

10. On Thundergods and Thunderbolts

“The thunderbolt...is the weapon of Zeus which he alone commands; it is irresistible, even gods tremble before it, and enemies of the gods are utterly destroyed when it strikes; in the face of such a manifestation of divine energy, man stands powerless, terrified and yet marveling.”¹

Virtually every culture has preserved memory of a “thundergod,” a towering and terrifying figure whose *modus operandi* is the generation of lightning and the hurling of death-dealing thunderbolts from the sky. It is the unanimous view of scholars exploring ancient religion that the peculiar mythical traditions surrounding thundergods originated in primitive man’s awe before the thunderstorm. Hilda Davidson’s opinion may be cited as representing the orthodox position:

“To people of an earlier civilization, living in vulnerable houses of wood or in tents and caves, such a sight as this [a major thunderstorm] must have been terrifying indeed. It is not surprising then that thunder is visualized, in lands where storms are frequent, as the manifestation of divine power, and symbolized accordingly throughout the world.”²

The thundergod himself, according to this view, is an invisible Oz-like being acting behind the clouds to bring about the thunderstorm and its attendant visual and auditory phenomena. It is our opinion that such views are so wide of the mark as to be virtually worthless for understanding ancient myth and religion. In what follows we hope to offer a new interpretation of the thundergod as an *extraordinary and visible* planetary power. Aided by new discoveries in plasma physics, particularly as elucidated and reconstructed by Anthony Peratt, the curious mythology associated with the omnipresent thundergod suddenly begins to unravel, revealing a fascinating tale of interplanetary thunderbolts and apocalyptic cataclysm.

¹ W. Burkert, *Greek Religion* (Cambridge, 1985), p. 126.

² H. R. Davidson, “Thor’s Hammer,” *Folklore* 76 (1965), p. 1.

A Universal Archetype

A prominent character in ancient pantheons, shaman rites, and religious iconography, the thundergod often doubles as a god of war. The Inca god Illapa is a case in point:

“Lightning in Inca religion was the major theophany of the weather god, known as Ilyap’a, now usually hispanicized to Illapa...Illapa was also the god of war, of trade, and god of death. It was represented as a constellation outlining a man wielding a club in his left hand and a sling in his right.”³

The Egyptian Min offers an early example of the thundergod, his defining symbol appearing already on predynastic pottery and rock art tracing to the fourth millennium BCE (see figure one). In addition to serving as a god of storm and war, Min also featured prominently as an agent of fertility.⁴



Figure one

The ancient Semitic thundergod Hadad/Adad, whose name is thought to be cognate with Arabic *hdd*, “to thunder,” was likewise represented as a warrior.⁵ Illustrations of the long-haired and bearded god holding an axe and/or lightning are common throughout ancient Mesopotamia (see figure two). Early epithets of the god, including *Bir-qu*, *Lugal-ri-ḥa-mun*, and *Mer-ta-i-mu*, identify him as the lightning, King of the Hurricane,

³ D. Gade, “Lightning in Folklife and Religion, Central Andes,” *Anthropos* 78 (1983), p. 775.

⁴ A. McFarlane, *The God Min to the End of the Old Kingdom* (Sydney, 1995), pp. 351-360.

⁵ M. Green, *The Storm-God in the Ancient Near East* (Winona Lake, 2003), p. 52. See also M. Pope, “Baal-Hadad,” in H. Haussig ed., *Götter und Mythen im Vorderen Orient* (Stuttgart, 1976), p. 254.

and thunderer respectively.⁶ Adad is elsewhere represented as a promoter of fertility, a pattern we will discover in other thundergods around the world. Thus, an Assyrian prayer invokes Adad as follows: “thunderer, splendid, mighty god, terror, doughty warrior, who wields lightning, master of the deluge...you make abundant greenery.”⁷



Figure two

The most familiar example of the thundergod is the Greek Zeus, whose resemblance to Hadad was commonly acknowledged by the ancients themselves. Although the cult of Zeus was subject to profound evolution, often to the extent that his original nature was largely obscured,⁸ the portrait of the god offered by our earliest sources is consistent and conforms to that of a prototypical agent of thunder, lightning, wind and rain.⁹ It would also appear likely that the archaic Zeus was a god of war.¹⁰ Walter Burkert describes the Homeric Zeus as follows:

⁶ K. Tallqvist, *Akkadische Götterepitheta* (Helsinki, 1938), pp. 246-247.

⁷ B. Foster, *From Distant Days* (Bethesda, 1995), p. 221.

⁸ Thus, L. Farnell, *The Cults of the Greek States, Vol. 1* (New Rochelle, 1977), p. 53, comments upon “the universal activity attributed to Zeus, who on occasion could assume the special functions of nearly all the lower divinities.”

⁹ *Ibid.*, p. 44 writes as follows: “The phenomena in the physical world which Zeus had under his especial care were the rain, the wind, and the thunder.”

¹⁰ *Ibid.*, p. 59.

“Zeus, according to his Homeric epithets, is the cloud gatherer, the dark-clouded, the thunderer on high, and the hurler of thunderbolts; in colloquial speech one can say ‘Zeus is raining’ instead of ‘it is raining’; in Imperial times children were still singing, ‘Rain, rain, O dear Zeus, on the fields of the Athenians...A direct epiphany of Zeus is lightning; wherever it strikes, a sanctuary is set up to Zeus Descending, *Kataibates*. It was as a thunderbolt that Zeus laid his fatal embrace on Semele. The thunderbolt...is the weapon of Zeus which he alone commands; it is irresistible, even gods tremble before it, and enemies of the gods are utterly destroyed when it strikes; in the face of such a manifestation of divine energy, man stands powerless, terrified and yet marveling.”¹¹

In ancient Europe the thundergod occupies a prominent place in early pantheons. The Norse Thor was both thunderer and warrior. The god’s name, cognate with the OHG Donar and Anglo-Saxon Thunor, derives from proto-Germanic *Thunaraz and signifies “thunder.”¹² Words formed with the god’s name signified the weapons hurled from heaven. In Swedish lore, for example, thunderbolts were known as *thorvigg* or *thorkil*.¹³

The Finnish god Ukko shares numerous features in common with Thor. He, too, produces the thunder and lightning while controlling the weather.¹⁴ The word *ukko*, like its diminutive *ukkonen*, came to signify “thunder.”¹⁵

It has long been recognized that Thor finds a close parallel in the Lithuanian Perkunas/Latvian Perkons, the latter god described as riding across the sky in a fiery chariot. The parallels between the two thundergods extend to the finest details and confirm their fundamental affinity and likely common ancestry. Witness the proverbial expression “*Perkons met savu milnu* ‘Perkons throws his mace.’” As Nagy points out,

¹¹ W. Burkert, *Greek Religion* (Cambridge, 1985), p. 126.

¹² J. Puhvel, *Comparative Mythology* (Baltimore, 1987), p. 201.

¹³ J. Grimm, *Teutonic Mythology*, Vol. 1 (Gloucester, 1976), p. 179.

¹⁴ U. Salo, “Agricola’s Ukko in the light of archaeology,” in T. Ahlback ed., *Old Norse and Finnish Religions and Cultic Place-Names* (Stockholm, 1990), p. 106.

¹⁵ A. Siikala, “Ukko,” in M. Eliade ed., *The Encyclopedia of Religion*, Vol. 15 (New York, 1990), p. 115.

milna ‘mace’ is cognate with Old Norse *mjöllnir*, the word for Thor’s hammer.¹⁶ The name of Thor’s mother—Fjörgynn—is also cognate with Perkunas.¹⁷ And as Thor waged deadly combat with the Midgard serpent so, too, did Perkunas battle the Veles serpent.

The Slavic Perun offers an obvious cognate of Perkunas. Of the former god, it is known that his name came to signify a thunderbolt: “In Slavic, *perunu* designates both ‘thunderbolt’ and ‘thunder-god’.”¹⁸ Russian folklore describes Perun as a great dragon-slayer.¹⁹

Parjanya, a thundergod of ancient India, offers yet another cognate to the Baltic Perkunas. The *Rig Veda* paints a powerful image of the god:

“He smites the trees apart, he slays the demons: all life fears him who wields the mighty weapon.”²⁰

Parjanya is described as wheeling about in heaven in his chariot, dispensing the fertilizing rains:

“Forth burst the winds, down come the lightning-flashes: the plants shoot up, the realm of light is streaming...Come hither with this thunder while thou pourest the waters down, our heavenly Lord and Father. Thunder and roar: the germ of life deposit. Fly round us on thy chariot waterladen.”²¹

Parjanya is elsewhere identified with Indra (8:6:1), the latter being a quintessential example of the Indo-European thundergod. Indeed, the Vedic hymns describing Indra offer the most comprehensive portrait we have of the archaic thundergod. It is Indra who

¹⁶ G. Nagy, “Thunder and the Birth of Humankind,” in *Greek Mythology and Poetics* (London 1990), p. 183.

¹⁷ *Ibid.*

¹⁸ *Ibid.*

¹⁹ J. Puhvel, *Comparative Mythology* (Baltimore, 1987), p. 234.

²⁰ V:83:2.

