



FIG. 1—BRONZE VESSEL, WITH INLAY WORK, PERSIA, LATE TWELFTH CENTURY A.D.  
TEHERAN, MUSEUM OF THE GULISTĀN PALACE

# THE PSEUDOPLANETARY NODES OF THE MOON'S ORBIT IN HINDU AND ISLAMIC ICONOGRAPHIES BY WILLY HARTNER

A CONTRIBUTION TO THE HISTORY OF ANCIENT AND MEDIEVAL ASTROLOGY

To Ananda K. Coomaraswamy

**T**HE DIFFERENCE BETWEEN THE FIXED STARS WHICH REVOLVE ABOUT OUR EARTH IN NEVER-changing constellations and the planets traveling within them on intricate tracks was known in a very early period of uranoscropy. In historic times, all peoples in antiquity were fully conversant with it, though, of course, the degree of exactness of knowledge deduced from the given facts varied considerably with the different peoples concerned. Thus, for instance, it is known that in Babylonia as well as in Egypt the apparitions of Venus, or Mercury, rising before the sun as morning star, or setting after sunset as evening star, were not always recognized as belonging to one and the same astral body, and the discovery of the retrogradations of the planets may be even of a considerably later date. The pyramid texts still seem to ignore the identity of the morning and the evening star,<sup>1</sup> and in Mesopotamia also this identity can hardly have been definitively established before the second millennium.

Without entering upon a more detailed discussion of this question, I shall content myself with the statement that, as far as the number of the planets was concerned, there ruled, at the latest from the second half of the second millennium B.C. to the time of Herschel's discovery of Uranus, an almost perfect unanimity in all parts of the civilized ancient world. The orthodox astronomical doctrine, congruent with the observed facts, taught that the total number of planets was seven: the moon, the sun, Mercury, Venus, Mars, Jupiter, and Saturn. Philosophical speculations, such as the Pythagorean hypothesis of the ten celestial bodies, exercised, as is well known, a considerable influence upon certain groups of scholars; but, not being practically applicable to the natural phenomena, such speculations never attained general recognition, and they never could seriously affect the belief in the correctness, or rather reality, of the sacred number of the seven planets. It need hardly be emphasized that the Pythagorean conception of the earth revolving about a hypothetic central fire, together with the indemonstrable existence of an ever-invisible counterearth, also was impracticable for astrological purposes and that, therefore, no trace of it can be found in the whole of the astrological literature. Of no more practical interest, of course, are the 88 planets, 28 Nakshatras, and 6,697,500 billions of stars which, according to the Jaina philosophers, belong to each sun and moon.

However, it would be a grave error to acquiesce in stating this, assuming that, also as far as astrology was concerned, the sacredness of the heptad of the planets was never thus violated. As a matter of fact, astrologers knew of more than seven planets to be taken account of, though, it may be anticipated here, their additional planets have no connection whatever with those of the Pythagoreans or Jainas. They have their source, not in sophisticated cosmological

<sup>1</sup> Cf. H. Brugsch, *Die Aegyptologie* (Leipzig, 1897), p. 322.

speculations, but in a primitive mythological conception inwrought into a rather advanced system of exact astronomical knowledge—a rather strange mixture, it is true. Astrologers certainly have been aware of the illegitimacy of these children of the imagination, which were just as invisible to the human eye as was the Pythagorean counterearth. Maybe they even were a little ashamed of them, as evidenced by the fact that, to begin with, the literature is by no means abundant in clear references, and that when once a writer condescends to mention them he does it with due precaution, showing a suspicious eagerness to explain to the reader that they are not real planets, but only fictions treated as such.

More frequently by far these mysterious extra planets appear in the astrological iconographies of various times and places, sometimes recognizable to everybody's eye, sometimes carefully protected against the sight of the uninitiated. Let us, therefore, start the investigation with an analysis of a specially clear example.

#### THE RELIEFS OF DJAZĪRAT IBN 'UMAR

In his remarkable paper, "Throne of Khusraw,"<sup>2</sup> Herzfeld mentions a series of eight reliefs incised on one of the main pillars of the great Tigris bridge of Djazīrat ibn 'Umar. Few archaeologists seem to have found it worth while to visit this place and therefore no really good photographs of the badly damaged reliefs have so far been taken. However, the ones published by C. Preusser<sup>3</sup> (*Fig. 2*), on which Herzfeld also based his analysis, show clearly enough those details which are of special interest to us. As to the date of the reliefs, Herzfeld is certainly right in attributing them to the second half of the twelfth century. This may be judged from the style of the reliefs themselves as well as from the archaic character of the Naskhī inscriptions on them; moreover, Ibn al-Athīr's statement (XI, 204) that "the bridge of Djazīra was constructed by a certain Djamāl al-dīn (d. 559 H. [1164 A.D.])" most likely refers to the bridge in question, and thus confirms the above date.

Herzfeld's description of the figures represented in these reliefs, translated literally from the German, runs as follows:

The reliefs of this bridge show, starting from the right: (1) Saturn and Libra, (2) Jupiter and Cancer, (3) Mars and Capricorn, (4) the sun and Leo, (5) Venus and Pisces, (6) Mercury and Virgo, (7) the moon and Taurus, (8) Sagittarius and ?<sup>4</sup> Seven years ago Max van Berchem wrote me with reference to this: "This juxtaposition of the planets with the signs of the zodiac is the one called by the astrologers *exaltatio* (Ψωμια), that was believed to exercise certain influences, and which

<sup>2</sup> Ernst Herzfeld, "Der Thron des Khosrō," *Jahrb. d. Preussischen Kunstsamm.*, 41 (1920), 1-24, 103-47; for the passage in question see pp. 138-39.

<sup>3</sup> C. Preusser, *Nordmesopotamische Baudenkmäler*, 17. *Wissenschaftliche Veröffentlichung der Deutschen Orientgesellschaft*, 1911, Pl. 40.

<sup>4</sup> Herzfeld, *op. cit.*, p. 138, inserts as a footnote the Arabic text:

(1) الميزان شرف زحل (2) السرطان شرف المشتري  
(3) القاهر شرف الجدى (4) الشمس شرفه الاسد

(5) الزهرا شرفها الحوت (6) السنبله شرف عطارد  
(7) القمر شرفها [ها] الثور (8) الجوزهر .....

In No. 3, I am unable to recognize the mutilated name of the planet which Herzfeld reads "al-Kāhir." If this be correct, it would be a somewhat unusual equivalent of the ordinary term "al-Mirrikh," ("Mars"). The following word must undoubtedly read, شرفه with the possessive suffix, not, as above, شرف. In No. 5, the two first words, الزهرة (not الزهرا) and شرفها, are de-

is different from the ordinary combination of the *domicilia*. The former is called, in Arabic, *sharafa* [N.B.: the correct term is the masculine noun *sharaf* (cf. the Arabic text)]. For many weeks, I studied the astrology of the Egyptians, Chaldaeans, Greeks, and Arabs, and finally arrived at the conclusion that these pictures have a purely astrological content, and by no means allow to carry out an astronomical determination of time, or even wish to indicate it [viz. the time of the construction of the bridge]. They originate in very old Babylonian conceptions.”

Herzfeld's footnote (see footnote 4) in connection with the text produces the impression that, in relief No. 8, the word *Djawzahr* in the mutilated inscription corresponds with Sagittarius, whose picture is clearly visible on the relief. But this can hardly be so, because the Arabic name of Sagittarius is either al-*Ḳaws* or al-*Rāmī*, but never al-*Djawzahr*. The case is, however, quite clear: the relief itself shows the well-known picture of Sagittarius as a centaur shooting with his bow, and something less well known, which is still to be identified; this unknown quantity is obviously explained by the term *Djawzahr*, the only word that is preserved in the inscription.

What is, then, this mysterious *Djawzahr*, which is added to the seven planets and thus appears to be a planet itself? This question cannot be answered without a brief discussion of the two astrological systems of combining planets with zodiacal signs, the “*domicilia*” and the “*exaltations*” mentioned in van Berchem's statement.

#### THE PLANETS' DOMICILES AND EXALTATIONS

The two are rival systems—both have been in use throughout the ages since the beginning of Hellenistic astrology. For a long time they were considered to be of the same degree of importance; but as this necessarily led to intolerable consequences, astrologers agreed that the effect produced by a planet standing in its sign, or rather point, of exaltation should predominate over that produced by a planet's position in its *domicilium* (cf. p. 118). At all events, Hugo Winkler's assertion, quoted by Herzfeld,<sup>5</sup> that “a planet (Babylonian *nabû*, ‘prophet’) is without effective power when standing in its *domicilium* (*bitu*, ‘house’), thus illustrating the Biblical proverb ‘A prophet is not without honour, save in his own country, and in his own house,’” is a misunderstanding. In astrology, the planet prophet is always treated with due consideration in his home and house! The question, whether the *domicilia* or the *exaltations* is the older system, cannot be answered offhand. As a perfected system, neither of them can have existed before the twelve-partite zodiac was established, which, roughly speaking, excludes any date earlier than the first millennium B.C. But, of course, it is by no means out of the question that one, or perhaps more, of the traditional juxtapositions of planets with particularly conspicuous constellations has its source in much older astronomical conceptions. As I intend to demonstrate in another paper, this is undoubtedly true of the combination of the sun with Leo, which takes us back even to prehistoric times.<sup>6</sup> As a whole,

stroyed. The possessive suffixes of Nos. 4 and 7 have to change their respective places: the sun, in Arabic, is female; the moon, male. The inscription of No. 7 reads

clearly شرفه .

<sup>5</sup> *Ibid.*, p. 138, note 2.

<sup>6</sup> Cf. pp. 119 and 146.

the domicilia have so far not been encountered in Babylonian astronomy or astrology, whereas the exaltations actually have been found, as E. F. Weidner<sup>7</sup> has shown.

1. *The domicilia* (Latin, *domicilium*; Greek, οἶκος; Arabic, bait)<sup>8</sup>

In this system a distribution of the seven planets on the twelve zodiacal signs which is as symmetrical as it possibly can be is sought. The circle of the zodiac is cut into halves by a diameter running from the beginning of Leo (i.e., the boundary between Cancer and Leo) to the beginning of Aquarius (i.e., the boundary between Capricorn and Aquarius). Then the top sign of the one half, Cancer, is attributed to the moon as her *domicilium* ("house"), and

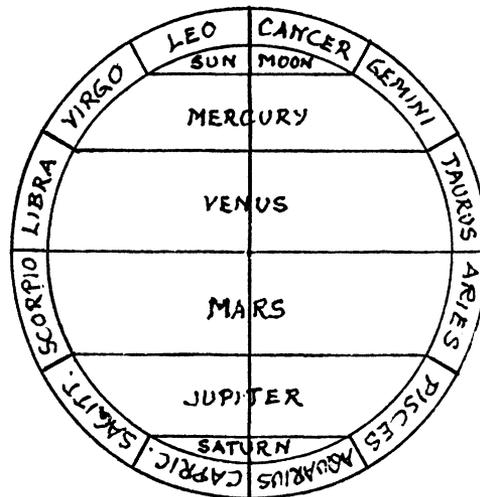


FIG. 3.—THE PLANETS' DOMICILIA

that of the other half, Leo, to the sun. While, thus, the two great luminaries of the night and the day have only one house each, each of the remaining five planets has two, situated symmetrically on either side of the main diameter, the planets being arranged according to their periods of revolution—viz., Mercury, Venus, Mars, Jupiter, Saturn, as is shown in Figure 3.

As the signs are alternately called male and female (viz., Leo, Libra, Sagittarius, Aquarius, Aries, Gemini, are male signs, the remaining six, female), the moon is the lord of a female *domicilium*, the sun of a male one, whereas each of the other planets has one of each kind. The distinction between night houses (the signs of the semicircle from Aquarius to Cancer, com-

<sup>7</sup> "Babylonische Hypsomatabilder," *Orientalistische Literaturzeitung*, 1919, cols. 10-16. In the same volume, cols. 212-14, Herzfeld published a short article, "Astrologische Parerga," in which he says with reference to the reliefs of Djazirat ibn 'Umar: "The parallel with Weidner's material (i.e., the planets' exaltations) is evident. But, curiously enough, though there are only seven planets, we here find eight pictures, and it really is to be regretted that just the eighth picture remains undistin-

guishable (*unkennlich*) on the photographs. Undoubtedly, it is only a stopgap (*Notbehelf*) because, for architectural reasons, eight pictures were needed. Nevertheless, we should very much like to know the 'substitute' (*Ersatz*) of the eighth planet." That in this particular case the eighth relief can hardly be called a "Notbehelf," will be shown in this article.

<sup>8</sup> Cf. also my article on "Minṭaqa," *Encycl. Islām*, III (1936), 501-4.

manded by the moon) and day houses (Leo to Capricorn, commanded by the sun) was unknown in early Hellenistic astrology, but played an important part during the Middle Ages.

It is seen that, in this system, all signs of the zodiac are occupied by the seven planet lords, and no space could possibly be left over for any extra planet. Quite a different situation however, occurs in the other system.

## 2. *The exaltations* (Latin, *exaltatio*; Greek, ὑψωμα; Arabic, *sharaf*)

According to this astrological theory each planet has its maximum power ("exaltation") when standing in a certain sign of the zodiac. In this system, contrary to that of the domicilia, there rules a perfectly developed dualism, the sign diametrically opposite to the exaltation sign of a planet being called its "dejection" or "depression" (Latin, *deiectio*; Greek, ταπείνωμα; Arabic, *Hubūt*), where its influence becomes a minimum or is simply considered to be negligible. The planets' distribution on the signs is the following:

The sun has his exaltation in the sign of Aries, his dejection in Libra; the moon, exaltation in Taurus, dejection in Scorpio; Saturn, exaltation in Libra, dejection in Aries; Jupiter, exaltation in Cancer, dejection in Capricorn; Mars, exaltation in Capricorn, dejection in Cancer; Venus, exaltation in Pisces, dejection in Virgo; Mercury, exaltation in Virgo, dejection in Pisces.

The earliest written document hitherto known in which this juxtaposition of planets and zodiacal signs appears is a pre-Hellenistic Babylonian cuneiform tablet published by F. X. Kugler, S.J.,<sup>9</sup> and interpreted correctly by E. F. Weidner.<sup>10</sup> The list contained in Ptolemy's *Tetrabiblos* is identical with the above and, therefore, of no special interest. But in a contemporary second-century Greek papyrus of Egyptian origin,<sup>11</sup> as well as a century earlier, in Pliny's *Naturalis Historia*, there appears an important restriction: it is no longer the entire sign, but only one single *degree* or *point* in it that is called the planet's exaltation, and the point 180° distant its dejection, as is illustrated by the following list:

<i>Planets</i>	<i>Exaltation</i>	<i>Dejection</i>
The sun	Aries 19°	Libra 19°
The moon	Taurus 3°	Scorpio 3°
Saturn	Libra 21° (20° <sup>12</sup> )	Aries 21° (20°)
Jupiter	Cancer 15°	Capricorn 15°
Mars	Capricorn 28°	Cancer 28°
Venus	Pisces 27°	Virgo 27°
Mercury	Virgo 15°	Pisces 15°

<sup>9</sup> *Sternkunde und Sterndienst in Babel* (Münster, 1907), I, 39-40: VI, "Eine Lehrprobe aus der babylonischen Astronomenschule."

