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Antonio PANAINO
Université de Bologne

**AHREMAN'S ASCENT
AND THE DIRECTION
OF HIS PRIMORDIAL AGGRESSION**

With an Excursus about the Cosmic Egg

Université de Strasbourg

2025

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In memory of my dear friend
Ivan M. Steblin-Kamenskij (1945-2018)
and of the nice times spent reciting
Wakhi fairy tales and nursery rhymes.

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Image de couverture
Ursa Major according to Tabula VI in J.E. Bode,
Uranographia sive Astrorum Descriptio, Berlin 1801.

Institut d'histoire des religions
Faculté des Sciences historiques
Palais universitaire
9, Place de l'Université
67084 Strasbourg cedex

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Introduction and Acknowledgments

This brief essay resumes some of my most recent investigations on the dynamics of Ahreman's aggression and their implication with respect to the Mazdean uranography and cosmology since the Avestan sources till the New Persian outcomes. It emphasizes some problems, such as the direction of Ahreman's motion from the deepness toward the level of the stars, and the horizontal break of the celestial vault. These aspects imply a number of cosmological problems, which present us with peculiar and, sometimes, strange contradictions, which show the difficult metabolization in Iran of some foreign scientific ideas, and the enduring preservation of earlier, ancestral, traditions. The results presented in the present study have been obtained in some years of study in which I have benefitted of many intellectual exchanges and support kindly received by many colleagues and friends.

I would like in particular to mention some of the scholars who gave important advice to my research. In particular, I would like to thank Prof. Samra Azarnouche (EPHE, Paris), Prof. Alberto Cantera (Freie Universität zu Berlin), Prof. Enrico Raffaelli (University of Toronto, Mississauga) for their unvaluable suggestions and remarks during the

elaboration of the present work.¹ I express special thanks to Dr. Afshin Aryanpur (Tehran) for his help in the preparation of the astronomical diagram appended to this essay, and for the various discussions about this relevant Persian text. Furthermore, I owe a number of insightful comments and remarks to Dr. Angelica Gaspari (University of Roma, “La Sapienza”), Dr. Alessia Zubani (Oxford University), and Dr. Naghmeh Mahzounzadeh (University Ca’ Foscari, Venice). I also want to express my deep gratitude to Prof. Gian Pietro Basello (Università di Napoli ‘L’Orientale’) for his generous support in the arrangement of the first figure, published in this volume, and dedicated to the visualization of Ahreman’s motion from the bottom of the pre-ordered universe and the circumpolar area. I am very happy to express my deepest gratitude to Dr. Susanne M. Hoffmann (Berlin and Jena), who very kindly accepted to calculate and design the (second) figure of this volume, concerning the sky vault and its circumpolar area around -1000 from the latitude of Babylonia and Persia.

I must inform the reader that the present work has been developed in the framework of a period of research between April and May 2025 offered by the ERC Project ZODIAC – Ancient Astral Science in

¹ In particular Professor Raffaelli was working on some Persian texts contemporarily with me, so that we have exchanged many comments. I had also the opportunity to consult his final text before my essay could be sent to the print.

Transformation, directed by Prof. Mathieu Ossendrijver, within the Department of History and Cultural Studies of the Freie Universität zu Berlin. In that occasion I had the opportunity to deliver two pertinent talks, one in the department of Prof. Mathieu Ossendrijver, the latter in that of Prof. Alberto Cantera. Thanks to these events, reach of supportive and illuminating suggestions and discussions, I was compelled to refine my ideas on various topics discussed in the present essay. Furthermore, I want to express my gratitude to Prof. Mario Neve (University of Bologna) for his assistance, as a professional geographer, in the treatment of some anthropological problems concerning the classification and distribution of the cardinal directions within a comparative and historical perspective. I thank my friend Prof. Velizar Sadovski (Österreichische Akademie der Wissenschaften) for his precious support and his advice on some subjects of common interest; furthermore, I must express my gratitude to Prof. Sadovski for the kind preparation of the final etymological Excursus about Yav. *apāxtara-*. Many thanks also to Prof. Paolo Ognibene for his continuous collaboration, which has been most relevant in the preparation of this volume.

Last but not least, I heartfully thank my colleague and friend Prof. Céline Redard of the University of Strasbourg, for her important comments and her generous support to the publication of the present research in the framework of her series of studies.

Without her unreserved and friendly help, the destiny of this book would have been very uncertain.

Ravenna – Aix-en-Provence, July 24th 2025

1. The Primordial Kingdom of Ahreman, and His Aggression

As it is well known,² the Pahlavi texts, in particular the Bundahišn, chapter 1,³ describe the premises of the attack of Ahreman against the kingdom of Ohrmazd, which was symbolically imagined as upraised on high with respect to the inferior position of the Darkness. Thus, the invasion, which takes place after Ahreman's awakening, must inevitably follow a motion upwards, starting from the realm of Darkness, located deep down (*zofr-pāyag*) within the "primitive" space of the pre-ordered universe. Then, we should logically conceive the motion of Ahreman as an ascent from the bottom of the primordial, pre-ordered, universe throughout the intermediate area of the "void" (*tuhīgīh*)⁴ or of the "atmospheric space" (*wāy*). The

² I began addressing the issues discussed in this study several years ago (see PANAINO 2019a: 132-139, *passim*), but in the meantime some new elements have emerged in my reflection.

³ See PAKZAD 2005: 4-25; CERETI & MACKENZIE 2005: 32-42; AGOSTINI & THROPE 2020: 6-11.

⁴ The cosmological and cosmographical role of the "void" is a subject of paramount importance in the speculative philosophy of late Antiquity. For instance, the presence of an intermediate void between the two kingdoms, as a bold differentiation between the Manichaean and the Mazdean primordial representation of the pre-ordered universe, was foundational in the theological debates. Apropos of this

latter was, in its turn, divided in two parts, one attributed to the “Bad Wind” (*Wāy ī wattar*) and another one to the “Good Wind” (*Wāy ī weh*).⁵ After Ahreman had pierced at noon (*nēm-rōz*) the inferior

subject, we should remark that the elaboration of the concept of “void” and not simply of empty space is *in se* of philosophical nature. We must observe that in the Manichaean doctrine, the kingdom of light and that of darkness are just contiguous, while in the Mazdean system, they are well distinguished and separated by means of the intermediate presence of the void/wind, according to a cosmological distinction, which was well understood also by the Muslim polemicists. A subtle consequence of these speculations about the infinite and the void strictly concerns the “essence” or “ipseity” (*xwadīh*) of God. According to later Zoroastrian theologians, such as the ones of the school which produced the *Dēnkard* (i.e., in particular *Ādurfanbag ī Farroxxādān* and *Ādurbād ī Ēmēdān*), but also (although with a different emphasis), a layman such as *Mardān-farrok*, Ohrmazd himself cannot be logically considered as infinite in the additional sense of “not defined,” but that, on the ontological level, he must be strictly “defined,” as any other thing (*ciš*), or his knowledge would be paradoxically limited and imperfect, especially because the infinite, as unlimitedness, cannot be embraced by a complete knowledge. This case would ruin the divine omniscience, which on the contrary is foundational in the Mazdean doctrine. But the theoretical statement concerning the finitude of Ohrmazd and Ahreman is confirmed also in the mythological account as attested in *Bundahišn* I.6. For a development of these matters, see DE MENASCE 1945: 248-249, AZARNOUCHE 2023: 108-110, and PANAINO (in the press, b).

⁵ See here n. 4 and PANAINO 2026.

heaven⁶ (i.e., the heaven of the stars),⁷ bringing with himself all his demonic army (together with the primordial Darkness and the intermediate space), he himself was imprisoned within the Good Creation. The originally pure world became, of course, contaminated by the “mixture” with the external polluting and malefic components of the primordial chaotic universe. This action, corresponding to an extra-cosmic invasion from a theological point of view, firstly implies that Ahreman took with himself not only the dark side of the primordial universe, but also the intermediate windy space,⁸ bringing them inside the Good Creation. Thus, in order to aggress and pierce the (lowest) heaven of the stars in the circumpolar area,⁹

⁶ The Bundahišn VA.1 (MACKENZIE 1954: 513; PAKZAD 2005: 76; AGOSTINI & THROPE 2020: 37), within the framework of the World Horoscope or *Thema mundi*, only states that the invasion took place at noon on the day Ohrmazd in the month Frawardin, “when day and night were equal.” Cf. also RAFFAELLI 2002. A direct reference to the same moment was given also in Bd. IV.10, and it obviously concerns the vernal equinox.

⁷ About the lowest level of the heavens, and its origin and development, see the discussion by PANAINO 1995.

⁸ According to Bd. IV.10, when Ahreman attacked the sky, he dragged it down into the void, and one third of the sky remained above the star station. This means that although Ahreman tried to pull the sky down, breaking also part of the earth, he was able to enter the creation mixing with it the realm of darkness and the primordial intermediate space. See PAKZAD 2005: 58-59; AGOSTINI & THROPE 2020: 30.

⁹ The relevance of this area of the northern sky is confirmed by passages such as Ir.Bd., V.3-4 where it is stated that

corresponding to the geographic north¹⁰ through which the devilish forces entered the sky according

Haftōring/*Haftōrang* is the General of the North (HENNING 1942: 231), who fights against the planet Ohrmazd (MACKENZIE 1964: 513; PANAINO 1999; RAFFAELLI 2010: 99-107). The Big Dipper actually is the constellation which protects the regular circular motion of the zodiacal signs, turning around the hell, which was located to the north. We must also recall that according to a later doctrine attested in Ir.Bd. II.7, the seven stars of this constellation are connected with the seven *kēšwars* (continents) of the earth (HENNING 1942: 232, n. 6; PANAINO 1998a: 71). This doctrine must be connected with the idea that *Haftōring* supports the regular turning motion of the zodiacal constellation. See also the note 27 below.

¹⁰ A very interesting problem concerns the difference between the Indian and the Iranian orientation systems. In ancient India the demons were located in the southern area, which can be associated with midday, while the positive forces are in the northern area. The Iranian system follows a radically different pattern, in which the north is the side of the demons, while south is a positive direction. It is not by chance, for instance, that many Mazdean champions win just at midday, when the sun is in *medium caeli* (as Tištriia against Apaōša; see PANAINO 1988). We can also remark that in the Zoroastrian framework, even east is obviously positive, being the auroral direction *par excellence*. This is, for instance, the direction from which the Saōšiiānt comes announcing the final resurrection (V19.5; cf. REZANIA 2017: 399). If, hypothetically, we take, as suggested also by REZANIA (2017: 400, n. 185) that the original model was the one preserved in the Indian folklore, one could suggest that north was originally the divine abode, and that the negative-ization of this direction would have occurred only after the inversion of the role played by the Indo-Iranian pantheon within the Mazdean context. This would be a plausible solution, which starts from the assumption that with the

to the Mazdean tradition, he had also to pass over the ground level of the earth and the atmosphere. We will see later the intriguing implications of this apparently simple remark (figure 1).

At this point, after having penetrated the Good Creation, Ahreman and his fellows were blocked inside the limited space and time,¹¹ previously set by Ohrmazd (Bd. I.25), so that they might not get out from this prison.¹² The impact of these demonic forces against the first heaven produced as an immediate reaction the circular motion of the stars, which sealed the hole through which Ahreman, and his gang had entered the world. In a previous work,¹³ I have already remarked that this motion was

demonization of the ancient **daiyas*, and with the negative meaning taken by the ancient term for “sky,” *diiu-*, in Avestan (see below), even the cardinal directions would have been submitted to a semantic and symbolic reinterpretation. On the other hand, other reasons could be at the origin of this change, without to say of the climatic and geographic characters of these distinct areas that could have favoured a reversed emphasis on the meaning of some cardinal points. Furthermore, as a general methodological caveat, we cannot systematically presume that any innovation was Iranian, while only Vedic data were representative of the supposed common Indo-Iranian heritage. In particular, the strong Mazdean and Iranian emphasis for the extra-cosmic derivation of evil should have clearly re-oriented the symbolic meaning of the cardinal points.

¹¹ On the role of time, see PANAINO 2000.

¹² See also PANAINO 2019a; 2020. Cf. AGOSTINI & THROPE 2020: 7.

¹³ PANAINO 2019a: 155 and n. 548.

attributed to an action played by the Frauuāšis in the Avestan texts,¹⁴ but it was eventually explained also as a combined result additionally due to the impetus¹⁵ resulting by the impact of Ahreman's clash against the sky during his successful act of piercing the heaven, which covered the Good Creation.¹⁶ Although of controversial interpretation, a Young Avestan source, such as Yt3.13, could confirm the extra-cosmic origin of Anra Mainiiu, who is presented as falling down from the front of the sky (*pauruua.naēmāt̥ patat̥ diiaōš daēuuanam draōjištō anrō mainiiuš pouru.mahrkō*, “the tremendously deadly Anra Mainiiu, the most deceitful of the demons, flew down from the front of the sky”).¹⁷ I think that König¹⁸ is right in rejecting or at least suspending the interpretation of the Avestan hapax *diiaōš*, genitive singular of *diiau-*, as “hell,” despite the fact that I still insist in interpreting this word *stricto sensu* as a reference to the primordial sky, and not as an alternative denomination of the beaming “light of the day,” as it later happens in the Pahlavi

¹⁴ See KELLENS 2001: 472-473; cf. also KELLENS 1975: 19-20, and MALANDRA 1971: 78 (text), 123 (translation); REZANIA 2010: 74-77, *passim*; PANAINO 2019a; 2020.

¹⁵ PANAINO 2019a: 156-157.

¹⁶ See in particular BAILEY (1943 = 1971: 138). Cf. PANAINO 2019a: 153-157.

¹⁷ See KÖNIG 2016: 181-183.

¹⁸ KÖNIG 2013: 313-318. About the names and the conceptualizations of the “sky” in the Indo-European contexts, see the discussion developed by HAUDRY 2012.

and Persian translations.¹⁹ Furthermore, in spite of the fact that we cannot be sure that *diiu-* as the old name of the sky was completely demonized or not, and then its meaning changed in that of “hell,” it is reasonable to presume that *pataṭ* in this context meant “to fly”²⁰ (with a negative connotation)²¹ and not just “to fall,” as if the gliding and landing of Anra Mainiiu within the Good Creation was just an accident. His flight, on the contrary, was the fruit of an aggression (*ēbgadīh*) and of the burst through the sky. This intrusion took place in a flash (*pad zamān*),²² and progressively pervaded the earth, as well explained in Bundahišn VII.1.²³ In the context of Yašt 3, then, the use of an archaic word, such as *diiu-*, ambiguous and connected with the daēvic dimension, seems to be an extraordinary relic of a poetic and mythologic texture. The sky pierced by the chief of the demons occurs as the (isolated) *diiu-*, and not as *asan-/asman-*, which is the normal term in the Avestan literature. The closing of the celestial hole reminds us that the door to hell is closed and, as we will see, it will only be reopened with the defeat of

¹⁹ KÖNIG 2016: 182-183.