²¹ V:83:4-7.

is said to have created the lightnings of heaven.²² The Divine Warrior's devastating thunderbolt is the subject of countless hymns in the *Rig Veda*. The following hymn is representative in this regard:

"I will declare the manly deeds of Indra, the first that he achieved, the Thunder-wielder. He slew the Dragon, then disclosed the waters, and cleft the channels of the mountain torrents. He slew the Dragon lying on the mountain; his heavenly bolt of thunder Tvastr fashioned."²³

The association of the thundergod with the slaying of a giant serpent threatening to destroy the world forms a recurring and apparently universal motif. Thus Thor was known as *orms einbani*, "sole slayer of the serpent."²⁴ The Iroquois thundergod is described as "having slain the great Serpent of the waters, which was devouring mankind."²⁵

The dragon combat plays a prominent element in many ancient cosmogonies, as we have elsewhere documented, generally serving as a prelude to Creation.²⁶ Indra's battle with Vritra is an exemplary case in point, being central to ancient Indian ideas of cosmogony.

Glorious deeds aside, there are clear indications that Indra also had a darker side. Witness the following hymn: "And men have faith in Indra, the resplendent one, what time he hurleth down his bolt, his dart of death."²⁷ Countless hymns describe the destruction caused by Indra's bolts. Indeed, heaven itself reeled under Indra's onslaught: "Yea, even that heaven itself of old bent backward before thy bolt, in terror of its anger, when Indra, life of every living creature, smote down within his lair the assailing

²² I:13:7.

²³ I:32:1-3.

²⁴ H. Davidson, *op. cit.*, p. 90.

²⁵ H. Alexander, *op. cit.*, p. 24.

²⁶ E. Cochrane, *Martian Metamorphoses* (Ames, 1997), pp. 138-140.

²⁷ I:55:5.

dragon.”²⁸ In addition to shaking heaven and earth, Indra’s hurling of the thunderbolt was accompanied by terrifying sounds:

“Then both the heaven and earth trembled in terror at the strong hero’s thunder when he bellowed. Loud roared the mighty Hero’s bolt of thunder, when he, the friend of man, burnt up the monster [Vritra].”²⁹

Despite his prominent status in the Vedic pantheon, scholars have long puzzled over Indra’s original nature. Herman Lommel summarized the futility of previous efforts as follows:

“Indra is the most celebrated and the most important god of the Vedas. Of all the ancient Indian gods his character has the largest number of facets and therefore his character is the most difficult to understand. If anybody understood it, he would have understood the major part of the Veda.”³⁰

In our previous studies on Indra, we argued that the Vedic thundergod is to be identified with the planet Mars based upon his fundamental affinity with Heracles, Verethragna, and Vahagn, each of whom was identified with the red planet by their respective cultures.³¹ The identification with Mars, although surprising at first sight, is actually the key to deciphering the multifaceted mythology surrounding the thundergod. Thus, as we have documented elsewhere, virtually every characteristic associated with Indra finds a close analogue in ancient conceptions associated with Mars.

The Lightning-hurling eye

One of the more curious beliefs surrounding the lightning holds that it emanates from the region of the sun or, more specifically, from a sky-god’s eye. This idea is well attested in

²⁸ V:17-8-9.

²⁹ II:11:9-10.

³⁰ H. Lommel, *Die alten Arier* (Frankfurt, 1935), p. 80.

³¹ E. Cochrane, *op. cit.*, pp. 79-97.

ancient Greece, where it was believed that Zeus could produce lightning from his eye.³² Aeschylus, for example, wrote as follows of the Greek thundergod: “The jealous eye of God hurls the lightning down.”³³ The same conception is implicit in Euripides’ *Bacchae*: “Unveil the Lightning’s eye.”³⁴

Numerous scholars have observed that the image of Zeus casting lightning from his eye corresponds to a widespread belief.³⁵ In Hindu tradition, for example, Shiva was said to have been capable of throwing lightning from his third eye, located in the center of his head.³⁶

Various cultures in Africa hold that lightning emanates from the sky-god’s eye. The Masai, for example, describe lightning as the “dreadful glance” of Ngai’s eye.³⁷

Similar beliefs are attested amongst native peoples in North America. The Pawnee of the Nebraskan plains identify lightning with the “glance” of the thundergod Paruksti.³⁸ In Iroquois lore, it is said that when Thunder gets angry lightning flashes from his eye.³⁹ Other tribes, such as the Cree and Tlingit, describe the Thunderbird as capable of sending forth “lightnings from his eyes.”⁴⁰ The Chumash Indians of Northern California report that the twin gods known as the Thunderers shoot lightning from their eyes.⁴¹ As to the popularity of this motif, Frazer remarks that “it is a common notion with the American

³² See here the extensive discussion in W. Roscher, *Die Gorgonen und Verwandtes* (Leipzig, 1879), pp. 63-71.

³³ *Agamemnon* 466.

³⁴ G. Murray, *The Collected Plays of Euripides* (London, 1954), p. 35.

³⁵ W. Schwartz, *Indogermanischer Volksglaube* (Berlin, 1885), pp. 169-179.

³⁶ D. Shulman, *Tamil Temple Myths* (Princeton, 1980), p. 58.

³⁷ P. Chemery, “Meteorological Beings,” M. Eliade ed., *The Encyclopedia of Religion*, Vol. 9 (New York, 1987), p. 489.

³⁸ E. Krupp, *Beyond the Blue Horizon* (Oxford, 1991), p. 105.

³⁹ H. Alexander, *op. cit.*, p. 24.

⁴⁰ *Ibid.*, p. 288.

⁴¹ D. Miller, *Stars of the First People* (Boulder, 1997), p. 156.

Indians that thunder and lightning are caused by the flapping of the wings and the flashing of the eyes of a gigantic bird.”⁴²

Analogous conceptions are common to the indigenous cultures of South America. Thus, the Desana of the Colombian rain forest hold that lightning is “a glance the Sun casts upon the earth.”⁴³

How are we to understand this widespread belief whereby lightning is thought to emanate from a celestial eye? The aforementioned Desana tradition offers an important clue: for strange as it must appear to the modern mind, lightning is intimately connected with the ancient sun-god. But why should this be? In the current solar system, needless to say, lightning does not emanate from the sun.

That cultures around the world associated the ancient sun-god with an “eye” is well known. In a recent study of the sun in ancient rock art, Miranda Green documented the prevalence of this motif: “In Egypt, Greece and many other literate cultures of the ancient world, the all-seeing role of the sun gave it an association with the eye.”⁴⁴



Figure three

⁴² J. Frazer, *Myths of the Origin of Fire* (London, 1930), p. 124.

⁴³ G. Reichel-Dolmatoff, *Amazonian Cosmos* (Chicago, 1971), p. 98.

⁴⁴ M. Green, *The Sun-Gods of Ancient Europe* (London, 1991), p. 20.

It is instructive at this point to review the evidence from prehistoric rock art. Consider the pictograph shown in figure three, attested around the globe. As we have documented, this image was commonly thought to denote the sun-god's "eye."⁴⁵ This very image, in fact, is depicted on countless cylinder seals from ancient Mesopotamia, where it serves to symbolize Shamash, the Semitic sun-god. A closely related form is depicted in figure four. Here the inner "eye" of the ancient sun-god is given a star-like form and associated with a number of radiating filaments. The wavy nature of the radiating spokes naturally suggests streaming or radiant energy of some sort. Indeed, it stands to reason that the widespread traditions of ophthalmic lightning have some reference to the stellar image in question and to the celestial phenomenon depicted therein, however we are to understand the "lightning" from an astro-physical or electro-magnetic standpoint.

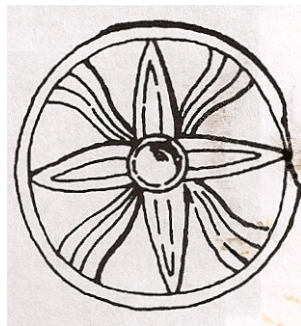


Figure four

The Sign of the Four

As Talbott and I have documented, the aforementioned "sun" pictographs commemorate a particular phase in the polar configuration's history, one that gave rise to a host of mythical interpretations. One of the most common interpretations viewed the central orb and radiating streamers as four streams watering the primordial paradise.⁴⁶ The same scenario was alternately viewed as four winds or four pillars.⁴⁷ An early example of this

⁴⁵ E. Cochrane, *Martian Metamorphoses* (Ames, 1997), pp. 194-214.

⁴⁶ D. Talbott, *The Saturn Myth* (New York, 1980), pp. 120-133. See also the discussion in W. Gaerte, "Kosmische Vorstellungen im Bilde prähistorischer Zeit: Erdberg, Himmelsberg, Erdnabel und Weltenströme," *Anthropos* 9 (1914), pp. 978-979.

⁴⁷ D. Talbott, *Symbols of An Alien Sky* (Portland, 1997), pp. 108-113.

motif finds the Akkadian Shamash described as ruler of the four pillars: “From the high-point of Heaven you support pillars of the land (the four World angles).”⁴⁸

Literary and pictorial traditions from around the world represent the ancient sun-god as associated with a four-fold pattern of streamers.⁴⁹ Figure five provides an example of this motif from the ancient Near East, although analogous images will be found around the globe.⁵⁰

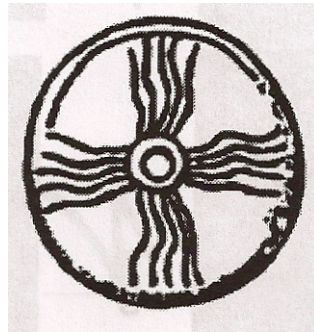


Figure five

Essential to understanding the mythical imagery in question is the thesis that the objective celestial reference was a series of planets in alignment, with Venus forming the “eye” or “heart” of the ancient sun-god and Mars forming the “pupil” of the Venusian eye. To the terrestrial skywatchers, the four-fold pattern of streamers appeared to emanate outwards from Venus/Mars and across the disc of the ancient sun-god.

