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On the Date of the Aryan Religion, and the Minoan Religion of the Bull

by

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I. The Probable Date of the Aryan Religion

In my study on the origin and significance of the Rig Vedic gods (Anghelina 2013) I argue that the Rig Vedic religion is fundamentally astral. The main gods of this religion represent the stars and constellations that the Vedic people worshipped in the morning just before sunrise. The constellations were of paramount importance for these people because of their role in keeping time. In a primitive agricultural society such as the Vedic, the cycle of the seasons, that is, time, was determined through the careful observation of the night sky. In this respect, the most important constellations for the Vedic people were those between the winter solstice (represented by Varuṇa = Aquarius) and summer solstice (Aryaman = Regulus in Leo). This period of time could become religiously significant because of its crucial importance for the development of the crops. Indeed, it is well known that in the temperate regions crops such as barley or wheat are harvested in May or June, that is, just before the summer solstice.

I also argue that the main myth of the Vedic religion, which is that of Indra (the constellation Taurus) killing Vṛtra (the constellation Scorpio, which is opposed to Taurus in the sky) and thus freeing the “waters” has to do with the natural event of the early spring rains. These rains are extremely important for the development of the crops and, therefore, for the summer harvest. In this respect, the other gods who bring prosperity to the Vedic people are the Aśvins and their chariot; these gods represent the constellation Gemini, which, in Vedic times, that is, during the “age of Taurus,” was a constellation appearing in the morning sky in April–May, that is, shortly before the time of the harvesting (May–June).
My theory, which I have briefly summarized above, is based on the well-known astronomical phenomenon of the precession of the equinoxes. The precession of the equinoxes makes it possible for us to reconstruct the configuration of the constellations in the night sky several millennia ago. Most importantly, this phenomenon can offer a possible answer to the vexed issue of when the Vedic religion was invented. Thus, in my study, I argue that this religion must have been created during the “age of Taurus,” that is, during the time period in which this constellation announced the spring equinox. The date I use in my study is “before 2000 BC.”

To assume that the Vedic religion was created before 2000 BC creates a major difficulty, namely, the absence of any evidence of a “Vedic people” before 2000 BC. At first, therefore, my theory seems to be flawed. My conclusion, however, is only apparently false. The fact that the gods of the pre-Zoroastrian Iranian religion are — in spite of their being obscured by the Zoroastrian religious reforms — identical to the Vedic gods (Haoma = Skt. Soma, Mithra = Skt. Mitra, Vṛtraghan = Skt. Indra) clearly shows that the astral Vedic religion is not only Vedic but Indo-Iranian. Given this, it is obvious that in order to date the Vedic religion it is absolutely necessary to reconcile two periods of time; these are the “age of Taurus” and the vexed issue of the time-period of Indo-Iranian unity.

I first tackle the issue of Indo-Iranian unity. There is no reliable data that could answer with precision the question of when the Indo-Iranians split. However, approximations can be made. The well-known fact that in Anatolia the Mitanni people worshipped Indo-Aryan gods around 1500 BC shows that the split must have occurred before that time. Anthony (2007: 51) argues that, since the Mitanni case shows Old Indic as being a distinct language by 1500 BC, common Indo-Iranian must date back to at least 1700 BC. This conclusion seems to be supported by archaeological evidence from sites such as Sintashta (north of the Caspian and Aral seas and east of the Ural mountains, at approximately 50° latitude), which is commonly regarded as representing an Indo-Iranian culture and which is dated roughly to between 2100 and 1800/1700. The time period of Indo-Iranian unity in their

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2 Kuz’mína (2001) argues for the existence of Indo-Iranian groups down to 1700 BC.

3 Cf., e.g., Anthony 2007 (408–11), Witzel 2000 (283–85).
homeland is regarded as synchronous with the spread of the horse-drawn chariot during the first quarter of the second millennium BC.\(^4\)

The (highly probable) existence of the Indo-Iranians in the temperate regions north of the Caspian and Aral seas fits well my theory that the main myth of the Rig Veda, which is that of Indra freeing the “waters,” is a metaphor for the advent of spring rains in the temperate regions. However, the time-frame for the Indo-Iranian unity (2100–1700 BC) does not seem to fit the time of the “age of Taurus,” which I posited as roughly before 2000 BC. Therefore, I reconsider this date below.

