bodies; this configuration is mirrored in the lower necks and heads of the dragons at the tail tips, which are twisted around roundels enclosing eight-pointed star rosettes, which Willy Hartner has interpreted as solar symbols (Hartner 1934, 144).

A similar notion is conveyed on the small "Kiosk Mosque" situated in the arcaded rectangular courtyard of the double-section caravanserai Sultan Han, located northeast of Kayseri, on the main road that once linked Konya, Kayseri and Sivas to the east (Iraq and Iran). It is the second largest Saljuq caravanserai in Anatolia and was

<sup>&</sup>lt;sup>54</sup>The text is ostensibly written in the fifth century but its present form probably dates to the mid-eighth century; see the "Introduction" of *Khorenatsi: History of the Armenians* 1978, repr. 1980.

<sup>&</sup>lt;sup>55</sup> Acaryan, H., *Hayeren armatakan bararan* ("Dictionnaire etymologique armenien"), vol. 1, 206 b (in Armenian), cited by *idem*.

<sup>&</sup>lt;sup>56</sup> *Poimandres, Traites 1–12*, 7 and 12, n. 9.

<sup>&</sup>lt;sup>57</sup> See Herzfeld (1954–5, 85, no. 36), Tabbaa (1997, 75).





Fig. 7 (a) A pair of intertwining, winged double-headed dragons. Relief carving on the so-called "Gate of the Serpents" (Bāb al-Ḥayyāt), Citadel of Aleppo. Syria, Aleppo, ca. 606/1209–10. Source: After Ettinghausen and Grabar (1987, repr. 1994, Fig. 337). (b) Detail of the relief carving on the so-called "Gate of the Serpents" (Bāb al-Ḥayyāt), Citadel of Aleppo. Syria (ca. 606/1209–10)

built between 629/1232 and 633/1236, on the orders of 'Alā' al-Dīn Kay Qubādh I of Konya, as attested by an inscription on the portal. Resting on a four-bay substructure, both the south- and east-facing monumental ogival arches are symmetrically framed with a complex serpentine festoon. The latter is composed of reciprocally arranged pretzel-like shapes, culminating at the apex in confronted dragon protomes. Their heads, with large, almond-shaped eyes, topped by backward-projecting pointed ears, have wide-open jaws revealing tongues and sharp teeth (Fig. 8).

Both the south- and east-facing reliefs are closely related but, while the dragon protomes on the south side do not touch each other at the apex, the protomes on the east side are joined and enlivened by dots (Öney 1969, Figs. 6 and 7; Gierlichs



**Fig. 8** Apex of a dragon festooned with a pair of dragons confronting one another. Relief carving on the south-facing arch, mosque of Sultan Han. Central Turkey, northeast of Kayseri, village of Tuzhisar. 629/1232–633/1236. Photo courtesy of Joachim Gierlichs

1996, pls. 6.1, 2). Moreover, on the south-facing arch, the dragon festoons end in small, inverted dragon heads with large eyes, necks bent inwards, and open jaws that appear to hold the tip of the outer edge of the festoon band. It is thus interesting to observe that they seem to bite (in other words simultaneously "swallow" and "disgorge") their own tails. While this feature is not recognisable on the east-facing arch (possibly due to surface deterioration), it shows, interestingly, an additional small, upward-oriented dragon head, growing out of one of the bends of the dragon festoon to the left. Also of note is the fact that both serpentine festoons are surmounted by a further band enclosing a tightly-woven knotted composition distinguished by a small eight-petalled star rosette in the interstitial area at the apex (although on the east side, this is no longer identifiable due to surface deterioration). Katharina Otto-Dorn has interpreted the rosette as a planetary symbol suggesting an astral-mythological reading of the iconography (1978–79, 130f, Fig. 24).