It is probable that this particular celestial scenario contributed to the widespread tradition of four lightnings. The latter motif is aptly illustrated in Navaho tradition, where the lightnings are expressly related to the war-god:

⁴⁸ A. Jeremias, “Schamasch,” in W. Roscher ed., *Ausführliches Lexikon der griechischen und römischen Mythologie* (Hildesheim, 1965), col. 543.

⁴⁹ See the discussion in D. Talbott, *Symbols of An Alien Sky* (Portland, 1997), pp. 52, 60, 108-113.

⁵⁰ For comparable examples from the New World, see Å. Hultkrantz, *The Religions of the American Indians* (Berkeley, 1967), p. 52. For a parallel in Old Europe, see V. Straizys & L. Klimka, “Cosmology of the Ancient Balts,” *Journal of the History of Astronomy* 28 (1997), p. 66.

“In Navajo mythology the war-god, Nayanezgani, is clad all in flint, and from the joints of his flint armor flash the four lightnings, hurling his enemies down into the earth.”⁵¹

Among the god’s enemies is included a giant monster which threatened to destroy the world.

The pictograph in figure five presents a cross-like form set in the center of the so-called “sun.” Significantly, a cross was also associated with the thundergod in ancient Europe. This was the case with the Norse Thor, for example: “An equal-armed cross was already in use as a symbol in the heathen period, and seems to have been associated with Thor.”⁵²

Similar conceptions surround the Vedic thundergod. Thus, Indra’s thunderbolt was described as “four-edged”: “Bull, hurler of the four-edged rain producer.”⁵³ We will return to the four-fold form of the thunderbolt below.

In addition to being likened to a cross, Thor’s thunderbolt was elsewhere represented with a swastika-like form on ancient monuments.⁵⁴ Davidson offered the following thoughts on this aspect of the thunderbolt’s iconography:

“Primarily it [swastika] appears to have had connection with light and fire, and to have been linked with the sun-wheel. It may have been on account of Thor’s association with the lightning that this sign was used as an alternative to the hammer, for it is found on memorial stones in Scandinavia beside inscriptions to Thor.”⁵⁵

Davidson’s association of the swastika with the sun-wheel is right on target, Thor’s weapon elsewhere being described as a fiery wheel (see below). Yet Davidson’s hypothesis ignores the unfortunate fact that the current sun never presents a swastika-like

⁵¹ V. Del Chamberlain, *When Stars Came Down to Earth* (Los Altos, 1982), p. 25.

⁵² H. Davidson, *op. cit.*, p. 10.

⁵³ *Rig Veda* IV:22:2.

⁵⁴ J. Grimm, *op. cit.*, Vol. 4, p. 1345.

⁵⁵ H. Davidson, *op. cit.*, p. 12.

form. Such realities of the modern heavens notwithstanding, the connection between the (ancient) sun and the swastika is universal in scope. Witness the following tradition from the Ofo Indians of Florida: “The Ofo called the swastika design *ila tata*, or ‘Sun middle.’”⁵⁶ Clearly the Ofo, like other indigenous peoples, believed that a swastika-like form was to be found in the center of the sun. While this tradition is difficult to understand by reference to the current sun’s appearance or behavior, it accords perfectly with descriptions of the ancient sun-god. In the ancient cylinder seal shown in figure six, for example, the wavy streamers of the “sun” present a swastika-like form.



Figure six

It is our opinion that the polar configuration hypothesis alone provides the key for understanding ancient references to the lightning/thunderbolt as a swastika-like form. Thus, as Cardona has argued,⁵⁷ there is a wealth of evidence that a swastika-like form appeared at some point during the polar configuration’s evolutionary history, the rotation of the four undulating streamers producing the appearance of a fiery swastika centered on the polar sun. Citing experiments by the plasma physicist C. J. Ransom, Cardona suggested a possible physical basis for the memorable celestial forms. Ransom obtained his results when ionized gases created in a glass cylinder were subjected to a magnetic squeeze:

⁵⁶ J. King, “A Southeastern Native American Tradition: The Ofo Calendar and Related Sky Lore,” *Archaeoastronomy* 14:1 (1999), pp. 115-116.

⁵⁷ D. Cardona, “The Cosmic Origin of the Swastika,” *Aeon* 4:5 (1996), pp. 17-28.

“As the field frequency and intensity was increased the plasma began to rotate. At one point, if the field was held constant, a three-armed figure appeared, seemingly radiating from the center of the plasma. Then, if the frequency were increased linearly this figure commenced to rotate at an exponential rate until it was a blur. Of a sudden, the plasma seemed to cease rotating and a four-armed figure appeared, with each arm curving away from the center like a stylized fylfot or swastika. This too began to rotate increasingly with greater field intensity until it also was a blur, and then a five-armed pattern would emerge. Curiously, two-armed and multiple-armed figures have been observed, but the most common were those with three or four branches.”⁵⁸

If the imagery of the swastika originated in spectacular events associated with the polar configuration, it stands to reason that the symbol would be associated both with the thundergod himself *and* with the ancient sun-god. That this is indeed the case is obvious from what has already been cited. It also stands to reason that the swastika would be intimately related to the various mythical interpretations of the wavy forms emanating from the central orb; i.e., streams of water, wind, pillars, hair, arrows, etc. Thus, it is most significant to find that the Maya knew the swastika as the “cross of four winds.”⁵⁹ A survey of the relevant literature would doubtless find similar associations between the swastika and the other mythical interpretations of the Venusian outflow.

The thundergod’s wheel

A closely related conception views the lightning as generated from the “wheel” of the ancient sun-god. The Lithuanian Perkunas, for example, is said to have obtained his terrible weapon in the following manner: “The source of the lightning is the sun, the

⁵⁸ *Ibid.*, p. 27.

⁵⁹ M. Preuss, “A Study of Jurakan of the Popul Vuh,” in E. Magana & P. Mason eds., *Myth and the Imaginary in the New World* (Laramie, 1986), p. 365, citing F. Ortiz, *El huracan* (Mexico City, 1946), pp. 186-187.

heavenly fire: the Thunder-god gets fire from the solar wheel by rotating his lightning-club in the nave of the solar wheel.”⁶⁰

Once again we are presented with a tradition which emphasizes the indissoluble link between the ancient sun-god and lightning—in striking contradiction to the currently prevailing meteorological state of affairs. Also noteworthy is the fact that Perkunas’s lightning, like the aforementioned swastika-forms, originates in the *center* of the sun. This Baltic tradition finds a remarkable parallel in ancient Greek lore, where Prometheus is said to have first obtained fire for man by ascending to heaven and “kindling a torch at the sun’s fiery wheel.”⁶¹ Servius described this event as follows: “It is said that Prometheus...ascended by the help of Minerva into the sky, and, applying a small torch to the wheel of the sun, stole fire.”⁶²

Thundergods are frequently linked to wheel-like objects in ancient art and ritual. A krater from Lecce shows Zeus holding a wheel (see figure seven). In addition to his thunderbolt, the Latin Jupiter was frequently depicted together with a wheel in Celtic iconography. The Celtic Taranis, whose name signifying “thunder” is cognate with that of the Norse Thor, is likewise pictured together with a wheel, prompting Green to state with respect to Celtic iconography that “the thunderbolt was a recurrent associate of the wheel-sign.”⁶³

⁶⁰ M. Gimbutas, “Perkunas/Perun: The Thunder God of the Balts and Slavs,” *Journal of Indo-European Studies* 1 (1973), p. 475.

⁶¹ J. Frazer, *Myths of the Origin of Fire* (London, 1930), p. 194.

⁶² Servius, on Virgil, *Eclogue VI*, 42 as quoted in A. Cook, *Zeus, Vol. I* (New York, 1964), p. 324.

⁶³ M. Green, *Symbol and Image in Celtic Religious Art* (London, 1989), pp. 118-120. See also the discussion in A. Cook, *op. cit.*, pp. 288-290.



Figure seven

Also relevant here is a fact noted earlier: Thor’s thunderbolt was expressly compared to a fiery wheel. Thus, Jacob Grimm described the curious rites that were still being practiced as late as 1779 in Europe:

“The latter ceremony [the so-called ‘wheel-rolling’ near Trier], mentioned first in 1550 and last in 1779, took place thus. On the Thursday in Shrove-week an oak was set up on the Marxberg (Donnersberg, Dummersberg), also a wheel. On Invocavit Sunday the tree was cut down, the wheel set on fire and rolled into the Moselle. A wheel, especially a flaming one, is the symbol of thunder, of Donar.”⁶⁴

Prehistoric rock art once again serves to illuminate these widespread traditions linking thundergods with flaming wheels. As we have documented, the “wheel” of the ancient sun-god is depicted in figure eight, a common image in prehistoric rock art.⁶⁵ Grant the possibility that such an image was once visible in the northern polar skies and the widespread traditions of a “solar wheel” no longer appear fantastic in nature. On the contrary, such traditions suddenly appear self-evident and perfectly rational. Equally important, however, is the acknowledged resemblance of figure eight to figure three. Indeed, the only difference between the two symbols is that in the former figure the inner orb has sprouted “rays” or radiating “spokes,” thereby presenting the image of a four or

⁶⁴ J. Grimm, *op. cit.*, p. 1348.