<sup>10</sup> See footnote 7. Undoubtedly, the Babylonian term *inamar* here indicates the exaltation, not, as otherwise, the heliacal rising of a planet: *Mulu-babar ina Pulukki inamar* = "Jupiter has his exaltation in Cancer," etc. The

sun and the moon are not mentioned in this text.

<sup>11</sup> *P. Mich.* 149, published and translated in *Michigan Papyri*, ed. by J. G. Winter (Ann Arbor, 1936), III, 62-117. For the passage in question, see col. XVI, lines 28-35; instead of ὑψωμα, the term θρόνος is used there.

<sup>12</sup> Pliny, Firmicus Maternus, and the Hindu astrologer Varāhamihira assume Saturn's exaltation to be at

It is not difficult to tell why a planet's exaltation thus was limited to a mathematical point instead of a whole sign of  $30^\circ$ : without this restriction, it would be impossible to calculate a horoscope, because the calculation could of course be based on the system of the domicilia just as well as on that of the exaltations, and two entirely different, contradictory prognostications would be the result; but with the restriction this ambiguity is completely avoided because then the logical rule will be that the degree of influence exercised by a planet when standing in its *domicilium* is only surpassed by the one attained in the moment of the planet's transit through its point of exaltation.

Less clear is the question as to the reasons these, and no other, points of the signs con-

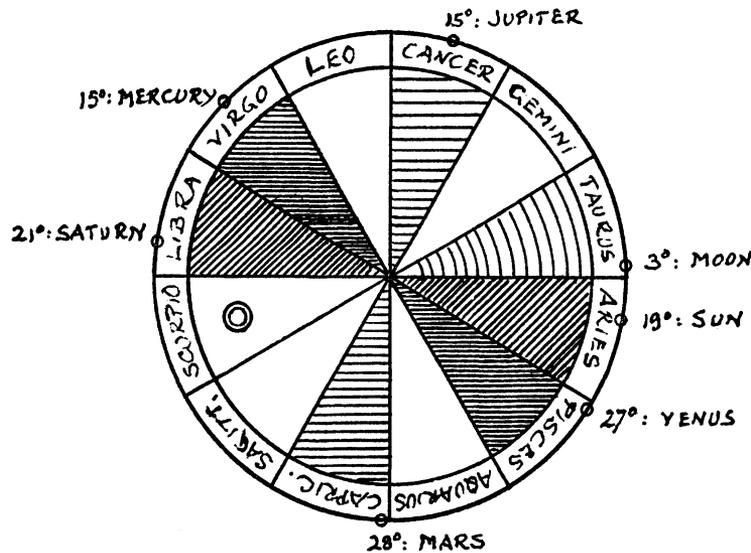


FIG. 4—THE PLANETS' EXALTATIONS

cerned were chosen. That there is at least no obvious regularity will be evident from Figure 4, which allows a clearer insight into the spatial distribution of the points in question than does the list given above.

As regards the choice of the signs themselves, a certain consistency may be recognized. The sun is exalted in Aries because his conjunction with this constellation introduced, during the second and first millennia B.C., the light half of the solar (or lunisolar) year, or even, in most of the ancient calendar systems, the year itself (cf. the Babylonian month *Nisannu*, starting the year about the time of the vernal equinox, and the Persian *Nawrūz*). Accordingly, the sun's dejection must be in Libra, that stands at the beginning of the dark half of the year. Saturn, being the "coldest" planet, simply plays the role of a nocturnal countersun and, therefore, has his exaltation where the sun is dejected, and vice-versa. Jupiter and Mars being strong antagonists, the former a thoroughly lucky, the latter a thoroughly unlucky, planet,

Libra  $20^\circ$ , and his dejection at Aries  $20^\circ$ . This is the only point on which there is no perfect agreement among

astrologers.

occupy two signs diametrically opposite. As to Mercury and Venus, the reasons for their exaltations being in opposite signs are less evident because Mercury, whose influence can be lucky as well as unlucky, is not the direct antagonist of the lucky planet Venus, although, of course, this may have been the case in an earlier period of astrology. Finally, the moon's exaltation in Taurus undoubtedly has its source in a very old tradition or mythological conception according to which the moon was inseparably connected with the bull. Innumerable representations on seals since the fourth millennium B.C. bear witness to this fact, and, according to al-Nadīm's *Fihrist*,<sup>13</sup> even the Ḥarrānian idolaters, in whose religion undoubtedly a great part of ancient oriental ideas and customs survived, still used to sacrifice and eat a bull in honor of their goddess, the Moon, on the sixth day of the first month (Nīsān) of their year.

We have described the almost perfect symmetry that characterizes the system of the domicilia. But the system of exaltations and dejections is governed also by a rather strong symmetry, the only difference being that the domicilia are arranged symmetrically in relation to an axis, the main diameter, whereas the exaltations and dejections are arranged in relation to a point, the center of the zodiacal circle. Six of the twelve signs—Aries, Cancer, Virgo, Libra, Capricorn, and Pisces—are both exaltations and dejections. Taurus is exaltation, the opposite Scorpio is dejection only. There remain two pairs of opposite signs, viz., Gemini and Sagittarius, and Leo and Aquarius, that are neither the one nor the other, as far as the seven planets are concerned.

#### THE FIRST SEVEN DJAZĪRA RELIEFS—A BREACH OF THE ASTROLOGICAL RULES

As may be seen, the pictures and inscriptions of the first seven reliefs of the Djazīra bridge really refer to the astrological system of the exaltations, as van Berchem and Herzfeld have pointed out. One remarkable exception escaped the attention of both authors: the fourth relief represents the constellation of Leo surmounted by the sun, and the inscription: الشمس شرفها الاسد designates *Leo as the exaltation of the sun!* This is a mistake, a statement contradictory to the elementary rules of astrology which teach that Aries, not Leo, is the exaltation of the sun. What the artist represented is not the sun's exaltation, but *domicilium*, whereas, in all the other reliefs, he proves to be perfectly conversant with the iron laws of the astrological doctrine. It is not too hard to trace the probable cause of this extraordinary *lapsus memoriae*. As I have indicated above (p. 115), the combination of the lion and the sun can be traced back to a remote antiquity, as far as the fourth millennium B.C., when the heliacal rising<sup>14</sup> of the constellation Leo took place about the time of summer solstice. Thenceforth, the lion was considered a decidedly solar animal; the sun's *domicilium* in Leo and the late Persian emblem—the lion surmounted by the sun—are only two out of many examples that bear witness to the extraordinary strength of this venerable tradition. No doubt it was

<sup>13</sup> Book IX, Chap. V.

<sup>14</sup> The apparent inconsistency between this passage and the one above (p. 118) is explained in such a way that, in the earliest period of astronomy, only annual

risings and settings of stars can have been observed, the conception of conjunctions of the sun with stars requiring a much more advanced stage of astronomical knowledge and abstract thinking.

for this very reason that the artist failed just in this instance, while in the case of the other pictures there existed no similar associations of ideas that might have interfered with his astrological erudition.

THE EIGHTH DJAZĪRA RELIEF—THE DJAWZAHR

Herzfeld had recognized the figure of Sagittarius and the word *Djawzahr*, which I have shown must be the name of the "eighth planet," as it cannot refer to the sign of Sagittarius. The figure of the (in reality invisible) "planet" is in a better state of preservation than are the figures of most of its brilliant celestial companions represented here. It appears to be a terrifying dragon's head whose serpentine neck and truncated body end in a knot. How does this fit in with literary references?

In the first place, I quote from dictionaries and encyclopedias:

1. Steingass' *Persian-English Dictionary* (page 378): "جوزهر *jauzahr*, the Dragon's head and tail; the sphere of the moon; a comet."

2. Vullers' *Lexicon Persico-Latinum Etymologicum* (II, 1046), gives two Persian equivalents of the Arabicized form جوزهر :

- a) "گوزچهر , cometa, ar. جوزهر . Sed جوزهر est forma arabica vocis persicae q.v."  
 b) "گوزهر , unde ar. جوزهر , caput et cauda draconis in orbe lunae."

3. Abū 'Abd Allāh Muhammad al-Kh<sup>w</sup>ārizmī's *Mafātih al-'Ulūm*:

الجوزهر هو النقطنان اللتان تتقاطع عليهما الدائرتان من الافلاك \* تسميان العقدين والجوزهر كلمة فارسية وهي  
 گوزچهر ای صورة الجوز وقيل \* گوی چهر ای صورة الكرة والاول اصح ويسمى ايضا التنين وهذا صورته في  
 الاصل واحدى العقدين تسمى الراس والاخرى الذنب وهذا في كل فلکین يتقاطعان فاذا اطلق له هذا الاسم \* عنى به  
 جوزهر القمر خاصة وهذا الذى يثبت حسابه في التقويم

al-Djawzahr.<sup>15</sup> The two points at which (the) two [great] circles of the sphere intersect; they are called the two nodes (i.e., knots). Al-Djawzahr is a Persian word, viz., *gawz-čihr*, i.e., 'the figure of the nut,' or also, *gūy-čihr*, i.e., 'the figure of the globe'; the former reading is the better one. It is also called al-Tinnīn (i.e., 'the giant dragon'), and such is his figure in the original copy.<sup>16</sup> The former of the two nodes is called 'the head,' and the latter, 'the tail'; and this (viz., a *Djawzahr*) is found in any pair of intersecting great circles. When the term is used in an absolute sense, it has the special significance of *Djawzahr* of the moon, the calculation of which is established in the calendar.<sup>17</sup>

As is seen, Steingass' and Vullers' interpretations are almost identical.<sup>18</sup> According to the latter, there are two original Persian words: گوزچهر , meaning "comet," and جوزهر , meaning "dragon's head and tail," both of which have coincided in the Arabicized form, جوزهر . In contradiction to this opinion, the Khwarazmian author of the *Mafātih al-'Ulūm*, who undoubtedly spoke Persian as his mother tongue, mentions only the one significance: "the dragon's

<sup>15</sup> The vocalization is not fixed. Some manuscripts read "Djawzahar," others "Djawzahir," sometimes even "Djawzahirr," with a *tashdīd* on the final letter *rā'*.

<sup>16</sup> The copyist omits to reproduce the dragon's figure in his text.

<sup>17</sup> Ed. van Vloten (Leiden, 1895), p. ۲۲.

<sup>18</sup> Steingass' second equivalent, "the sphere of the moon," is an obvious mistake; the passage ought to read (cf. Vullers): "The Dragon's head and tail *in* the sphere of the moon."

head and tail"; and for this he suggests the etymology گوزچهر, which Vullers indicates to be a Persian term for "comet." What we may conclude from this confusion is that both گوزچهر and کوزهر are rather unusual words in Persian and that the two are most likely nothing but variants of one and the same original word, which may have the two different meanings: (1) "the dragon's head and tail," (2) "a comet."

It is obviously the former of the two meanings that bears upon our planet figure. "The Dragon's head and tail" is a well-known astronomical term, which has survived even in modern astronomical terminology. Although a little obsolete, the expression "dragon's head," represented by the symbol  $\Omega$ , is still in use for the *ascending node of the moon's orbit*<sup>19</sup> and, correspondingly, the "dragon's tail" ( $\oslash$ ) for its descending node. And the time which elapses between two subsequent transits of the moon through one and the same node—on an average 27 days, 5 hours, and 5.6 minutes—is to this day commonly called a "dracontic month," a period of time of essential importance for the calculation of solar and lunar eclipses.

As to the Arabic reference, there is no doubt that the general definition of *Djawzahr* given in the beginning of the passage is only secondary, and that the term originally was applied to the nodes of the moon's orbit exclusively. The question of the etymology of the word *Djawzahr* will have to be dealt with extensively in another connection.

Neither of the two etymologies suggested by the author can be regarded as strictly convincing. It seems a priori much more probable—and I am going to support my theory by some more concrete arguments—that the first component of the word *Djawzahr* is the Persian *gāw*, "cow," or "ox," reminiscent of the moon's mythological relationship to the Bovidae (p. 119). If we adopt Abū 'Abd Allāh's derivation of the second component (which is undoubtedly correct), the meaning of *Djawzahr*, as seen from the modern Persian viewpoint, would be "gāw-čīhr," i.e., "the bull-shaped" or "the bull-face,"<sup>20</sup> alluding perhaps to a bull-horned serpent or dragon, or some other horned animal. Such monsters appear in an early period—I refer the reader to the various types of horned serpents or dragons on the Babylonian kudurrus, or the horned quadrupeds on prehistoric painted pottery (as for instance that of Tepe Siyalk<sup>21</sup>), frequently accompanied by other lunar symbols, or the horned serpents found on Susian seals.<sup>22</sup> They are also encountered in literature, and it will be sufficient to quote a particularly famous passage where the horned dragon again presents itself, together with the sun, the moon, and

<sup>19</sup> The great circle of the moon's orbit intersects with that of the sun's orbit (i.e., the ecliptic) at two diametrically opposite points called "nodes." The one in which the moon passes from southern to northern latitudes is called the ascending, the other the descending node.

<sup>20</sup> As will be seen later, the problem is not at all exhausted by this translation (cf. pp. 153–54).

<sup>21</sup> See R. Ghirshman, "Rapport préliminaire sur les fouilles de Tépé Sialk, près de Kashan," *Syria*, XVI (1935), Pls. XLII–XLIII. On most of the vessels from

"Necropolis B" (twelfth or eleventh century B.C.) horse-like animals with horns in the shape of a crescent are represented, sometimes with a sun symbol above the animal's back. The accompanying ornaments—sharp points and crescents—undoubtedly have to be interpreted as lunar symbols.

<sup>22</sup> See P. Toscanne, "Études sur le serpent," *Mém. Délégation en Perse* (Paris, 1911), XII, 166, Figs. 252 and 254.

the stars, this time unambiguously in a strict antagonism to the astral bodies: the Revelation of St. John, Chapter 12: 1-4, one of the favorite motifs of Renaissance painters:

And there appeared a great wonder in heaven; a woman clothed with the sun, and the moon under her feet, and upon her head a crown of twelve stars:

And she being with child cried, travailing in birth, and pained to be delivered.

And there appeared another wonder in heaven; and behold a great red dragon, having seven heads and ten horns, and seven crowns upon his heads.

And his tail drew the third part of the stars of heaven, and did cast them to the earth: and the dragon stood before the woman which was ready to be delivered, for to devour her child as soon as it was born.