A closely related Saljuq dragon sculpture can be found on the now partly destroyed thirteenth-century caravanserai, Susuz Han (Susuz Khān), dated ca. 644/1246, located about one kilometre south of Bucak, just off the Burdur-Antalya road. Here the ogives of a pair of recessed *muqarnas* niches that flank the portal are each surmounted by a pair of antithetically presented dragons in profile (Fig. 9). The heads of the mythical creatures are crowned by curved horns. They have elongated snouts that end in curled-up tips and their mouths are wide-open. Their sinuous necks are covered with scales and from their protomes project curved wings and short forelegs. At the apex, the confronting dragon mouths flank a small, rounded human head with clearly demarcated eyes, ears, nose, and mouth. The dragons' stylised festooned tails, which echo the contemporary festoon on the arches of the "Kiosk Mosque" at Sultan Han, frames the entire arch (without

<sup>&</sup>lt;sup>58</sup> This detail is documented by Öney (1969, Fig. 7a). Cf. Gierlichs (1996, pl. 6.1), and features the entire festoon on which, however, it is difficult to discern this feature.

<sup>&</sup>lt;sup>59</sup> See detail in *idem*, pl. 7.3.



**Fig. 9** A pair of winged dragons with forelegs flanking a human head surmounted by winged figures. Relief carving above two niches that flank the main portal, Susuz Han. Southwestern Turkey, south of Bucak, ca. 644/1246. Photo by Sara Kuehn

however ending in a second head at the tail tip, as on the south-facing ogive arch at Sultan Han). The composition is further distinguished by a pair of winged figures that flank a central, now destroyed, motif. These figures seem to hover protectively over the composition and can be assumed to have celestial significance. Their presence seems to bestow an honorific dimension upon the enigmatic iconography of the mask-like human heads tightly enclosed by the dragons' gaping jaws.

A pair of monumental antithetical dragons are similarly depicted on a deeply-carved relief band at the back of the entrance  $\bar{\imath}w\bar{a}n$  at Karatay Han, on the former trade road linking Kayseri with Malatya, built during the reign of  $Sult\bar{a}n$  Ghiyāth al-Dīn Kay Khusraw II in 638/1240–1. Their expansive serpentine bodies, entirely stylised by three parallel moulded bands, form a horizontal guilloche, which extends to frame the entire arch and interlaces at the apex to form a central circular motif, presumably alluding to stellar symbolism (Fig. 10a, b). Tongues with bifid tips touch the edges of the central motif, projecting from the toothed jaws of the substantial dragon heads which are finely carved in profile with slightly gaping mouths and long, wrinkled snouts, the tips terminating in a tight curl. Their heads have small, almond-shaped eyes and their cheeks are enlivened by fine spiralling motifs. A pair of cusped ears crowns their heads; their manes swept back and covering the uppermost section of their finely carved, scaly necks. <sup>60</sup>

<sup>&</sup>lt;sup>60</sup> The iconography is entirely absent from surviving Western Central Asian monumental art until the fifteenth century, when it first appeared on the portal of Abu 'l-Qāsim Babur's mosque dating





**Fig. 10** (a) A pair of dragons with entwined bodies flanking a stellar emblem. Relief carving at the back of the entrance to  $\bar{\imath}w\bar{a}n$ , Karatay Han. Central Turkey, east of Kayseri, village of Karadayi, ca. 638/1240–41. Photo by Sara Kuehn. (b) Detail of relief carving at the back of the entrance to  $\bar{\imath}w\bar{a}n$ , Karatay Han. Central Turkey, east of Kayseri, village of Karadayi, ca. 638/1240–41. Photo by Sara Kuehn

from 848/1444–5, situated in the shrine complex of Jamāl al-Ḥaqq wa 'l-Dīn at Anau near Ashgabat in Turkmenistan, which was destroyed when the area was struck by an earthquake in 1948. There, two symmetrical large yellow dragons set against a blue background in mosaic faience were depicted in the tympanum of the portal arch. Some of the dragon mosaic has been recovered and is now housed at the Fine Arts Museum of Ashgabat. The portal was photographed by the German art historian Ernst Cohn-Wiener in the 1920s, whose collection of photographs taken in west Turkestan is kept at the British Museum and published online in the digital library of archnet.org; ArchNet Image ID ICW0120 (accessed July 2013). For a discussion of the Anau dragon motif, see Pugachenkova (1956, 125–9). Dragons also appear in the spandrels of a fifteenth-century mosque at the shrine complex of Turbat-i Sheikh Jām halfway between Mashhad and Herat in Khurasan; see Daneshvari (1993, pl. I, Fig. 1), and *idem* (2011, 84, pl. 39).