²⁰ Cf. the observations by KÖNIG 2016: 314.

²¹ BARTHOLOMAE 1904: 819-820. The Pairikās, as shooting stars, “fly” (*pat-*) between heaven and earth, and the daēvic hues of this verbal root are frequent in Avestan. We recall that the act of rebellion in the Achaemenid inscription is indicated with the verb *pat-*, plus the preverb *ud°* (*udapatatā*, “he rebelled”), an evidence confirming some negative hues in its semantics.

²² See Bd. VII.1; PAKZAD 2005: 118; AGOSTINI & THROPE 2020: 52.

²³ AHMADI 2020: 6.

Ahreman. Thus, the use of *diiiau-*, although not strictly meaning “hell,” would have underpinned the idea that in the northern sky, in the circumpolar area, in connection with *Haptōiringa*, there was the earlier external hell, as a memorial of the primordial aggression. Thus, this infernal dimension plays the role of a metaphoric reference to the ancestral, extra-cosmic dimension of the original chaotic realm of darkness, which entered the creation when Ahreman pierced the sky, and its location was the celestial north. Without this background it would be very hard to explain the origin of the doctrine attested in the *Dādestān ī Mēnōg ī Xrad*, chapter XLIX,²⁴ where it is stated that the constellation *Haf-tōring* with an army of 99,999 *frawahr* of the right ones was appointed at the gates and the passages of the hell (*pad dar ud widarag ī dušox gumārd ēstēd*)²⁵ in order to keep control and guard over 99,999 demons, antagonist of the celestial sphere and the stars. This text continues stating that the motion of such a constellation was around the hell (*u-š rawišn pērāmōn ī dušox*), which means, with close reference to the case of Ursa Major, that it was rotating around the

²⁴ See BAUSANI 1963: 155-156. For the Pahlavi text, apart the traditional editions by SANJANA (1895) and ANKLESARIA (1913), see now the transcription by D.N. MACKENZIE at the address: <https://titus.uni-frankfurt.de/texte/etcs/iran/miran/mpers/mx/mx.htm>.

²⁵ The same tradition occurs also in Bd. II.9; PAKZAD 2005: 38. Cf. AGOSTINI & THROPE 2020: 19.

northern Pole.²⁶ Thus, we must infer that the hell of the original darkness was imagined beyond the border of the circumpolar area and, in some cases, we should assume that its symbolical and metaphysical place was still imagined as “sleeping” there. But this conclusion would be very strange, when literally taken, because with the aggression the whole demonic army should have entered the Good Creation and was fighting within it. I do not know any doctrine stating that a sort of military strategic reserve was taken by Ahreman outside of the cosmic ordered space, waiting for a new attack, or, in alternative, that the Frauuāšis had stopped part of the demons out of the sky during the first and unique invasion from the primordial outer universe. My impression is that the present reference to the extra-cosmic celestial hell is an evocation of the ancestral dark dimension of Ahreman and his fellows, and that this hell corresponds to the space of the hole opened in the sky by Ahreman (and immediately after closed by the *frawahr*) in order to block

²⁶ According to Bd. VB.12, at the beginning of Ahreman’s invasion, *Haftōring* and *Sadwēs* were of greater power than *Ohrmazd* (Jupiter) and *Anāhīd* (Venus) and they restrained both planets to harm the creation (see MACKENZIE 1964: 519-512; PAKZAD 2005: 85; cf. AGOSTINI & THROPE 2020: 41). As previously remarked, the sources confirm that *Haftōring* was considered the *abāxtar spāhbed*, the General of the northern celestial quarter (see Bd. II.6); HENNING 1942: 231-232; PAKZAD 2005: 37-38; cf. AGOSTINI & THROPE 2020: 18.

their escape from the trap,²⁷ not for stopping new attacks from outside. It is evident that this presentation of the celestial barrier played by the Big Dipper should be put in direct relation with another statement very interestingly contained in chapter 74 of the third book of the Dēnkard,²⁸ where it is stated what follows:

*ud gannāg mēnōg bē barēnd az-iz frōdтар ī asmān abāg
ālūdagiḥ ī aziš bawēd andar asmān hamāg-rōšn hu-bōy
pāk ud harw nēkiḥ <ud> wisp šēdāy ō abardar frazān-
agiḥ xwadāyih ī dādār passazag.*

²⁷ For instance, the Spirit of the sky (*mēnōg ī āsmān*) declared that he will not let out Ahreman from the creation (Bd. IV.12); the same concept is emphasized in Bd. II.6A.1-3, where it is stated that Ahreman desired to scurry back out the way he came, but that the Spirit of the sky blocked him until Ohrmazd had built a strong barrier against Ahreman, setting also the *frawahrs* to block the aggressor. Only at that moment, Ahreman would have understood that he would have been defeated. According to a mythological tradition preserved, e.g., in Bd. XXXIV.30, Ahreman and Āz will be expelled from the Creation through the same passage (*widarag*) in the sky from which they had previously entered. Cf. PAKZAD 2005: 60; 89-91; 387; AGOSTINI & THROPE 2020: 30; 45; 182. I must recall in the case of the end of Ahreman that, according to a deep philosophical orientation, Ahreman's substance will be disentangled and reduced in pieces, although it will be impossible to kill and completely destroy his essence, because ontologically "primordial," and then eternal in itself (PANAINO 2005).

²⁸ See MADAN 1911: I.64; DRESDEN 1968: 46. We have at disposal a new edition of the text by FAZILAT 2002: 274-275. For the translation, cf. DE MENASCE 1973: 78-79.

“And they (i.e., the forces of Ohrmazd) will throw out the *Gannāg Mēnōg* from the lowest heaven with the pollution, which belongs to him, and there will be in the heaven all-light, sweet-smelling purity, all-beatitude, and complete bliss, appropriate to the superior wisdom (and) lordship of the creator.”

According to this passage, Ahreman will be expelled from the lowest heaven, reasonably from the same point from which he had previously invaded the creation. This solution is clear, but also paradoxical, because it cannot work within a (supposedly) homocentric system, where the lowest heaven is not in direct contact with the extra-cosmic space, but just with one of the superior heavens. Clearly, that description was just mythical and did not take into consideration the consequences of the late antiquity Ptolemaic uranography. In any case, it is very informative, because such an image supposes that Ahreman, according to (at least) one of the simplest versions of his final defeat, will be expelled from a heaven, which should be considered as the one located at the bottom of the Good Creation. What does it mean? This story seems to imply that, if the lowest heaven must be presumed as a layer that was located in such an inferior position, generically in the deepest space of the celestial area, its image would remind that of the earlier attack of Ahreman from the bottom of the primordial universe. But, although very peculiar, this point would again correspond to the circumpolar area, symbolically representing the bottommost of the

cosmos. The cardinal distribution of this area was strictly connected with the hell and the north, despite these data cannot be geometrically reconciled in a coherent way with the realia, as seen from our side of the world. But here we are moving through mythical visualisations and dealing with the religious imaginary, in which the primordial chaos presents a disposition of the cardinal points, which cannot be directly reconciled with that of our universe.

Within the framework of these problems, we can observe that the area of the hole still calls a closer analysis. Although the hole was sealed, it reasonably corresponded to that part of the sky which was called *diiau-*. Actually, there was no risk of new intrusions, but as a careful reading of the text suggests, the real danger was represented by the attempts of the demons, in particular the celestial ones, to interfere with the regular motion of the twelve zodiacal constellations and the other stars.²⁹

From the intertextual point of view, Yt3.13 should be closely connected with V19.1:³⁰

apāxtaraṭ haca naēmaṭ apāxtaraēibiō
haca naēmaēibiō fraduuarat
aṣrō mainiiuṣ pouru.mahrkō
daēuuanqm daēuuō

²⁹ In this case, many sources mention the complex role played by the cords of wind, on which see PANAINO 1998; 2019b.

³⁰ REDARD 2021: 35-37. For the Pahlavi translation, which follows the Avestan text, see MOAZAMI 2014: 428-429.

“the tremendously deadly Aṇra Mainiiu,
the Demon of the demons,
ran from the northern region,
from the northern regions.”

It is clear that the back-motif is the same, and that Yt3 concerns Aṇra Mainiiu’s flight from the sky, while V19.1 is referred to an earthly aggression. But both texts describe an attack, clearly coming from the north, of the Demon of the demons on two different, but interconnected, dimensions.

Certainly, according to the Bundahišn II.10, Ohrmazd would have arranged the ecliptic sphere “in the likeness of a spinning-wheel, so that at the time of the Mixture they (the stars) could start revolving”³¹ (*u-š spihr ī awēšān axtarān *čahrag-ēwēnag nihād kū andar gumēzišn ō rawišn ǎstēnd*).³² The strategic consequence of this rotation, together with the definitive act of sealing the hole, was that of blocking the invaders within the trap. In other words, Ohrmazd prepared a sort of cosmic ambush, in which the defending role from the extra-cosmic enemy was not so relevant as the one directed to block any attempt of escaping. The main target was that of destroying completely the antagonist and eradicate his power from the whole universe, not that of limiting his forces. The strategy was that of

³¹ As translated by HENNING 1942: 232. Cf. AGOSTINI & THROPE 2020: 19.

³² PAKZAD 2005: 39.

ambushing the whole antagonist army, not to block a part of it out of the trap. This assumption is confirmed in chapter IA.6a of the Bundahišn, where it is stated that “(the Spirit of the sky) accepted to be like an enduring fortress against the Evil Spirit, (that is: he did not let (him) from scurrying away in retreat)” (*u-š *padīrift drubuštīh az gannāg mēnōg kū abāz dwāristan nē hišt.*).³³

³³ See PAKZAD 2005: 27-28; cf. CERETI & †MACKENZIE, 2005: 43; ANKLESARIA 1956: 22-23. Here the numeration established by Cereti and MacKenzie has been followed.

2. From a Primitive Heaven to a Spherical Model: Facts, Problems and Contradictions

I have often underlined the fact that the cosmic model of the primordial Good Creation should have *not* originally corresponded to a perfect sphere, and that the cosmic architecture including a number of homocentric spherical shells, as it emerges from some astronomical references attested in the Pahlavi sources, should have taken its final shape only after the conclusion of the initial aggression.³⁴ This assumption becomes evident when we observe that, if the cosmic model had been truly spherical and homocentric since the beginning of the primordial state of immobility (i.e., since the period in which Ohrmazd enacted the creation in a *gētīg* state, but already suspended in the *mēnōg*),³⁵ Ahreman would have been able to immediately aggress and conquer the most external spherical level, i.e., exactly the one belonging to the highest Paradise³⁶

³⁴ PANAINO 2019a: 101-150, *passim*.

³⁵ See PANAINO 2022a with a special focus on the original and most fitting analysis of the second phase of 3,000 years in the *mēnōg* period, suggested by Molé.

³⁶ In the Mazdean sources there is a certain flexibility in the reference to the paradisiacal levels. Sometimes, the OAv. *garō-damāna-* (lit. “House of song;” cf. YAv. *garō.nmāna-*, Pahl. *garōdmān*, etc.) can be located as the fourth stratum from the earth, although even the “infinite lights” could be defined as a sort of paradise, but in other occurrences the true Paradise, as

of Ohrmazd, which would correspond to a sort of *Primum Mobile*.³⁷ On the contrary, the sources clearly state that Ahreman, after the invasion, began to start a series of fights against different kinds of good creatures at time on the level of the heaven of the stars,³⁸ in the atmosphere,³⁹ and on the earthly ground,⁴⁰ but that his strategic target was that of storming Ohrmazd's House, a result which he was not able to accomplish. This means that Ahreman and his army never attained a higher celestial sphere than that of the fixed stars and that did not reach

the proper abode of Ohrmazd, must be connected with the highest level of the divine architecture, higher than the moon, the sun and the infinite lights, i.e., on the top of the universe.

³⁷ PANAINO 2019a: 103-104, 132-139, 154-155. As we will emphasize also later in this study, the location of the Paradise was imagined as staying on the top of the heavenly level corresponding to the *raōcā anayra*, or “infinite lights,” in Pahlavi sources, *anayr rōšn*. This could practically mean that the Paradise does not exactly correspond to the eighth sky, but that it stays above it, as if it were in another, higher heaven corresponding in other cosmologies to the ninth one. See MALANDRA 2012.

³⁸ See in particular the 2nd chapter of the Bundahišn; cf. HENNING 1942: 230-235.

³⁹ This intermediate level is the one in which the wind, the clouds, but also the star Tištriia can play a remarkable meteorological role against the demons. See again Bd. II.17; HENNING 1942: 233; AGOSTINI & THROPE 2020: 19.

⁴⁰ In particular, chapters III, IV, V, and VII of the Bundahišn insist of the various aggressions led by Ahreman against the different sectors of the Good Creation between heaven and earth. See AGOSTINI & THROPE 2020: 19-53.

the paradisiacal stratum, because an impenetrable barrier composed by the *star ī a-gumēzišnih*, i.e., “(the level of) the unmixable stars,”⁴¹ (corresponding to the Avestan [...] *stārō yōi spənta.mainiiauuu* of the Rašn Yašt 12.32)⁴² had previously blocked any further ascent toward the superior heavenly levels and the Paradise. Within the framework of a very simple cosmic description, Bundahišn IA6, states that the metallic sky, with the form of an egg (**xāyag-dēs*), joined at the top to the Endless Lights. This description implies that the egg did not envelop the superior celestial strata, as something beyond the earthly perception, completely untouchable by Ahreman and his demons.

A solution for this apparent conundrum would be the one assuming that within the context of this narration just two different conceptions of the sky and of the cosmos were mixed: the first one more archaic, i.e., Avestan, in which the earth was considered just like a sort of egg enveloped by the wings

⁴¹ HENNING 1942: 232-233; AGOSTINI & THROPE 2020: 19. The pertinent passage of Bd. II.10, states that this sphere was created in order to repel the arrival of the aggressor, so that his polluting mixture would have been blocked and Ahreman had no access to the higher strata of the heavens. See also PANAINO 2019a: 101-118. Thus, this astral level corresponds to a sphere above the sphere. It would be useful to recall that in Bd. VIJ, the role of these stars is emphasized, and they represent “the limit of purity within the mixture” (*brīn ī abēzagīh andar gumēzagīh*). cf. PAKZAD 2005: 117; AGOSTINI & THROPE 2020: 50.