⁶⁵ E. Cochrane, *Martian Metamorphoses* (Ames, 1997), pp. 118-123.

eight-spoked wheel. (That the wheel-like image is likely the result of an electrical/plasmatic discharge has been argued by Wal Thornhill and Dave Talbott.⁶⁶)



Figure eight

In the Saturn model, each of the planets participating in the polar configuration plays a distinctive role with respect to the wheel-like phase. If the radiating streamers of the Venus-star represent the “spokes” of the wheel, the conjoined orbs of Venus and Mars constitute the “nave.” Mars itself forms the “axle” of the sun-centered wheel. And as we have documented, various warrior heroes identified with Mars are said to reside at the “nave,” where they “move” or otherwise govern the “axle” of the solar wheel. Indra, for example, was invoked as follows:

“Thou movest...Bold One, the axle of the car. Satakratu [Indra], thou...stirrest the axle with thy strength.”⁶⁷

Indra’s “stirring” of the wheel’s axle offers a striking mythical analogue to Perkunas rotating his lightning-club in the nave of the solar wheel.

The World Pillar

In order to understand the mytho-historical context and multivalent imagery of the thundergod and his weapon, it is necessary to consider the dynamic history of the polar

⁶⁶ D. Talbott & W. Thornhill, *Thunderbolts of the Gods* (Portland, 2005).

⁶⁷ I:30:14.

configuration. As the polar configuration evolved through time, the various planets moved up and down the axis, alternately growing larger and smaller while moving in and out of conjunction with each other. At various times Venus and Mars became displaced from their axial location, thereby producing a kaleidoscopic montage of celestial forms for mesmerized terrestrial skywatchers and mythmakers. It is also likely that the plasma enveloping the various planets underwent dramatic changes in form and luminous intensity, thereby producing spectacular lightning-like discharges and iridescent aurora-like effects (more on which later). The planet Mars, for example, assumed a number of different positions within the polar configuration during distinct phases in the configuration's history. Insofar as Mars was identified with the thundergod, it stands to reason that the symbolism attached to the thundergod and his weapon most likely reflects this evolving history. A case in point is the lightning/thunderbolt's intimate connection with ancient conceptions of the *axis mundi*.

A particularly memorable phase in the evolutionary history of the polar configuration found the planet Mars leaving the central "eye" of Saturn and descending to a position closer to Earth. Astronomically, the "descent" of Mars was apparently the result of its elliptical orbit, which brought it alternately close to Venus at the apex of its orbit and closer to Earth (and thus beneath Saturn and Venus) during its descent along the shared polar axis.

A widespread theme associated with the descent of the warrior-hero was the formation of the World Pillar, the latter conceived as a tangible column of luminous material stretching between Mars and Earth and appearing to support the ancient sun-god. As we have documented elsewhere,⁶⁸ various war-gods identifiable with the planet Mars are celebrated for upholding the heavens in pillar-like fashion—Apollo, Rudra, *Tîwaz, Shu. And the same holds true with respect to archaic thundergods. In Vedic lore, for example, Indra was said to support heaven like a pillar (see chapter one):

⁶⁸ E. Cochrane, *Martian Metamorphoses* (Ames, 1997), pp. 97-114.

“He who, just born...Who measured out the air’s wide middle region and gave the heaven support, He, men, is Indra.”⁶⁹

The Greek Zeus was likewise intimately associated with the World Pillar. Cook summarizes the evidence surrounding the Italian cult of Zeus at Tarentum as follows:

“Sacrifices were offered on pillars to the lightning-god Zeus *Kataibates*—a practice which, as we saw, had probably been inherited from ‘Minoan’ times. Apulian and Campanian vases, also, represent Zeus fulminant on the top of a pillar. Altogether, it looks as though there were in south Italy an old belief that Zeus with his lightnings dwelt on high above an obvious tangible pillar, his vehicle and support.”⁷⁰

The intimate connection between the solar wheel and *axis mundi* would appear to explain the fact that the latter is occasionally described as having eight angles or corners. This idea forms a prominent theme in the sacred literature and architecture of ancient India, as Coomaraswamy has documented: “The Axis of the Universe according to the texts as represented is usually cylindrical or four or eight-angled: early Indian pillars are usually either cylindrical or eight-angled.”⁷¹

A vestige of such archaic conceptions, perhaps, is to be found in certain rites practiced in the late Middle Ages, wherein youths celebrated a scapegoat-like rite around a Jupiter column described as “eight-cornered.” According to Grimm’s summary of the ritual, the central scene involved the burning of the Jupiter column: “The schoolboys dressed it in a cloak and crown, and attacked the Jupiter as they then called it, by throwing stones first from one side, then from the other, and at last they burnt it.”⁷²

Why the *axis mundi* would be regarded as four or eight angled is difficult to understand apart from the thesis defended here, which views the *axis mundi* as a luminous pillar-like

⁶⁹ II:12:1-4.

⁷⁰ A. Cook, *op. cit.*, Vol. 2, p. 45.

⁷¹ A. Coomaraswamy, *Symbolism of Indian Architecture* (Jaipur, 1983), p. 42.

⁷² J. Grimm, *op. cit.*, p. 190.

form descending from the solar wheel. The solar “wheel” itself, as we have seen, is alternately presented with either four or eight “spokes” or “angles.”

A related conception finds the thunderbolt being ascribed an octagonal shape. The following tradition from the *Aitareya Brahmana* describing the sacrificial pillar is of interest here: “The post is a thunderbolt; it should be made of eight corners; the bolt is eight-cornered.”⁷³

The Descent of Mars

In addition to forming a pivotal event in the biography of the warrior hero, the cataclysmic descent of Mars is of paramount importance for a proper understanding of the mythology surrounding the thundergod and his fiery weapon. As Blinkenberg documents at great length, lightning is thought to fall down from heaven as a stone:

“The thunderstone falls down from the sky in thunderstorms or, more accurately, whenever the lightning strikes. The stroke of the lightning, according to this view, consists in the descent of the stone; the flash and the thunder-clap are mere after-effects or secondary phenomena.”⁷⁴

Meteorites, in accordance with this belief, were identified with thunderstones throughout the ancient world.⁷⁵ As a testament to the durability of these archetypal traditions, Blinkenberg reports that: “In modern times meteors have in several places been looked upon as thunderstones.”⁷⁶

⁷³ *AB* 2:1:3.

⁷⁴ C. Blinkenberg, *The Thunderweapon in Religion and Folklore* (Cambridge, 1911), p. 1.

⁷⁵ *Ibid.*, p. 13. For a similar opinion see G. A. Wainright, “Letopolis,” *Journal of Egyptian Archaeology* 18 (1932), p. 161: “In religion the meteorite and the thunderbolt are the same thing.”

⁷⁶ C. Blinkenberg, *op. cit.*, p. 13.

It is doubtless in keeping with these widespread traditions identifying thunderbolts with meteorites that thundergods everywhere are described by epithets signifying “stone thrower.” The Yoruba thundergod Shango, to take but one of countless examples, was also known as *Jakuta*, “the stone thrower.”⁷⁷ So, too, is Indra’s thunderbolt compared to a rock hurled from heaven. Here Gonda observes: “Although Indra’s weapon is usually explicitly designated by the term *vajra*, and *vajra* is generally described as metallic (*ayasa*), it is incidentally spoken of as a rock (*parvata*) or ‘stone of, or: from, the heavens’ (*divo asmanam*).”⁷⁸ No ordinary rock, Indra’s thunderbolt is described as “whirling down from the misty realm of the sun (Surya).”⁷⁹

Similar conceptions are apparent in the traditions surrounding the Greek Zeus. The epithet *Kataibates* signifies “the descender” or “he who comes down.”⁸⁰ As Farnell noted, this epithet appears to hark back to an archaic form of thought in which the god and his weapon were not yet distinguished:

“The descending Zeus is the Zeus that descends in the rain or lightning...This naïve belief that the god himself came down in the lightning or the meteor is illustrated by the story which Pausanias found in the neighborhood of Gythium about a sacred stone, a *lithos argos*...There is much to be said for the view that the term means ‘the falling god,’ ...We are here touching on a stratum of thought infinitely older than the Homeric.”⁸¹

It is probable that such traditions have their original point of reference in the spectacular appearance of the red planet as it descended from Saturn/Venus towards Earth, as if it were a gigantic boulder or bolide hurled from on high. That the fall of Martian meteorites accompanied this event is possible and likely contributed to the mythical

⁷⁷ S. Lagercrantz, “Der Donnerkeil im Afrikanischen Volksglauben,” *Etnologiska Studier* 10 (1940), p. 29.

⁷⁸ J. Gonda, *Epithets in the Rig Veda* (S-Gravenhage, 1959), p. 63.

⁷⁹ *Rig Veda* X:27:21.

⁸⁰ F. Graf, “Zeus,” in S. Hornblower et al eds., *The Oxford Classical Dictionary* (Oxford, 1996), p. 1636.