The pairing of the dragons, aimed at buttressing and doubling the visual impact, was a noticeable feature that may have served to both augment and reinforce the symbol's potency. The cult of heaven ( $t\ddot{a}\tilde{n}r\dot{i}$ ) was central to the ancient Turko-Mongol system of belief, its beginnings going back to ancient times. The belief system played a fundamental role not only in the notions of legitimacy and sovereignty (Spuler 1939, repr. 1955, 168–9), but comprised the veneration of the sun, in particular the rising sun, the moon, and the natural phenomena of the heavens in which the belief in a dragon also played an important role. The inherently ambivalent aspect of the great beast is also mirrored in ancient Turkish cosmology, which saw the creature living underground in winter, then reappearing in the spring and soaring into the sky in the summer, where it reigned at the zenith as a divine creature (Boratav, "Drache." WdM, 207). It may thus be suggested with a degree of certainty that the double dragon featured above or next to archways alludes to the heavenly spheres and the diurnal cycle of the light of day followed by the darkness of night.

At this juncture, it is important to emphasise that the intrinsic as well as extrinsic ambiguity of the serpent-dragon also entails an element of transcendence, necessarily so since the creature's mystery can only be explained as flowing from the juxtaposition of two or more levels of reality. In essence, then, the dragon defies understanding. The cosmic aspect of the dragon also involves a sacred dimension; it is interesting to note that the Latin term *sacer* means both sacred and wretched or cursed. Its inherent duality makes the dragon image an embodiment of change and transformation par excellence. Such associations extend the dragon's semantic territory as agent of metamorphosis into the realm of spiritual conception. Further, the great beast serves as metaphor for spiritual realities whose meanings are obscured or veiled.

In his short tractate entitled *Sod ha-Nachasch u-Mischpato* ("Mystery of the Serpent"), the thirteenth-century cabalist, Joseph Gikatilla ben Abraham, a disciple of the Spanish mystic Abraham ben Samuel Abulafia (1240–ca. 1292), sheds some light on the mystery of the mythical creature, which serves not only as a liminal symbol, situated upon the ambiguous dividing line between the divine and the demonic but also as the serpent of heaven:

<sup>&</sup>lt;sup>61</sup>Cf., for instance, the Mongol formula, *möngke tngri-yin küčün-dür* ("In the Might of the Everlasting Heaven"), found at the beginning of some Mongol letters; Meyvaert (1980, 253, n. 39 and 258, n. 79).

<sup>&</sup>lt;sup>62</sup> Spuler (1939, repr. 1955, 140), with reference to D. Banzarov, *Černaja věra ili* šamanstvo *u Mongolov i drugija stat'i* ("Der schwarze Glaube oder der Schamanismus bei den Mongolen und andere Aufsätze"), edited by G. N. Potanin, St. Peterburg, 1891, 15f. Cf. Liu (1958, 10), Roux (1978, 128, also 143).

<sup>&</sup>lt;sup>63</sup> See also Esin (1970–71, 161–82), and a review by Rogers (1970, 161–82), in which he disputes the cosmological significance of the dragon in Turkish art. In her reply (1973–74, 151f), Esin quotes, *inter alia*, from Yusūf Khāṣṣ Ḥājib's *Qutadghubilig* ("Wisdom of Royal Glory") completed in 462/1069–70, couplet 126:

Yarattı, kor, evren, tuci evrilur Anıng birle tezginc yime texginur ("See, He created evren [the dragon] which revolves continually, Together with it revolves the Ecliptic").

For a further discussion, see Esin (1981, 834).

Know that from the outset of its creation the serpent represented something important and necessary for harmony so long as it stood in its place. It was the Great Serpent who had been created to carry the yoke of both sovereignty and service. Its head surmounted the heights of the earth and its tail reached into the depths of hell.

Yet in all worlds it had a befitting place and represented something extraordinarily significant for the harmony of all stages, each one in its place.

And this is the secret of *the serpent of heaven* [emphasis added] that is known from the *Sefer Yezira*, and that sets in motion the spheres and their cycle from east to west and from north to south. And without it no creature in the sublunar world had life, and there would be no sowing and no growth and no motivation for the reproduction of all creatures.