⁴² GOLDMAN 2015: 36, 193-194, 222, 223; PANAINO 2019a: 69-73.

of a bird (Yašt 13.2)⁴³ or as a flattened thin space with a round surface,⁴⁴ looking like a chariot's wheel (Yašt 19.43),⁴⁵ although probably located within a sort of cylindrical or ovoidal⁴⁶ structure (more or less as it can be presumed for the Babylonian framework),⁴⁷ where atmosphere, some heavens (three or more)⁴⁸ plus the Paradise, were superimposed one above the other. The latter, on the contrary, was a Hellenistic, probably already pre-Ptolemaic, spherical model, which entered Iranian astronomy between the Parthian and the Sasanian periods.⁴⁹ When the sphe-

⁴³ See HENNING 1954; PANAINO 2019a: 39-42, 58, 64 and n. 213, 66. Very important comments on this passage can be found in the monographic study by REZANIA 2017: 160-168.

⁴⁴ An interesting overview of the mental models developed by children in modern western societies shows the complexity of the spatial representations and of the ideas about the earth, which can shed light on the elaborations of ancient peoples. See INGOLD 2011: 96-118.

⁴⁵ PANAINO 2019a: 33-39 (with additional bibliography).

⁴⁶ See, e.g., the cosmographic models proposed by REZANIA 2017: 162, 175, 187. I disagree with respect to the very important remarks advanced by Rezania in this study with his frequent reference to the concept of sphericity in the Avestan sources. As already observed (PANAINO 2019a: 2023), there are no elements in order to accept the presence of the image of the sphere in the Old Iranian folklore and cultural traditions.

⁴⁷ See LIVINGSTONE 1986: 82; PANAINO 2019a: 164.

⁴⁸ See again PANAINO 1995.

⁴⁹ About the later adaptation of the Greek conceptual image of the astronomical sphere, which was extraneous to the primitive Iranian uranography, and which was completely absent in many other ancient civilizations, see PANAINO 2019a, but also the additional remarks offered in PANAINO 2023.

rical systems were introduced and accepted in the Iranian cosmology, they produced dramatic contradictions, whose implications seem to have not been really perceived. For instance, as we have already noted, the second chapter of the *Bundahišn*, par. 10,⁵⁰ is very sharp in stating that Ohrmazd had created the sphere of the stars and the other ones before the aggression, and implicitly this means that they, theoretically, should have been ready before the Ahremanic attack. The dramatic problem is that this presentation of the cosmic architecture is in bold contradiction with the essential idea that the superimposed levels of the sky were like a multilayer shield created to protect, as a series of barriers following each other, the Paradise of Ohrmazd. This one, in its turn, should be in the centre of the celestial fortress, as the most shielded kernel of the universe, i.e., as the last stand. On the contrary, the result obtained with the introduction of such a system of homocentric spheres would be exactly the opposite, with the highest sphere, strictly connected with the Paradise, and then located in the most external position, which in this case would have been the most exposed to external attacks.⁵¹ There

⁵⁰ HENNING 1942: 233; PAKZAD 2005: 39; AGOSTINI & THROPE 2020: 19.

⁵¹ It clear that the homocentric system places the paradisiacal dimension in a superior, but not central, position from the point of view of an earthly observer. This counterevidence, obviously, contradicted the more traditional view of the centre as a space of excellence of power or divinity. On the concept of centrality, see REZANIA 2014.

was presumably a kind of mistaken superimposition of the idea of an invincible protection, imagined as the innermost fortress, the central stronghold of God, with that of the outermost sky of a homocentric system. On the contrary, the eighth sphere would have resulted to be the most exposed level of the cosmos, if one had to imagine an attack brought by an extra-cosmic enemy coming from another anti-universe, which eventually included its primordial and external void as well. It is reasonable to infer that this contradiction was not perceived in its whole gravity, or that a solution was the one of assuming that the full spherical homocentric system would have taken its final and physical shape only after the aggression of the starred sky, as a cosmic architecture *in potentia*, mentally ready, which definitively would have enveloped the ahremanic army only after the end of its invasion against the heaven of the stars. Of course, this is just a speculation, because the Mazdean sources do not seem to openly focus on this bold contradiction, and on the inevitable effects descending from what the sources state. On the other hand, this assumption is based on some similar evidence, such as the fact that a *mēnōg* creation was previously developed in *mente dei*, and only later found its realization *in actu*. Another argument can be deduced from the case of the relation between time and motion.⁵² We know

⁵² I have already discussed in detail this problem in PANAINO 2020.

that even during the first six millennia⁵³ of celestial immobility, each zodiacal constellation would have ruled for 1,000 years imposing its positive “chronocratory” (*hazārag xwadāyih*, lit. “the lordship of the millennium”), despite the fact that the heaven of the stars was not moving, and then that time was not apparently passing. But in this case as well, the limited time of God, although in a state of apparent immobility, was perceived by Ohrmazd himself as advancing toward the central event of the direct confrontation with Ahreman. Consequently, the power of the “chronocratories” was effective, although the stars were immobile from a quantitative point of view, because the quality of the divine perception of the mental time, even if enacted in its limited disposition, was not reduced in Ohrmazd ipseity. Probably, the background of this doctrine is already Avestan. According to Yt13.57-58,⁵⁴ before the

⁵³ See Bd. VB.15, where it is stated that, despite the 6,000 years of immobility, of which 3,000 passed in a “mental” condition (*mēnōgih*) and the following 3,000 in a *gētīg* state, although suspended in the *mēnōg*, each zodiacal constellation, starting from the Lamb to the Ear of Corn, ruled the corresponding millennium for 1,000 years. This means that the geometric lordship was administered without any apparent physical motion, but that its effects were in any case efficient. See MacKenzie 1964: 520-521; Pakzad 2005: 86-87; Agostini & Thrope 2020: 41.

⁵⁴ See Panaino 2020: 269-271, with a detailed discussion of the passage and with further bibliography; see also Kelless 2001: 472-473; cf. also Kelless 1975: 19-20. Cf. Ahmadi 2020: 5 and Malandra 2018: 95, 145.

aggression of Anra Mainiiu, the stars, the moon and the sun remained motionless⁵⁵ in the same place:

57. aṣāunq̃m varj^vhiš sūrā^o spəntā^o
frauuaṣaiiō yazamaide
yā^o strq̃m mājhō hūrō
anayranq̃m raōcaṇhqm
paθō daēsaiien aṣaōnīš
yōi para ahmāt hame gātuuō
darəyəm hištənta afrašūmantō
daēuuanq̃m parō tbaēšaṇhaṭ
daēuuanq̃m parō dramōhu.
58. āaṭ tē nūrqm *frauuaazənte
duraēuruuaēsəm aḍβanō
uruuaēsəm nāšəmnā
yim frašō.kərətōiṭ varhuiiā^o.

“We worship the good pious strong
incremental Frauuaṣis of the right ones,
who showed the right paths of the stars,
the Moon, the Sun and the Infinite Lights,
which before that (moment) stood still
in the same place
since long time without moving forward,
before the hostility of the demons,
before the aggressions of the demons.
Then, now they fly (advancing)
on the faraway-turning path
desiring to reach the turning point,
which (will start) with the good Restoration.”

⁵⁵ See the remarks offered here, in the note 53.

As I have remarked in another forthcoming study,⁵⁶ the discussion developed by de Menasce⁵⁷ about the concept of *wimand*, “frontier, limit,” as the separation occurring in the primordial universe among the different realms, is still relevant. Rightly, de Menasce assumed that the Mazdean scheme would have not been spatial or at least that it was so only figuratively, because the space and the corporeity would have been practically involved only after the creation of the *gētīg* dimension. In other words, de Menasce presumed that the “places” of Ohrmazd and Ahreman would have been only “transcendental,” while in the Manichaean context, the material principle was by definition and from the beginning, strongly quantified and extended. Even though this is a theoretical reconstruction, in which the “mental” (*mēnōg*) dimension is radically distinguished by the following “living” (*gētīg*) enactment, it is theoretically sound and can justify some apparent contradictions, although I doubt that it could represent the original formulation current in ancient Zoroastrianism. Actually, it is too abstract and philosophical for the already sophisticated assessment of the Avestan background, so that its attribution to a very archaic period seems to me highly implausible.

For similar reasons, we must also remark that it is difficult to presume the existence of a clear

⁵⁶ PANAINO in the press, b.

⁵⁷ See DE MENASCE 1945: 247, and in particular the note 2.

ancestral universal model in terms of an astronomical and cosmic geometrical architecture, which could be taken, according to our parameters, as a rationale mechanic pattern capable to assess or explain (even in a wrong way)⁵⁸ a supposed rationale for the origin of the visible phenomena. At this regard, we must eventually wonder if this kind of deductive approach had been ever imagined in those times. My impression is that it was presumably not so! For this reason, we can suspect that different conceptions of the cosmographic architectures occurring during such a primordial fight engaged by Ahreman against the Good Creation were concurrently and contradictorily adopted, even within the same presentation of the events. In other words, this is a condition that should not be taken as a scandal, in particular if we consider that the treatment of these uranographic problems was not approached as we would expect today, and its inner logic did not answer the same scientific theoretical preconditions that we would like to consider as “scientifically” indispensable in our times.

For symmetry, with regard to some presentations of the final events in which Ahreman will be eventually expelled from the ordered cosmos from

⁵⁸ I must recall that a mechanic model theoretically wrong can offer correct results, as it was the case for centuries of the Ptolemaic system. A system, more correct from the scientific point of view, as the heliocentric one, at the beginning of its applications, produced some mistakes and erroneous predictions.

the lowest heaven, we are compelled to imagine that the same order of the homocentric spheres should have been dissolved within a unique space, so that Ahreman could be thrown out of a fully purified and ordered universe. On the contrary, he would just be sent into another superior divine heaven, from which he was previously excluded, and this result would be like a sort of promotion, not a total defeat. This solution, although not explicit, is highly plausible, because we can imagine that, when Ohrmazd finally will descend into the physical world for the last fight against Ahreman and the cosmic sacrifice of the White Bull, the whole cosmic (and homocentric) architecture will be closed up, like an origami, on the celestial sphere of the fixed stars (i.e., the one that originally was considered as the lowest),⁵⁹ since the rest of the construction would have been no longer needed, while the next step would restore a perfect universe, completely free from evil and any pollution.

⁵⁹ This would have been a very advantageous coincidence. In fact, the lowest heaven, i.e., that of the stars, according to the peculiar Mazdean system, would have been plausibly considered as the perfect synthesis of all the other skies after the final victory against Ahreman.

3. Vertical and Horizontal Directions of Ahreman's Motion

As already observed, the Bundahišn insists on a sort of vertical motion of ascent from below (*zofr-pāyag*) to the top (*bālistīg*), from darkness to light, passing through the atmospheric void/wind, so that the northern direction,⁶⁰ which corresponds to the

⁶⁰ It is well known that the northern direction (named in Avestan as *apāxədra-* and *apāxtara-*) was demonized already in the Avestan sources; it was connected with Midnight and with the maximum of obscurity, but also with the side taken by one of the most dangerous demons, the Druj Nasu (V7.2). It is from the north that the bad smelling wind, announcing the arrival of the bad *daēnā-*, comes (HN2.25) approaching the *uruuan-* of the dead (HN2.7; LOMMEL 1923: 206; PIRAS 2000: 56, 63, 67, 71-72, 119-120). This direction is clearly opposed to the one taken by the southern wind announcing the good *daēnā-* (HN2.7; LOMMEL 1923: 206; PIRAS 2000: 52, 60, 65, 69, 88; REZANIA 2017: 399-400). According to Yt4.8, the sacrificer smashes the northern direction. Again, in V8, in particular in paragraph 21, an exorcism emphasizes the demoniac dimension of the northern side. Cf. also V19.1. For the negative role of the north in the Mazdean literature, see FORREST 2011, *passim*. See the remarkable discussion proposed by REZANIA (2017: 91-122, 399-402, *passim*) about the north. Rezanian has actually analysed in a systematic way various aspects of this particular process of demonisation in connection with theological, cosmological, and rituals details, focusing also on the Mazdean systematic care in avoiding that the priests might be oriented towards the north. We may remark that also for the Egyptians the main

original dark side of the primordial space, should be symbolically located⁶¹ in an imaginary lower

direction, corresponding to a frontal position, was south, while east corresponded to left, west to right. See TUAN 1974: 86; SCHMIDT DI FRIEDBERG 2018: 25, 30–42.

⁶¹ In this discussion, a relevant importance has been assumed by the critical discussion of the etymology of *apāxǣdra-*, which has been explained by Witzel in various ways: firstly, as a derivation from an IE. compound, such as **apo-H₂nk^utro-*, interpreted as “from the side of the night” (cf. IE. **H₂ŋkt-*), i.e., “placed against the setting sun.” This meaning would be exactly the opposite of an IE. **sH₂un-tro-*, “located on the side of the sun of Midday” (WITZEL 1972: 173–175). In reality, this explanation for the origin of *apāxǣdra-* presents several difficulties. The reconstruction of an IE. stem such as *H₂nk^ut-*, with a *Schwundstufe* in the first syllable, seems to me *ad hoc* with such a very peculiar vocalization of the original **H₂ŋ-*, particularly in *sandhi* after another vowel. Furthermore, Witzel argues that *apāxǣdra-* would be an expanded stem with an additional *-r-* extension, such as *H₂nk^ut-r-* plus a thematization (**H₂nk^ut-r-o-*), and precisely confers to YAv. *upa.naxtar-*, “an die Nacht grenzend, nächtlich” (WITZEL 1972: 186, n. 27), whose formation certainly presents the *-r-* extension, but the normal degree of the radical vowel as well. In few words, the reconstructed compound **apa.axθra-* (WITZEL 1972: 172) would mean “nächtlich in der Ferne,” i.e., “at night in the distance.” WITZEL himself (1972: 172–174) eventually suggested also another solution (already advanced by LOMMEL 1923), which would connect *apāxǣdra-* with the Old Germanic system of the geographic determinations. He, thus, assumes a derivation from a PIE. compound such as **apo-H₂nk^u-tro-*, practically meaning “auf der abgewandten Seite gelegen,” (or “located on the opposite side”), in which PIE. **apo-H₂nk^u-* (> IE. **apōk^u-* > Ilr. > **apāk-*, would literally mean “das Auge (sc. die Sonne) weggehend,” or “with the [sun’s] eye” having gone away”). In

dimension. Clearly, the position of the darkness and the light, one deep down, the latter in the uppermost peak of the universe (in connection with the peak (Taēra) of Mount Harā Bərəzaitī, or later Alborz),⁶² corresponds more to a mainly moral and symbolic distinction than to a physical condition.⁶³

fact, this compound would contain the old name of the “eye” (*H₃nk^u-), well corresponding to an archaic metaphoric denomination of the sun, obviously setting in its northern position. Although REZANIA has observed (2017: 102, n. 136) that Witzel’s etymological solutions would have the advantage of connecting all the four Avestan cardinal points to the course of the sun, the suggested explanations remain uncertain. I still prefer to follow BARTHOLOMAE’s doctrine (1904: 79-80), who assumed that *apāxədra-* and *apāxtara-* were comparative stems of *apānk-*, thus meaning “rückwärts, hinten gelegen”, sva. ‘nördlich.’” As a matter of further complication, we must observe that WITZEL (1972: 175) also assumed that MP. *abāxtar* would have been the fruit of an assimilation of *apāxədra-*, whose pronunciation was difficult, so that it was transformed according to the model of the denominations of the other cardinal directions ending in *-tar-*. In its turn, *apāxtara-* would have been the result of the avesticization of a word of Pahlavi origin (cf. also LOMMEL 1921: 218). Furthermore, I cannot follow the other explanation concerning the secondary and later origin of *apāxtara-*. It is not clear why a well attested word such as *apāxədra-* would have been difficult to be pronounced, and why Pahlavi *abāxtar* should be a word of pseudo-Avestan derivation. I prefer to follow the etymological solution kindly offered by Prof. Dr. Velizar Sadovski in the Excursus 2.