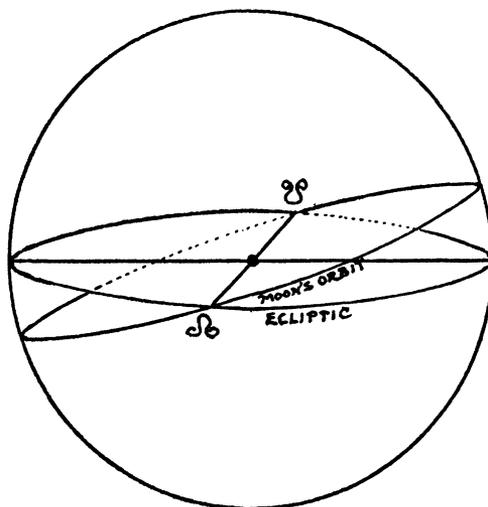


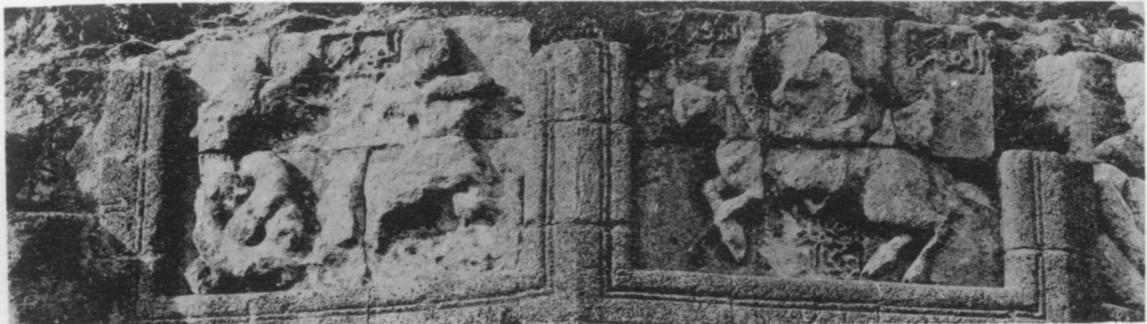
FIG. 5—THE NODES OF THE MOON'S ORBIT

#### THE NODES OF THE MOON'S ORBIT

What is most essential to us here is to have established the identity of the *Djawzahr* with the nodes of the moon's orbit. We may now say a few words about the astronomical significance of these fictitious points.<sup>23</sup>

The great circle of the moon's orbit is inclined, at an angle of about  $5^\circ$ , to that of the ecliptic (*Fig. 5*). The two nodes, i.e., the points of intersection of these circles, are of a special astronomical interest for the reason that whenever a conjunction, or opposition, of the sun and the moon (i.e., new moon, or full moon, respectively) takes place in or near them, there will occur a solar, or lunar, eclipse. These nodes are not invariably connected with a fixed point of the ecliptic, but have a constant motion of their own, contrary to that of the sun, the moon, and the planets. In other words, they travel slowly from Aries through Pisces, Aquarius, etc., back to the sign of departure, taking about eighteen and a half years to make a complete revolution through all the signs of the zodiac. Hence, also, the eclipses themselves gradually

<sup>23</sup> Cf. footnote 19.



FROM PREUSSER

FIG. 2.—RELIEFS ON THE TIGRIS BRIDGE OF DJAZĪRAT IBN 'UMAR, SECOND HALF OF TWELFTH CENTURY A.D.

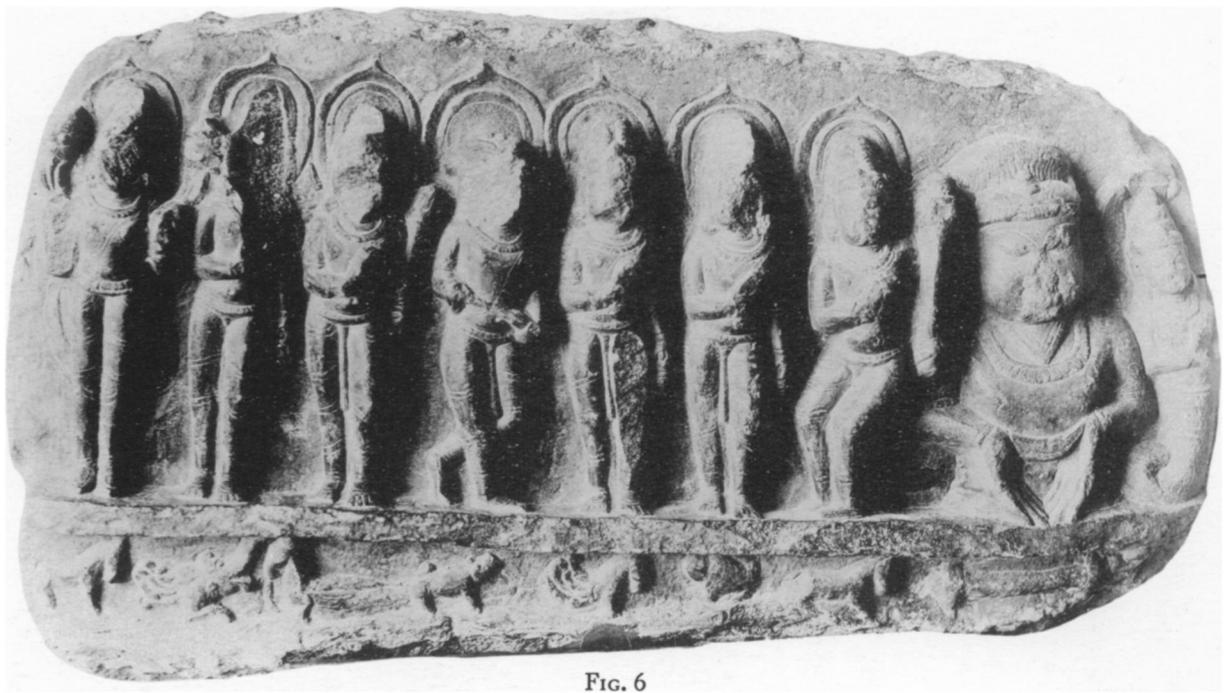


FIG. 6



FIG. 7

INDIAN REPRESENTATIONS OF THE NINE PLANETS (NAVAGRAHA)  
PROBABLY EIGHTH AND NINTH CENTURIES A.D.  
LUCKNOW, MUSEUM, AND WORCESTER, MASS., ART MUSEUM

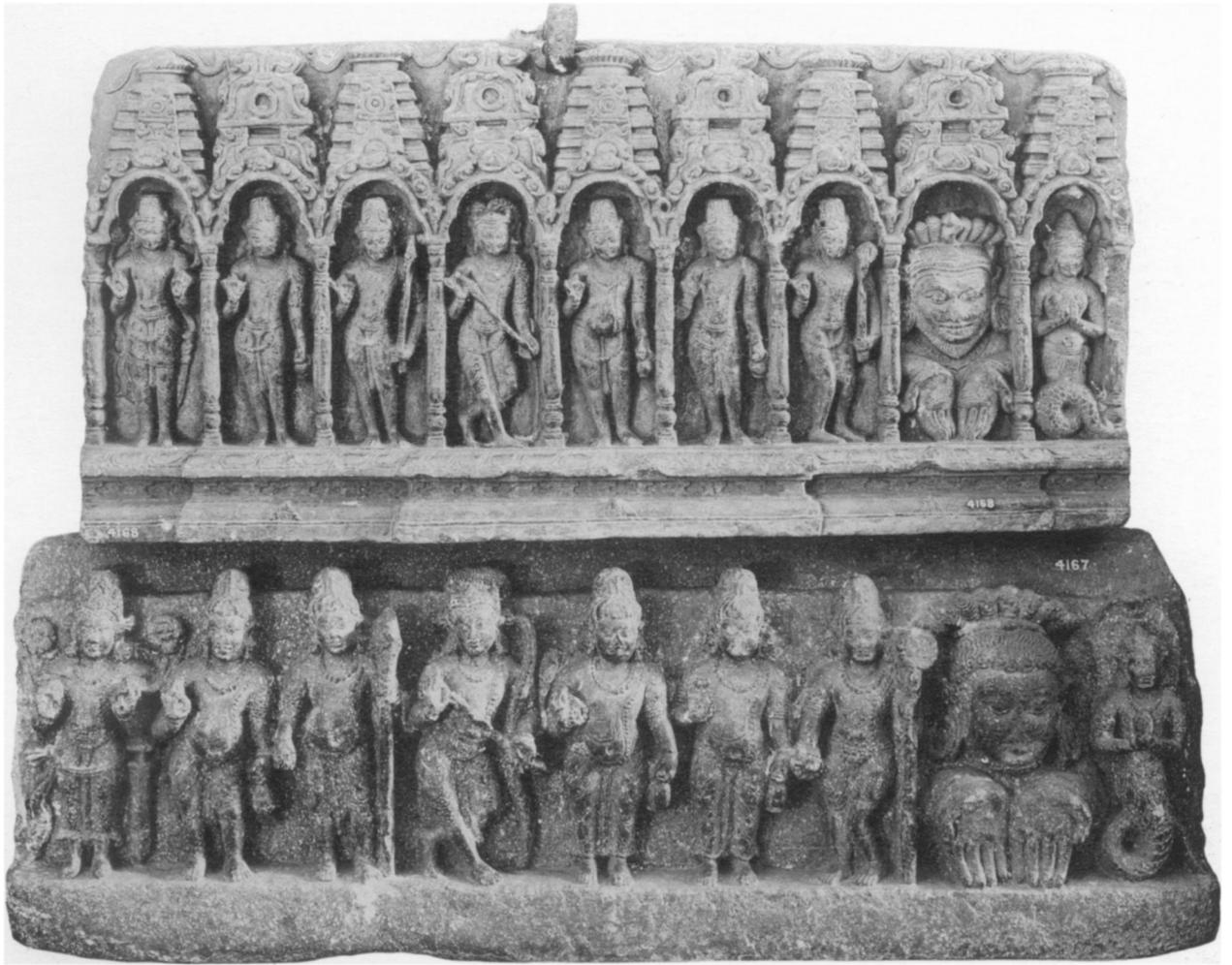


FIG. 8



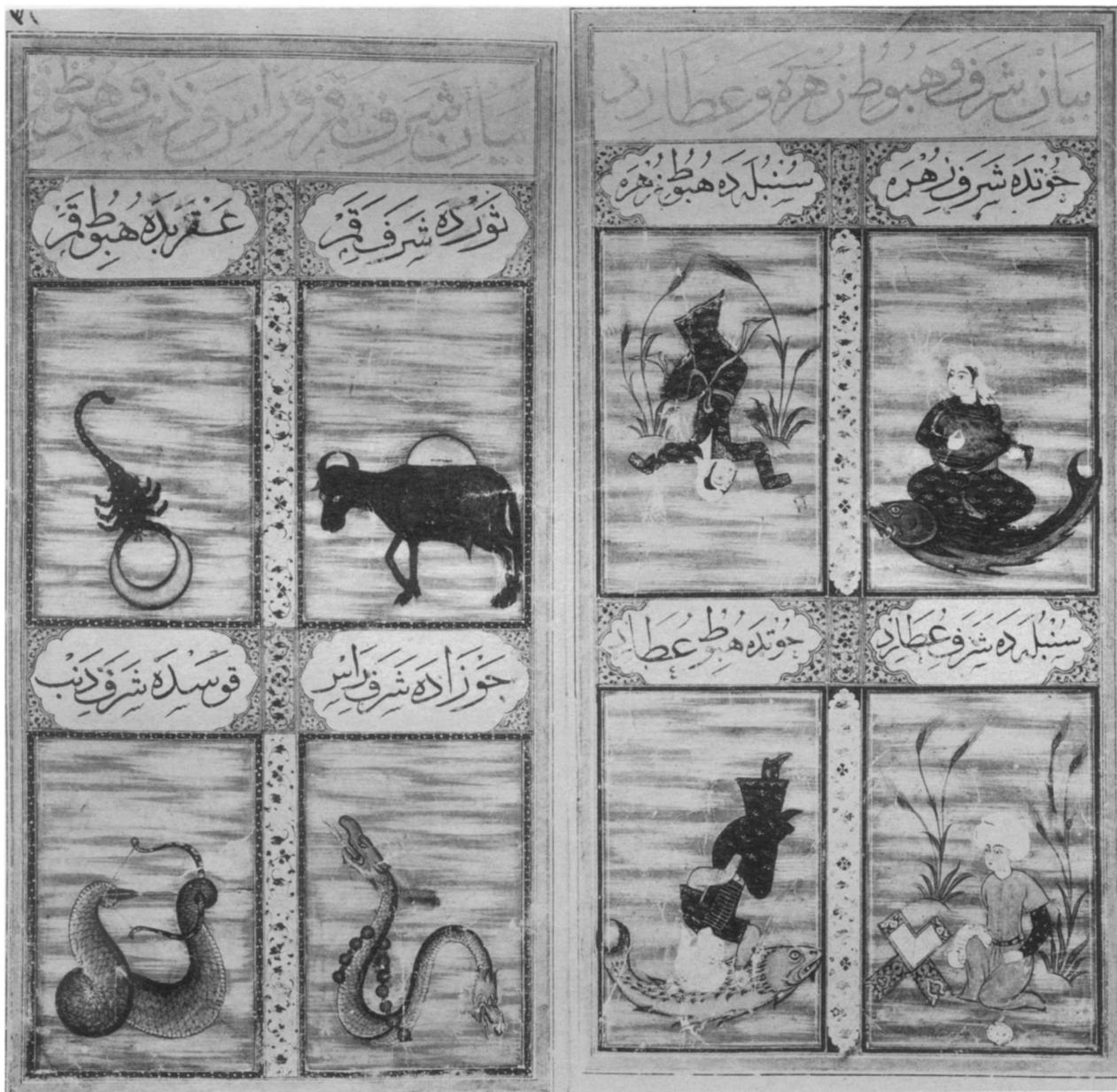
FIG. 9

INDIAN REPRESENTATIONS OF THE NINE PLANETS (NAVAGRAHA)  
 NINTH TO ELEVENTH CENTURIES A.D.  
 CALCUTTA, MUSEUM (Nos. 4168 and 4167) AND MATHURĀ MUSEUM OF ARCHAEOLOGY



COURTESY OF THE PIERPONT MORGAN LIBRARY

FIG. 11—THE FIRST FOUR PLANETS' EXALTATIONS AND DEJECTIONS. FROM A  
 TURKISH MANUSCRIPT, 990 H. (1582 A.D.)  
 NEW YORK, PIERPONT MORGAN LIBRARY



COURTESY OF THE PIERPONT MORGAN LIBRARY

FIG. 12—THE LAST FOUR PLANETS' EXALTATIONS AND DEJECTIONS. FROM A  
 TURKISH MANUSCRIPT, 990 H. (1582 A.D.)  
 NEW YORK, PIERPONT MORGAN LIBRARY