This serpent now stood originally outside the walls of the sacred precincts and was connected from the outside with the outer wall, since its tail was linked with the wall whereas its countenance was oriented inwards. It did not befit it to enter the inside, but its place and law was to affect the creation of growth and reproduction from the outside, and this is the secret of the tree and the knowledge of good and evil.<sup>64</sup>

Finally, it is important to recall the significance accorded to the great serpent in the legendary Islamicised prophetic tales, based on the authority of learned men from the early years of Islam but recorded only from the eleventh century onwards. Related by the  $qussas al-\bar{a}mm$  ("narrators for the common folk"), who enjoyed great success with popular audiences, the tales reveal the extraordinary aura that surrounded the fabulous beast. Not only was the great serpent said to encircle the divine canopy, but it was singled out to:

... greet [the] Prophet Muḥammad on the night of his ascent into heaven and give him glad tidings concerning himself and the community. 65

#### **Abbreviations**

- EHAS Rashed, Roshdi, ed. 1996. *Encyclopedia of the History of Arabic Science*, 3 vols., London and New York: Routledge.
- EI<sup>2</sup> The Encyclopaedia of Islam, 2nd ed., 11 vols., Leiden: Brill, 1960–2005, Extract from The Encyclopaedia of Islam CD-ROM v.-1.0.
- EIr *Encyclopaedia Iranica Online*. Available: http://www.iranica.com/newsite/. Accessed February 2012.
- WdM Haussig, Hans Wilhelm, ed. 1965–86. *Wörterbuch der Mythologie*, 7 vols., Stuttgart: Ernst Klett Verlag.

<sup>&</sup>lt;sup>64</sup> See Scholem (1957, repr. 1988, 437).

<sup>&</sup>lt;sup>65</sup> Al-Kisā'ī (citing the authority of Ka'b al-Ahbār) in *Qisas al-anbiyā*', 7.

#### References

### **Primary Sources**

Bet ha-Midrasch, Sammlung kleiner Midraschim und vermischter Abhandlungen aus der älteren jüdischen Literatur, 6 vols., edited by Adolph Jellinek. 1853–73. Leipzig and Vienna: F. Nies, repr. 1967.

- al-Bīrūnī, Abu 'l-Rayḥān Muḥammad ibn Aḥmad. *Kitāb al-Tafhīm li-Awaī'l Ṣinā'at al-Tanjīm*, translated and edited by R. Ramsey Wright. 1934. *The Book of Instruction in the Elements of the Art of Astrology*, repr. from British Museum Ms. Or. 8349. London: Luzac and Co.