The convention that 2000 BC is the date on which the vernal equinox passed from Taurus to Aries (that is, the date on which the vernal equinox ceased to be in Taurus) is an approximation that can be found in most of the books popularizing the concept of the precession of the equinoxes. However, it seems that this date is not scientifically very precise; more accurately, this date can be lowered to around 1700 BC. This conclusion was reached by Maunder (1904: 490–91), who also notes that in 1700 BC the sun, which at that time was rising between Taurus and Aries at the equinox, was still moving through Taurus during the whole month succeeding the equinox (March–April).\(^5\) This is due to the fact that the sun in its apparent course through the year moves in a direction that is opposite to that in which the equinoctial point moves among the stars. In addition, since the brightest stars of Aries (e.g., Hamal) can be found not by the side of Taurus but towards the opposite side, Maunder argues that Taurus was still considered to be the first constellation following the vernal equinox until 700 BC.

These astronomical considerations put the whole issue of the date of the creation of the Aryan religion into a new perspective. It appears that the time-frame assumed for the Indo-Iranian unity (2100 and 1700 BC) overlaps with the “age of Taurus.” If that is so, then it is likely that the Aryan religion was conceived during this period of time in the northern, temperate regions of Asia.\(^6\) An

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\(^5\) It is well known that the month after the spring equinox represented the first month of the year for many ancient peoples including the pre-Zoroastrian Iranians; cf. Blois 1996 (48–49).

\(^6\) The existence of the Mitanni Indo-Aryan gods in 1500 BC possibly points to the fact that at least a part of the Rig Vedic hymns belongs to the period of time 1800–1700 BC (the conjectural date of the split of the Indo-Iranians) and 1600–1500 BC (that is, before 1500 BC). The date usually assumed for the Rig Veda varies between 1500 and 1200 BC, but earlier dates have
earlier date for the creation of this religion is certainly still possible, but this would imply the
eexistence of the Indo-Iranian group before 2100 BC. There has been, however, no clear evidence so far
to support such an assumption.

II. The Ādityas in the “Age of Taurus”
I would like now to take up again the issue of the nature of the Ādityas. In my study I conclude that
the three main Ādityas represent the most significant points on the ecliptic, that is, the two solstices
and the vernal equinox. Since the place of Varuṇa, the most important of the Ādityas, is in the
celestial sea, I assumed that he represented the constellation Aquarius or parts of it. I still hold to this
opinion, in favor of which I offered many arguments in the chapter on Varuṇa in my earlier work.
However, my identification of Mitra and Aryaman with Aldebaran (the “eye” of Taurus) and Regulus
(the brightest star in Leo), respectively, which was based on the fallacy that these gods had to
represent the other most important points on the ecliptic (the vernal equinox and the summer
solstice), raises a major difficulty; this is the fact that Mitra and Aryaman would be a superfluous
duplication of Taurus and Leo, respectively. Therefore, I find it necessary to reconsider here the stellar
natures of Mitra and Aryaman.

The present interpretation is based on that passage in the Rig Veda in which Indra, that is,
Taurus, is said to be túrīyāditya “the fourth Āditya” (8.52.7). This epithet offers an elegant solution to
the issue of who the other three Ādityas are. Thus, since Varuṇa (Aquarius) and Indra (Taurus)
represent the winter solstice and the spring equinox, respectively, the second and third Ādityas are
likely to be the other two zodiacal constellations between Aquarius and Taurus; these are Pisces and
Aries. Thus, Mitra, who is often mentioned together with Varuṇa, must be the constellation closest to
Aquarius, that is, Pisces the “Fish,” whereas Aryaman probably represents Aries the “Ram.” This
identification can explain why the first three Ādityas — or only Mitra and Varuṇa — are mentioned
together: they represent the transitional period from winter to spring, whose advent is announced by
Taurus. It can also explain why Skt. mitra means the “friend”; in the transition from winter to spring,
Mitra *alias* Pisces (that is, the months of January and February) is not as “dark” as Varuṇa, the constellation of the winter solstice. Put differently, Mitra is “friendlier” than Varuṇa.

It is necessary to underscore that, since Taurus is the “fourth” Āditya, Varuṇa, that is, Aquarius, must be the “first” of the Ādityas. This Vedic way of counting the zodiacal constellations leaves little doubt that for the Vedic people the year began with the winter solstice. This conclusion is clearly supported by another passage from the Rig Veda, in which Varuṇa is said to know not only the twelve months but also the additional one, that is, the “intercalary month.”