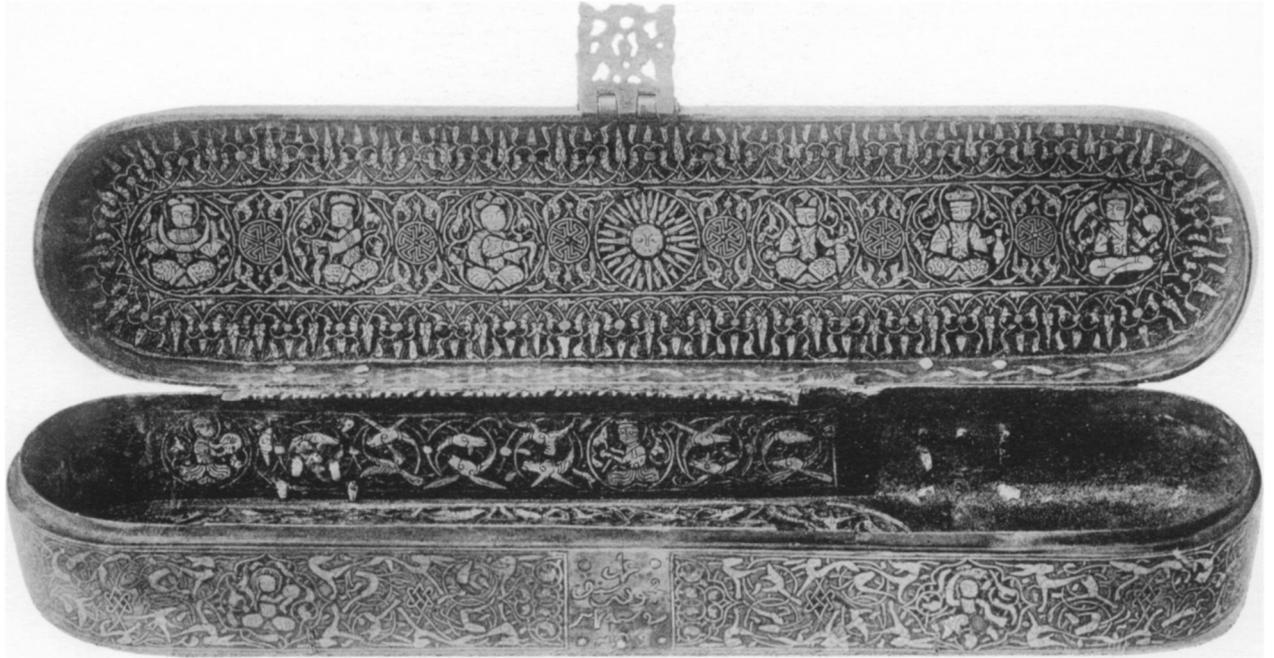


FIG. 13



FIG. 14

FROM *A Survey of Persian Art*

ḲALAM BOX MADE BY MAḤMŪD IBN SUNḲUR, PERSIA, 608 H. (1211-12 A.D.)  
LONDON, BRITISH MUSEUM



FIG. 16—SAGITTARIUS WITH THE DRAGON, PERSIA  
FIFTEENTH CENTURY A.D.  
BOSTON, MUSEUM OF FINE ARTS

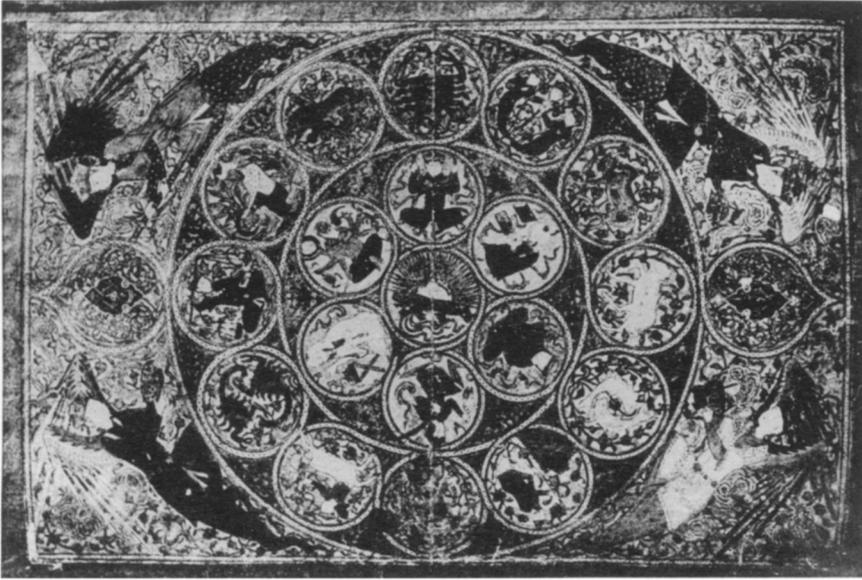


FIG. 17



FIG. 18 FROM *A Survey of Persian Art*

FIGS. 17-18—CENTAURUS AND LUPUS (SABU' REPRESENTED AS LION), AND THE SYMBOLS  
OF THE FOUR EVANGELISTS, BAGHDAD SCHOOL (?), FOURTEENTH CENTURY A.D.  
LENINGRAD, ACADEMY OF SCIENCES



FROM KÜHNEL

FIG. 19—THE WORLD MIRROR, PERSIA, HERAT SCHOOL, FIFTEENTH CENTURY A.D. FORMERLY IN ISTANBUL, LIBRARY OF THE SULTAN



FROM GUNTHER

FIG. 20—RIM OF AN ASTROLABE OXFORD, OLD ASHMOLEAN MUSEUM



COURTESY OF THE PIERPONT MORGAN LIBRARY

FIG. 21—THE CONSTELLATION OF SAGITTARIUS. FROM A TURKISH MANUSCRIPT, 990 H. (1582 A.D.) NEW YORK, PIERPONT MORGAN LIBRARY

change their position relative to the zodiac: if, for instance, in a certain year the ascending node be in Aries, and the descending in Libra, eclipses will take place in these two signs; but after four or five years the nodes will be in Capricorn and Cancer, respectively, and consequently eclipses will then occur there.

#### THE ECLIPSE MONSTER: DRAGON, DJAWZHR, AND RĀHU-KETU

It need hardly be said that the knowledge of great circles, nodes, etc., marks a highly developed stage of abstract thinking and thus belongs to a very late period in the history of astronomy. To the primitive mind eclipses are supernatural phenomena caused by a horrifying monster which swallows the sun or the moon whenever its magic power prevails over that of the celestial gods. As to the nature of this great antagonist of light and life, there rules an astounding agreement among the peoples, as most of them suppose it to be a giant snake, or dragon, menacing the great luminaries, and devouring them at certain irregular intervals. The Apocalyptic dragon, symbol of Satan, is evidently closely related to this monster, as is the Tinnīn of the Arabs, referred to by Abū 'Abd Allāh, the Djawzahr of the Persians, and in Hindu mythology, the ill-fated demon Rāhu, whose famous story I venture to recall to the reader's mind: it was he who, previous to the churning of the milk ocean, commanded the demons, then allied with the celestial gods in the struggle against the world serpent, Ananta. After the victorious event, he succeeded in an unguarded moment in sipping the amrita drink; but the sun and the moon, who had watched his crime, denounced him to the gods, and instantly Vishnu, approaching in haste, severed his head from his body. Nevertheless, the amrita had already produced its effect and rendered him immortal like the celestials. Consequently, Rāhu's head as well as his body, Ketu, intransigent enemies of the two great luminaries, ever since try to devour the sun and the moon whenever occasion serves, and thus cause solar and lunar eclipses. In addition to this, Ketu also causes comets, like eclipses ill-omened phenomena, to appear among the stars, or perhaps we may rather say that Ketu's tail now and then takes the shape of a comet and thus becomes visible to the human eye.

We might suppose that clear insight into the physical causes of eclipses would have thrown the mythological tradition into the background. But this has not been the case. What we observe is that the mythological and the astronomical elements contract an intimate fusion. The nodes of the moon's orbit are simply identified with the eclipse monster itself: with the Hindus, Rāhu becomes the ascending, Ketu the descending node; with the Persians and Arabs, the head and the tail of the Djawzahr play the same role.

#### THE NODES AS PLANETS

The last step in this evolution is logical enough. If we remember that the two nodes constantly change their position with regard to the fixed stars, making a complete revolution in the course of eighteen and a half years, the parallel with the planets certainly suggests itself. As a matter of fact, in Hindu as well as in Islamic astrology these nodes often have decidedly planetary characters and properties. In respect to their period of revolution they rank be-

tween Jupiter (about twelve years) and Saturn (about thirty years), although, it must be recalled, the direction of their motion is opposite to that of all the other "real" planets.

It is hard to tell when and where this promotion to planetary rank took place. I am inclined to believe that, although a certain like tendency seems to have existed in later Hellenistic astrology,<sup>24</sup> the idea was fully developed only in India. There, in the sixth century A.D., Varāhamihira, in his *Bṛhatsaṃhitā* (5.1 ff.), discusses the Rāhu-Ketu myth in connection with the nodes of the moon and the scientific theory of the eclipses; and the nine planets (*navagraha*), including Rāhu and Ketu in parity with the orthodox seven, appear on very early Indian sculptures, such as are represented in Figure 6,<sup>25</sup> considerably earlier than any trace of such "additional" planets can be found in Islamic iconographies. More accurately speaking, the reliefs of *Djazīrat ibn 'Umar* are the earliest example known to me in which an Islamic artist obviously grants the same rights to one or both of these pseudoplanets as to the seven real ones, while in India this had been the rule centuries before (*Figs. 7-9*<sup>26</sup>). In the early Hindu astrological literature, it is true, the planetary character of the moon's nodes was not yet decidedly marked, although the information obtained from the passage in Varāhamihira's work seem to bear witness to the existence of such an interpretation. At any rate, the lack of clearness that can be discerned in these early literary references does not at all disprove my assumption that even in the sixth or seventh century the Hindus commonly interpreted the nodes as planets because, as I have said, astrologers obviously felt a bit uneasy about these pseudoplanets and disliked speaking of them outright, whereas artists, not being bound by any such psychological inhibitions, freely and easily represented the nine planets alto-

<sup>24</sup> The earliest astrological reference to the moon's nodes is found about fifty years after Ptolemy in Tertullian's (d. *circa* 230 A.D.) *In Marcion.*, Chap. I, 18: "Fortasse et Anabibazon obstabat aut aliqua malefica stella, Saturnus quadratus aut Mars trigonus" (cf. A. Bouché-Leclercq, *L'astrologie grecque* [Paris, 1899], p. 122, note 1). In this passage, the expression *aut aliqua malefica stella*, shows clearly that the Anabibazon is not a planet (*stella*) like Saturn or Mars.

<sup>25</sup> *Ἀναβιβάζων* and *καταβιβάζων* (scil. *συνδεσμός*) are the ordinary astronomical terms for the ascending and descending nodes. The "dragon" is assuredly not of Greek, but of Oriental origin. To cite Bouché-Leclercq literally (*op. cit.*, p. 122: "Les Grecs du Bas-Empire et surtout les Arabes firent grand état des nœuds écliptiques, appelés la Tête  $\Omega$  et la Queue  $\Psi$  du Dragon. Cette notoriété du Dragon chez les Grecs d'Asie et les Arabes est à elle seule un indice. On sait que le pôle par excellence était pour les Chaldéens le pôle de l'écliptique, lequel est dans la constellation du Dragon. Le Dragon

devait être Anou lui-même."

According to Bouché-Leclercq (*op. cit.*, pp. 508-9) the *ἄναβιβάζων* figures in the horoscope of Proclus (Marin., *Vita Procli*, 35), who was born in 410, but this isolated reference does not necessarily imply that the ascending node was generally recognized as a planet like the other seven. Indeed, the conception of the nine planets enjoying equal rights seems to be a generalization which originated in India.

<sup>25</sup> Original in the Lucknow Museum. See B. C. Bhat-tacharya, *Indian Images* (Calcutta, 1921), pp. 31-33 and Pl. XXII.

<sup>26</sup> Figure 7, original in the Worcester Art Museum, Worcester, Mass. The figure of Ketu (at the extreme right) is destroyed. See A. K. Coomaraswamy, "The Nine Planets," *Bull. Worcester Art Mus.*, XIV (1923), No. 1, 6-10.

Figure 8, original in the Calcutta Museum.

Figure 9, original in the Mathurā Museum of Archaeology.

gether. But in the later medieval Indian literature all nine of them certainly enjoy equal rights, and ever since, down to our time, Hindu astrologers have attributed the same importance to Rāhu and Ketu as to the seven other planets.

In Islamic literature, also, the nodes are frequently listed with the planets, but as a rule play a minor part as compared with the other planets. Some authors, such as al-Bīrūnī (d. 440 H. [1048 A.D.]) expressly state that "they are no real planets"; there is, in particular, one passage in his *India* (Chapter LXXX) which proves that he considered the planetary interpretation of the nodes to be purely Indian, and that this concept was not at all popular in the Islamic world of his time:

Regarding the number seven as that of the planets, there is no difference between us and them. They call them graha. Some of them are throughout lucky, viz., Jupiter, Venus, and the moon, which are called *saumyagraha*. Other three are throughout unlucky, viz., Saturn, Mars, and the sun, which are called *krûragraha*. Among the latter they also count the dragon's head, though in reality it is not a star.<sup>27</sup>

In his work on astrology<sup>28</sup> the same author nevertheless treats the nodes as planets, as is evident from the fact that, in dealing with the planets' exaltations, he mentions that the exaltation (ṣharaf) of the dragon's head is in Gemini 3°, and that of the tail, in Sagittarius 3°. This means that one of the two pairs of zodiacal signs which, in ancient astrology, remained unoccupied by planetary exaltations (p. 119), was attributed, in the enlarged medieval system, to the nodes of the moon.<sup>29</sup> This interesting statement is not isolated in the medieval astrological literature. Abū Ma'shar (d. 272 H. [886 A.D.]) refers to the same points of exaltations for the nodes of the moon, and so do contemporary and later Hindu astrologers. Moreover, in Abū Ma'shar's work on the *Great Conjunctions*<sup>30</sup> as well as in the *Flores Albumasaris*,<sup>31</sup> the nodes are listed together with the planets, and their influence when standing in the different signs of the zodiac is dealt with extensively. The Augsburg and the Venice editions of the *Great Conjunctions* both introduce the chapter treating of the planetary influence of the nodes by a very impressive figure which shows the "dragon" with its head and its tail twisted around the two nodes. On account of the peculiar importance of this representation the figure contained in the Venice edition is reproduced in Figure 10.

It is very likely that a corresponding figure already was contained in the Arabic manu-

<sup>27</sup> Quoted from E. Sachau's translation, *Alberuni's India* (London, 1910), II, 211-12.

<sup>28</sup> Abū 'l-Rayḥān Muḥammad ibn Aḥmad al-Bīrūnī, *The Book of Instruction in the Elements of the Art of Astrology*, ed. and trans. by R. Ramsey Wright (London, 1934), written in Ghazna, 1029 A.D. Reproduced from British Museum Ms. Or. 8349.

<sup>29</sup> The question, why the pair Gemini-Sagittarius, not

Leo-Aquarius, was selected for the exaltations of the nodes, will be discussed below (see pp. 147-49).

<sup>30</sup> *De magnis conjunctionibus*, etc., Latin version by Joannes Hispalensis (Augsburg, 1489; reprinted, Venice, 1515).

<sup>31</sup> *Tractatus Albumasaris florum astrologie*, probably a compilation from the *Great Conjunctions* and other works by the same author, printed in Augsburg, 1488.

script from which Johannes Hispalensis translated, but we may assume that the original looked somewhat different, as the above dragon is a typical representative of the occidental species.