⁶² For additional details, see BOYCE 2014.

⁶³ This fact is confirmed also in the Avestan sources, where the symbolic spatial order, as attested in ritual ceremonies, shows

Furthermore, speaking of “high” and “below” or of “up” and “down,”⁶⁴ within the primordial universe seems to be nonsensical, if this discussion would be developed in a post-relativistic frame. But in the present context, we are dealing with a moral and symbolic antagonism that cannot be sharply distinguished from an imaginary physical reality projected into an imaginary, mythopoetic primordial dimension. In addition, we cannot escape the importance of earlier archaic doctrines concerning the location of hell underground, as another supportive element in the stratification of this cosmological representation.⁶⁵ This imaginary should have

the superiority of what is on high with respect to the inferior parts. See REZANIA 2017: 388-392, *passim*.

⁶⁴ About the enduring use of these stereotypes, see SCHMIDT DI FRIEDBERG 2018: 26.

⁶⁵ We cannot escape the various compelling evidence showing that the Iranian world knew also the image of a deep hell located underground or that of the “underground world” as the natural abode of the demons. LOMMEL (1921: 213-214, 220-221) was of the idea that this doctrine should have been older than the northern location of the hell and that the association of the north with the demons should be later. In any case, the idea of the inferior location of the infernal dimension could have played a relevant impact on the imagination of the primordial cosmos as well, and the original disposition of the Darkness deep down in the abyss. See Av. *aḍairi.nāēma-*, m., “die untere Seite” (BARTHOLOMAE 1904: 58). We must observe that the Av. HN and other Pahlavi texts describe as a descent in three steps the journey of the soul of the damned impious. This implies a motion toward a realm located underground, if we consider that the soul of the right ascends in three steps the levels of

the stars, the moon and the sun, which is doubtless on high: cf. GIGNOUX 2003. The final scenario of the apokatastasis (PANAINO 2021), with the river of molten metal destroying the hell and cleaning the souls of the dead seems to imply that the hell was underground. Furthermore, as GIGNOUX (2003) has observed with reference to the Dādestān ī Dēnīg: “In question 32, the author defines three infernal places: *hamēstagān*, ‘hell’ (*dušox*) or ‘worst existence,’ where poison grows, and *drujaskan* (Av. *drujas-kanā-*), which is at the bottom of darkness and where the chief demon resides. These places are even geographically situated at the north, the demoniac direction, under the earth; and the gate to hell is the ‘Arzur ridge,’ which is very famous for its demons, and which is in the Alborz mountains (cf. Bundahišn 12.8; Vidēvdād 3.7). Manuščīhr finally teaches that at the time of the final renovation the souls of the wicked go through the ordeal of molten metal for three days in order to be purified. Thereafter there shall be neither demon, nor punishment, nor hell. Thus, hell is not eternal.” All these references show that the hell was connected with the north, and that the hell in its turn was conceived as underground. The Greek sources confirm the association of Areimanios with Hades, as already remarked by LOMMEL (1921: 224); in particular Aristoteles (apud Diogenes Laertius, Proemium, 8) and Plutarch (De Iside et Osiride 46). On the other hand, we must remark that even if the primitive, i.e., Indo-Iranian, location of the demons would have been underground, the Zoroastrian idea of an extra-cosmic origin of the demonic army and its leader would have imposed the arrival of the negative forces from outside. This would have produced an overlapping and an inevitable synthesis of the image of the dark, subterranean position of the demons, with their intrinsic origin from a very remote, extra-cosmic, part of the primordial universe, as it presented itself before the ordering action of Ahura Mazdā and the organization of his Good Creation. This need imposed also the location of the aggression in an extra-cosmic dimension,

underpinned the association of the demonic side, the north, with the inferior, primordial, abyss, at least within the context of a symbolic association very common in many ancient societies.

Coming back to the main point, as we have seen, the ascensional direction cannot compellingly imply that Ahreman was attacking a spherical system, already arranged according to a homocentric architecture, although we could have this impression at first sight. On the contrary, the ascensional direction should be imagined as a trajectory certainly moving from the primordial northern side, thus imagined as symbolically⁶⁶ located deep down within an obscure realm of chaos and evilness, but this trajectory had probably to describe a sort of angle on the horizontal plane, during the ascensional motion,⁶⁷ when it crossed the level between the lowest heaven of the fixed stars and the atmospheric space. Thus, even within a pre-spherical system, if we do not want to presume a priori the adoption of a Ptolemaic model before Pto-

i.e., in a sort of “non-place,” out of the space controlled by God, but in a remote abyss where the anomia is absolute.

⁶⁶ As stated in other passages of the present study, the primordial universe, including both the chaos and the opposite principle of order, connected with the dimension of Ohrmazd, does not reflect or represent the normal, consuetudinary reality. This is an imaginary, mythical, dimension, which a priori escapes from our rational, objective description and comprehension of the normal world.

⁶⁷ See the two images, which I proposed in PANAINO 2019a: 167 (Plates 8 and 9).

lemy himself,⁶⁸ —a solution which would be strongly anachronistic and ungrounded—, we cannot admit that the Mazdean cosmology assumed a primordial sky, which enveloped in a complete way a circular and flat earth or an earthly egg (both these two images being apparently attested in the Avestan sources in their simplest form), but not the bottom of the egg. In fact, if this were the case, and the ascensional attack would have been just directed in a vertical direction against the highest side of the universe, Ahreman would have attacked the inferior part of the earth, or the reversed dark side of a flat ground (i.e., the “antipodes”), —a solution very unsound, but not impossible (although farfetched, as we will see)—, while it is clear that he was aggressing and piercing the heaven of the stars. This evidence, attested in Avestan and Pahlavi sources, shows that in any case, with a flat earth or with an

⁶⁸ It is true that pre-Ptolemaic spherical models had already entered eastern countries, India in particular (PINGREE 1976), but it is improbable that the Mazdean priests and wise men had tried to combine their traditional uranographic models with homocentric patterns during the earliest Hellenistic period. The beginning of this mixture should be framed not before the end of the first millennium BCE and the beginning of the new one. More precisely, I would like to suggest that the best moments for this combination would have been those before the end of the Parthian domination and the beginning of the Sasanian one or a little bit earlier, in any case when the processes of Hellenization had become stronger and the interest for western forms of divination would have found some élites more interested in these subjects.

earth roughly imagined as part of an egg, Ahreman should have moved up surpassing the ground level in order to pierce the sky, which was above the earth, not below it. Then, we can conclude that at the beginning of the second phase of the millennial scheme (i.e., at the beginning of the *gētīg* phase of 6,000 years and before it)⁶⁹ the heaven did completely envelop the whole surface and the flanks of the earth, but without embedding and covering even its reversed inferior side. This is evident from the Avestan description of the earth as an egg enveloped by the bird, whose body and wings cover the upper regions and the flanks, but not the inferior side, and furthermore, do not directly include⁷⁰ the yolk as an eggshell (see here the first Excursus appended to the present study).

Practically, we should imagine that the final trajectory of the aggression started from a primordial imaginary north of the pre-ordered universe, but that at a certain moment, when above the level of the atmospheric space, Ahreman would have taken a horizontal trajectory, moving against the area of the Big Dipper (or Ursa Major; Av. *Haptōiringa*–; Pahl. *Haftōring*; NPers. هفت اورنگ),⁷¹ and

⁶⁹ See PANAINO 2022a.

⁷⁰ See the most fitting observations by REZANIA (2017: 161): “Die Analogie zum Vogel-Ei-Verhältnis sollte diese Relation dahingehend verbildlichen, dass der Himmel wie eine Halbkugel auf der Erdoberfläche sitzt und nicht wie etwa eine Eierschale das Eigelb umschließt.”

⁷¹ See HENNING 1942: 232.

the Lesser Dipper (i.e., Ursa Minor, Av. *Hapta.srū*-).⁷² Of course, it would appear peculiar to describe the primordial inferior location of the darkness as placed in the north, but paradoxically this was the original side of the demons. This side was described according to a visualization based on a vertical axis, in which, at the top of the primordial chaos, there was the realm of light and the abode of Ohrmazd, in the middle the atmospheric dimension of the void, and below, in the abyss, the darkness of Ahreman. As previously observed, this location would be nonsensical if considered from the point of view of a cosmic system not yet ordered, but it corresponded to a moral representation of the space, in which light and goodness are on high, while obscurity and evilness must stay deep down in an abyss. Any further discussion about the logical implausibility of this distribution would be unhistorical, and it would introduce a sort of relativity of the space, which did not belong to the mental pattern of ancient mythologies. What is most relevant is that this vertical disposition, put the south on the top and the north down.⁷³ From such a direction, Ahreman would have entered the heaven of the stars after having pierced it, so

⁷² PANAINO 1994-1995.

⁷³ We can just remind that in the horoscopic scheme, such as the one of the *Thema mundi*, attested in Bundahišn V or Bundahišn VI, the south is in *medium caeli*, which corresponds to the highest part of the diagram, while the north is just opposite to it, in the *imum caeli*. RAFFAELLI 2001, *passim*.

invading the Good Creation. The earlier vertical order was rearranged in a horizontal one, so that according to the distribution of the four cardinal points, the north and the south were located not as an absolute zenith opposed to its nadir, but as opposite directions visible from the terrestrial surface on the horizon. This change from a pure vertical direction (north / south) to a horizontal one (with four horizontal cardinal points) corresponds to the phase in which Ahreman started his rising motion from the bottom of the chaos, in order to aggress and pierce the sky surrounding the divine creation. Thus, when Ahreman moving upwards, toward the creation of Ohrmazd, surpassed the level of the earth and the atmosphere, he approached the circumpolar area, which he trespassed. As we will see better below, at the latitudes of the southern Iranian regions, the circumpolar area does not appear at the zenith, but above the horizon in the northern direction (figure 2). This is a point we must emphasise and consider as very relevant. In fact, when Ahreman will enter the creation, the whole demonic army would follow him, so that the hole through which all these filths entered, was the mark not only of the north, but of the whole extra-cosmic reality, the non-being which had invaded the creation. Practically, throughout that break all the external chaos would have jumped within the creation, resulting like garbage sucked into a vortex. This dramatic event is the premise for a long period

of purgation of the whole chaos, before its purification or annihilation.⁷⁴

Being now blocked in the higher direction of the impenetrable uppermost celestial levels, his army compellingly started to fight within the heaven of the stars, in the atmosphere and on the ground. This reconstruction of the mythical imaginary of the primordial battle should be true not only for the Sasanian and post-Sasanian cosmology, but already for the Avestan one. The main difference we may presume is that, in Late Antiquity, only after the full entrance of the demons within the Good Creation, the cosmos had to assume a spherical shape, which concurred to represent the earthly level as the innermost part of a homocentric system, in which Ahreman was now prisoner, being located in the farthest stratum with respect to the Paradise of Ohrmazd. In this case, we observe that the Paradise can

⁷⁴ The idea that the cosmos corresponding to the Good Creation is an instrument fitting for the purgation of the evil and pollution, which have entered it, is not isolated, and it could be considered, although in a reversed way, as an antecedent for the Manichaean development. Within the Manichaean cosmology, the particles of light must be liberated through the living action of the human beings, who digest light and transfer it out of the earthly prison by means of the Column of Light. The two models are exactly specular; the Zoroastrian one assumes that the Good Creation is absolutely positive, while the Manichaean one considers the physical reality as an obscure prison from which the light must be saved. In any case, the idea of a purgation of evil is common, although the ontology of nature is seen from two diametrically opposed positions.

be located on the highest sky, because Ahreman and the whole demonic army are now blocked inside the homocentric system, and nobody could aggress the uppermost heaven from outside, or this construction would have been completely nonsensical within the economy of the Mazdean theological system. The same considerations would be necessary in the case of certain descriptions of the expulsion of Ahreman, whose dynamics could result very peculiar (see above).

4. The Circumpolar Area and Its Cosmological Role

From an observational point of view, it would be worthy to recall that the latitude of some important Iranian lands, for instance the Sīstānian area, foundational within the elaboration process of the Young Avestan mythology, was of 27.52999060 degrees. Practically, the circumpolar area was permanently visible, as normally expected, of course, not at the local zenith, but on the northern side of the celestial area. This means that its location was observable on a lateral position, not particularly eminent, with respect to the position of a local observer. If we imagine a local sky-watcher, sitting in a valley surrounded by high mountain peaks, or also living in a mountainous area, scanning the constellations in front of him, the circumpolar area appeared certainly not so far from his horizon, certainly not vertically on his head. For this reason, when we reflect on the geographical meaning of the references to the northern area as the point of irradiation of the demonic army, we must consider these facts. Despite some different geographic coordinates (latitude 30.383333 north), a partly similar situation was perceivable by a local observer

in Mesopotamia around the year -1000 as shown in the figure reproduced in the first Excursus.⁷⁵

Thus, the circumpolar North would have been clearly observable on the septentrional side of the heaven during any season, this area being characterized by its permanent visibility and a presumable absence of any stellar setting (with the exception, during its rotation around the astronomical pole, of physical occultations due to the geographical terrestrial landscape, as in the case of mountains' peaks, etc.).