⁸¹ L. Farnell, *op. cit.*, p. 46.

imagery as well.⁸² Certainly it is no accident that a universal motif finds Martian heroes being hurled or otherwise cast from heaven for one crime or another. The traditions surrounding Helel ben Shahar (Lucifer), Tezcatlipoca, and Phaethon are exemplary here and could be multiplied *ad infinitum*.⁸³

Lightning as fire from heaven

In our discussion of the sacred marriage rite, we noted that a recurring theme around the world viewed the drilling of fire as a cosmogonical act, commemorating the primeval union of male and female powers (see chapter three). In Pawnee lore such ideas were specifically connected to the planets Mars and Venus. Thus, a primary motif in the Pawnee account of the Creation holds that Mars first approached and then overcame Venus, whereupon he succeeded in impregnating her and insuring fertility for the world in the process. In addition to rites designed specifically to commemorate this primeval union of male and female powers, the Pawnee believed that they were celebrating the marriage of Venus and Mars every time they generated a fire, the drilling stick representing the male Mars and the horizontal stick the female power.⁸⁴

Martian gods and heroes are everywhere celebrated for “drilling” the first fire. Prominent examples of this motif include Indra, Tezcatlipoca, and Maui. In Vedic lore, for example, Indra creates the fire by rubbing two stones together. Thus, the thundergod is described as having “begat the fire between the two stones.”⁸⁵ In the *Satapatha Brahmana* Indra is invoked as the “Kindler.”⁸⁶

The Greek hero Prometheus, whom Servius described as obtaining his fire from the sun’s wheel, was said by Diodorus to have been the “inventor of the fire-sticks, from which fire

⁸² E. Cochrane, “Martian Meteorites in Ancient Myth and Modern Science,” *Aeon* 4:2 (1995), pp. 57-73.

⁸³ E. Cochrane, “Mars Gods of the New World,” *Aeon* 4:1 (1995), pp. 58-63.

⁸⁴ E. Cochrane, *The Many Faces of Venus* (Ames, 2001), pp. 25-34.

⁸⁵ *Rig Veda* II:12:1-4. Ralph Griffith, the editor of the *Rig Veda*, adds that this is a reference to Indra’s generating “lightning between heaven and earth.”

⁸⁶ VI.1. 1, 2.

is kindled.”⁸⁷ Arthur Cook, while disavowing previous attempts to link the Greek hero’s name to the Sanskrit term *pramantha*, “fire drill,” would nevertheless relate the latter term to an epithet of Zeus’s: “It is highly probable that *pramantha* the ‘fire-drill’ does explain *Promantheus*, a title under which Zeus was worshipped at Thourioi.”⁸⁸

That many ancient peoples identified the planet Mars as the “fire-star” is well-documented.⁸⁹ So, too, is the fact that numerous thundergods double as “fire” gods. In the Lithuanian cult of Perkunas, for example, a sacred fire was kept. If for some reason the fire was allowed to go out, the priest in charge was put to death.⁹⁰ A sacred fire is also attested in Thor’s cult. Thus, the *Kjalnesinga Saga* describes the thundergod’s altar as follows:

“This was the place for the fire which was never allowed to go out. This they called the sacred fire.”⁹¹

It is also interesting to note the Lappish custom of using images of Thor to strike fire. A text from the seventeenth century describes the god’s idol as follows: “Into his head they drive a nail of iron or steel, and a small piece of flint to strike fire with, if he hath a mind to do it.”⁹²

Like the thundergod himself, the planet Mars was conceptualized as an agent promoting fertility and sexual prowess. The Australian Waijungari offers a primary illustration of this motif. Expressly identified with the red planet, it was said that the warrior-hero had an insatiable sexual appetite and personified sexual activity and fertility.⁹³

⁸⁷ A. Cook, *op. cit.*, Vol. 1, p. 325.

⁸⁸ *Ibid.*, p. 330.

⁸⁹ W. Eilers, *Sinn und Herkunft der Planetennamen* (München, 1976), pp. 74-75. See also E. Cochrane, *Martian Metamorphoses* (Ames, 1997), pp. 25ff.

⁹⁰ M. Gimbutas, *op. cit.*, p. 469, citing Johannes Dlugosz’ *Chronicle* written in the period between 1455 and 1480.

⁹¹ H. Davidson, *Gods and Myths of Northern Europe* (Baltimore, 1964), p. 79.

⁹² *Ibid.*, p. 78.

⁹³ D. Johnson, *Night Skies of Aboriginal Australia* (Sydney, 1998), p. 35.

The sacred marriage and New Fire rites provide the essential background for understanding certain peculiar traditions surrounding the thundergod. The aforementioned tradition wherein Perkunas generates fire by rotating his lightning club is a case in point: “The source of the lightning is the sun, the heavenly fire: the Thunder-god gets fire from the solar wheel by rotating his lightning-club in the nave of the solar wheel.”⁹⁴

The rotary action of Perkunas’ “club” in the nave of the solar wheel offers a precise mythical parallel to the Martian hero’s drilling of fire that, in turn, offers a precise parallel to Mars’ union with Venus. Each of these mythical interpretations, in our view, has reference to Mars’ behavior while in conjunction with Venus. Indeed, the Martian hero’s “drilling” or “boring” is an endlessly recurring motif, the Homeric account of Odysseus’ boring out of the Cyclops’ eye being perhaps the most famous example. That Odysseus’ “eye-drilling” has often been compared to the drilling of fire ought to surprise no one familiar with the lore surrounding the warrior-hero.⁹⁵

The thunderbolt as mill-stone

A recurring tradition makes the thunderbolt a crushing instrument of some sort. This idea is apparent in the name of Thor’s bolt, *mjölnir*, which signifies “the crusher” or “pulverizer.” According to Montelius, the word “refers to the terrible power of the hammer to crush whatever it encountered.”⁹⁶ Cognate with words signifying “lightning” in various languages (Russian *molnija*, for example), the Norse *mjölnir* is also an apparent cognate of the Old Norse *mala*, “grind” and *molva*, “crush.”⁹⁷

Other cultures also preserved traditions linking the thundergod with grinding. Thus, a central rite in the Hittite New Year’s celebration honoring the thundergod involved the

⁹⁴ M. Gimbutas, *op. cit.*, p. 475.

⁹⁵ A. Cook, *op. cit.*, pp. 317-323.

⁹⁶ O. Montelius, “The Sun God’s Axe and Thor’s Hammer,” *Folklore* 21 (1910), p. 70.

⁹⁷ J. de Vries, *Altnordisches Etymologisches Wörterbuch* (Leiden, 1977), p. 390.

breaking of a sacred pithos and the grinding and milling of its contents.⁹⁸ A semantic link between thunderstones and “grindstones” is also discernable in Inca lore.⁹⁹ Russian peasant lore, which transferred Perun’s mythology to St. Ilia with the onset of Christianity, preserves a curious link between the rambling of the thundergod’s chariot and “grinding”: there thunder is alternately ascribed to St. Ilia’s driving his chariot or “grinding his corn.”¹⁰⁰

It is probable that the “grinding” motion associated with the thunderbolt is intimately related to its function as a driller of fire, as both activities rely on rotary motion and friction. During the prehistoric period, fire was generated by rubbing two sticks or rocks together. In Vedic lore, as we have seen, Indra creates the fire by rubbing two stones together.

The Finnish god Ukko was especially associated with the striking of fire and those stones like quartz which were thought to produce fire. Thus, the name *ukonkivi*, “thunderstone,” came to signify quartz. Here, too, scholars have recognized an intimate connection between the ancient thundergod and the generation of fire: “The name may be derived from the fact that pieces of quartz flare up if they are rubbed or struck together.”¹⁰¹

The Norse word *mjöllnir* is also related to the English word miller, and scholars have long recognized a relationship between Thor’s thunderbolt and millstones.¹⁰² With reference to the Vedic passage wherein Indra rubs stones together in order to generate “fire” or lightning, it is significant to find the Slavic Perun described as generating thunder and fire by grinding together two giant millstones.¹⁰³ Especially significant is a modern proverb likening thunder to the fiery wheeling of Perun’s chariot: “God is

⁹⁸ P. Cate, “The Hittite Storm God: his Role and his Rule According to Hittite Cuneiform Sources,” in D. Meijer, *Natural Phenomena* (Amsterdam, 1992), pp. 91-92.

⁹⁹ W. Sullivan, *The Secret of the Incas* (New York, 1996), p. 175.

¹⁰⁰ J. Grimm, *op. cit.*, p. 166.

¹⁰¹ U. Salo, *op. cit.*, p. 108.

¹⁰² J. Puhvel, *op. cit.*, p. 234.

¹⁰³ *Ibid.*, p. 234.

coming—the wheels are striking fire.”¹⁰⁴ Here we recognize a slight variation upon the aforementioned tradition surrounding St. Ilia, yet instead of thunder being ascribed to Ilia’s “grinding,” it is here traced to Perun’s gnashing “wheels.”

The Thunderbolt as Fructifier of the Earth

A universal belief finds the thunderbolt (or lightning) regarded as a fertilizing force. Indeed, the idea is so common in ancient myth and modern folklore that it is usually taken for granted as if it somehow makes sense in terms of the customary behavior of lightning. The thunderbolt’s striking the earth, together with the accompanying rain, is thought to “fertilize” or “inseminate” the earth.

The Desana Indians of Colombia, for example, hold that “lightning...is a fertilizing force that impregnates the earth with its crystal-semen.”¹⁰⁵ More precisely, the lightning is regarded as the Sun’s ejaculation or semen or, with specific reference to the latter’s eye, as a “fertilizing glance.”