1.25.8. *véda māsó dhṛtávrato duvā́daśa prajávataḥ védá yá upajáyate.*

1.25.8. Er kennt die zwölf Monate mit ihrem Nachwuchs, der Gesetzvollstrecker; er kennt den, der nachgeboren wird.

This passage shows the obvious fact that an intercalary month was necessary to put in accord the well-known 360-day Vedic division of the year with the tropical year, which represents the length of time (approximately 365 ¼ days) the sun takes to return to the same position in the cycle of the seasons. Since it is well known that in this type of calendar the extra month was added at the end of the year, it makes perfect sense to say that Varuṇa — the first month of the year — knows it.

To conclude: the Vedic people worshipped those stars and constellations that marked the seasonal transition from winter to spring; for agriculture, this transitional period was and still is the most important part of the year. The main Vedic constellations, therefore, are Varuṇa = Aquarius (December–January), Mitra = Pisces (January–February), Aryaman = Aries (February–March), and,

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7 In ancient cultures, the solstices, which are very easy to observe, were very often chosen to mark the new year; cf. Samuel 1972: (16–17). In ancient Athens, for example, the year started after the summer solstice (the month of Hekatombaion); cf. Samuel 1972 (64).

8 Cf. Geldner on 1.25.8; Anghelina 2013 (123).

9 That the Vedic year had 360 days is clear from 1.164.11, in which it is said that the “wheel of time” has 720 “sons”; this number obviously represents the total number of days and nights in a year: *dvādāsāraṁ nahí táj jārāya várvari cakrāṁ pāri dyám rtásya/a putrá agne mithunáso átra saptá šatáni vinśatís ca tasthuh* (Dies zwölfspeichige Rad der Zeit [Ordnung]]|rtásya| dreht sich immer wieder um den Himmel, denn nicht kann es sich abnutzen. Darauf stehen, Agni, die Söhne paarweise, siebenhundert und zwanzig).
finally, Indra = Taurus (March–April). Gemini (April–May) alias the Aśvins are also extremely important because their first appearance in the morning sky was close to the time of the harvesting. The Vedic year began with Varuṇa, the winter solstice.

The Minoan Religion of the Bull

The Aryan worship of the bull is strikingly echoed by a completely different culture; this is the Minoan religion from Crete before the middle of the second millennium BC. It is well known that the Minoans worshipped a bull. Since in the Aryan religion the bull represents the constellation Taurus, it is worthwhile to investigate whether the Minoan bull represents this constellation or not. In order to answer this question I bring into discussion the two well-known main objects worshipped in the Minoan religion: these are the horns of consecration and the double ax.¹⁰

The phrase “horns of consecration,” which describes one of the two main cult objects in the Minoan religion, was first coined by Evans (1901: 135), who noticed the undeniable similarity between this object and the horns of the ox.¹¹ This origin is also strongly suggested by the frequent association of the double ax — the other well-known main object of the Minoan cult — both with architectural horns (fig.1) and with the horns of realistic bull-heads (bucrania) painted on Cretan artifacts (fig. 4).¹²

There is no clear solution to the issue of the origin and significance of the horns of consecration. The same goes for the double ax. Nilsson (1950: 190) even states that “what the origin of the horns of consecration is must remain uncertain”; the same opinion is basically shared by Powell (1977).¹³

It is beyond the scope of this paper to go over all the theories concerning the meaning of these two objects. I only mention here the interpretation that seems to have always gained some sympathy among scholars. This is the well-known hypothesis that the “horns of consecration” represent a

¹⁰ Nilsson (1950: 165) describes these as “objects of preeminently religious character which are typical of the Minoan cult” and as “closely connected with the cult and with sacral architecture”; see figs. 1, 3, 5.

¹¹ For a concise presentation of the facts and of the history of the issue, see, e.g., Powell 1977 and Nilsson 1950 (165–93).


¹³ For a synopsis of these theories, see Nilsson 1950 (165–235), Powell 1977, Sippel 1986.
cosmic mountain, a symbol that allegedly was taken over by the Minoans from Egypt. This hypothesis, already criticized by Nilsson (1950: 188–89), was recently taken up by Marinatos (2010: 103–113).

Marinatos' argument goes as follows (2010: 114–130). The Minoan horns of consecration are similar in shape to the symbol of the so-called cosmic mountain in ancient Egypt. This cosmic mountain is always represented as two peaks having a sun-disk between them; sometimes two lions support upon their backs both the sun and the mountain (cf. fig. 3). Since the double ax is often represented between the horns of consecration it would follow that the double ax is the symbol of the sun. Therefore, the horns of consecration and the double ax would represent the sun (the double ax) rising from the horizon (the horns of consecration), which would be represented by the “cosmic mountain.”