- al-Bīrūnī, Abu 'l-Rayḥān Muḥammad ibn Aḥmad. *Kitāb al-Āthār al-Bāqiya 'an al-qurūn alkhāliya*, translated and edited by Carl Eduard Sachau. 1876–8. *Chronologie orientalischer Völker von Albêrûnî*. Leipzig and London: Deutsche Morgenländische Gesellschaft.
- al-Firdawsī, Abu 'l-Qāsim. *In the Dragon's Claws: The Story of Rostam & Esfandiyar from the Persian Book of Kings*, translated and edited by Jerome W. Clinton. 1999. Washington: Mage Publishers.
- al-Damīrī, Kamāl al-Dīn Muḥammad ibn Mūsā. *Ḥayāt al-ḥayawān al-kubrā*, translated and edited by Atmaram Sadashiva Grandin Jayakar. 1906. *Ad-Damiri's Ḥayat al-ḥayawan* ("A Zoological Lexicon"), vol. 1. London and Bombay: Luzac and Co.
- Eznik of Koghb (Kołb). *Elc alandoc* ("A Treatise on God"), translated and edited by Louis Mariès and Charles Mercier. 1959. *Eznik de Kołb: De Deo*. Patrologia Orientalis, vol. 28, Armenian text, fasc. 3, French tr., fasc. 4. Paris: Firmin-Didot et Cie.
- Hermes Trismegistus. *Poimandres, Traites 1–12*, translated and edited by Arthur Darby Nock and André-Jean Festugière. 1946. *Corpus hermeticum*, vol. 1, 4, Paris: Les belles lettres.
- Khorenatsi, Movsēs (Moses of Chorene). *Khorenatsi: History of the Armenians*, translated and edited by Robert William Thomson. 1978. Cambridge: Harvard University Press, repr. 1980.
- al-Kisāʾī, Muḥammad ibn ʿAbdullāh. *Qiṣaṣ al-anbiyāʾ*, translated and edited by Wheeler McIntosh Thackston. 1978. *The Tales of the Prophets of al-Kisāʾī*. Boston: Twayne Publishers.
- Philo of Byblos. *The Phoenician History: Introduction, Critical Text, Translation, Notes*, translated and edited by Harold W. Attridge and Robert A. Oden Jr. 1981. Washington: The Catholic Biblical Association of America.
- al-Suhrawardī, Shihābuddīn Yaḥyā. *The Mystical and Visionary Treatises of Suhrawardi*, translated and edited by Wheeler McIntosh Thackston. 1982. London: Octagon Press.
- al-Ṭabarī, Abū Jaʿfar Muḥammad ibn Jarīr ibn Yazīd. *Mukhtaṣar taʾrīkh al-rusul (al-umam) wa ʾl mulūk wa ʾl-khulafāʾ*, edited by Michael Jan de Goeje. 1879–1901. *Annales quos scripsit Abu Djafar Mohammed ibn Djarir at-Tabarī*. Leiden: Brill.
- al-Thaʿlabī, Abū Isḥāq Aḥmad ibn Muḥammad ibn Ibrāhīm. 'Arāʾis al-majālis fī qiṣaṣ al-anbiyāʾ, translated and edited by William M. Brinner. 2002. Lives of the Prophets, vol. 24. Leiden: E. J. Brill.
- al-Warāwīnī, Sa'd al-Dīn. *Marzubān-nāma*, translated and edited by Reuben Levy. 1959. *The Tales of Marzuban*. London: Thames and Hudson.