Every Old World thundergod worth his salt doubles as an agent of fertility. Marija Gimbutas described the Lithuanian Perkunas as follows: “The earth is barren until the Thunder strikes her in the springtime—until in his epiphany of thunder Perkunas weds the Mother Earth, Zemyna.”¹⁰⁶ Such beliefs, according to Gimbutas, “are universal [among the Balts and Slavs] and certainly stem from very early times.”¹⁰⁷

Of the Latvian thundergod, Biezais has written: “The function of Perkons is clearly defined: he is a fertility god.”¹⁰⁸ The Indian Parjanya was also deemed an agent of fertility. Witness the following prayer from the *Rig Veda*:

¹⁰⁴ M. Gimbutas, *op. cit.*, p. 466.

¹⁰⁵ G. Reichel-Dolmatoff, *op. cit.*, p. 98.

¹⁰⁶ M. Gimbutas, *op. cit.*, p. 471.

¹⁰⁷ *Ibid.*

¹⁰⁸ H. Biezais, “Perkons,” M. Eliade ed., *The Encyclopedia of Religion*, Vol. 11 (New York, 1990), p. 247.

“May this my song to Sovran Lord Parjanya come near unto his heart and give him pleasure. May we obtain the showers that bring enjoyment, and God-protected plants with goodly fruitage. He is the Bull of all, and their impregner.”¹⁰⁹

Similar conceptions prevailed with respect to the Norse Thor. Thus, Adam of Bremen described Thor as follows: “They say he rules the air which controls the thunder and the lightning, the winds and the showers, the fair weather and the fruits of the earth.”¹¹⁰ Also relevant here is a curious scene in *Thrym’s Song*, or “The Fetching of the Hammer,” wherein Thor disguises himself as Freya in order to regain his thunderbolt, which had earlier been stolen by the giant Thrym. There we read:

“Bring the hammer the bride to wed, place Mjöllnir in the maiden’s lap.”¹¹¹

As Davidson points out, such ideas hark back to ancient conceptions of the thunderbolt as fecundator or impregner, some of which survived well into modern times. Thus it is that Thor was frequently invoked at weddings, the god’s thunderbolts forming a prominent feature of many a bridegroom’s attire: “In certain parts of Norway and Sweden, it continued to be the custom for a bridegroom to bear an axe at the wedding long after Thor was forgotten; the weapon was said to give him mastery, and also to ensure a fruitful union.”¹¹²

Analogous ideas surround the Lithuanian thundergod. Thus, Perkunas’s axes were commonly regarded as promoters of fertility:

¹⁰⁹ VII:101:5-6.

¹¹⁰ *History of the Bishops of Hamburg*, IV, 26.

¹¹¹ Lines 29-32 as quoted in O. Montelius, *op. cit.*, p. 71.

¹¹² H. Davidson, *op. cit.*, p. 11.

“In Lithuania, the axe as a life-stimulating symbol, is laid under the bed of a woman in labor; on the sill to be crossed by the newly-wedded couple...During sowing, axes were thrown onto the field.”¹¹³

Strikingly similar conceptions are widely attested throughout Africa. The Yoruba identify stone axes with thunderstones hurled by Shango and, believing they lead to a good harvest, place them amongst the seeds.¹¹⁴

As thunderstones were thought to promote fertility so, too, were they deemed capable of sparking the flames of passion. Witness the curious set of beliefs attached to the Inca thundergod known as Apocatequil:

“He it was, they thought, who produced the thunder and lightning by hurling stones with his sling; and the thunderbolts that fall, said they, are his children. Few villages were willing to be without one of these. They were in appearance small, round, smooth stones, but had the admirable properties of securing fertility to the fields, protecting from lightning, and, by a transition easy to understand, were also adored as gods of the Fire, as well material of the passions, and were capable of kindling the dangerous flames of desire in the most frigid bosom. Therefore they were in great esteem as love charms.”¹¹⁵

Here, in one figure, are united the various motifs of the thundergod as a hurler of stones, agent of fertility, and God of Fire.

The Finnish god Ukko was apparently involved in a *hieros gamos* of sorts, designed to facilitate the fertility of the land.¹¹⁶ In a poem written in 1551, Agricola refers to these ancient practices in somewhat veiled language:

¹¹³ M. Gimbutas, “Perkunas/Perun: The Thunder God of the Balts and Slavs,” *Journal of Indo-European Studies* 1 (1973), p. 476.

¹¹⁴ S. Lagercrantz, *op. cit.*, p. 8.

¹¹⁵ D. Brinton, *The Myths of the New World* (New York, 1968), pp. 184-185.

¹¹⁶ U. Salo, “Agricola’s Ukko in the light of archaeology,” in T. Ahlback ed., *Old Norse and Finnish Religions and Cultic Place-Names* (Stockholm, 1990), pp. 104-107, 182.

“And when the spring sowing was done, then the old man’s [Ukko] toast was drunk. For this was Ukko’s wooden vessel fetched, and the girl and the wife got drunk. Then were shameful things done there, as was both heard and seen. When Rauni Ukko’s woman huffed, greatly puffed Ukko from the depths. Thus it gave weather and the new crop.”¹¹⁷

Like his Inca counterpart, Apocatequil, Ukko was intimately associated with elliptical “fire” stones. In a monograph exploring the evolution of Ukko’s cult, Salo offered the following summary:

“His functions included assuring the fertility of the soil, the growth of crops and the yearly harvest. This took place in the holy marriage of Ukko and his spouse: in flashes of lightning, the rumble of thunder and thundery rain. Ukko may have celebrated such holy marriages from his very arrival but no firm evidence of them appears until the Iron Age with the coming of elliptical fire stones (ca. 50-700) and the elliptical rimmed fire steels that followed them. Since the use of these continued from Merovingian times (550-800) until the advent of matches it is understandable that the *hieros gamos* myth was still a living folk belief during Agricola’s time. Similar beliefs were also preserved among the Swedish-speaking population of Ostrobothnia until recent times, apparently as a tradition going back to their medieval arrival in Finland. The symbolic shapes of the fire stones and fire steels indicate that the secular striking of fire was looked upon as a rite repeating the myth of the origin of celestial fire.”¹¹⁸

Such traditions raise a host of questions. Why would thunderstones be regarded as promoters of fertility? Why would lightning be compared to a “fertilizing glance”? The orthodox claim that these beliefs have reference to the fertilizing properties of the thunderstorm does not provide an obvious reference for the glancing “eye” nor does it account for the stone itself or for its curious “crushing” behavior. The key to understanding such traditions is Mars’ conjunction with Venus: it was the conjunction of these two planets that provided the celestial prototype for the sacred marriage of male and

¹¹⁷ Quoted from *Ibid.*, p. 104.

¹¹⁸ *Ibid.*, pp. 182-183.

female powers. As Mars ascended the polar column and “penetrated” Venus, it was viewed to have impregnated the celestial embodiment of the fertile “earth.” Hence the thundergod’s archetypal status as an “impregner.” Insofar as the Martian thundergod is identifiable with his “weapon,” we can understand the fertilizing powers ascribed to “thunderstones.” And insofar as Mars’ union with Venus was conceptualized as a “drilling” we can understand the fact that the ancient Swedes—like the Skidi Pawnee—recognized a *hieros gamos* of celestial powers behind the drilling of fire.

Yet the conjoined bodies of Mars and Venus also formed the central “eye” of the ancient sun-god. It was from this “eye” that lightning appeared to emanate to the four corners of heaven. Given the fact that lightning was witnessed to proceed from the “eye” enclosing the thundergod (Mars), it stands to reason that it would be compared to a fertilizing “glance” emanating from a celestial “eye” (see figure five).

The thundergod as unerring marksman

Of Thor’s weapon, it was said: “If he threw the hammer, it would never miss the mark and never go too far to return again to his hand.”¹¹⁹ In this tradition we recognize the universal theme of the unerring marksman.

Like Thor, Heracles, Indra, Rudra, Murukan, and countless other divine “Champions” are said to be unerring marksmen. The Tamil Murukan, known as the “killer of serpents,” was famed for his “javelin which never misses its mark” and, upon being thrown, always returned to his hand.¹²⁰ Of Skanda’s spear, it was said that “it never misses the mark but, once thrown, returns to him.”¹²¹ Skanda, in turn, was explicitly identified with the planet Mars.¹²²

¹¹⁹ O. Montelius, “The Sun God’s Axe and Thor’s Hammer,” *Folklore* 21 (1910), pp. 70-71.

¹²⁰ K. Zvelebil, “A Guide to Murukan,” *Journal of Tamil Studies* 9 (1976), pp. 5, 19.

¹²¹ A. Keith, “Indian Mythology,” in L. Grey ed., *The Mythology of All Races, Vol. 6* (Boston, 1917), p. 140.

¹²² S. Markel, *Origins of the Indian Planetary Deities* (Lewiston, 1995), pp. 40-41.