In investigating a greater number of Islamic astrological texts, one has the impression that some authors deliberately ignored the planetary interpretation of the nodes, and that others obviously considered it quite a natural thing. I have not been able to decide whether or not this is due to the influence of different astrological schools. The discrepancy between the two works by al-Bīrūnī, which were composed almost simultaneously, cannot, of course, be explained by such an assumption; possibly the passage referring to the exaltations of the dragon's head and tail is a later addition made by a copyist.

The fact that the planetary character of the nodes was so perfectly developed that astrol-



FIG. 10—THE “DRAGON” TWISTED AROUND THE TWO NODES, FROM ABŪ MA’SHAR  
*De Magnis Conjunctionibus*, VENICE, 1515

ogers even attributed to them exaltations and dejections, just as to the other planets, is of essential importance, as it is the last clue to the understanding of the eighth *Djazīra* relief. It is obvious that this relief represents the figure of the planetary eclipse dragon with its sign of exaltation, Sagittarius, and it may be taken for granted that in the partly destroyed inscription the word al-*Djawzahr* once was followed by the words *sharafuhu al-Ḳaws* or *sharafuhu al-Rāmī*<sup>32</sup> (الجوزهر شرفه القوس) or (الرامي), “its exaltation is Sagittarius.” The knot in which the truncated body of the dragon is tied has also a specific significance—it refers to the “node” of the moon’s orbit, which is closely related to the dragon. That this knot is an integral part of the eclipse monster is evident also from the fact that all the *navagraha* reliefs quoted represent the figure of *Ketu* (i.e., the monster’s tail) with a “mermaid’s tail” ending in a loop or knot. The only exception is as seen on Figure 9, where *Ketu*’s tail is rendered straight; but here it is evidently the twined serpent under the planet figures that indicates the “node.”

<sup>32</sup> The Arabic equivalent of Sagittarius is al-Ḳaws or al-Rāmī, see p. 115.

## THE DRAGON AND THE NODE IN OTHER ISLAMIC ICONOGRAPHIES

## a) "Isolated" representations

Four pages out of an illuminated sixteenth-century Turkish astrological manuscript in the collection of the Pierpont Morgan Library<sup>33</sup> are reproduced in Figures 11 and 12.<sup>34</sup> There the planets' exaltations and dejections are represented in a very impressive way: Saturn, as in most similar instances, as an aged Indian, sitting under his sign of exaltation, Libra, and standing upside down on the back of his sign of dejection, Aries; correspondingly, Jupiter occurs with Cancer and Capricorn, etc. The arrangement and sequence are exactly the same as in the *Djazīra* reliefs, with the sole exception of the sun, whose exaltation is indicated correctly here (viz., Aries instead of Leo, cf. p. 119).

Thus, seven such pairs of pictures represent the exaltations and dejections of the seven great planets. But, to make the congruence with the *Djazīra* reliefs a complete one, there follows an eighth pair which represents the lunar dragon: the first picture shows a serpentine body with a dragon head on either end, intertwined with a figure consisting of a number of stars (Gemini); similarly, the second picture shows the same body forming a knot and ending in a tail on either side, between which the monster holds a drawn bow. The Turkish text accompanying these two pictures reads:

جوزاده شرف راس

The exaltation of the head is in Gemini,

and

قوسده شرف ذنب

The exaltation of the tail is in Sagittarius.

The case is clear enough in itself and needs no further explanation, but it is proper to add a few remarks.

In comparing the *Djazīra* reliefs with our manuscript, it can be seen that the former represent only the *Djawzahr* exalted in Sagittarius, whereas the latter distinguishes between the head and the tail of the dragon, attributing, as is required by the rules of medieval astrology, Gemini to the head and Sagittarius to the tail. It is not easy to answer a question as to why the artist of *Djazīrat* ibn 'Umar, having the choice between these two possibilities, decided to represent the exaltation of the dragon's tail, and to omit that of the head. Assuredly this is not due to literary influence because, in the Islamic astrological writings since the time Abū Ma'shar, a greater importance has been conceded to the head than to the tail. But the fact that, in the inscription, the Persian term "*Djawzahr*," which commonly refers to the

<sup>33</sup> *Kitāb Maṭālī' al-Sa'ūda wa-Manāfi' al-Siyāda*, Pierpont Morgan Library Ms. No. 788, written 990 H. (1582 A.D.). This manuscript seems to be almost identical with the Paris Bibl. Nat. Ms. supp. turc. 242, dating from the same year, and probably related to the famous Bodleian Ms. Or. 133. Unfortunately, I have not seen the latter

manuscript for several years, and I find nothing in my notes that bears upon those details which would be of interest here. This omission is owing to the fact that, by the time of my last visit to the Bodleian I had not yet recognized the importance of just those minute details.

<sup>34</sup> Courtesy of the Pierpont Morgan Library.

dragon as a whole, not to either its head or tail,<sup>35</sup> is used might even indicate that the artist-astrologer did not wish to make any such distinction. It is true that the picture of the *Djawzahr* shows only the forepart of the dragon and thus would seem to represent the head rather than the tail or the entire dragon; but it must be recalled that, on the one hand, the Indian Ketu (tail), just as well as the Rāhu (head), is usually represented with a (human) head, and, on the other, that it would have been a difficult task to render in an unambiguous way the dragon's tail alone by the side of the bow-bending centaur. The solution arrived at by the Turkish illuminator for the isolated pictures of the head and the tail would hardly have been applicable to this case.

b) "*Combined*" representations

To this point we have been considering only the iconographies in which the dragon—either the whole or one of its two parts—figures as an independent, isolated, element. There exist, however, a very great number of Islamic iconographies, to be found most frequently on Persian and Egyptian engraved metal work, but also in illuminated manuscripts, where the dragon forms an integral part of some of the zodiacal signs. I mean first and foremost the numerous representations of the zodiac, in which the single signs appear in combination with their astrological lords. Indeed, the main principle according to which the signs and planets are arranged, is always that of the domicilia; but, as will be seen, the artists almost never fail to add the dragon to the seven great planets, although it has no theoretical right to appear in this astrological system, but in that of the planetary exaltations only.

As a typical example of this class of iconographies, I have chosen an engraved Persian *ḳalam* box (*Figs. 13* and *14*) made and inscribed by Maḥmūd ibn Sunḳur in the year 608 H. (1211–12 A.D.).<sup>36</sup> The inner side of the lid shows the seven planets with their emblems, in the ordinary sequence (*viz.*, from right to left)—Saturn, Jupiter, Mars, the sun, Venus, Mercury, the moon. The outer side is decorated with the twelve signs of the zodiac, arranged in three circles containing four signs each, starting with Aries at the extreme left, and running counter-clockwise, as illustrated by Figure 15.

As is seen, each of the twelve signs is rendered in combination with its planet lord, symbolized either by attitude or emblem: behind the Ram stands Mars, holding a severed head in his hand; behind the Bull, Venus with the lute; of the Twins, only the one is shown (as frequently in combined as well as in isolated representations [cf. *Fig. 20*, third medal in the right-hand column]), while the other (left) figure represents Mercury holding a scroll;<sup>37</sup> over the Crab, the moon is shown; over the Lion, the sun; the Virgin, holding a corn ear,<sup>38</sup> is confronted with Mercury, with pen and scroll; under the Balance appears Venus with a harp; Mars holds in each of his hands a scorpion; the bow-bending centaur (Sagittarius) is fused

<sup>35</sup> A remarkable exception will be discussed on pp. 151–54.

<sup>36</sup> In the collection of the British Museum.

<sup>37</sup> Mercury—'Uṭārid, commonly called "the scribe" (al-*Kātib*).

<sup>38</sup> Virgo—al-'*Adhrā*' = Spica—al-Sunbula.

into one figure with Jupiter; behind the ibex (Capricorn) stands Saturn, holding in his left hand some indefinable animal—one of his manifold attributes; the figure of the water carrier (Aquarius) is again fused with the lord of the sign, Saturn, designed as a gray-headed Indian with a pickax, which is the planet-god's chief emblem; and, finally, over the Fish—there is only one (cf. the singular "al-Ḥūt" often used instead of the dual "al-Samakātāni")—is seen Jupiter holding a vessel.<sup>39</sup>

With this description, however, the symbolical content of the example is not yet exhausted. As a matter of fact, it is not as much the seven old planets that interest us here, as the eighth, the *Djwzahr*-dragon, or rather the eighth and ninth (viz., the dragon's head and its tail). From the preceding, it is clear where one may expect to find their traces.

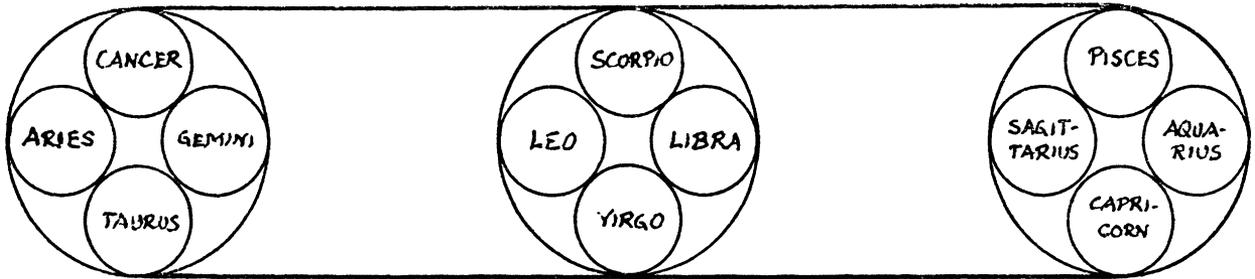


FIG. 15—ARRANGEMENT OF THE SIGNS OF THE ZODIAC ON THE *ḲALAM* BOX, 608 H. (1211-12 A.D.), LONDON, BRITISH MUSEUM

In the first place it will be necessary to look at the picture of Sagittarius—indeed, the parallel with the eighth relief of *Djazīrat* ibn 'Umar is as perfect as it can be. Behind the centaur is recognized the dragon, whose serpentine body is tied into a knot, the sole variation of the *Djazīra* motif being that the dragon is no longer separated from the centaur's body but, as in all later examples known to me, simply forms his tail. In other words this particular centaur monster consists of three entirely different elements which have been fused together, viz., the original figure of the Sagittarius-centaur, Jupiter as the lord of the domicile, and the dragon's tail having its exaltation in this zodiacal sign.

In the second place, if we recall to our memory that Gemini is the sign in which the dragon's head is exalted, the curious object between the two human figures in the Gemini medal also takes on a very specific significance. It looks like a mask or monstrous head mounted on a staff. After all, there can hardly be a doubt that it symbolizes the head of the dragon. Somewhat surprising, it is true, is the fact that the face has human features and does not resemble the traditional Islamic dragon. But there is a strong similarity with another variety of our monster, viz., the colossal figure of the Indian *Rāhu* (see the *navagraha* reliefs represented on *Figs. 6-9*). Considering the close connection between the Indian and the

<sup>39</sup> All the named objects (severed head, lute, etc.) appear also, more easily distinguishable to the eye, as

attributes of the isolated planetary figures on the inner side of the lid.

Islamic conceptions of the eclipse monster, there are good reasons for assuming that this similarity was caused by direct or indirect influence of the Indian archetype.

A final minute examination of the engravings of the *qalam* box (which might be called a brief summary of astrology) reveals that the dragon appears in two more places: (1) the moon over the crab's claws is menaced by a pair of dragons; and (2) the lion surmounted by the radiant sun is rendered with a long tail which makes the characteristic loop under the animal's body and again ends in a dragon head. I admit that, in the latter instance, the details are not so clearly recognizable and, therefore, hasten to refer the reader to another similar example (*Fig. 1*),<sup>40</sup> which excludes any doubt. There, in the central picture of Leo, the dragon at the end of the lion's tail represents a special variety which is also sometimes encountered elsewhere (the winged dragon with forelegs [cf. *Figs. 26* and *27*]). Again, the monster is shown in a menacing attitude toward the other great luminary, the sun. As on the *qalam* box, the two preceding medals (first and second from the right, showing Gemini and Cancer respectively) also contain elements bearing upon the dragon—the staff with Rāhu's head between the two human figures is the same as in Figure 14. As to Cancer, the dragon itself is lacking, but it is replaced by a loop, or rather knot, under the disk of the moon, which has a very typical shape reminiscent of a "heart": .<sup>41</sup> A great many examples showing this heart-shaped knot could be quoted here—as a typical representative, the picture of Sagittarius from a Persian fifteenth-century manuscript of Ḳazwīnī's *'Adjā'ib al-Makhlūqāt* is reproduced in Figure 16.<sup>42</sup>

This combination of the moon and the sun, or their respective animals, the crab and the lion, with the dragon, evidently originates not in a doctrinal astrological conception, but in a purely mythological, or rather metaphysical, one. After a long wandering we thus suddenly find ourselves back at the point from which we started—the antagonism between the celestial luminaries and the terrestrial light-devouring dragon.

Figures 19–21<sup>43</sup> are added only for the purpose of demonstrating to the reader how consistently the same elements recur in this class of iconographies, as a *tema con mille variazioni*.

<sup>40</sup> Inlaid twelve-sided bronze vessel, Persian, late twelfth century (Museum of the Gulistan Palace), showing the signs of the zodiac and their astrological relations—closely related to the box reproduced in Figures 13 and 14. The five signs from Gemini to Libra (running from right to left) are visible on the photograph; the lion with the sun and the dragon stands in the center.

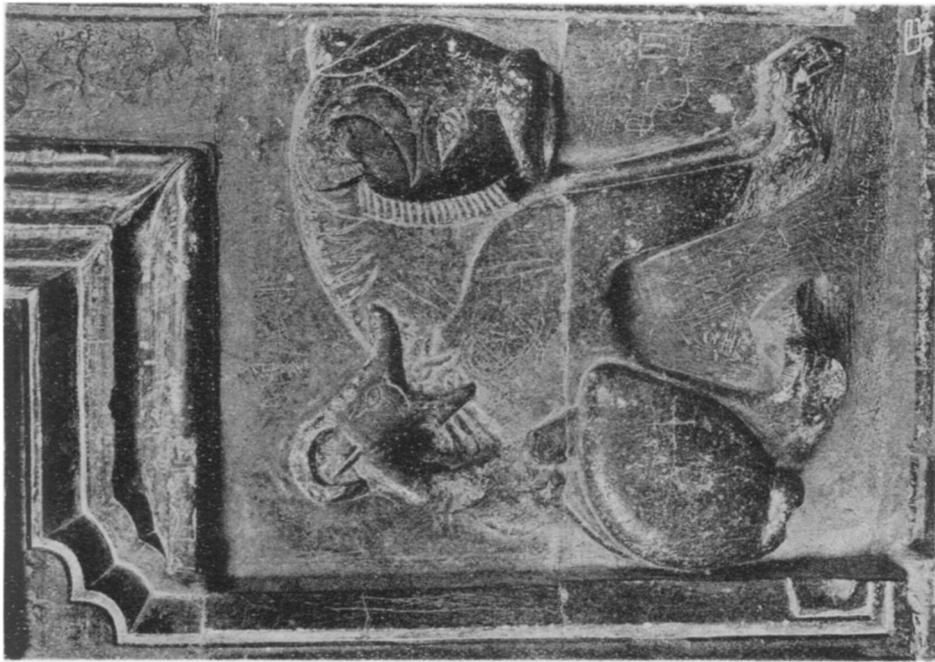
<sup>41</sup> This heart-shaped knot ending in the dragon head is encountered, above all, in illuminated manuscripts, particularly in most of the copies of Ḳazwīnī's *'Adjā'ib al-Makhlūqāt* ("Marvels of Creation") known to me, whereas none of the manuscripts of 'Abd al-Rahmān al-Ṣūfī's *Catalogue of the Fixed Stars* shows any trace of the dragon or the knot. Of course the astrological dragon has no right to appear in a work of purely astronomical character.