I do not see any appealing resemblance between the shape of the double ax and the sun. To identify these two objects with each other presupposes a certain degree of abstractness, which would be difficult to explain. It is worthwhile to note, however, that the symbol of a sun-disk placed between bull-horns is well known in Egypt. Thus, Egyptian gods such as Hathor or Isis are often shown as bearing such symbols on their heads. (cf. fig. 2) Obviously, there can be no connection between this symbol and the idea of the “sun emerging from the horizon.” Besides, since the horns are also depicted/built without the double ax between them, it would be hard to explain how the Minoans could be so obsessed with a “cosmic mountain.” Therefore, it is not necessary to assume that the Minoan horns represent such a “mountain.”

Marinatos's argument also creates another problem, of which she is aware; this is the fact mentioned above that the double ax is often painted between the horns of a realistic bovine head (Marinatos 2010: 116–120). To solve this problem she appeals again to ancient Egypt and the Middle East where the ox or ox-head seems to be associated with the sky. Consequently, she interprets the bovine head as representing the sky whereas the presence of the double ax between the bovine horns would confirm her hypothesis that the ax represents the sun.

This kind of argument seems doomed to failure from the beginning. The reason for this is the huge complication created by the assumption that different symbols are used to express the same

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thing; according to Marinatos, both the bovine-head and the horns representing the cosmic mountain are symbols used to put in evidence the sun emerging from the horizon. In each of the representations, the sun would be represented by the double ax.

As I noted above, for Marinatos the ox-head or the ox itself is a symbol taken over by the Minoans from the Egyptians, and represents some undefined celestial object, perhaps the sky itself. I argue that, as was the case with Vedic Indra, this celestial bull is Taurus. This hypothesis is not new. Recently, albeit in low-profile publications, Benigni and Carter (2007) and Dempsey (2008) argued for the same view. In the present study I offer new support for this hypothesis.

In the Minoan iconography there are two iconic elements that hint at the fact that the horns of consecration indeed represent the constellation Taurus. Firstly, the horns — and the double ax as well — are often accompanied by birds (figs. 6 and 7). Marinatos (2010: 115–16), for whom the double ax represents the sun, argues that the presence of the birds in such cases is due to the fact that birds in general are the first living beings that wake up at sunrise. This is obviously a far-fetched argument. If, on the other hand, the horns of consecration represent Taurus, then the symbol of the birds can be interpreted in a more natural way as symbolizing the sky, which is the location of Taurus. Similar iconography can be met with in other cultures as well. Thus, it is well known that in the ancient Greek and Roman iconographies the presence of fish or dolphins symbolizes the aquatic element.

The second element that points to the conclusion that the Minoan horns symbolize Taurus is the presence of flowers (lilies) next to the horns and the double ax (figs. 4, 8). Marinatos (2010: 121–22)

15 The Egyptian lions mentioned above may also represent a celestial object, namely the constellation Leo, which in antiquity was the constellation marking the summer solstice. The representation of two lions instead of a single one may be meant to show the rotation of the constellation in the sky. The well-known Mycenaean Lions’ Gate, on which two lions are shown as supporting a column (the *axis mundi*?), may also reflect this artistic conception.

16 The astronomical considerations of Benigni are too flawed to be mentioned here; however, she had the intuition that the Minoan bull represented Taurus. Dempsey’s theory, on the other hand, is, from the scientific perspective, very sophisticated. He argues that the double ax was a device for measuring the cycles and positions of the moon (that is, a device for measuring time), especially in relation to Taurus (Benigni [2007: 46] suggests the same thing). I found Dempsey’s theory extremely interesting, but it is hard to believe that the Minoan horns and double ax were used for such sophisticated purposes (that is, for astronomical exact measurements); cf. my argument below.

17 The Greek god of the sea Poseidon, for example, is often accompanied by dolphins or other fish.
argues that the flowers in such cases suggest “growth and development,” which the double ax, that is, the sun, brings about. Along the same lines, Gimbutas (1989: 270), who associates the flowers with the bull, interprets both the flowers and the bull as symbols of regeneration and vitality. These arguments seem far-fetched as well. It is hard to believe that elements that are so different from one another as the sun, the bull, and the flowers were constantly used by the Minoans only for the purpose of expressing the idea of vitality.

The assumption that the Minoan horns symbolize Taurus offers a simpler and more elegant solution to the issue of the presence of flowers in such cases. Thus, the flowers underscore the astronomical role of Taurus, which is that of marking the start of the spring season. Their presence symbolizes the spring season, which, in turn, is announced by and, thus, associated with Taurus.