Of the Vedic war-god Rudra, it was said that his heaven-hurled arrow “never misses its target.”¹²³ Yet as “the red boar of heaven,” Rudra is to be identified with the planet Mars.¹²⁴

As the traditions surrounding Rudra, Skanda, and Murukan attest, the unerring marksman forms a recurring theme in ancient Indian lore. The scholar who has done the most to elucidate its mythical significance is Ananda Coomaraswamy, who notes that a wealth of symbolism pertaining to the *axis mundi* surrounds the unerring marksman (Sanskrit *akkhana-vedhin*). As to the etymology of the phrase, Coomaraswamy writes as follows:

“The etymology of the word *akkhana* has been disputed: as PTS remarks, “We should expect either an etym. bearing on the meaning ‘hitting the center of the target’ [i.e., its ‘eye’; cf. Eng. bull’s eye]...or an etym. like ‘hitting without mishap.’ It is evident, in fact, that the connection of *akkhana* is with Skr. *aks*, to ‘reach’ or ‘penetrate,’ the source of *aksa* and *aksam*, ‘eye’ and *akhana*, ‘butt’ or ‘target’ and in fact ‘bull’s eye.’...*Aksa* is also ‘axis’ and ‘axle-tree’ (distinguished only by accent from *aksa*, ‘eye’), and Benfey was evidently near the mark when he suggested that *aksa* as axle tree was so-called as forming the ‘eye’ in the hub of the wheel which it penetrates...*Akkhana-vedhin* is then ‘one who pierces the eye,’ or ‘one whose arrow penetrates the bull’s eye’: in the present context it would scarcely be too much to say ‘pierces the center of the disc of the Sun’ or ‘hits the solar and macrocosmic bull’s eye.’”¹²⁵

Although such traditions have no obvious point of reference in the current solar system, they make perfect sense from the vantage-point of the Saturn theory. The attested connection between eye, axle, and *axis mundi* stems from the fact that the ancient sun-god had a centrally located “eye” which served as the nave or hub for the spokes of the solar “wheel” as also for the appendant *axis mundi* connecting heaven and earth. As the

¹²³ S. Kramrisch, *The Presence of Siva* (Princeton, 1981), p. 20.

¹²⁴ E. Cochrane, *Martian Metamorphoses* (Ames, 1997), pp. 62-65.

¹²⁵ A. Coomaraswamy, “The Symbolism of the Dome,” in R. Lipsey ed., *Coomaraswamy: Selected Papers* (Princeton, 1977), p. 442.

Martian thundergod moved up along the *axis mundi*, it “penetrated” the “eye” of Venus set “in the center of the disc of the sun.”

As Talbott has pointed out, the motif of the unerring marksman is most likely to be explained by reference to Mars’ habit of climbing the *axis mundi* and “penetrating” Venus.¹²⁶ Given the astro-physical dynamics that governed the workings of the polar configuration, it was virtually inevitable that Mars would succeed in reaching its “target”—i.e., Venus. Given the sexual symbolism associated with Mars’ penetration of Venus, it follows that the unerring marksman motif is simply a variation upon the widespread theme which viewed the red planet as the paramour of Venus.

The Thundergod and the Heart of Heaven

A widespread tradition locates the thundergod at the center or “heart” of heaven. Thus, the Semitic thunderer Adad was said to roar in “the heart of heaven,” the latter site being that wherein the ancient sun-god both “rose” and “set.”¹²⁷ Similar ideas are apparent in the Finnish cult of Ukko, known by the epithet “navel of the sky,” thought to link the thundergod with the polar region.¹²⁸

The Navaho thundergod Nayanezgani is likewise said to have lived in the center of the world.¹²⁹ So, too, is the Vedic Parjanya, described as follows in the *Rig Veda*: “Parjanya is the Father of the Mighty Bird: on mountains, in earth’s centre hath he made his home.”¹³⁰

¹²⁶ D. Talbott, “Servant of the Sun God,” *Aeon* 2:1 (1989), p. 44.

¹²⁷ A. Jeremias, *Handbuch der altorientalischen Geisteskultur* (Leipzig, 1913), pp. 33, 280.

¹²⁸ U. Salo, *op. cit.*, p. 110.

¹²⁹ H. Alexander, *op. cit.*, p. 157.

¹³⁰ IX:82:3.

The Quiche thundergod Jurakan was called by the epithet *U C'ux Caj*, “Heart of the Sky.”¹³¹ Jurakan was the highest deity in the Quiche pantheon and he was credited with being the “source of all energy and life in the universe.”¹³² Indeed, it was his union with the earth that initiated Creation.¹³³

Cognate deities are found elsewhere in Central America and along the South American coast. Tedlock writes as follows regarding the popularity of the thundergod:

“Throughout the East Indies and along the north coast of South America, especially among Carib and Arawakan peoples, there is a god of the hurricane and thunderbolt whose name is cognate with *hurakan*.”¹³⁴

The English word hurricane derives from a Taino (Arawakan) name of the thundergod.¹³⁵ As Preuss has documented, the language associated with hurricanes and analogous meteorological phenomena involving extreme winds leads to a host of interesting connections, several of which are relevant for an accurate understanding of the ancient thundergod:

“The philology of the terms used for the various types of winds is of great importance in the development of the theme of Jurakan. As can be seen by these definitions, these winds indicate a circular motion and a gyration about a center or eye. For the indigenous mind, these factors hold a religious significance as they are comparable in form to the sacred center from which creative and destructive power emanates...for example, the word *huracan*, a Carib word, means ‘a tropical cyclone with winds of 73 miles per hour or greater, but rarely exceeding 150 miles per hour, is usually accompanied by rain, thunder, and lightning...The cyclone, a term that originated from the Greek *kyklos*, meaning ‘wheel’ or ‘circle’, and was modified to *kykloma* that signifies ‘wheel’ or ‘coil of a snake’, is defined as ‘a storm or system of winds that rotates about a center of low

¹³¹ M. Preuss, *op. cit.*, p. 360.

¹³² *Ibid.*, p. 360.

¹³³ *Ibid.*, pp. 362-363.

¹³⁴ D. Tedlock, *Popol Vuh* (New York, 1985), p. 343.

¹³⁵ *Ibid.*, p. 343.

atmospheric pressure clockwise in the Southern hemisphere and counterclockwise in the North...The tornado, from Latin: *tornare*, ‘to turn in a lathe’, and also influenced by the Spanish words *tornado*: ‘turned’ or ‘returned’ and *tronada*: ‘thunderstorm’, is a ‘violent destructive whirlwind accompanied by a funnel-shaped cloud...’¹³⁶

Most significant for our discussion here is the intimate relationship thought to pertain between the whirling winds and an “eye” or “wheel-like” form, reminiscent of our earlier discussion of swastika-forms.

Preuss, together with previous scholars, called attention to Juracan’s intimate connection with the pole and *axis mundi*. Somewhat hesitantly, she would identify the god with Ursa Minor: “The one-legged and rotating god in the sky is Ursa Minor whirling around the Pole Star or Ursa Major or both constellations spinning around the world axis.”¹³⁷

Jurakan, like the other thundergods described as living at the “heart of heaven,” is best understood as a personification of the planet Mars which formerly resided at the Pole, the latter deemed to be the sacred center whence emanated the primeval winds and prototypical lightning.¹³⁸

The Celestial Ladder and Related Forms

As Talbott and I have documented, the form of the *axis mundi* evolved during the history of the polar configuration. In addition to presenting a pillar-like structure or *universalis columna*, as in figure nine, a closely related phase saw the *axis mundi* assuming a spiraling form, commonly interpreted as an undulating serpent or rope stretching across the sky.

¹³⁶ M. Preuss, *op. cit.*, p. 359.

¹³⁷ *Ibid.*, p. 364.

¹³⁸ It is certainly not without interest that Juracan is a recognized cognate of the Aztec Tezcatlipoca, identified by us with the red planet. See E. Cochrane, *op. cit.*, pp. 69-76.



Figure nine

The *axis mundi* eventually assumed the form of a ladder-like structure (see figure ten). The resemblance of the solar “ladder” to a spinal column with vertebrae is striking.

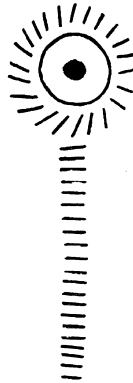


Figure ten

In an essay on the “Milky Way,” we argued that ancient traditions describing a fiery pillar or ladder-like structure spanning the heavens trace to the *axis mundi* associated with the ancient sun-god.¹³⁹ With the disappearance of the World Pillar, the traditions surrounding the prototypical “Milky Way” were transferred to its modern namesake, thereby misleading scholars into believing that this familiar celestial phenomenon could inspire such specific and complex myths as that of the celestial ladder along which transmigrating souls might pass to the celestial otherworld. A systematic analysis of the numerous mythological themes associated with the “Milky Way” will confirm this statement at every turn. Such an analysis will also provide important clues for identifying the thundergod’s former polar location.

¹³⁹ E. Cochrane, “The Milky Way,” *Aeon* 4:4 (1996), pp. 39-66.

It is a striking fact that each of the aforementioned forms of the *axis mundi* is reflected in ancient epithets and traditions surrounding the Milky Way. That the Milky Way was often compared to a pillar-like form is well documented. Thus, the Iraku of Africa call the Milky Way *mugamba gwa ilunde*: “the beam of the sky.”¹⁴⁰

Numerous cultures compared the Milky Way to a giant serpent winding across the sky. The natives of the Nyassaland in Africa hold that the celestial band of stars is a great python.¹⁴¹ The Maya compared the Milky Way to a Fer-de-lance.¹⁴² The Australian aborigines likewise described the Milky Way as serpentine in nature.¹⁴³

Other cultures compared the Milky Way to a ladder spanning heaven. Such ideas are attested in the New World among the Navaho:

“In Acoma sandpaintings the Milky Way appears as a ladder, for it is thought that these stars form a bridge to the heavens. In the Acoma creation myth, the roof beams of the first kiva represent the Milky Way.”¹⁴⁴

The same idea is attested in ancient and medieval Europe, as Cook has documented with his usual thoroughness.¹⁴⁵

A very widespread idea compared the Milky Way to the “backbone” of heaven. Thus the Shoshone call the Milky Way the “Backbone of the Sky.”¹⁴⁶ The Chumash call it “Night’s Backbone.”¹⁴⁷ The Tipai of California knew the Milky Way as “Sky-Its-

¹⁴⁰ S. Lagercrantz, *op. cit.*, p. 68.