<sup>42</sup> In the collection of the Museum of Fine Arts in Boston. The two illustrations (*Figs. 17* and *18*), reproduced from another Ḳazwīnī ms. in the Library of the Academy of Sciences, Leningrad, show that the original significance of the dragon and the knot finally has fallen into oblivion in such a way that the artist adds it to the tails of all kinds of animals, or even to their wings. It must be well observed that the top figure of Figure 17 is not Sagittarius, but the southern constellation of the Centaur. The combination with the dragon is preposterous, and equally meaningless is the knot in the tail of the "Bull of St. Lucas" in Figure 18.

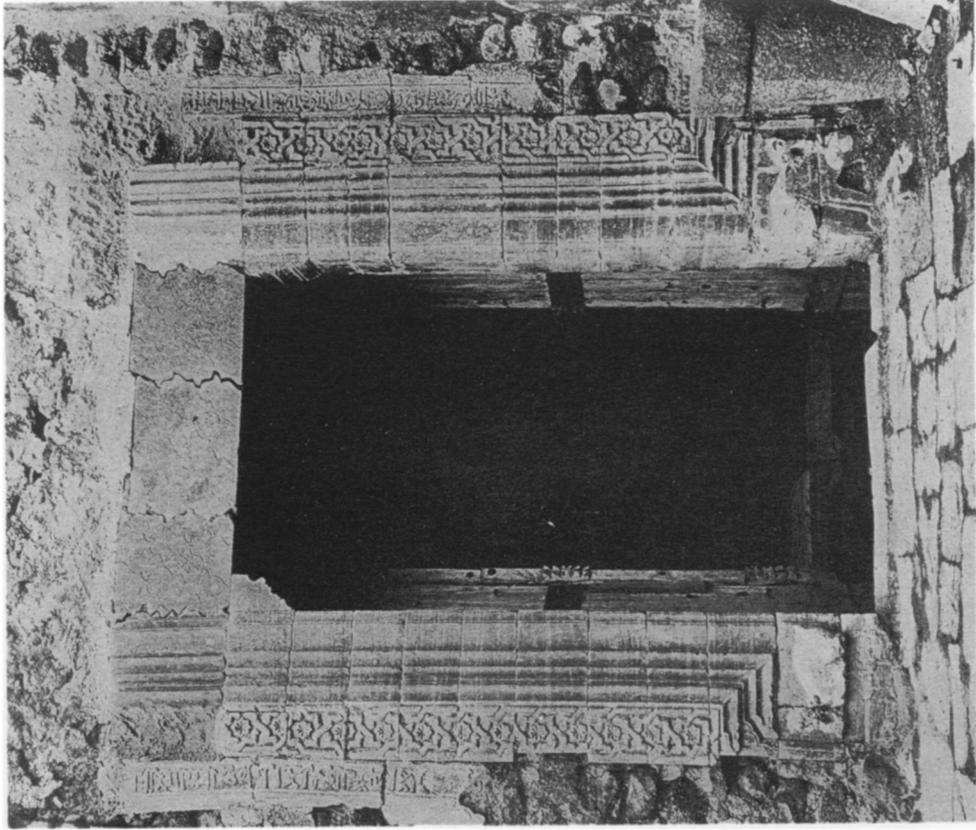
<sup>43</sup> Figure 19, "The World-Mirror," Herat, fifteenth-century Persian miniature, formerly in the Library of the Sultan, Istanbul; reproduced from E. Kühnel, *Miniaturmalerei im islamischen Orient* (Berlin, 1923), Pl. 41.



FROM BLOCHET  
 FIG. 22—THE ANGEL SHAMHŪRAH FIGHTING THE  
 DRAGON, 670-71 H. (1272 A.D.)  
 PARIS, BIBLIOTHÈQUE NATIONALE

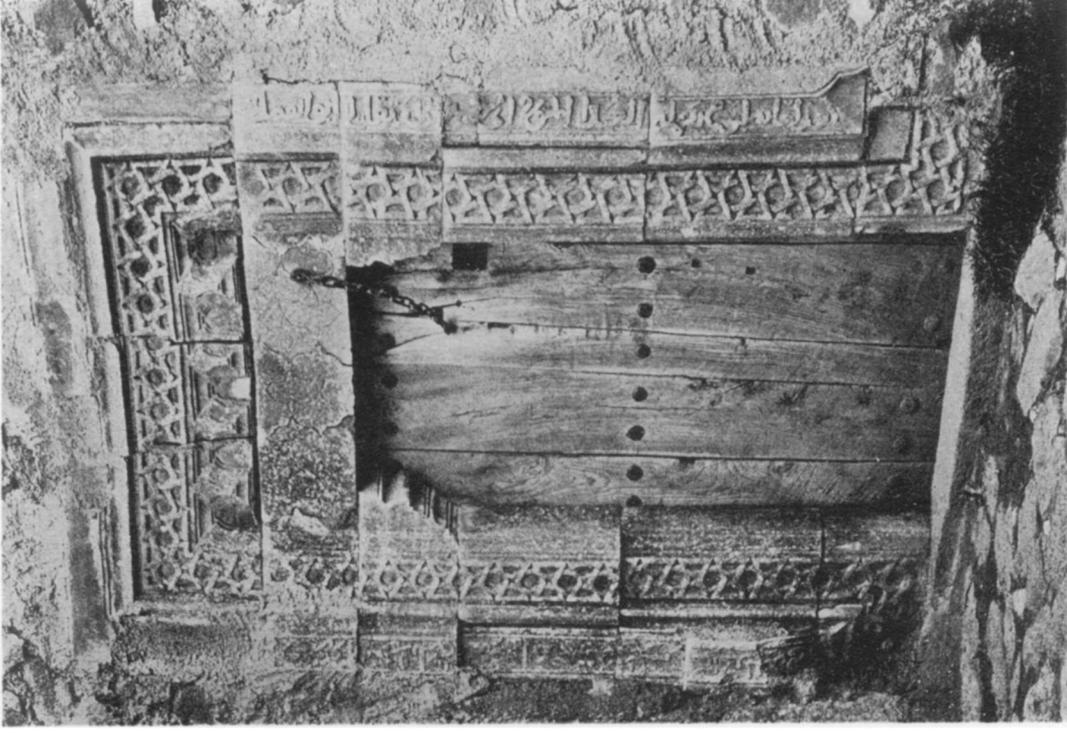


FROM PREUSSER  
 FIG. 23—LION RELIEF AT THE MEN'S ENTRANCE  
 DJAZIRAT IBN 'UMAR, JACOBITE CHURCH



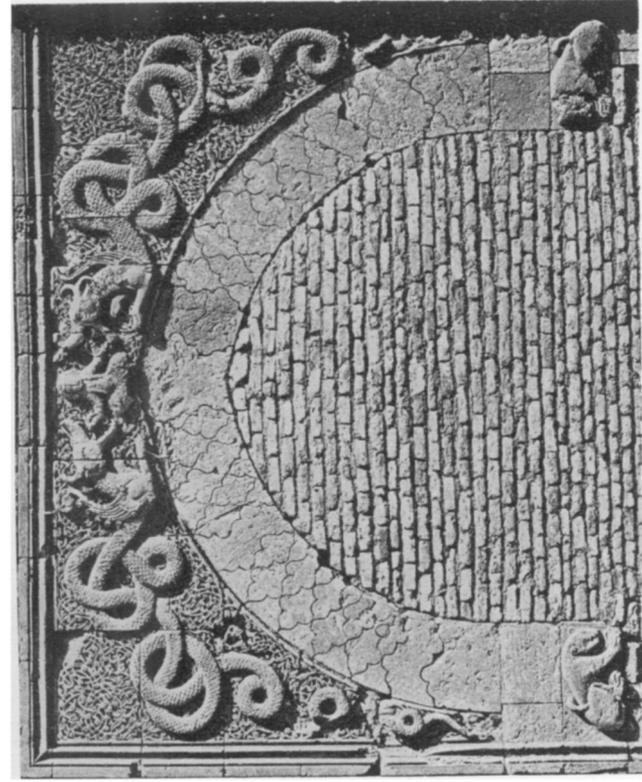
FROM PREUSSER

FIG. 24—MEN'S ENTRANCE, DJAZIRAT IBN 'UMAR  
CHALDAEAN CHURCH



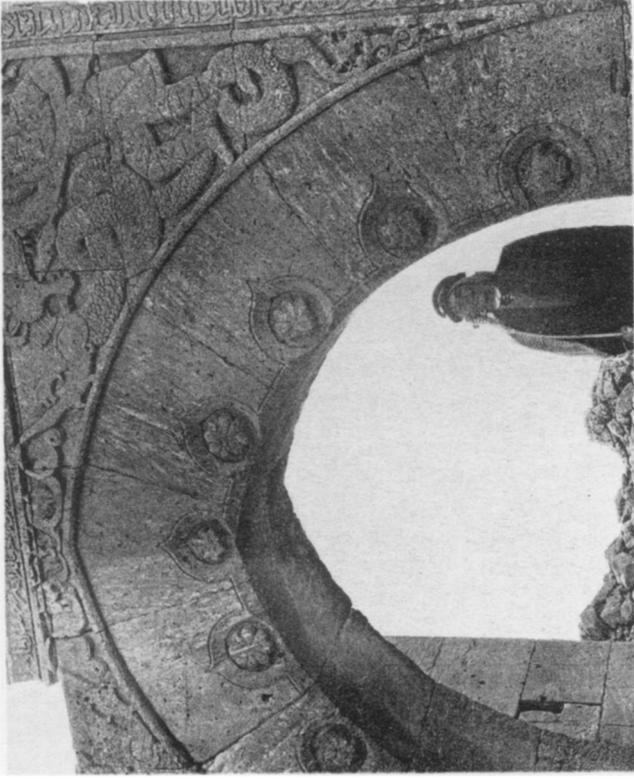
FROM PREUSSER

FIG. 25—WOMEN'S ENTRANCE, DJAZIRAT IBN 'UMAR  
CHALDAEAN CHURCH



FROM PREUSSER

FIG. 26—SECTION OF THE OLD TALISMAN GATE, BAGHDAD



FROM PREUSSER

FIG. 28—GATEWAY OF AL-KHĀN, NEAR THE SINDJĀR MOUNTAINS



FROM PREUSSER

FIG. 27—MAIN ENTRANCE, KHIDR ELIĀS, CHURCH



FROM PREUSSER

FIG. 29—GATEWAY, CITADEL OF ALEPPO



FIG. 30

TWO VIEWS OF THE GUNDESTRUP KETTLE, COPENHAGEN, NATIONAL MUSEUM

FROM W. A. VON JENNY

FIG. 31



FIG. 32



FROM W. A. VON JENNY

FIG. 33

SILVER PLATES, GUNDESTRUP KETTLE



FROM *Délégation en Perse*

FIG. 34—VASE, SECOND PERIOD OF SUSA, PARIS  
MUSEE DU LOUVRE

Sagittarius with the dragon at the end of his tail is contained in all three of them. The knot is missing only in the Turkish miniature—maybe the artist was not aware of its essential importance. The fifteenth-century Persian “World Mirror” is interesting from several viewpoints. The artist obviously intended to create an “isolated” representation of the planets and the signs of the zodiac, but the strength of the astrological tradition forced him to make some remarkable exceptions. Thus, the sun in the center of the composition is mounted on the back of the lion, forming, as we have seen, an almost inseparable unity. Furthermore, the picture of the Virgin is replaced by Mercury, the lord of the sign, mowing the corn ear (al-Sunbula, “spica”) with a sickle; and, again, the person who holds the balance is undoubtedly Venus. In this picture the representation of the head and the tail of the dragon in Gemini and Sagittarius, respectively, is even more impressive than elsewhere, on account of the circular arrangement of the twelve signs, by which the two symbols correctly appear on diametrically opposite places of the zodiac.

Figure 22<sup>44</sup> shows a Persian version of the St. George motif—the angel Shambūrash fighting the dragon. Although it has absolutely no astrological significance,<sup>45</sup> I ventured to add it to the other iconographies because it demonstrates the enormous influence which these astrological ideas exercised upon medieval artists. The reader will easily recognize the complete identity of this dragon with its astrological relatives.

I turn once more to the place whence the investigation started, Djazirat ibn ‘Umar, as it certainly would be a serious omission not to take into account a number of other iconographies found in the region of Djazira, and south to Baghdad, and west to Aleppo, which bear directly upon our subject. In fact, there is hardly any other part of the Islamic world which is so rich in iconographical references to the dragon myth with all of its manifold variations. It will also be evident that dragon motives were not confined to Islamic monuments, but were used equally by Christian artists. This, however, cannot be surprising if it is remembered that during the Middle Ages astrology was simply the great international means of understanding among the adherents of all possible religions, Muhammadans, Christians, Jews, and “pagans.”

In Figures 23–24<sup>46</sup> are seen the well-known lions whose tails end in dragon heads (cf.

Figure 20, inlaid rim (showing the twelve signs of the zodiac separated by figures of warriors) of an astrolabe, made by Muhammad ibn Abī Bakr ibn Muhammad al-Rāshidī al-Ibarī (the “Needlemaker”) of Isfahan, 618 H. (1221–22 A.D.); reproduced from R. T. Gunther, *The Astrolabes of the World* (Oxford, 1932), I, Pl. XVI; original in the Old Ashmolean Museum, Oxford (Lewis Evans collection).

Figure 21, picture of Sagittarius (with the lord of the domicile, Jupiter, in the background), from the Pierpont Morgan Library Ms. No. 788. (Photograph by courtesy of the Pierpont Morgan Library.) See footnote 33.

<sup>44</sup> Figure 22, the angel Shambūrash fighting the dragon,

from Nāṣir al-Dīn Muhammad al-Siwāsī, *Daḳā'ik al-Ḥaḳā'ik*, written in 1272 A.D. (670–71 H.), in the Bibliothèque Nationale, Paris (Ancien fonds persan 174). Reproduced from E. Blochet, *Les enluminures des manuscrits orientaux* (Paris, 1926), Pl. XIX.

<sup>45</sup> This assertion is perhaps exaggerated. Of course, St. George and the dragon symbolize the antagonism of the light, celestial (sun), and the dark, terrestrial, principles. Hence, the motif is rather closely related to the mentioned dragon-tailed lion combined with the sun. But, as we have said, this is not an astrological but a metaphysical conception.