## **Secondary Sources**

- Beck, Roger. 2004. *Beck on Mithraism: Collected Works with New Essays*. Ashgate Contemporary Thinkers on Religion. Aldershot, Hants, England: Ashgate.
- Boyce, Mary. 1975. A History of Zoroastrianism: The Early Period, vol. 1, Handbuch der Orientalistik, 1, Religion, 1, Religionsgeschichte des alten Orients, 2, 2a. Leiden: Brill, repr. 1996.

- Boyce, Mary. 1984. Textual Sources for the Study of Zoroastrianism. Manchester: Manchester University Press.
- Boyce, Mary, and Frantz Grenet. 1991. A History of Zoroastrianism: Zoroastrianism under Macedonian and Roman Rule, with a contribution by Roger Beck, vol. 3. Leiden: Brill.
- Caiozzo, Anna 2009. "Autour des dragons célestes: astronomie, astrologie, magie et imaginaire en Orient médiéval." In Good Dragons Are Rare: An Inquiry into Literary Dragons East and West, edited by Fanfan Chen and Thomas Honegger. Frankfurt am Main: Peter Lang: 419–439.
- Chelhod, Joseph 1979. "A Contribution to the Problem of the Pre-Eminence of the Right, Based upon Arabic Evidence." In *Right & Left: Essays on Dual Symbolic Classification*, edited by Rodney Needham. Chicago: University of Chicago Press: 239–262.
- Coomaraswamy, Ananda K. 1935. "Angel and Titan: An Essay in Vedic Ontology." *Journal of the American Oriental Society* 55, 4: 373–419.
- Daneshvari, Abbas. 1993. "The Iconography of the Dragon in the Cult of the Saints in Islam." In *Manifestations of Sainthood in Islam*, edited Grace Martin Smith, 15–25. Istanbul: Isis Press.
- . 2011. Of Serpents and Dragons in Islamic Art: An Iconographical Study. Costa Mesa: Mazda Publishers.
- Duchesne-Guillemin, Jacques. 1990. "The Dragon and the Lunar Nodes." In *Bulletin of the Asia Institute* 4: 17–9.
- Elderkin, George Wicker. 1924. *Kantharos: Studies in Dionysiac and Kindred Cult*, Princeton Monographs in Art and Archaeology XII. Princeton: Princeton University Press.
- Esin, Emel. 1970–1. "Evren, Selçuklu san'atı evren tasvirinin Turk ikonografisinde menşe'leri (The Origins of Saljuq Cosmological Symbols in Turkish Iconography)." In *Selçuklu Araştırmaları Dergisi* [Journal of Seljuk Studies] I, Ankara: 161–82, and 19 unnumbered pls.
- . 1981. "The Religious Terminology of *Qutadghu Bilig* (462/1070)." In *Sprache und Erkenntnis im Mittelalter: Akten des VI. Internationalen Kongresses für Mittelalterliche Philosophie der Société Internationale pour l'Étude de la Philosophie Médiévale. 29 August 3 September, 1977 in Bonn*, edited by Jan P. Beckmann and Wolfgang Kluxen, 831–7. Berlin: De Gruyter, IV.3.
- Ettinghausen Richard, and Oleg Grabar. 1987. *The Art and Architecture of Islam 650–1250*. New York: Penguin, repr. 1994.
- Gierlichs, Joachim. 1996. Mittelalterliche Tierreliefs in Anatolien und Mesopotamien: Untersuchungen zur figürlichen Baudekoration der Seldschuken, Artuqiden und ihrer Nachfolger bis ins 15. Jahrhundert, Istanbuler Forschungen 42. Tübingen: Ernst Wasmuth Verlag.
- Ginzberg, Louis. 1909–38. *The Legends of the Jews*, 7 vols. Philadelphia: The Jewish Publication Society of America, repr. 1946 and 1955.
- Le Goff, Jacques. 1980. *Time, Work & Culture in the Middle Ages*, translated by Arthur Goldhammer. Chicago: University of Chicago Press.
- Gray, Louis H. 1906. "The Jews in Pahlavi Literature." In *Actes du XIV Congrès International des Orientalistes*. Paris: Leroux: 161–92.
- Hartner, Willy. 1938. "Pseudoplanetary Nodes of the Moon's Orbit in Hindu and Islamic Iconographies." In Ars Islamica 5, 2: 114–54.
- Hauptmann von Gladiss, Almut. 2006. "Amid–Diyarbakr." In *Die Dschazira: Kulturlandschaft zwischen Euphrat und Tigris*, edited by Almut Hauptmann von Gladiss. Berlin: Museum für islamische Kunst Berlin: 29–33.
- Herzfeld, Ernst. 1954–55. *Matériaux pour un Corpus Inscriptionum Arabicum, Troisième Partie: Syrie du Nord. Inscriptions et Monuments d'Alep*, tome I, vol. 1. Cairo: Institut Français d'Archéologie Orientale.
- Jackson, Abraham Valentine Williams. 1932. *Researches in Manichaeism*, Columbia University Indo-Iranian Series 13. New York: Columbia University Press.
- Katz, Marion Holmes. 2002. Body of Text: The Emergence of the Sunnī Law of Ritual Purity. Albany: State University of New York Press.

Khareghat, Muncherji Pestonji. 1914. "The Identity of Some Heavenly Bodies Mentioned in Old Iranian Writings." In *Sir Jamsetjee Jejeebhoy Madressa Jubilee Volume*, edited by Jivanji Jamshedji Modi. Bombay: Fort Printing Press: 116–58.