This kind of geographic condition supported and emphasized the idea that Ahreman was prisoner within space and time, and that he was no more in the position to get out from the cosmic jail, which was, in its turn, encapsulated within a series of spherical structures (evoking, although sharply different with respect to the Ptolemaic ones). On the contrary, Ohrmazd, whose central command occupied the top of this architectural structure, was still free to remain in the eternal time, directing the battle out of the contamination from the state of mixture (*gumēzišn*), until the arrival of the right moment for the definitive defeat of his antagonist. We must also observe that with Ahreman's invasion and his physical transportation of both the realm of Darkness and the intermediate space within the

⁷⁵ I must again thank for her help Dr. Susanne M. Hoffmann for the preparation and the necessary astronomical calculations of the image reproduced in the figure 2 appended to this essay.

Good Creation, the universe out of the Creation had been completely cleaned from any evil or ambiguous presence, so that, at the cosmic level, the first part of the battle was already gained by Ohrmazd. Thus, out of the battlefield represented by the trap corresponding to the state of mixture within the Good Creation, the space corresponding to the external side of the cosmos had become pure, while now, after the invasion, it was the Good Creation to become, only temporarily, mixed and polluted. The Avestan sources unfortunately contain less explicit references to the modalities of the following steps of the invasion led by Angra Mainiiu. In this framework, we do not find proper references to the geographical opposition between up and down, and the direction taken by the Antagonist is not presented as exactly following an ascensional trajectory. More precisely, we cannot find even a synthetic summary of the phases preceding the fight, and a description of the primordial universe before the activation of the two antagonist powers is missing. Thus, we can only infer, albeit with extreme prudence, the occurrence of some events. In this respect, the direct opposition between up and down seems to be absent or at least not explicit, while we must observe that the direction followed by Angra Mainiiu had to be semi-horizontal toward the northern area of the heaven. Thus, as suggested by Alberto Cantera during a Berlin seminar which I had the privilege to give on these matters,⁷⁶ the

⁷⁶ Berlin, Freie Universität, April 27th, 2025.

aggression of Anra Mainiiu seems to come from the back,⁷⁷ as in the case of a cowardly and treacherous

⁷⁷ The clear priority of what is on the front with respect to what is located on the back is again confirmed by REZANIA (2017: 396-398, *passim*) after a careful overview of the Avestan sources. On the other hand, we must recall that the temporal relation with the special directions has assumed in Avestan a peculiar evolution. It has been REZANIA himself (2019) to observe that the “past” stays in front, a something being already known and seen, while the “future” is on the back, because it is still invisible and unknown. This implies, in my opinion, that the Mazdean idea of future, more or less consciously, contains a certain negative hue, because it is connected with an external, cosmical need, imposed by the mixture resulting from Ahreman’s invasion. In other words, the future, seen from the primordial eternal perception of Ohrmazd, would have been unnecessary, as the historical fight emerging from the necessity of facing evil. Future is thinkable only within the framework of the limited time, as a time of preparation for a war, and as the time of the development of the conflict. On the contrary, within God’s sempiternity there is no qualitative difference between all the temporal moments, which coexist within his ontology, and peace and harmony are the rule. The evident fact that future is imagined as arriving from our invisible backside (while conventionally the Mazdean priests and their fellows should look at the south or the east), exactly as Ahreman comes from the (northern) back, shows an intrinsic negative character of the temporal arrow, but which is tempered by the hope and promise of the final victory and the absolute belief in the instauration of the future “post-body,” the *tan ī pasēn*. In fact, limited time, with its progress, not only is necessary, but is a foundational actor of the final triumph on evil. It is for this reason, that Ahreman would like to block or delay the arrow of time in order to escape the crucial moment of the last battle; see PANAINO 2018.

attack, and there is no special focus on an aggressive ascent from below, as, on the contrary, the Pahlavi sources imply. Even if we have seen that this kind of ascensional motion was the starting one, at a certain point, such a vertical movement would have re-directed itself onto the horizontal plane in order to attack the area of the lower sky (that of the stars), so that it was possible to invade the Earth's atmosphere and the terrestrial ground as well. In both cosmologies, any continuation of the aggression toward higher layers would have been impossible for the primordial Antagonist, because a superior starred barrier, that of the stars belonging to Spənta Mainiiu in the Avestan framework as well as that of the unmixable stars in the Bundahišn, would have definitively crushed any further demonic attempt to bring war and contamination to a higher celestial dimension. However, the presence of these stellar shields should be imagined as following Ahreman attack, or his invasion would have been simply impossible, these astral barriers being impenetrable.

5. The Spherical Model of the Persian Rivāyats in the Context of the Cosmic Fight

Before concluding this study, I must emphasize the fact that some paradoxical observations I previously advanced find a certain confirmation in the Persian Rivāyats of Dastūr Barzū Kamdin (apparently half of the 17th century.)⁷⁸ This priest, in fact, combined the Sasanian scheme of the homocentric spheres, which placed all the planetary demons on the same level of the heaven of the stars with the Greek and Islamic ones, in which each planet is attributed its proper heaven.⁷⁹ For instance, in the Persian Rivāyat entitled the “Influence of the stars,”⁸⁰ firstly edited and

⁷⁸ WEST 1899: 690.

⁷⁹ This list, as in many Medieval and earlier sources, just mentions the main planetary spheres, but we know that ancient astronomers created a number of minor or secondary spheres, in order to account for the different features of the planetary motions. Furthermore, an eighth sphere was introduced for the fixed stars, and in some models, even a ninth sphere was added, for the precession of the equinoxes. According to the systems, the motion of the eighth sphere should be very slow, and it depends on the impulse given by the *Primum Mobile*, the “First Mover,” which correspond to the ninth sphere.

⁸⁰ DHABHAR 1932: 428-431. In reality this letter belongs to a text which can be entitled as *Dar Āfrīnīsh-i jahān*, “About the creation of the world”, as remarked by RAFFAELLI 2017 and in a new study in the press.

studied by Spiegel,⁸¹ the celestial order is as follows starting from the external level:⁸²

Eighth sky belonging to Vanant⁸³ and to four unspecified demons.

Seventh sky belonging to Saturn.

Sixth sky belonging to Jupiter.

Fifth sky belonging to Mars.

Fourth sky belonging to the Sun.

Third sky belonging to Venus.

Second sky belonging to Mercury.

First sky belonging to the Moon.

In an additional sky or semi-celestial level (practically corresponding to the atmospheric one), placed below the one of the Moon, and which coincides with the atmospheric level, we find the Head and the Tail of the Dragon (ǰawzahr).⁸⁴

⁸¹ The text edited by SPIEGEL 1860: 161-166, in particular page 165 of the translation contains a strong variety with respect to the one preserved in the ʿOlamāʿ-e Eslām; cf. ZAEHNER 1972: 409, 416-417.

⁸² DHABHAR 1932: 429. See the new translation offered by RAFFAELLI in the press.

⁸³ Written in Pāzand script; SPIEGEL 1960: 162, l. 21; UNVALA 1922: II.63, l. 2.

⁸⁴ DHABHAR 1932: 429. This particular location of the Celestial Dragon will be the object of a special discussion by Enrico RAFFAELLI (in the press). It was already discussed by HARTNER 1963 (= 1968: 260), who noted that this doctrine belongs to the 11th c. and concerns the *circulus pareclipticus*. In the diagram of the spheres, the text describing the innermost heaven presents a problem. As very fittingly Samra Azarnouche has remarked

This order is patently in bold contradiction with the traditional Mazdean sequence, which the same Rivāyat knows, when it refers to the fact that *Garōdmān*, the Paradise, is on the top of the highest heaven of the heavenly bodies. But the ancient order of the celestial spheres is well attested in other Rivāyats, just edited in the ms. MU few pages before the present text,⁸⁵ and in particular in one of them by the same Dastūr Barzū,⁸⁶ which clearly evokes the Avestan and Pahlavi traditions, although with few differentiations. What is really interesting is the

(email of May 21st, 2025), the text runs as follows: *falak čo zohreh īn-ast*, but a reference to *Zohreh* would be nonsensical in this place. Actually, this is the name of the planet Venus, while here we have to do with a particular sphere located below that of the moon, and which belongs to the celestial Dragon and eventually to his head and tail (corresponding to the lunar nodes). It is plausible that in this case the scribe made a lapsus, mistakenly repeating the name of Venus instead of that of *Ĵawzahr* (cf. Ar. *Ĵawzahar*), which we should expect exactly in this astronomical location, at least according to the description of the homocentric spheres as given in the plain text of this Rivāyat. Probably, the final *-h* of *Zohreh* has been appended in order to complete the name. The final *īn-ast*, “this is” or “it is here,” is normal in these texts, as Azarnouche again remarks. We must also observe that the peculiar mention of Venus occurs also in the translation by DHABHAR (1932: 429, at the end the page), and again it is due to the scribe. At this proposal, Prof. Raffaelli fittingly remarks that the working copy of the text was due to a Muslim scribe, in the year 1900, whose textual competence in Mazdean matters could have been not particularly deep.

⁸⁵ DHABHAR 1932: 426-427.

⁸⁶ See again DHABHAR 1932: 426; UNVALA 1922: 58, ll. 17-18.

content of one passage preserved in this Rivāyat, which needs to be clarified with respect to the current interpretation it was given by Dhabhar. In particular, the Parsi scholar assumed that the text was describing the aggression of Ahriman as a violent crossing of the earth, which would have been literally perforated.⁸⁷ But, in reality, the passage in question does not speak of the earth, but more in general of the whole world, as we deduce from the original text:

و زمانه چنان ساخت که آهریمن جهان را سوراخ کرد و در گیتی
 دوارید و هر چه در گیتی بود از بدی و پلیدی خویش آلوده کرد
 (va zamāneh čenān sāxt ke āhriman jahān-rā surāx
 kard va dar giti davārid va har čeh dar giti bud az badi
 va pelidi xweš āludeh kard).⁸⁸

“[...] and Time made it so that Ahriman pierced the earth and roamed into the material creation and whatever there was in the world, he polluted with his own wickedness and filth.”

In his interpretation of the passage, Dhabhar introduced a peculiar deviation from the tradition, because, while the attack of the Aggressor comes from below,⁸⁹ very peculiarly he seems to discharge

⁸⁷ DHABHAR 1932: 429.

⁸⁸ See UNVALA 1922: 64, line 1.

⁸⁹ The same doctrine is attested also in the ‘Olamā’-e Eslām 14, where it is stated that Ohrmazd looked down (from his celestial uppermost position), and saw Ahriman ninety-six thousand

the traditional doctrine that unanimously describes Ahriman as piercing the heaven of the stars and consequently introduces the idea that the Prince of the Darkness was emerging from the underground. But on the contrary and more simply, the text simply states that Ahriman has pierced (*surāx kard*) the “world” or the “universe” (*jahān*), entering the material creation (*giti*), although the same source, as the present Rivāyat confirms,⁹⁰ notes that Ahriman seems to have been grounded beneath the Alborz Mountain,⁹¹ a place which links the lowest level of

parasangs away (ZAEHNER 1972: 410). The same figure is attested in a parallel source appended to the edition of the Rivāyats (UNVALA 1922: II.83-84; DHABHAR 1932: 428). The text of the ‘Olamā’-e Eslām 14 explicitly remarks that Ahriman from his inferior position turned towards the heights, but he decided to redescend because he did not possess the right army for the combat (ZAEHNER, *ibidem*).

⁹⁰ DHABHAR 1932: 430.

⁹¹ As previously noted (PANAINO 2021: 46-47), according to the Avestan background, the mountains form a sort of circle and belong to the divine creation, while their origin is justified in some Pahlavi sources as a reaction against the invasion of Ahreman into the Good Creation. When Ahreman pierced the sky, his aggression produced, according to the Bundahišn VIC (PAKZAD 2005: 101-104) and the Wizīdagihā ī Zādspram 3.26-32 (GIGNOUX & TAFAZZOLI 1993: 46-49), a counter-reaction in the earth, which set in motion the mountains. The dynamic of this growing is peculiar. It could imply that, while rising higher toward the Earth from outside of the creation, Ahreman produced a retreat of the mountains. In other words, the growing of the mountains does not seem to correspond to a phenomenon of attraction produced by Ahreman, but, on the contrary, of antagonist repulsion and opposition. We

the earth to the highest peak of the paradise. Even though this text is not really clear on these matters, it seems that Ahriman would have been imprisoned in this subterranean hell,⁹² before rushing out and starting to pollute the world,⁹³ but the image of the Prince of Darkness as an aggressor digging a tunnel

remember that at the end of the fight the earth will be levelled, and the mountains will disappear (LINCOLN 1983). Of course, there are other doctrines concerning the origin of the mountains, as in the Pahlavi Rewāyat 46.5 (PANAINO 2021: 46 n. 114). In that context, their origin was described as completely independent from Ahreman. In any case, the metals and the precious stones are consubstantial with the matter of the sky, and it will be used in order to burn the hell and to seal the hole from which Ahreman entered the world. I must also recall that some sources, such as the *Māh ī Frawardīn rōz ī Hordād* 39 (GRENET 2009: 166), state that the earth, after the final defeat of Ahreman, will ascend to the level of the stars, for it had been put down at the moment of the primordial aggression. Although it is a later tradition, it implies a sort of complementarity between the heaven and the earth, and their primordial substance.

⁹² We must inevitably observe another bold contradiction; if Ahriman was outside of the creation, in another extra-cosmic dimension, how was possible that it was already hidden within the deepest regions of the earth? Apparently, there is a mixture between the common location of Ahriman within a terrestrial hell, as in Christianity and other religions, and the genuine Mazdean idea of a primordial region of the chaos, in which Ahreman was originally located. Thus, there was a hell before the fight, and another one during the mixture. Here, we see a kind of overlapping between these two phases and well distinct places.

⁹³ *Ibidem*.

throughout the whole earth seems to me unacceptable and ungrounded.

Another interesting doctrine is the one which explicitly assumes what follows:

چنان بیان کرده اند که اورمزد جهان را مثال گوی بیافرید و از
فلک الافلاک تا کُرّه خاک بدین مثال
(*čēnān bayān kardeh-and ke Ohrmazd jahān-rā mesāl
gūy biyāfarid va az Falak-ol-Aflāk tā koreh-ye xāk bedin
mesāl*).⁹⁴

“It is so related that Ohrmazd had created the world like a ball (*gūy*) and from the empyrean heaven (*Falak-ol-Aflāk*, lit., “the heaven of the heavens”) to the terrestrial globe (*koreh-ye-xāk*) it is (created) in this manner.”⁹⁵

The text, then, confers to a diagram (figure 3, which is reproduced in this study at the end of the text after the manuscript, followed by a translated version within a round scheme by Afshin Aryanpur; figure 4). It is important to remark that this statement is not perceived at all as in conflict with the disposition of the paradise in the most external sphere, which would have been the first front during the aggression. We cannot doubt that this very passage certainly implies a spherical system,

⁹⁴ See UNVALA 1922: II.62, the last two lines of the page. N.B. In the ms. we find the orthography *bedimesāl*.