<sup>46</sup> Figure 23, one of the lion reliefs at the men's entrance to the Jacobite church of Djazirat ibn ‘Umar.

*Fig. 1*). It is remarkable that in both instances only the men's entrances to the (Christian) churches are decorated in this way; of course, the lion, with or without its solar relationship, is the manly animal,  $\kappa\alpha\tau' \acute{\epsilon}\xi\omicron\chi\eta\nu$ , and no metaphysical threads whatever could possibly lead from it over to the female sex. On the former picture, the dragon's head is represented with a curved horn. This particular feature reminds us of the description of the apocalyptic dragon threatening the sun and the moon or even of the horned serpents on Susian seals.<sup>47</sup> In most of the preceding examples, the minuteness of the objects represented makes it impossible to decide whether the dragons are horned or not. But of the following four pictures, two clearly represent the dragons' heads with one or two curved horns (viz., the Bāb al-Ṭilasm at Baghdad and the gateway of al-Khān near the Sindjār Mountains. By way of parenthesis I should like to mention in this connection that the Chinese dragon also belongs to the horned species).

Figure 26<sup>48</sup> shows the lion-and-dragon decoration of the Talisman Gate of Baghdad. The lions have no dragons' tails; each of the two dragons which menace the new-born child—symbol of the new moon—is represented with wings and the two forelegs (cf. p. 138 and *Fig. 1*) and, as pointed out before, with a pair of horns. The dragons' bodies are tied in two typical knots and end in loops.

Figure 27 shows a similar arrangement of motifs, found over the main entrance to the church of Khidr Eliās, a place near the ancient Nimrūd. Only the left lion's tail carries a dragon's head. The two intertwined unhorned dragons in the center of the architrave threaten to devour some indefinable objects (men or animals?).

In Figure 28,<sup>49</sup> again, another version of the St. George motif is given. Figure 29 shows the pair of intertwined dragons, but this time with a head at either end of the serpentine body, which is tied in three knots of the characteristic shape. The addition of a solar symbol (encircled eight-pointed star) is remarkable; around it the lower neck and head of the dragon is twisted. It expresses the same idea as the solar lion with the dragon's tail.

#### EXCURSUS ON THE CELTIC SILVER KETTLE OF GUNDESTRUP

The famous Celtic vessel, found near Gundestrup in North Jutland in the year 1891, and described by Sophus Müller in the first volume of *Nordiske Fortidsminder*,<sup>50</sup> has been, for the reason of its extraordinary images and ornaments, the object of a number of learned discussions. In spite of Müller's serious admonition "to abstain from giving a wild goose chase to parallels, which possibly might lead the hunter even to Asia," several attempts of the kind have been made. Among these, an article recently published by F. O. Schrader, "Indische

Reproduced from Preusser, *op. cit.*, Pl. 34.

Figure 24, men's entrance to the Chaldean church of Djazirat ibn 'Umar, showing two lion reliefs. This is in a bad state of preservation. Observe the absence of the lion reliefs on the women's entrance in Figure 25. Reproduced from Preusser, *op. cit.*, Pl. 35.

<sup>47</sup> Cf. footnote 22.

<sup>48</sup> From Preusser, *op. cit.*, Pl. 16.

<sup>49</sup> Reproduced from Preusser, *op. cit.*, Pl. 17, where the captions are erroneously exchanged. Figure 28, gateway of al-Khān near the Sindjār Mountains. Figure 29, gateway of the citadel of Aleppo.

<sup>50</sup> Published by *Det Kgl. Nordiske Oldskriftselskab*, Second Fasc. (Kjöbenhavn, 1892).

Beziehungen eines nordischen Fundes,"<sup>51</sup> deserves particular attention. There, the author has shown that the details of one of the images of the Gundestrup vessel are nearly identical—as far as the motifs themselves and their arrangement are concerned—with those of one of the Mohenjo-daro seals.<sup>52</sup> In fact, it is impossible to deny that there exists a very striking similarity between the two objects, and it would be difficult to believe that it could have been caused by a mere chance, although it is a complete riddle as to the way a very special pre-Arian Indian motif created in the third millennium B.C. could have been preserved practically unchanged through thousands of years, and finally transmitted to the Celts of northern Europe.

In the following I intend to show the similarity between some of the images of the Celtic vessel and the traditional representations of the eclipse monster encountered in Hindu and early Islamic iconographies. Of course, I admit the possibility that this similarity, as well as the one discussed by F. O. Schrader, is merely accidental, but, in the present instance at least, there is not such an enormous gap of time to be filled, as the vessel which Müller ascribed to the Roman period of Denmark (second century A.D.) may be of a considerably later date (fifth or sixth century A.D., according to Reinach's theory). Naturally one cannot expect to find there any traces of astrological erudition but, at best, the one or the other motif referring to the metaphysical antithesis of the dragon and the celestial bodies. It will be well to remember in this connection that, although the artist's way of treating these motifs on the Gundestrup kettle undoubtedly discloses foreign influence, their mythological background may just as well be sought in northern Europe as in the Oriental world. In fact, there are not many parts of the Eurasiatic continent in which no traces of the dragon myth can be found.

In Figures 30 and 31 two views of the Gundestrup kettle are shown.<sup>53</sup> The outer circumference of the vessel is covered by seven rectangular silver plates with relief decorations. Each of the plates is dominated by a colossal image of a male or female deity of whom only the head and the upper part of the chest with the two arms are represented. It is true that the few parallels in Roman art referred to by Sophus Müller<sup>54</sup> also represent the colossal heads in a similar way, but in none of them are the arms attached to the truncated bodies visible. But if these strange figures are compared with those of the demon Rāhu as shown on our navagraha reliefs, one finds that there exists a rather surprising congruence between the two: in all cases, we can cite the same colossal heads and upper parts of the bodies, with the arms held in various attitudes.

Figures 32 and 33 show enlargements of two of the above-mentioned silver plates,<sup>55</sup> which bear upon our subject. Figure 32 shows the colossal figure of a male deity, adorned as are

<sup>51</sup> *Zeitschr. d. Deutschen Morgenländischen Gesellschaft*, LXXXVIII (1934), 185-93.

<sup>52</sup> Sir John Marshall, *Mohenjo-daro and the Indus Civilization* (London, 1931), Pl. XII, No. 7.

<sup>53</sup> Reproduced from W. A. von Jenny, *Keltische Metallarbeiten* (Berlin, 1935), Pl. 20.

<sup>54</sup> *Op. cit.*, pp. 51 ff. The figure on the Roman vessel (Cabinet des Médailles, Paris, No. 5268), referred to by Müller, *op. cit.*, p. 52, Fig. 7, has no arms. He admits that "noget ganske tilsvarende kjendes ikke" ("anything absolutely identical is unknown").

<sup>55</sup> v. Jenny, *op. cit.*, Pl. 21.

most of the corresponding images by the Celtic "torquēs," who holds in each of his hands a winged dragon. Müller wishes to identify this animal with the classical hippokampos; but, as he admits himself, the hippokampos is rarely represented with wings, and never with a finless tail. Assuredly, the fishtail is a necessary attribute of the Greek monster because it was the riding horse of the sea-gods. The Gundestrup monster, however, is a genuine winged dragon with a curved snake's tail, and its relationship to the cited Islamic dragons seems to be much closer than to the hippokampos. Of course, the medieval Mesopotamian dragon itself cannot possibly have been the model of the Gundestrup dragon, but a common archetype would have to be looked for in an earlier period of either Indian or western Asiatic art, previous to the earliest of our navagraha reliefs, which already have a purely astrological significance. The identity of Rāhu and the *Djawzahr* dragon has been sufficiently proved, and the (one-, seven-, or many-headed) snake (Ananta) that crowns Rāhu's, or Ketu's, figure in several of our examples, also clearly indicates the close kinship, or identity, of the Indian eclipse monster with the world serpent or the serpent dragon.

It is this mythological identity that would seem to be symbolized by the Gundestrup relief: the god, or demon, with his emblem, the winged dragon. But this is not the only point of congruence with the Asiatic iconographies. The other motif shown on the same plate of the vessel, consisting of a strange double animal that stretches over the god's chest, again recalls to memory the various Mesopotamian dragons discussed above. The one of *Khidr Eliās* especially (*Fig. 27*) has to be quoted as a parallel: in both instances the same arrangement symmetrical with the main axis is observed, the same two heads menacing or devouring animals or (in the Celtic image clearly recognizable) human figures. The only difference between the two is that on the Celtic vessel the hind parts belonging to the two heads are fused into one, whereas the Asiatic iconography represents two intertwined and looped serpentine bodies. However, the absence of the knots or loops in the case of the Celtic image is natural, as these, we have seen, exclusively refer to the astrological, or rather astronomical, interpretation of the dragon.

In Figure 33 there is also a motif of astronomical significance which, in the ancient Near East, had been in use thousands of years previous to the time of the Gundestrup kettle—the "heraldic" eagle with displayed wings, symbol of the sun, together with the lion, the solar animal par excellence. Exactly the same combination, originally indicating the heliacal rising of Leo, which took place in the fourth millennium about the time of the summer solstice, is found on an asphalt vase from the second period of Susa (*Fig. 34*<sup>56</sup>), including even the little bird (dove) under the eagle, in the right hand of the Celtic goddess as well as in the claws of the Susian eagle. Moreover, this eagle-and-lion motif appears in the coat of arms of the city of Lagash (cf. the famous silver vase of Entemena), and in hundreds of other examples (painted pottery, seals, etc.).<sup>57</sup>

<sup>56</sup> *Mém. Délégation en Perse* (Paris, 1912), XIII, Pl. XXXIV, No. 2.

<sup>57</sup> Cf. above, pp. 115 and 119.

As another argument for the astronomical significance of at least some of the Gundestrup images, I may quote one of the inner plates on which, again, the colossal bust of a male deity is shown, this time holding a "sun wheel" in his hand.

After all, there can hardly be a doubt that the Gundestrup images are in some way related to the Near Eastern and Indian astronomical iconographies. But it is, of course, impossible to tell what have been the direct prototypes of the Celtic images. Assuredly, the Celtic artist did not create his work by simply copying the one or the other Oriental model; it seems more likely that he was inspired by Oriental ideas without having taken a more than superficial view, and without understanding their intrinsic meaning.



FIG. 35—SAGITTARIUS FROM A BABYLONIAN KUDURRU PERIOD OF MELI-ŠIPAK II, ABOUT 1200 B.C. LONDON, BRITISH MUSEUM



FIG. 36—SAGITTARIUS FROM THE "RECTANGULAR ZODIAC OF DENDERAH" EGYPT ROMAN PERIOD

#### A BABYLONIAN PROTOTYPE OF THE ASTROLOGICAL SAGITTARIUS-DJAWZAHR COMBINATION

I have stated that two pairs of diametrically opposite signs of the zodiac were available as exaltations of the nodes, viz., Leo–Aquarius and Gemini–Sagittarius. The fact that astrologers agreed on choosing the latter was hardly due to a mere accident. On the one hand, there is the obvious negative reason that Leo, on account of its peculiar solar relationship, could hardly be attributed to any planet other than the sun. As it had to remain unoccupied in the original system of the exaltations, it would have been an awkward thing to combine it, in the enlarged system, with the planetary nodes, so much the more as these have a strictly antisolar significance. But it appears that there is also a positive reason for the choice of the pair Gemini–Sagittarius:

Figure 35 shows one of the earliest pictures of Sagittarius so far ascertained, copied from a Babylonian kudurru from the time of Meli-Šipak, and Figure 36, a Hellenistic Egyptian ver-

sion of it, as found on the "Rectangular Zodiac of Denderah."<sup>58</sup> In both examples, the winged centaurs have two tails of which the one, turned upward, in the Babylonian picture, is clearly recognizable as that of a scorpion; moreover, the centaurs are shown Janus-headed, a monstrous head of some undefinable animal being attached to the back of the archer's "normal" head.



AFTER JEREMIAS

FIG. 37—MESOPOTAMIAN DOUBLE-HORNED DRAGON FROM AN ASSYRIAN SEAL CYLINDER  
BETWEEN 1200 AND 700 B.C. PARIS, MUSÉE DU LOUVRE

In comparing this old Oriental type of Sagittarius with our Islamic representations, the possibility, or rather probability, of a direct or indirect influence must be admitted, as only slight changes in the grouping of just those characteristic details mentioned were necessary to produce the Islamic type from the Babylonian or Egyptian: the monstrous hindhead is then put at the end of the tail, and its original place is taken by the ribbons waving from the centaur's cap, as seen in practically all representations of the constellation of Sagittarius (cf. *Fig. 16*, and the iconographies of this constellation on medieval celestial globes, or in the illuminated manuscripts of 'Abd al-Rahmān al-Šūfi's *Catalogue of the Fixed Stars*).



FIG. 38—SCORPION MAN FROM A KUDURRU, PERIOD OF NEBUCHADNEZZAR I, ABOUT 1130 B.C.  
LONDON, BRITISH MUSEUM

As concerns the original significance of the double-headed and double-tailed Babylonian archer, we can make nothing but rather vague conjectures. In looking at this figure, one gets the impression that the centaur's body is thought to be fused with the body of a monster of which only the head and the scorpion tail are visible to the eye. Is this monster related to, or even a modified version of, the Mesopotamian double-horned dragon, well known from the

<sup>58</sup> Reproduced from A. Jeremias, *Handbuch der alt-orientalischen Geisteskultur*, 2d. ed. (Berlin and Leipzig, 1929), Figs. 127 and 128. There is some want of precision in the rendering of some details: the bow of the

Egyptian archer is double curved, and the features of the monstrous head do not strictly resemble those of a dog, as it would seem in this drawing.

kudurrus, which, when appearing on seals, is usually represented with a scorpion tail (see *Fig. 37*<sup>59</sup>)? The probability of such a hypothesis can hardly be denied, but the question remains entirely unsolved as to why this dragon was combined with the constellation of Sagittarius. Most probably the solution of the problem has to be sought in the ancient oriental mythology—indeed, there certainly exists a connection with the “scorpion man” watching, in the *Gilgamesh Epic*, at the entrance to the inferior world. This corresponds to the sun’s entrance into the dark half of the year, through the constellation of Scorpio, by the time of the autumn equinox, in the fourth and third millennia B.C. This scorpion man (with a human head, a scorpion’s body and tail, and a bird’s feet and claws<sup>60</sup>) is a rather common figure on Mesopotamian seals, and by the end of the second millennium it makes its appearance also on the kudurrus, with the scorpion itself, as one of the two types of figures representing the constellation of Sagittarius (*Fig. 38*<sup>61</sup>). Thus, Sagittarius, being the left neighbor of Scorpio, would seem to have been differentiated from the undoubtedly very old constellation of Scorpio, when the need was felt to fill the gaps between the originally conceived four cardinal constellations, viz., Taurus, Leo, Scorpio, and Capricorn–Aquarius,<sup>62</sup> by new groups of stars, from which the twelve-partite zodiac was finally derived. And simultaneously, some of the mythological features belonging to the scorpion also seem to have passed over to Sagittarius—hence its combination with the scorpion monster or scorpion-tailed dragon; and, still, we must not forget that the scorpion itself had always been closely related to the snake,<sup>63</sup> symbol of the inferior antisolar world, the region of the dragon!