- Kuehn, Sara. 2011. *The Dragon in Medieval East Christian and Islamic Art*. Leiden, Boston: Brill. Liu, Mau-Tsai. 1958. *Die chinesischen Nachrichten zur Geschichte der Ost-Türken (T'u-kue*), 2 vols. Wiesbaden: Verlag Otto Harrassowitz.
- MacKenzie, David Neil. 1964. "Zoroastrian Astrology in the *Bundahišn*." In *Bulletin of the School of Oriental and African Studies* 27: 511–29.
- Mahé, Jean-Pierre. 1995. "Dragons et serpents dans les traditions arménienne." *Actes du colloque* "Les Lusignans et l'OutreMer," 20–4 octobre 1993. Poitiers: Université de Poitiers: 181–9.
- De Mallmann, Marie-Thérèse. 1962. Les enseignements iconographiques de l'Agnipurāna. Annales du Musée Guimet, Bibliothèque d'études 67. Paris: Musée Guimet.
- Markel, Stephen A. 1995. *Origins of the Indian Planetary Deities*. Studies in Asian Thought and Religion, vol. 16. Lewiston: Edwin Mellen Press.
- Mathews, Thomas F. 1982. "The Genesis Frescoes of Alt'amar." Association de la Revue des Études Arménienne, ser. n.s., vol. 16: 245–257.
- Meinecke, Michael. 1989. "Islamische Drachentüren." Museumsjournal, Berichte aus den Museen, Schlössern und Sammlungen im Land Berlin 3, series 4: 54–8.
- Meyvaert, Paul. 1980. "An Unknown Letter of Hulagu, Il-Khan of Persia, to King Louis IX of France." In *Viator* 11: 245–60.
- Needham, Joseph, and Ling Wang. 1965. Science and Civilisation in China, vol. 4, Physics and Physical Technology, part 2, Mechanical Engineering. Cambridge: Cambridge University Press.
- Öney, Gönül. 1969. "Anadolu Selçuk sanatında ejder figürleri ("Dragon Figures in Anatolian Saljuk Art")." In *Belleten* XXXIII: 171–92 (Turkish vers.), 193–216 (English vers. and pls.).
- Otto-Dorn, Katharina. 1978–9. "Figural Stone Reliefs on Seljuk Sacred Architecture in Anatolia." *Kunst des Orients* 12, 1–2: 103–49.
- Panaino, Antonio. 2004. "Two Zoroastrian Nērangs and the Invocations to the Stars and the Planets." In *The Spirit of Wisdom [Mēnōg ī Xrad]. Essays in Memory of Ahmad Tafazzoli*, edited by Touraj Daryaee and Mahmoud Omidsalar. Costa Mesa: Mazda Publishers: 196–218.
- 2005. "Lunar and Snake Omens among the Zoroastrians," In Officina Magica: Essays on the Practice of Magic in Antiquity, edited by Shaul Shaked, IJS Studies in Judaica, vol. 4. Leiden and Boston: Brill: 73–89.
- Pingree, David Edwin. 1989. "Indian Planetary Images and the Tradition of Astral Magic". In *Journal of the Warburg and Courtauld Institutes* 52: 1–13.
- . 2006. "The Byzantine Translations of Māšā'allāh on Interrogational Astrology," In *The Occult Sciences in Byzantium*, eds. Paul Magdalino and Maria V. Mavroudi. Geneva: La Pomme d'Or: 231–44.
- Pugachenkova (Pugačenkova), Galina Anatolyeva. 1956. "Dragony Mecheti Anau." In *Sovietskaya Etnografiya* 2: 125–9.
- Pugachenkova (Pugačenkova), Galina Aleksandrovna, and Lazar' I. Rempel'. 1960. Vydayushchiesya pamyatniki izobrazitel'nogo iskusstva Uzbekistana. Tashkent: Gosudarstvennoe Izdatel'stvo Khudozhestvennoĭ Literatury UzSSR.
- Reitzenstein, Richard. 1916. "Himmelswanderung und Drachenkampf in der alchemistischen und frühchristlichen Literatur." In Festschrift Friedrich Carl Andreas zur Vollendung des siebzigsten Lebensjahres am 14. April 1916 dargebracht von Freunden und Schülern, Harrassowitz: Leipzig: 33–50.
- Rhodokanakis, Nikolaus, with addendum by Armin Ehrenzweig. 1921. "Genesis 2–4." In Zeitschrift für die alttestamentliche Wissenschaft 39: 76–83.
- Rogers, Michael J. 1970–1. "Selçuklu Araştırmaları Dergisi [Journal of Seljuk Studies] I, Selçuklu Tarihi ve Medeniyeti Enstitütüsü, Ankara, 1970, pp. 256." Kunst des Orients VII, 1: 267–9.