⁹⁵ *Ibidem*.

because the author refers to a diagram (at p. 64 of the original Persian text of MU),⁹⁶ which follows a clear homocentric model. The same paradoxical situation emerges from the location in the eighth sky (already mentioned above) of four demons,⁹⁷ although under the control of the astral divinity Vanaṇt,⁹⁸ according to a doctrine, which counters all the instruments usually mentioned in the Mazdean sources in order to take the demonic forces far away from the abode of Ahura Mazdā. The text again shows a strong contradiction: actually, it uses the concept of *Falak-e Thābitāt* (فلك ثابتات),⁹⁹ which corresponds in the Arabic astronomical terminology to *Falak al-Thābitāt* (فلك الثابتات), a term which strictly concerns the eighth heaven as that of the fixed stars, whose motion was so slow that it was conceived as stable. It is probably in this sense that we should interpret Dhabhar's translation as "Immoveable

⁹⁶ See UNVALA 1922: II.64. A new translation of this text with the diagram can be found in RAFFAELLI, in the press.

⁹⁷ DHABHAR 1932: 429. The presence of demons in the highest heaven is simply nonsensical, but probably due to the mention of the star Vanaṇt, whose antidemonic role was paramount. In any case, the demonic location there goes against the previous Mazdean tradition. But the same consideration can be made for the planetary heavens, which follow a correct western subdivision, but that in the Sasanian diagrams, were placed within the same sky of the stars against whom they were supposed to fight.

⁹⁸ On this Avestan star, see PANAINO 1998.

⁹⁹ UNVALA 1922, II: 63, l. 2; SPIEGEL 1860: 165, l. 20.

Sky,”¹⁰⁰ which is *per se* not astronomically precise, but that seems to imply that this sphere was seen in the Mazdean context not only as the eighth heaven, but as connected with the image of the *Primum mobile*, i.e., like a sort of ninth sphere containing *de facto* the Empyrean, which, theoretically, could correspond to the proper abode of Ohrmazd.¹⁰¹

¹⁰⁰ See again DHABHAR 1932: 429; UNVALA 1922: 63, l. 2.

¹⁰¹ The present source is the object of a deep study by RAFFAELLI (in the press), so that I do not enter some other subjects, which will be of a certain interest, because they are brilliantly treated by my colleague.

6. A Mazdean Empyreum?

We must eventually observe that the concept of *Primum Mobile* was only implicitly shaped in Aristotle's *Metaphysics* (ὃ οὐ κινούμενον κινεῖ, “that which moves without being moved” [Book XII, 1072a]), where the Greek philosopher elaborates the idea of a universal “first cause,” which, in its turn, should be associated with the outer heaven,¹⁰² but that it was not explicitly formulated in the Ptolemaic sources. This is the solid conclusion imposed by Hullmeine¹⁰³ in his study on the origin of the ninth sphere of which there is no trace in his *Almagest*. Despite later sources try to ascribe this idea to Ptolemy's Planetary Hypotheses, Hullmei-

¹⁰² *Metaphysics*, Book XII.7 [1072a] (tr. by TREDENNICK 1935: 144-147): “There is something which is eternally moved with an unceasing motion, and that circular motion. This is evident not merely in theory, but in fact. Therefore the ‘ultimate heaven’ must be eternal. Then there is also something which moves it. And since that which is moved while it moves is intermediate, there is something which moves without being moved; something eternal which is both substance and actuality.” καὶ ἔστι τι αἰεὶ κινούμενον κίνησιν ἄπαυστον, αὕτη δ' ἡ κύκλῳ (καὶ τοῦτο οὐ λόγῳ μόνον ἀλλ' ἔργῳ δῆλον), ὥστ' αἰδῖος ἂν εἴη ὁ πρῶτος οὐρανός. ἔστι τοίνυν τι καὶ ὃ κινεῖ. ἐπεὶ δὲ τὸ κινούμενον καὶ κινεῖ καὶ μέσον, ἴσθ' [25] ἔστι τι ὃ οὐ κινούμενον κινεῖ, αἰδῖον καὶ οὐσία καὶ ἐνέργεια οὕσα. For some later modifications with respect to Aristotle's mechanic model, see SORABJI 2007.

¹⁰³ HULLMEINE 2020: 79-82, *passim*.

ne¹⁰⁴ has equally shown that this attribution is the fruit of a later speculation introduced by Johannes Philoponos after a theological argument. For this reason, it would not be farfetched to presume that the full development of the conceptual and cosmical function of the ninth sphere was not only the fruit of a seminal contamination between the thought of Aristotle and the astronomical cosmology shaped by Ptolemy, but that its definition, particularly in the Arabic world, was due to the diffusion of Neoplatonic comments about the number of the spheres.¹⁰⁵ In this context, some post-Ptolemaic commentaries ascribed Ptolemy with this theory, although it was not his own. Certainly, the ninth sphere and the idea of the *Primum Mobile* found a certain success not only in the Medieval West, but they knew also criticisms and refutations, especially in the framework of the Arabo-Islamic astronomy. In this context, the interest about astronomical cosmology started already since the end of the 8th century, with al-Farghānī (9th c.), Thābit ibn Qurra (9th-10th c.), al-Kindi (9th c.), al-Jawharī (9th c.), and it continued with later authors.¹⁰⁶ For instance, al-

¹⁰⁴ HULLMEINE 2020: 82-93.

¹⁰⁵ Very important is the monography by DAVIDSON 1987, which in many sections deals with the problem of the “First Mover” and the ninth sphere in Christian, Islamic and Jewish theological and philosophical contexts.

¹⁰⁶ See KING 1993; SALIBA 1994: 1-39, *passim*; 2011: 92-94, 132, 163, 171-191; RAGEP 2001; 2022: 49, 126, 349.

Bīrūnī strongly criticized it,¹⁰⁷ and he himself explicitly wrote that this innovation did not appear in the works of Ptolemy himself.¹⁰⁸ It is beyond my expertise to enter in detail the relations between the *Falak al-aṭlas*, i.e., the true *Primum Mobile*, associated with the ninth sphere, and the *Falak al-Thābitāt*, which was just the sphere of the fixed stars (i.e., the eighth one),¹⁰⁹ but it seems that the Persian Rivāyats

¹⁰⁷ Although *falak* generally refers to “heaven,” it assumed, probably already in the Qur’ān 21.34 and 36.40, the more specific meaning of “sphere,” as that of Arabic *kura*, whose meaning was strictly that of “sphere” or “globe.” It also important to remark, as observed by HARTNER (2010), a very fitting statement by al-Bīrūnī about the use of the term *falak* only with reference to moving heavens. So Hartner writes: “According to al-Bīrūnī (*Al-Kānūn al-Mas‘ūdī*, i, Hyderabad-Dn. 1954, 54-5), “*dā’ira* and *falak* are two terms that denote the same thing and are interchangeable; but sometimes *falak* refers to the globe (*kura*), in particular when it is moveable (*mutaḥarrik*); *falak*, thus, does not apply to the motionless [globe]; and it is called “*falak*” only on account of its similarity with the whorl of the rotating spindle (*‘alā waḍḥ al-tashbih bi-falak al-mighzal al-dā’ir*.” See also LANGERMANN 1982; LERNER 1996: I. 88, 288 n. 8, 293 n. 47. Cf. also HULLMEINE 2020: 83-87 and BRENTJES 2022: 87 (with reference to Banū Mūsā’s reject of the existence of the ninth sphere). See also here in the note 84.

¹⁰⁸ See also the discussion offered by HULLMEINE 2020: 91-93 with additional bibliography and textual references.

¹⁰⁹ In his *Taḥfīm*, al-Bīrūnī (1936: 43-45, §§ 120-123) describes the celestial sphere as follows: “[120] ... a body like a ball revolving in its own place. [...] It is called *falak* on account of its circular movement like that of the whirl of a spindle [...]. [121] There are eight such spheres enclosed the one within the other, like the skins of an onion; the smallest sphere is that

play with the role of the eighth heaven as whether it was attributed certain characters, which distinguish the ninth one. In fact, as noted before, within the diagram above mentioned, we find eight spheres, and the most external one is that of the fixed stars, which here assumes (but only theologically) the role of the *Primum Mobile* as well, although the text,¹¹⁰ as many oriental sources expo-

which is nearest to us [...]. These seven spheres belong to the planets, but above them all is the sphere known as that of the fixed (or desert) stars. [...] A number of people consider that beyond the eighth sphere there is a ninth entirely quiescent; it is this which the Hindus call in their language *brahmānda*, i.e., the egg of *Barāham*, because the prime mover must not be moved, and it is on this account that they describe it as motionless. But it is possible that it is a body not like the other spheres, otherwise its existence could be demonstrated, and that to apply this name to it is an error. Many of our ancestors considered that beyond the eight spheres there is an infinite empty space, others, a boundless quiescent substance, while according to Aristotle there is neither substance nor void beyond the revolving bodies.” It is interesting to remark that al-Bīrūnī gives another reference to the *brahmānda* in his work about India (tr. by SACHAU 1910: 1.225-227) in a passage dedicated to Āryabhaṭa, before addressing the subject of the actual existence of the ninth sphere. On the importance of this refutation, and on the statement that al-Bīrūnī himself remarked that he would have been unable to find textual passages in the works by Ptolemy supporting the existence of this additional motionless heaven, see HULLMEINE 2020: 91-93. More precisely, we should transcribe *brahmāṇḍa*-, or “the egg of Brahṁa).” There is also an important Sanskrit Purāṇic text entitled *Brahmāṇḍa-purāṇa*.

¹¹⁰ This is the text concerning the eighth sphere in the diagram:

کره هشتم از مرکز زمین که کواکب اندرست ثابت‌ه و بر میان فلک هشتم دوازده صورت برج انگيختند و نام صورتها این است: حمل، ثور، جوزا، سرطان، اسد، سنبله، میزان، عقرب، قوس، جدی، دلو و حوت و در پهلوی نامهای: گاو، دوپیکر، خرچنگ، وشیزه، خوشه، ترازو، کژدم، نیماسپ، دهی، دول و ماهی می‌گویند

Koreh-ye haštom az markaz-e zamīn ke kavākeb andar-ast thābeteh va bar miyān-e falak-e haštom davāzdah sūrat-e borj angixtand va nām-e sūrat-hā īn ast: hamal, sūr, jōzā, saratān, asad, sonboleh, mizān, aghrab, ghūs, jadi, dalv va hūt va dar pahlavī nām-hā-ye: <barra>, gāv, du-paikar, xarčang, šīr, xušeh, tārāzu, každom, nimāsp, dahī, dōl va māhī mi-guyand.

“The eighth sphere from the centre of the Earth, where the constellations are fixed, contains in this sky the twelve signs of the zodiac, and the names of the signs are: Aries (*hamal*), Taurus (*sūr*), Gemini (*jōzā*), Cancer (*saratān*), Leo (*asad*), Virgo (*sonboleh*), Libra (*mizān*), Scorpio (*aghrab*), Sagittarius (*ghūs*), Capricorn (*jadi*), Aquarius (*dalv*) and Pisces (*hūt*), and in Pahlavi (*dar pahlavī*) the names are: <Aries> [*-barra*], Taurus [*gāv*], Gemini [*du-paikar*], Crab [*xarčang*], Leo [*šīr*], Virgo [*xušeh*] (lit. Ear [of Corn]), Libra [*tārāzu*], Scorpio [*každom*], Sagittarius [*nimasp*], Capricorn [*vahī*], Aquarius [*dōl*], and Pisces [*māhī*]. We must remark that the author offers two series of names for the single zodiacal signs, the first one (here in round brackets) according to the Arabo-Islamic tradition, the second (here in square brackets) according to the Pahlavi lexicographical custom and the Sasanian background. It is probable that the second list was not forgotten in Iran after the fall of the Sasanian Empire, but that it was preserved not only among the Zoroastrians, but among the astronomers as well. In particular, the older series should have been kept living, indifferently from the religious identity of the author, at least among the astronomers and interpreters who translated and adapted Pahlavi scientific and divinatory materials in Arabic. N.B. In the Pahlavi list, the reference to Aries [*-barra*] was drop out in the writing by the scribe. I must thank again Samra

sed to the criticism of Islamic astronomers, does not adopt the ninth sphere. It is clear that in this case too we must observe again another contradictory mixture of different doctrines and traditions without a consistent astronomical model. It is difficult to say in which measure this waving cosmological approach was only a later result or if its origin finds its roots not only in the ambiguities produced by the impact of the Ptolemaic models (and their contradictory receptions) on the traditional Mazdean uranography (with its starred heaven as the lowest celestial stratum), but also in the theoretical complexity produced by the dialogue with the protagonists of the Islamic astronomy, particularly within the intellectual circles of Baghdad, where the Mazdean component¹¹¹ played its part, and transmitted a Persian secular heritage.¹¹² The reflexes of a certain dialogue are certainly visible in some contradictory doctrines. Just as an example, we may quote the interesting fact that, even though the author of this Rivāyat declares to have followed the Bundahišn,¹¹³ in reality he mentions among many others a very specific doctrine, such as the one referring to good and bad stars (literally defined as “Ohrmazdian” and “Ahrimanian” stars [*setāre ohr-*

Azarnouche, Afshin Aryanpur and Enrico Raffaelli for their help in the critical discussion and interpretation of this passage.

¹¹¹ See now the contribution by SAHNER 2023.

¹¹² See GUTAS 1998: 11–52, *passim*.

¹¹³ DHABHAR 1932: 431.

mazdiast ud ahrimaniast]),¹¹⁴ which is well known, although it was not only unorthodox, but had nothing to do with the tradition of the Bundahišn and with the Zoroastrian standard classification of the (fixed) stars as divine beings in opposition to the planetary demons.

¹¹⁴ DHABHAR 1932: 431; see UNVALA 1912: II.66, l. 9. On this tradition, see KUNITZSCH 1981; 1989; 1993. See also RAFFAELLI 2001: 139-141.