All the elements I mentioned above — the shape of the architectural “horns of consecration,” the association between these horns and the realistic bovine head, the presence of birds and flowers next to the bull — strongly suggest that the main object of cult for the Minoans was the constellation Taurus. It is also worthwhile to note that the Minoan horns of consecration first appear during the time period called “Middle Minoan II,” which roughly corresponds to the first quarter of the second millennium BC (2000–1700); this time period is identical with that during which the Aryan religion developed. In the Minoan case, however, it is not necessary to assume that Taurus was worshipped because it was the marker of the spring equinox; this is shown by the position of the reconstructed monumental horns at Knossos, which is not due east (cf. n. 18). As I noted above, however, this constellation was representative for the whole month following the spring equinox, which is April; this is the month in which in Crete — and elsewhere in the temperate regions of the northern hemisphere — the flowers blossom. In Crete therefore Taurus was worshipped because it was a symbol of the spring season.

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18 The horns of consecration placed in the southern part of the palace in Knossos (fig. 1) are oriented toward the northeast (cf. Benigni 2007 [20]); it would be interesting to check whether this orientation corresponds to the position of the main body of Taurus in the sky after 2000 BC. The translation of Taurus from due east (roughly 3000 BC) to northeast is due to the astronomical phenomenon of the precession of the equinoxes.

The identification of the horns of consecration with the constellation Taurus may shed some light on the enigmatic meaning of the double ax as well. Benigni (2007) and Dempsey (2008), who argue for the identification of the horns with Taurus, offer the hypothesis that the double ax, or more precisely its two curbed extremities, was used for the observation of the phases of the moon, that is, for time measurement. For these two scholars therefore the double ax had a very sophisticated astronomical role. My argument against this theory is that the double ax does not have a standard form, which must be assumed for precise astronomical measurements. Therefore, I think that the solution to this issue must be looked for elsewhere.

The solution I propose here is based on the fact that the double ax is sometimes artistically represented as very similar in shape to the horns between which it is often set (cf. figs. 4 and 5). Given this observation, it may be that the double ax and the horns of consecration play an identical role, that of being a symbol of Taurus. This could explain why the horns were mainly used in architectural ornaments, whereas the double ax seems to have been an instrument of worship and ritual. At any rate, even if this hypothesis is wrong, the association between the double ax and the horns, which represent Taurus, points to the fact that the double ax must have been an astral/cosmic symbol as well.

To conclude: the nature of the Minoan religion seems to be astral. Similarly to the Aryans, the Minoans worshipped Taurus as their main god. Thus, these two different cultures, which, at the

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20 See Sippel (1986) for a synopsis of all the theories concerning the meaning of the double ax; cf. n. 13 above.

21 I assume therefore that the “double ax” actually represents two symmetrical sets of horns put together, one of which is pointing upwards and the other one downwards.

22 Certainly, the occasional similarity between the two may still be due to an ornamental purpose.

23 Apparently the Minoans had priestesses; the double ax was carried only by women; see Nilsson 1950 (226).

24 I also make the hypothesis that the well-known Minoan “snake-goddess” may have astronomical significance as well. During the time-frame discussed here the Pole Star was represented by the star Thuban, which is α Draconis (see figs. 9 and 10), that is, the brightest star in the constellation of the “Snake.” Thuban therefore separates the snake into two halves. These halves may be the “snakes” the “snake-goddess” apparently holds in her hands. If so, then the “snake-goddess” possibly represents either the celestial north pole or the axis of the universe.
beginning of the second millennium BC, were separated by thousands of miles, seem to have been similar with respect to their main object of worship.

Fig. 1. The horns of consecration in the southern yard of the palace in Knossos.
Fig. 2. The Egyptian goddess Hathor wearing bull-horns and sun-disk on her head.

Fig. 3. Ancient Egyptian lions (Leo?) supporting the sun-disk.
Fig. 4. Realistic ox-head with double ax and lily sprouting from the double ax.

Fig. 5. Horns of consecration and double ax of the same shape.

Fig. 6. Bird perched on top of the double ax and horns of consecration.
Fig. 7. Gold leaf showing horns of consecrations and birds.

Fig. 8. Double ax surrounded by flowers.
Fig. 9. The Minoan “snake-goddess.”

Fig. 10. The constellation Draco and the Pole Star Thuban (β Draconis).
Bibliography


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