¹⁴¹ *Ibid.*, p. 68.

¹⁴² W. Lamb, “Star Lore in the Yucatec Maya Dictionaries,” in *Archaeoastronomy in Pre-Columbian America* (Lubbock, 1975), p. 237.

¹⁴³ C. Mountford, *Art, Myth and Symbolism* (Melbourne, 1956), p. 503.

¹⁴⁴ D. Miller, *op. cit.*, p. 183.

¹⁴⁵ A. Cook, *Zeus*, Vol. 2 (1964), pp. 476ff.

¹⁴⁶ D. Miller, *op. cit.*, p. 132.

¹⁴⁷ *Ibid.*, p. 157.

Backbone.”¹⁴⁸ The Tewa speaking Pueblo called the Milky Way “Backbone of the Universe.”¹⁴⁹ The Assiniboin of Minnesota and Winnipeg describe the celestial river as the “Backbone of the Sky.”¹⁵⁰

The same idea is to be found in Africa. Thus, the San peoples of Northern Namibia call the Milky Way “night’s backbone.”¹⁵¹

A remarkable fact, hitherto unnoticed so far I’m aware, is that thundergods everywhere are described as residing or moving in close proximity to the Milky Way, yet another tradition that seems inexplicable by reference to the current solar system but accords perfectly with the historical reconstruction offered here, whereby the thundergod is identified with Mars and intimately associated with the *axis mundi*. Thus, Ovid describes the Milky Way as follows:

“There is a lofty road, plain to see in a clear sky; it has the name ‘milky’, and is famous for its brilliance. This is the way taken by Those Above to the roofs and royal house of the great Thunderer.”¹⁵²

The Sotho of South Africa conceptualize the “Milky Way” as *molala-tladi*, “the roosting place of the *tladi* bird.”¹⁵³ Yet *Tladi* himself was the African equivalent of the Thunderbird, the bringer of lightning.¹⁵⁴ Most significant, perhaps, in light of what has been said previously with respect to the Milky Way as a World Pillar, is the Sotho belief that the *molala-tladi* “supports the sky to prevent it from falling on the earth.”¹⁵⁵

¹⁴⁸ *Ibid.*, p. 164.

¹⁴⁹ *Ibid.*, p. 178.

¹⁵⁰ *Ibid.*, p. 237.

¹⁵¹ B. Warner, “Traditional Astronomical Knowledge in Africa,” in C. Walker ed., *Astronomy Before the Telescope* (London, 1996), p. 311.

¹⁵² *Metamorphoses* I:168-171.

¹⁵³ H. von Sicard, “Karanga Stars,” *NADA* 9 (1966), p. 51.

¹⁵⁴ P. Breutz, “Sotho-Tswana Celestial Concepts,” *Ethnological and Linguistic Studies in Honour of N. J. van Warmelo* (Pretoria, 1969), p. 208.

¹⁵⁵ *Ibid.*

The Incan thundergod Illapa, according to the Franciscan friar Cobo, formerly moved along the Milky Way:

“They say that he passed across a very large river in the middle of the sky. They indicated that this river was the white band that we see down here called the Milky Way. Regarding this matter, they made up a great deal of foolishness that would be too detailed to include here.”¹⁵⁶

Similar traditions surround various mythical heroes identified with the planet Mars, as we have elsewhere documented.¹⁵⁷ The Australian warrior-hero Waijungare, expressly identified with the red planet, is said to live in the Milky Way.¹⁵⁸ The Aztec Tezcatlipoca, also identified with the “Morning Star,” was described as living along the Milky Way.¹⁵⁹

In Chorti lore, the Milky Way is known as the “Road of Santiago,” after their thundergod. Yet the fact that Santiago also doubles as a god of war and is identified with the “Morning Star” suggests he is to be identified with the planet Mars.¹⁶⁰

Here it is significant to note that ancient descriptions of the Milky Way dovetail at various points with the behavior ascribed to lightning and thunderbolts. The Pima Indians of New Mexico, for example, share the widespread belief that the lightning moves in zigzag fashion. Yet they also ascribe a zigzagging form to the Milky Way:

“I believe that the ‘crooked (*jujul*) trail going west’ is a metaphor for the Milky Way in its aspect as the trail to the land of the dead. The Piman word *jujul* also means ‘zigzag’; in one of the Rain Songs it is used to describe the behavior of lightning: ‘lightning

¹⁵⁶ B. Cobo, *Inca Religion and Customs* (Austin, 1990), p. 32.

¹⁵⁷ E. Cochrane, “The Milky Way,” *Aeon* 4:4 (1996), pp. 54-65.

¹⁵⁸ P. A. Clarke, “The Aboriginal Cosmic Landscape of Southern South Australia,” *Records of the South Australian Museum* 29:2 (1997), p. 138.

¹⁵⁹ B. Brundage, *The Fifth Sun* (Austin, 1979), p. 95.

¹⁶⁰ S. Milbrath, *Star Gods of the Maya* (Norman, 1999), pp. 34, 41.

moving very zig-zag, roaring beautifully...Perhaps ‘crooked trail’ is also a metaphor for lightning trail. The shaman’s ladder to the sky is also known as the zigzag ladder.”¹⁶¹

If we now turn to the image represented in figure eleven, which depicts the “Milky Way” in Navaho art—the Navaho being close neighbors of the Pima—the celestial reference for the zigzagging form will be readily apparent.



Figure eleven

In figure twelve, Adad’s lightning/thunderbolt assumes the very position otherwise associated with the *axis mundi* or World Pillar—as a support for the ancient sun-god. Note also that the lightning/thunderbolt is represented as a zigzagging form, thereby conforming to a universal conception.



Figure twelve

A certain parallel to the Mesopotamian cylinder seal is offered by an American Indian representation of the Thunderbird (see figure thirteen). Here, too, the zigzagging form of

¹⁶¹ T. Hoskinson, “Saguaro Wine, Ground Figures, and Power Mountains,” in R. Williamson & C. Farrer, *Earth and Sky* (Albuquerque, 1992), p. 136.

the thunderbolt is a point of emphasis. Also interesting is the fact that the lightning is believed to emanate from the “heart” of the Thunderbird, the latter represented as an orb-like object.



Figure thirteen

Various other phases in the history of the polar configuration can be reconstructed as well, the *axis mundi* alternately assuming the appearance of a chain of wedges or arrows, often compared to a ladder; a towering pile of serpent-like coils; and a pyramidal or ziggurat-like form. A detailed analysis of these respective forms would be impossible here, but the problem deserves careful study insofar as the forms described in ancient myth and depicted in rock art closely resemble forms seen during certain laboratory experiments performed by Anthony Peratt involving high-energy plasma discharges.¹⁶² Here ancient lore and modern science appear to converge at a level of detail difficult to explain away as mere coincidence. For the first time in history, perhaps, the physical sciences are in a position to illuminate and elucidate recurring mythical themes. Be this as it may, an accurate reconstruction of the various forms assumed by the *axis mundi* is

¹⁶² See here D. Talbott & W. Thornhill, *Thunderbolts of the Gods* (Portland, 2005).

certain to tell us a great deal about ancient myth in general and the biography of the thundergod in particular.

Conclusion

To recap our findings in this chapter: the thundergod is inextricably associated with the ancient sun-god, in ancient myth as well as in sacred iconography. The god's lightning is said to emanate from the solar region or from a celestial eye. We are not the first to document this connection between the sun and the thundergod.¹⁶³ The Assyriologist Morris Jastrow observed that: "In many mythologies the sun and lightning are regarded as correlated forces."¹⁶⁴ Arthur Cook, similarly, concluded: "The sun-god has much in common with the thunder-god."¹⁶⁵

The answer as to why this should be the case, although perfectly obvious once the relevant evidence is brought forward, has escaped previous scholars because they were predisposed to seek an explanation by reference to the current skies and familiar meteorological effects. Yet one will never explain the manifold traditions surrounding ancient thundergods by reference to the current skies and commonplace meteorological phenomena. A proper reconstruction of the thundergod's history is much more compelling and cataclysmic from start to finish. For the ancient thundergod was the planet Mars and the prototypical "lightning" an interplanetary discharge of stupendous power and heaven-spanning dimension. The archetypal thundergod formerly resided at the "heart of heaven." There, in plain view and nestled inside the planet Venus, he presided over the sacred fire while kindling his paramour's passion.

¹⁶³ G. Reichel-Dolmatoff, *Amazonian Cosmos* (Chicago, 1971), p. 28 notes that the Desana Indians refer to thunder as the "voice of the Sun."

¹⁶⁴ Quoted in A. Cook, *op. cit.*, pp. 578-579.

¹⁶⁵ *Ibid.*, p. 337.