7. Conclusions

If the devil hides himself in the details, certainly his arrival, described in a simple and primitive way, presents some strangeness that deserves our attention, since it reveals the difficulty in which different conceptual models have overlapped each other, not without problems, in the elaboration of the Mazdean cosmology. Certainly, the Zoroastrian idea that the House of Ahura Mazdā (OAv. *garō.dāmāna*-, lit. “house of song;” cf. YAv. *garō.nmāna*-; Pahl. *garōdmān*) was on the top of the ordered universe, and that it endured to occupy, within the spherical system of Late Antiquity, the highest level, corresponding to a sort of Empyrean, is independent from the western and Islamic speculations about the eighth and the ninth sphere, but it represented an element of comparison and potential inspiration, particularly in the Middle Eastern framework, whose relevance has never been taken into account. As we have seen, following Hullmeine’s remarks,¹¹⁵ Philoponus’ arguments underpinning the existence of a ninth sphere were based on theological reasons, not on strictly physical and mathematical inferences. This shows that even for one of the most rational and advised scholars of the 6th century CE religious matters played a remarkable influence. For the Zoroastrians as well the upper-

¹¹⁵ HULLMEINE 2020: 90-91.

most part of the cosmic architecture was untouchable and perfectly pure, and in addition it permitted to God to strongly hold the direction of the fight against his direct opponent, Ahreman, now prisoner between the earth and the starred heaven. Of course, this mythological and theological model had become scientifically unacceptable, but, despite the influence of the homocentric doctrine, it remained primitive, incoherent and substantially wrong from the point of view of the celestial mechanics of that period. Using it, nobody could have saved the phenomena, but – I continue to remark – this was not a drama, because even the Christians, particularly in the framework of the Sasanian Empire, endured in the defence of the hyper-confessional Christian astronomical-cosmographic theory based on an anti-Ptolemaic cosmos, arranged according to the image of the sacred Tabernacle of Moses.¹¹⁶ Thus, in spite of all these absurdities, I cannot *a priori* reject the possibility that the Mazdean conceptual position of God's residence on the top of the cosmic building might have played its influential role, entering in resonance with other more or less sound or peculiar doctrines, although it did not prevent the Zoroastrian astronomers and theologians to present in a clearer and more fitting way the cycle of the events during the dramatic moments due to Ahreman's aggression. That God should be placed on

¹¹⁶ On the anti-Ptolemaic cosmology of Cosmas Indicopleustes, and its role in the Iranian world, see the detailed discussion in PANAINO 2019a, *passim*.

the top of the universe was, as far as we can see, a commonly shared idea, but what to do if evil was an extra-cosmic power? The Avestan model, in its primitive arrangement, was less speculative, but more intuitive and fitting, if put to the test in front of a scenario, however imaginary, but empirically describable in its completeness. The consequences with the most advanced model, partially Ptolemaic, turned out to be very uncertain, and certainly weak from the point of view of the physical exposure to the enemy of the most precious sky. Something must have escaped us in the transmission of this narrative or simply the sources describe an imaginary sky, whose completeness, as I have tried to suggest hypothetically, must be postulated as in progress and not as a fully accomplished reality before Ahreman's aggression, or simply as qualitatively different and *in fieri* between the mental and the physical living phase.

8. Excursus 1. Addenda and Corrigenda about the Image of the Cosmic Egg

Actually, the metaphoric reference to the egg in Yašt 13.2 is not *per se* so relevant as it could seem, and this brief excursus is now necessary in order to avoid potential confusions or wrong inferences, as I myself did in past studies, where I have emphasized the resonant points of correspondence emerging from some Mazdean sources about the cosmic egg, but without noting that some of them in reality concern a very different conception of the shape of the universe. In the Avestan framework, the bird, corresponding to the sky, envelops the earth, which is presented like an egg, but the two are separated. Therefore, in this case, there is not even a vague comparison between the egg and the sky, but just between the egg and the earth. Thus, the egg does not represent the whole universe or the whole creation, but just a part of it.

A later modification of this image appears in Plutarch's *De Iside et Osiride* 46-47,¹¹⁷ where the Greek author states that Hōromázēs (Ὡρομάζης) created 24 gods, placing them into an egg. In his turn, Arīmánios (Ἀρειμάνιος) too would have created other 24 demons, who pierced this egg as well,

¹¹⁷ PANAINO 2020; 2025 in the press, a.

so that gods and demons were finally mixed.¹¹⁸ This text clearly evokes the image of the invasion of the Good Creation and refers to the Ahremanic aggression of the heaven and the piercing of the sky by the demonic army, as it is mentioned in the Avestan sources, and anticipates what more extensively will be described in the Pahlavi ones. Furthermore, we must also cautiously remark that the previous Avestan passage of Yt13.2, and the tradition collected by Plutarch, probably via Theopompus, can find a very far (although partly distorted) development also in Dēnkard III.74,¹¹⁹ where the heaven was described as follows:

[B47.8-16, M64.5-17] *hād. az dēn nigēz ī asmān fradom dām az ān ī gētīgīg stī [var. dād] ud abāriḡ dāmān hamāg *dād-estēnd andarōn asmān čiyōn way andarōn xāyag dād estēd. āsmān pērāmōn wispān čiyōn xāyag abar way, ud andarōn asmān gyāg 3 ēwēnag:*

¹¹⁸ It would be interesting to note that Athanasius KIRCHER (1602-1680; see the third volume of his *Theatrum ieroglyphicum*, 1654: 275) mentioned this story with direct reference to its iconographic quotation on the obelisk, which was visible in Rome (in Piazzale del Verano), where the world was described as an *ovum Zoroastræum*. Here, the egg is associated with a cosmic shape. See Ursula SIMS-WILLIAMS 2013. See in this study the image n. 5.

¹¹⁹ MADAN 1911: I.64; DRESDEN 1968: 46. See also the new edition of the text by FAZILAT 2002: 274-275. For the translation, see DE MENASCE 1973: 78-79; cf. also the discussion in PANAINO (in the press, a).

*ēk rōšn ī agumēg-tom wehīh ī agumēg-wadīh ud šādīh
 ī agumēg-bēš: gyāg ī abardar u-š nām garōdmān
 wahišt abardom ī-š pāyag wehīh ī dādār-ohrmazd ud
 pāyagīhā ī amahrspand ud abārīg yazdān, azādān
 frawahr ud rōšnān ī wēnišnīg pad abēzagīh az ēbgad.
 ud ēk tom ī agumēg-rōšn. ud wattarīh ī agumēg-wehīh
 ud bēš <ī> agumēg-šādīh ī gyāg ī frōdtom gannāg
 mēnōg rēzēd, pāyagīhā māzanīgān ud abārīg
 padīrag<ān> [B74.8-21, M101.6-22]¹²⁰ kōxšīšn ī dēw
 <ud> druz pad bazag ālūdagīh *pādīrānēnidag dru-
 wandān ruwān u-š nām dōšox.
 ēk rōšn ī gumēg-tom ud wehīh ī gumēg-wattarīh ud
 šādīh ī gumēg-bēš. gāh ī mayān ī harw dō u-š nām
 gētīg, gyāg kōxšīšn ī abāg ēbgadtom ud wattarīh <ud>
 bēš mad ēstēd ō gēhān.*

“Thus: From the exposition of the Good Religion
 (it is clear) that the heaven is the first creation
 among those other living beings and all the other
 creatures have been created inside the heaven as
 the bird (way) has been created inside the egg
 (xāyag). The heaven (sur)rounds all (the crea-
 tures) like an egg (sur)rounds the bird and inside
 the heaven there are three kinds of places:
 One is the light not mixed with the darkness and
 happiness not mixed with harm; and the name of

¹²⁰ The text of this chapter was curiously divided, and the
 second part of chapter 74 was written down only some pages
 later, so that it results partly mixed with chapter 107. We can
 suspect that some textual gaps might be present. Cf. DE
 MENASCE 1973: 389.

this superior place (is) *Garōdmān*, i.e., the higher Paradise (*Wahišt*), whose station (corresponds to) the goodness of Ohrmazd the creator and (to) the stations of the Amahraspand and of the other gods, of the Frawahr of the not-yet-born and the visible lights in the (state of) purity from the aggression (of Ahreman).

One is the darkness not mixed with light, evil not mixed with goodness and harm not mixed with happiness, where the inferior place of the Gannāg Mēnōg flows, (and) the stations of the Māzānian (demons) and of the other antagonists (are) [lacuna in the codices] and the combat of the demons (and?) the *druz* holding back the souls of the sinners within the sin of pollution; and its name is Hell (*Dōšox*).

One (is) the light mixed with darkness and the goodness, which is mixed with evil and happiness, which is mixed with harm: (it is) the intermediate place among the other two (above mentioned places), and its name is ‘physical (*gē-tīg*) place of struggle’ with the worst aggressor, (his) evilness and harm, which entered the creation. [...].”

Despite an *apparently* uninterrupted continuity during the transmission of the image of the celestial egg, we are compelled to observe that the conceptual visualization of the cosmos in this case has been completely reversed, because in the Avestan passage it was the bird with its wings that surrounded the egg (= the earth) and not the op-

posite, as in the Dēnkard III.74, where the heaven surrounds the earth like an egg containing a bird within. Practically, the Avestan description concerns a bird, which was hatching an egg (in order to give birth to another little bird), the Pahlavi one just the growth of the little bird within the egg. Then, the Pahlavi version insists on the ovoidal shape of the whole Good Creation according to a very simple vision, in its turn relatively primitive as well (and with some point of comparison with the Indian tradition), but in any case, extraneous to the later idea of an astronomical sphericity,¹²¹ although it

¹²¹ I must observe that in the Chinese text of the 2nd c. CE entitled *Houen yi tchou* by Tchang Heng, we find, within an already spherical context, a description of the sky as a round egg, while the earth is compared to the yellow yolk in its centre. I quote part of the French translation given by MASPERO 1939: 335: « le ciel est comme un œuf, il est rond comme une balle d'arbalète ; la terre est le jaune de l'œuf : elle se trouve toute seule à l'intérieur du ciel. Le ciel est grand, la terre est petite. À l'intérieur de la partie inférieure du ciel il y a de l'eau. Le ciel enveloppe la terre comme la coque (de l'œuf enveloppe) l'intérieur. Du ciel et de la terre, l'un monté sur l'air se dresse, l'autre porté par l'eau flotte. La circonférence du ciel a 365°4 ; en la partageant en deux on obtient 182°5 degrés : ce qui recouvre le dessus de la terre est de 182°5, ce qui entoure le dessous de la terre est de 182°5. C'est pourquoi, des 28 mansions, la moitié est visible au-dessus de la terre et l'autre moitié est cachée. Ses deux sommets s'appellent les Pôles Nord et Sud. Le Pôle Nord est le milieu du ciel ; il est exactement au Nord et est à 36° au-dessus de la terre ; par conséquent un cercle tracé autour du Pôle Nord comme centre et ayant un

suggests that Ohrmazd's creation was similar to a solid shape and not to a flat disk. Apparently, we must observe that this image of the egg corresponding to the universe does not find any support within the Avestan literature, and it should be fruit of an external influence or the result of relatively later speculations. Furthermore, according to the *Dēnkard* III.74, the cosmic egg in reality contains also three distinguished layers, one corresponding to the light (and the Paradise of Ohrmazd at its highest level), the second to the darkness, and a third one in the middle corresponding to the intermediate place. Thus, we do not find here just the image of the Good Creation, but a description of the already "mixed" (i.e., polluted) cosmos, in which one finds the heavens, the earth and the atmosphere, where the fight between Ohrmazd and Ahreman is taking place. This is a contradictory representation of the same Zoroastrian mythological narration, because the text assumes that the heavens, full of light, envelop the egg, in which there are the three strata of the mixed universe, including the darkness, that originally were outside of the heaven. Thus, the full text containing this description does not concern only the form of the Good Creation, but it embeds, in a contradictory way, also the shape of the primordial universe already before the beginning of the cosmic battle, and then lists the three different cosmic levels, which are located

diamètre de 72° est toujours visible et n'est jamais caché. [...] ». See also BAUSANI 1981: 29.

inside the egg itself. It is clear that this description moved from a simplistic comparative image between the heaven and a cosmic egg, but that later on switched toward a larger comparison between the contents of the egg and the three primordial layers of the universe, as they were after the irruption of Ahreman. In this way, two different moments in the drama of the cosmic fight between Ohrmazd and Ahreman have been contradictorily mixed, despite the fact that they belong to two completely different phases of this frontal confrontation. Thus, in *Dēnkard* III.74, Ahreman's aggression is described in its later development within the inner side of the egg and not as an aggression from the outer part, as it was still in Plutarch's text. I must again observe that the comparison with the egg was certainly very attractive, and it was in any case developed, as it occurs in the *Dādestān ī Mēnōg ī xrad* 47.7:¹²²

(8) *kū asmān ud zamīg ud āb ud abārīg harw čē andarōn xāyagdēs ēdōn homānāg čiyōn murwān xāyag.* (9) *asmān azabar zamīg xāyag homānāg pad dastkārīh ī dādār Ohrmazd winard estēd.* (10) *ud zamīg andar mayān asmān hangōšīdag ēdōn homānāg čiyōn zardag mayān xāyag.* [(11) *ud āb andar zamīg ud āsmān ēdōn čiyōn āb andar xāyag*].

“(8) The sky and the earth and the water and all the rest, which exists in between are egg-shaped, exactly like an egg of a bird. (9) The sky has been

¹²² ANKLESARIA 1913: 126-127.

established above the earth like an egg by the manufacturing skill (*dastkārīh*) of the creator Ohrmazd. And the earth, in the middle of the sky, looks like the yolk of the egg within an egg. [And the water in the earth and the sky is like the ‘albumen’ within an egg].”¹²³

Here the egg corresponds to the image of the Good Creation, so that the aggression of Ahreman will pierce its external shell. This representation is closer to that of Plutarch, but differs again from the Avestan one, and only partially coincides with that of the *Dēnkard* III, which mixes two different stages, as we have noted before. This is just another evidence of the different and contrastive metaphoric representations of the heavens (corresponding, as the waters, to the albumen [*āb andar xāyag*; lit., ‘the water inside the egg’]) and of the primordial cosmic shape, which mixed different traditions and mythological suggestions. Although this subject should require further investigations concerning the cultural and cosmological relations between India and Iran in Late Antiquity (and not the common Indo-Iranian heritage), we cannot exclude that the mythological idea of a cosmic egg enveloping the *whole* primordial creation, and the comparison between the yolk and the earth was of Hindu derivation if we consider its distance from the Avestan presentation of the earth as an egg, and not

¹²³ See BAUSANI 1963: 150.

its yolk.¹²⁴ Perhaps, it is not by chance that al-Bīrūnī in his works insists on the comparison between the outer sphere of the cosmic system and the *brahmāṇḍa*.¹²⁵ For him the concept was Indian, not Iranian, and it is not impossible to imagine that this was a very plausible origin for its diffusion in Iran.