- Ronca, Italo. 1998. "Religious Symbolism in Medieval Islamic and Christian Alchemy." In Western Esotericism and the Science of Religion, edited by Antoine Faivre and Wouter J. Hanegraaff, Gnostica 2. Leuven: Peeters Publishers: 95–116.
- Roscher, Wilhelm H. 1914. Omphalos: eine philologisch-archäologisch-volkskundliche Abhandlung über die Vorstellung der Griechen und anderer Völker vom "Nabel der Erde", Abh. der phil.-hist. Kl. der Sächsischen Gesellschaft der Wissenschaften, vol. XXIX, no. IX, 9 pls.
- 1915. Neue Omphalosstudien: ein archäologischer Beitrag zur vergleichenden Religionswissenschaft, Abh. der phil.-hist. Kl. der Sächsischen Gesellschaft der Wissenschaften, vol. XXXI, no. I, 7 pls.
- Roux, Jean-Paul. 1978. "La prétendue représentation du calendrier des douze animaux dans l'art islamique medieval." In *Journal Asiatique*, vol. 266, nos. 3–4: 237–49.
- Russell, James R. 1987. Zoroastrianism in Armenia. Harvard University, Dept. of Near Eastern Languages and Civilizations. Cambridge, MA: National Association for Armenian Studies and Research.
- ———. 2004. Armenian and Iranian Studies, Harvard Armenian Texts and Studies 9, Cambridge: Armenian Heritage Press..
- Scherer, Anton. 1953. Gestirnnamen bei den Indogermanischen Völkern. Heidelberg: Carl Winter Verlag.
- Schlüter, Margarete. 1982. "D<sup>e</sup>rāqôn" und Götzendienst: Studien zur antiken jüdischen Religionsgeschichte, ausgehend von einem griechischen Lehnword in mAZ III 3, Judentum und Umwelt. Frankfurt a. M. and Bern: Verlag Peter Lang.
- Scholem, Gershom. 1957. Die jüdische Mystik in ihren Hauptströmungen. Frankfurt a. M.: A. Metzner, repr. 1988.
- Schütt, Hans-Werner. 2002. "Alchemie und Transzendenz im Spiegel zweier Symbole." In *Neuzeitliches Denken: Festschrift für Hans Poser zum 65. Geburtstag*, edited by Günter Abel, Hans-Jürgen Engfer and Christoph Hubig. Berlin and New York: de Gruyter: 101–116.
- Sezgin, Fuat. 1971. Alchimie-Chemie-Botanik-Agrikultur bis ca. 430 H., Geschichte des arabischen Schrifttums, vol. 4. Leiden: Brill.
- Spuler, Bertold. 1939. Die Mongolen in Iran: Politik, Verwaltung und Kultur der Ilchanzeit 1220– 1350. Leipzig: J. C. Hinrichs, repr. 1955.
- Stapleton, Henry Ernest, and M. Hidāyat Ḥusain. 1933. "Excursus (with Relevant Appendices) on the Date, Writings, and Place in Alchemical History of ibn Umail, an Edition (with Glossary) of Early Medieval Latin Rendering of the First Half of the Māʾ al-Waraqī, and a Descriptive Index–Chiefly of the Alchemical Authorities Quoted by Ibn Umail." Memoirs of the Asiatic Society of Bengal, 12, no. 1: 117–213.
- Tabbaa, Yasser. 1997. Constructions of Power and Piety in Medieval Aleppo. University Park: The Pennsylvania State University Press.
- Thierry, Jean-Michel, Donabédian, Patrick and Thierry, Nicole. 1987. *Les arts arméniens*, L'art et les grandes civilisations, 17. Paris: Mazenod.
- Ullmann, Manfred. 1972. Die Natur- und Geheimwissenschaften im Islam, Handbuch der Orientalistik I, Der Nahe und der Mittlere Osten, Ergänzungsband VI, 2. Brill: Leiden.
- Watkins, Calvert. 1995. *How to Kill a Dragon: Aspects of Indo-European Poetics*. Oxford and New York: Oxford University Press.
- Wensinck, Arent Jan. 1978. The Ideas of the Western Semites Concerning the Navel of the Earth, Verhandelingen der Koninklijke Akademie van Wetenschappen te Amsterdam, Afdeeling Letterkunde, Nieuwe Reeks, Deel XVII, no. 1. Amsterdam 1916, reprinted in Studies of Arent Jan Wensinck. Amsterdam, New York: Arno Press.
- Wheeler, Brannon M. 2002. *Prophets in the Quran: An Introduction to the Quran and Muslim Exegesis*. Comparative Islamic Studies. London and New York: Continuum.
- Zaehner, Robert Charles. 1955. Zurvan: a Zoroastrian Dilemma, Oxford: Clarendon, repr. 1972.