¹²⁴ See BAILEY 1971: 135-136.

¹²⁵ See here again in note 109.

9. Excursus 2: YAv. *apāxtara-* by Prof. Velizar Sadovski

YAv. *apāxtara-* represents the regular phonological outcome of PIr. **(H)apāxtara-* < PIIr. **Hapa-Hk-tara-* (PIE transponate: **h₂epo-h₃k^u-tero-*), an adjectival formation with the suffix Ilr. **-tara-* < PIE **-tero-* that forms contrastive — e.g. PIE **h₂él-tero- ... *h₂él-tero-* ‘the one ... the other, *alter ... alter*’ — and, in particular, comparative derivatives. Their derivational bases may be adjectives (productive comparatives in OInd./OIran. *-tara-*, Greek *-τερο-*), nouns (e.g. Ved. *ásva-tara-* ‘mule’, orig. ‘a hoofed animal related with but different than the horse’ [*ásva-* < **h₁ek^uyo-* ‘horse’], cf. Lat. *mater-tera* ‘a woman related with but different than the mother [*mater*]’), furthermore, pronouns (e.g. Ved. *ítara-* [... *ítara-*] < **Hi-tero-* [... *Hi-tero-*] ‘the one ... the other’, cf. Lat. *iterum* ‘for another/the second time’) and adverbs.

YAv. *apāx-tara-* ‘posterior, located (lit. “more”) behind, located (lit. “more”) in/to the north [“than”/from the orientation point]’ derives from the (neuter accusative) adverb PIr. **(H)apāk* ‘turned/directed backwards; northern’ < PIIr. **Hapa-Hk-* ‘directed backwards’, cf. Ved. *ápāk* ‘turned/directed backwards; western’, < PIE **h₂epo-h₃k^u-*, lit. ‘whose eyes/look are/is (turned/directed) backwards’. It contains the root-noun **h₃ek^u-/*h₃k^u-* ‘eye, look’ in the second term (on the heterogeneous

structure of the paradigm of Ved. *ápāñc-/apāc-*, YAv. *apaš* [adv. Yt10.48; cf. BARTHOLOMAE 1904: 82, s.v. “j. *apāñk-*: *apāk-*”] see EWAia 1,85, with refs.); on the contrastive stress in the adj. derivative *ápāk-a-* ‘posterior; (coming) from far away; apart’ vs. the adverbialised instr. sing. *apāká* ‘behind; far away; apart’ see EWAia 1,85 and SADOVSKI 2000: 459; SADOVSKI forthc.: IV.3, no. 49. Its first term is the PIE adverb **h₂épo* ‘away; back(wards)’. On the system of the Avestan adjectives for space directions (as determined by a main orientation centre in the south, unlike the eastern-oriented Vedic topology), see BARTHOLOMAE 1904: 79, s.v. “j. *apāñk-*: *apāk-*”; laryngeal reconstructions in **h₂épo* and **h₂él-tero-pace* LIPP 2, s.vv. **áp/*ápo* ‘weg [...], hinter, nach’ and **ál-* ‘anderswo’. *apāxtara-* ‘located in the direction backwards, posterior; northern’ thus belongs to the type with an adverb as a derivational basis, just like the cases enumerated by DEBRUNNER 1954: 607f. Beyond them, cf. Ilr. **uttara-* ‘upper, higher, northern, later’; this formation itself seems to be an inner-Ilr. innovation, in spite of the precise parallel of the Greek comparative ὕστερος ‘posterior, rear’, since the suffix **-tara-* is increasingly productive (cf. LUBOTSKY forthc., s.v. **uttara-*, as opposed to archaic **-ara-* < PIE **-ero-* building adjectives from local/(de)locative adverbs, e.g., in Ved. *ápara-*, O/YAv. *apara-* ‘located behind; later’ < **h₂ep-ero-*, see EWAia. 1,83f., or Ved. *ádharma-*, YAv. *aðara-* ‘located below; western’ < **(H)nd^h-ero-* [cf. *adh-ás* ‘under(neath), below’, see EWAia 1,66]). The form *apāxədra-* goes back to *apāxtra-* according to a special

Young Avestan development, cf. YAv. *vaxδra-* ‘speech’ < PIr. **vaxθra-* < PIIr. **_uaktra-* < PIE **_uék^u-tro-* or YAv. dat. sg. *fəδrōi* ‘for/to the father’ < **fθraj* < **pθráj* < PIIr. **pHtráj* (< IE **ph₂tréj*, where the laryngeal disappears in accord with the rule CHCCV̄ > CCCV̄ discovered by Gernot Schmidt and elaborated upon by Martin Peters [see on both MAYRHOFFER 1986: 137f., with refs.] and HACKSTEIN 2002 [**CH.CC* > **C.CC*]). The coexistence of forms with suffixes **-tero-* and **-tro-* strongly reminds of some contrastive pronouns, cf. **k^ue-tero-* ‘which one [of the two]?’ > Ved. *katará-* (cf. also LUBOTSKY forthc.) besides **k^ue-tro-* in Lithuanian *katràs*, Slovak *kotrý*, USrb. *kotry* (and even [**k^ue/o-*]-*toro-* in Av. *katāra-*, Old Church Slavonic *kotorъ(jь)*, East Lithuanian *kataràs*); these cases either witness an original ablaut in the suffix or represent the result of processes of assimilation and/or analogy.

The bibliographical references to this note are listed in a separate bibliography at the end of the general one.

Appendix - Figures

Figure 1: The direction of Ahreman's aggression.

Ahreman rising from the bottom of a pre-ordered and primitive universe reaches the level of the stars and attacks the Good Creation in the centre of the circumpolar area.

Figure 2: The circumpolar constellations Ursa Major and Ursa Minor are well visible in the northern sky from the point of view of a local observer by S. Hoffmann.

Figure 3: The eight spheres of the Zoroastrian uranography in the Persian Rivāyat by Dastūr Barzū Kamdin; p. 64 of the original Persian text of MU (UNVALA 1922).

Figure 4: Translation and graphical reproduction of the eight spheres of the Zoroastrian uranography in the Persian Rivāyat by Dr. Afshin Aryanpur.

Figure 5: *Ovum Zoroastræum*, i.e., Zoroaster's egg, from *Oedipus Ægyptiacus*, vol. 3: 275 (British Library 581.l.21).

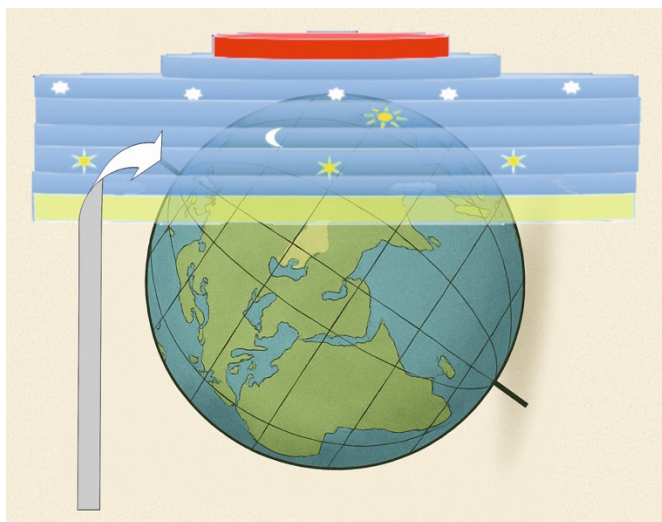


Figure 1: The direction of Ahreman's aggression. Ahreman rising from the bottom of a pre-ordered and primitive universe reaches the level of the stars and attacks the Good Creation in the centre of the circumpolar area. The layering of the Avestan model onto the spherical Earth is intended to show that, even in the absence of any spherical understanding of the world, the circumpolar area was not located at the zenith, but rather in an intermediate area—not too far from the horizon at those latitudes. This image is a combination of a previous model already created by A. PANAINO (2019a: 167) with the one of the earth gently designed by Prof. G.P. Basello.

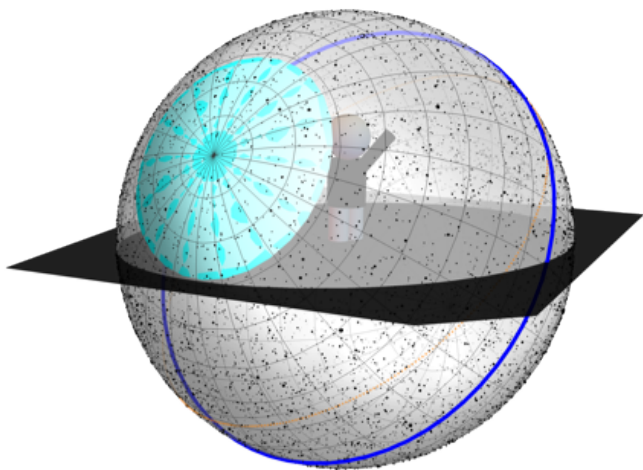


Figure 2. CC by Susanne M. Hoffmann.
N.B. The circumpolar constellations Ursa Major and Ursa Minor are well visible in the northern sky from the point of view of a local observer.



Figure 3: The eight spheres of the Zoroastrian uranography in the Persian Rivāyat by Dastūr Barzū Kamdin; p. 64 of the original Persian text of MU (UNVALA 1922).

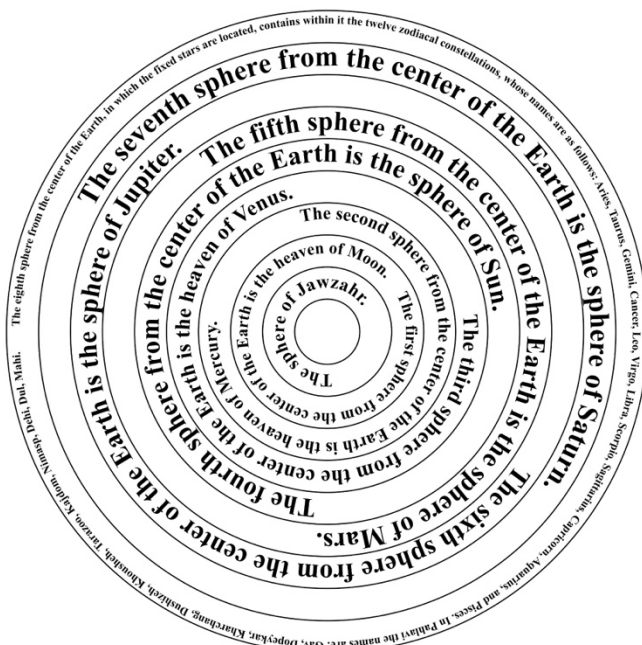


Figure 4: Translation and graphical reproduction of the eight spheres of the Zoroastrian uranography in the Persian Rivāyat by Dr. Afshin Aryanpur.



Figure 5: *Ovum Zoroastræum*, i.e., “Zoroaster’s egg,” from Kircher, *Oedipus Ægyptiacus*, vol. 3, p. 275 (British Library 581.l.21)

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Summary

The present study analyses the problem of the trajectory taken by Ahreman during his aggression against the Good Creation, and in particular deals with the evolution of the shape of the creation in itself. In the Pahlavi texts, this attack clearly moves in a direction from the bottom of the primordial universe (the realm of darkness) to the top (the lights of Ohrmazd), passing throughout the atmospheric intermediate void, an evidence which implies that the heaven of the stars, pierced by the demonic army, was not spherical at that moment, and certainly did not envelop the earth also in its reversed, inferior, side. According to a Hellenistic homocentric system, the most external sphere would have been the one of the *Primum Mobile*, where the Paradisiacal House of God was located, but in this case Ahreman, coming from the outer space, would have aggressed directly Ohrmazd. This solution is obviously countered by the description of the attack, so that we must presume that the final homocentric shape was assumed after the aggression, or that the Sasanian theologians mixed an earlier non spherical model with a later one, with a contradictory result. Parallel problems emerge when we try to understand certain narrations concerning Ahreman's expulsion from the lowest heaven, whose effects, without any other

clarification, would have been that of putting the antagonist not out of the universe, but in another heaven or celestial sphere. Ahreman enters only the heaven of the stars, but he cannot ascend to the higher strata of the heavens, because blocked by the sphere of the unmixable stars, so that the fights take place in the first heaven, in the atmospheric stratum, and on the earthly ground. This situation is the one which probably reflects also the Avestan uranographic and cosmological imagine of the battle, with the earth conceived as round or ovoidal in shape (metaphorically covered on the top and the flanks by the wings of an imaginary bird). It was protected by a series of superimposed strata starting from the ground to the highest abode of Ahura Mazdā, within a structure presumably arranged as a sort of cylindric or ovoidal architecture. The evolution of the Zoroastrian cosmology, in particular in later periods, as shown in the Persian Rivāyats, presents us with an additional number of different and contradictory ideas and representations of the facts that reveal the different points of view and the chronological and culturally distinct influences that the Zoroastrians mixed in their mythology.

Keywords: Zoroastrianism; Uranography; Ahreman; Aggression; Egg, Homocentric spheres; stars, *Primum Mobile*, North, Cardinal Points.

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This study analyses the problem of the trajectory taken by Ahreman during his aggression against the Good Creation. In the Pahlavi texts, this attack moves from the bottom of the universe to the top, passing throughout the intermediate void. This means that the heaven of the stars, pierced by the demonic army in the circumpolar area, was not spherical at that moment, and that the cosmos did not follow a homocentric model, or Ahreman, coming from the outer space, would have aggressed directly Ohrmazd, whose paradisiacal sphere would have been the most external one. Actually, the cosmos assumed a homocentric shape only after the aggression, and this shows that the Sasanian theologians mixed an earlier non spherical model with a later spherical one with contradictory results. Parallel problems emerge with reference to certain narrations concerning Ahreman's expulsion from the lowest heaven, whose effects would have produced the transfer of the antagonist not out of the universe, but in a superior sphere. The present book discusses this and other uranographic problems in connection with the complex evolution of Zoroastrian cosmology since the Avestan period till the later phases, when the Mazdeans were living within a dominating Islamic cultural framework.



Antonio C.D. PANAINO, Professor of Iranian Studies at the University of Bologna, is a specialist of Ancient and Middle Iranian philology, with a special interest in Zoroastrianism, its uranography and astral lore. He has studied the Avestan hymn to the star Sirius and other intercultural subjects concerning the intellectual interrelation between the Iranian world and other ancient civilizations.

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