After all, it is not out of the way to assume that the medieval astrologers still possessed some knowledge of the mythological significance of the Babylonian–Egyptian picture of Sagittarius, and that the dragon’s astrological co-ordination with this constellation thus was due to a reminiscence of a very old mythological tradition.<sup>64</sup>

EARLY LITERARY REFERENCES TO THE DJAWZAHR; THE NAWBAHR;  
RĀHU-KETU; AND THEIR IRANIAN EQUIVALENTS

1. *A rabbinic reference*

In the *Mishna* tract ‘*Aboda Zara* (Chapter III, 3), the following passage is contained:

Whenever a vessel is found on which the picture of the sun, or of the moon, or of a dragon (draḡōn) is shown, it must be thrown into the salt sea.

<sup>59</sup> Detail from an Assyrian seal cylinder, from Jeremias, *op. cit.*, Fig. 206 (p. 375).

<sup>60</sup> Cf. W. H. Ward, *Seal Cylinders of Western Asia* (Washington, D. C., 1910), Nos. 624, 1137, 1138.

<sup>61</sup> Detail from a kudurru of the time of Nebuchadnezzar I (about 1130 B.C.), copied from Jeremias, *op. cit.*, Fig. 121.

<sup>62</sup> Originally the constellation of the *Ibex* seems to have been formed by the brightest stars of the later constellations of Capricorn and Aquarius. The earliest his-

tory of the constellations of the zodiac will be treated in a forthcoming publication.

<sup>63</sup> Witnessed by the manifold serpent–scorpion combinations on prehistoric Mesopotamian seals and pottery. See P. Toscanne, *op. cit.*, *passim*.

<sup>64</sup> An important connecting link between the ancient Babylonian and the medieval Islamic representations of Sagittarius is found in a Biblical reference, Rev. 9: 3, 7–10, 17, and 19:

“3. And there came out of the smoke locusts upon

Maimonides' commentary to this passage reads as follows:

When a picture of the sun or the moon is mentioned, this does not mean that the picture of the sun be represented by a round disk, and that of the moon by a bow, but it refers to those figures which are called *telesmata*, and which are ascribed to the stars by the men who made them. Thus, for instance, they used to represent Saturn like a black old man, Venus like a gold-adorned fair young girl, the sun as a crowned king sitting on a chariot, and likewise they ascribe many figures to all of the constellations and stars though there is no agreement on it among them . . . But the picture of the dragon which is mentioned in this *Mishna* is a scaled and finned figure like that of a fish. This figure was highly renowned with them because they attribute it to a certain part of the celestial sphere. And one of them who used to make such pictures told me that this one picture represents the dragon in the sphere of the moon—called in Arabic “al-Djawzahr”—and that it is made after a certain model and in a certain hour. As I never had seen any such picture I asked him in what book I might find it mentioned. Whereupon he answered me that his teacher himself had devised that picture and confided it to him as a secret, together with many other things.<sup>65</sup>

What we learn from this is that still in the twelfth century the astrological doctrines of the *Djawzahr* had by no means become a generally known matter but used to be treated as a secret by the initiated, in such a way that even a highly erudite scholar like Maimonides could make only a rather vague statement about it. On the other hand, the *Mishna* passage itself proves that, in or before the fifth century A.D. (which is certainly the latest possible date of composition of the *Mishna*), it must have been quite a common usage to represent the dragon as well as the sun or the moon, since otherwise it would be incomprehensible that the Jewish theologians found it worth while fighting against this heresy.

It is improbable that this passage really refers to the astrological significance of the dragon, as Maimonides interpreted it; more likely, it is an allusion to the mythological role which the dragon played in the religion of the people whose hospitality the author of the passage in question enjoyed. By that time there were places enough in the Near East where this old mythological tradition still could be found living and strong, and it must be remembered that the star-worshipping Ḥarrānians preserved it even to a much later time.

the earth: and unto them was given power, as the scorpions of the earth have power. . . .

“7. And the shapes of the locusts were like unto horses prepared unto battle; and on their heads were as it were crowns like gold, and their faces were as the faces of men.

“8. And they had hair as the hair of women, and their teeth were as the teeth of lions.

“9. And they had breastplates, as it were breastplates of iron; and the sound of their wings was as the sound of chariots of many horses running to battle.

“10. And they had tails like unto scorpions, and there

were stings in their tails: and their power was to hurt men five months. . . .

“17. And thus I saw the horses in the vision, and them that sat on them, having breastplates of fire, and of jacinth, and brimstone: and the heads of the horses were as the heads of lions; and out of their mouths issued fire and smoke and brimstone.

“19. For their power is in their mouth, and in their tails: for their tails were like unto serpents, and had heads, and with them they do hurt.”

<sup>65</sup> See D. Chwolohn, *Die Sabier und der Ssabismus* (St. Petersburg, 1856), II, 484–85.

## 2. *Djawzahr-Nawbahr; etymological questions and early Iranian references*

In going over Arabic manuscripts of astronomical or astrological content, I happened to come across a passage contained in a *Mukhtaṣar* of the tables of Ulūgh-Beg<sup>66</sup> which deserves attention; the author there employs the term al-Djawzahr only for the ascending node, and introduces a special expression, al-Nawbahr, for the descending node: "The Djawzahr is also called 'the head' (al-Ra's), and its nadir, al-Nawbahr, is called 'the tail' (al-Dhanab)." <sup>67</sup>

Using the term نوبهر in this way is quite an extraordinary thing. It is true that this word also appears fairly often in other astrological texts, but, then, it has always to be understood as "one ninth part <sup>68</sup> of a sign of the zodiac," being an astrological quantity which of course cannot possibly be put into connection with the Nawbahr mentioned here. The passage stands also in some contrast with the eighth *Djazīra* relief because there, as has been seen, the situation results from the astrological rules that it must be the dragon's tail, exalted in Sagittarius, or possibly the dragon *in toto* (cf. pp. 135-36), that is called *Djawzahr*, while here it is the head.

In spite of this obvious confusion, there remains the important and interesting fact that in the Islamic astrological literature also two different terms, *Djawzahr* and *Nawbahr*, occur as designations for the two parts of the dragon monster, corresponding exactly to the two Sanskrit terms *Rāhu* and *Ketu*. As both of them clearly are borrowed from the Persian, I shall now try to find their traces in the earlier vernacular Iranian literature.

In the *Bundahishn*, the *Djawzahr* appears in two different passages, in the obviously corrupted form "Gūrčīhar":

### Chapter 5:

Gūrčīhar and Dūzdīn Mūš-Parīk, the tailed stars (dumbōmand [ دوماوومند ]), attacked the sun and the moon (and the stars)<sup>69</sup>; the sun bound the Mūš-Parīk to his path in such a way that it can do but little harm.

### Chapter 31:

When Gūrčīhar on the firmament falls down to the earth from the limb of the moon, then the earth will be suffering such pains as a lamb which is assailed by the wolf.

As is seen, the first of these references also mentions two antagonists of the sun and the

<sup>66</sup> In the collection of the Institut für Geschichte der Medizin und der Naturwissenschaften at Berlin, written in Maghribinian style, second half of the seventeenth century (Ms. Or. II. 38). See my description in J. Ruska and W. Hartner, *Katalog der orientalischen und lateinischen Originalhandschriften, Abschriften und Photokopien des Instituts für Geschichte der Medizin und der Naturwissenschaften in Berlin* (Berlin, 1939). The word *Nawbahr* occurs also in Ms. Or. II. 44, *Kitāb al-Lum'a fi Ḥall al-Sab'a* by Shihāb al-Dīn al-Rīshī, p. 37, caption:

"... al-Djawzahr, which is diametrically opposite to *al-Nawbahr*, the tail."

الجوزهر ويسمى الراس ونظيره النوبهر ويسمى الذنب

<sup>67</sup> It should then be read "Nūbahr" instead of "Nawbahr" (نو = نُه, "nine"; بهر, "part").

<sup>69</sup> The bracketed words "and the stars" are certainly apocryphal; cf. F. Justi, *Der Bundehesh* (Leipzig, 1868), p. 7, footnote.

moon, viz., Gūrčīhar and Dūždīn Mūš-Parīk.<sup>70</sup> The material identity of these two terms with the modern Persian *Djawzahr-Nawbahr*, as well as the etymological identity of Pahlavi Gūrčīhar with modern Persian *Djawzahr* is evidently beyond doubt. It is not clear whether "tailed" refers to both of them or only to the second one. The latter alternative would seem to be the better because, then, the term *دومبواومند* would indicate that Mūš-Parīk, corresponding to Ketu, is the tail of the bisected monster, and of course also a "tail star," i.e., a comet, like Ketu.

The question of the significance and etymology of Dūždīn Mūš-Parīk, and of the modern Persian *Nawbahr*, is very delicate indeed. Is it possible that the astrologically meaningless "Mūš-Parīk," which otherwise occurs only in one Avestan passage (*Yasna* 16.8), is nothing but a misunderstood reading of another word, less well known to the copyist? And should the *Nawbahr* perhaps give us the clue to it? If, despite my insufficient training in Iranian philology, I dare to enter upon a discussion of this matter, I a priori ask the specialists' forbearance.

According to Bartholomae,<sup>71</sup> Dūždīn Mūš-Parīk means "the thievish pairika (witch), Mūš." But considering the obviously astromythological character of the whole passage (in which all the other planets are mentioned as fighting against the celestials), Bartholomae's reading and interpretation seem hardly convincing. If we accept dūždīn as "thievish," i.e., "stealing the light of the great luminaries during eclipses," there still remains the second component to be explained, which Justi reads as Mūšpar, written in Pahlavi characters: *𐭮𐭥𐭥𐭥*. To the modern Persian *Nawbahr* would correspond a Pahlavi form, \*Nōkbahir: *𐭮𐭥𐭥𐭥*. Is it not possible that the second half of the first word (špar) was produced from the word *bahir*, meaning "part," by the carelessness of a copyist: *𐭮𐭥𐭥𐭥* > *𐭮𐭥𐭥𐭥*? I believe any Arabic student who has had to do with carelessly written manuscripts would admit the possibility of it.

It seems to me that a corruption of the first parts of the two words: *𐭮𐭥* > *𐭮𐭥*, might also easily have been produced in a similar way.

The meaning of the word *Nawbahr*, corresponding to an Avestic form \*navabaḫəδra or \*navabaδra (Sanskrit \*navabhadra<sup>72</sup>) would be "the new part" or "the new luck." The former of these two translations certainly agrees well with the Indian version of the dragon myth, since there also Ketu is the "new part" produced by the bisection of the demon Rāhu.

As to the Sanskrit word *ketu*, its original significance is "light," "clarity" being an abstract term synonymous with the etymologically related word (adjective) *citra*, which we shall have to deal with instantly—in the figurative sense it can be applied to all kinds of luminous phenomena, especially meteors or comets. As these "tail stars" were regarded as manifestations of Rāhu's tail the application of the term *ketu* to this latter was quite natural in itself;

<sup>70</sup> This reading is according to C. Bartholomae, *Altiranisches Wörterbuch* (Strassburg, 1904), col. 1189, s.v. *mūš*, while Justi's text and transliteration of the *Bundahishn* reads *دوچدو موشر*, Dūčdū Mūšpar.

<sup>71</sup> See footnote 70.

<sup>72</sup> Cf. the similar composition, Avestan *hubaδra*, Sanskrit *subhadra*, used as adjective or noun. See H. Hübschmann, *Persische Studien* (Strassburg, 1895), p. 33, No. 245; and H. S. Nyberg, *Hilfsbuch des Pehlevi* (Uppsala, 1931), II, 29.

but then there arose the logical difficulty that the light-devouring function of Ketu as an eclipse demon came to stand in strict contradiction to the word's original significance—light! This inconsistency, however, does not seem to have bothered the Hindu astrologers.

Finally, the question of the early history and etymology of the word *Djawzahr* will have to concern us once more. On page 121 I stated that the correct form of the modern Persian *gawzahr* گوزهر most probably is *gāw-čīhr* گاوجهر, which we tentatively translated as “bull shaped” or “bull face,” according to the current meaning of the word *čīhr* in present-day language. But this interpretation, it will be seen, does by no means do full justice to the esoteric content of the compound.

In Vullers' *Lexicon*, I, 605a, we find s.v. چهر : (1) *origo essentiae* (Avestan: *čithra*, “semen”), (2) *facies, vultus* (especially in the form چهره). It is the former of these two equivalents that gives us the key to the right understanding of the problem: in the *Avesta*, the compound *gao-čithra*, being the exact etymological equivalent of the modern Persian *gāw-čīhr*, occurs in several passages, and always as an epithet of the moon! Thus it appears, for example, in *Yasht* 7.3 (called Mah Yasht, the “Moon Yasht”): “We revere the Moon, the *gao-čithra*, the asha-holy, the ratav (‘donor’) of asha.”

Similarly, in *Yasht* 7.5, 6; 12.33, *Yasna* 16.4, *Vidēvdāt* 21.9.

This term *gao-čithra* is usually interpreted as “forming the origin of the ox,”<sup>73</sup> or perhaps rather “having the *sperma bovis*,” which is regarded to be concentrated in the lunar sphere or even on the moon herself, from where it acts as a fecundator of the terrestrial regions. But in the etymologically corresponding Sanskrit word *citra*, derived from the same etymon as *ketu*, we find still another original significance preserved which possibly is resonant even in the above Avestan passages: that of “light, clear, brilliant,” frequently occurring as one of the moon's many epithets. Thus, the astrological *Djawzahr*, whose material identity with *Rāhu* we have established before, finally turns out to be etymologically related to *Rāhu*'s *alter ego*, *Ketu*. That this material identity between *Rāhu* and the *Djawzahr* is of a rather early date, must be considered a matter of fact. Thus, our second quotation from the *Bundahishn* (Chap. 31): “When *Gūrčihar* on the firmament falls down to the earth from the limb of the moon, then the earth will be suffering such pains as a lamb which is assailed by the wolf,” has its perfect parallel in the story of *Rāhu*, whose severed head, “like a mountaintop, fell roaring down to the ground, so that the earth was shaken as by an earthquake.”<sup>74</sup>

It might seem a strange thing that *gao-čithra*, originally the light and fecundity attribute of the moon, was subjected to such a modification of meaning that it finally—probably in the late Sasanian period—became a denomination of the eclipse demon, the personified dark principle par excellence and direct antagonist of the celestial luminaries. Of course, we must keep in mind the considerable gap of time which elapsed between the Avestan period and the intro-

<sup>73</sup> Cf. Bartholomae, *op. cit.*, col. 480: “*gao-cithra*, adj., ‘den Ursprung des Rindes bildend’, ‘woraus das Rind entstanden ist’, vom Mond”.

<sup>74</sup> Cf. H. Zimmer, *Maya, der indische Mythos* (Stuttgart und Berlin, 1936), p. 133.

duction of Hellenistic astrology in Iran. The apparent confusion was perhaps due to the interference of the ancient metaphysical and mythological conceptions with the knowledge of the physical causes of eclipses (particularly solar eclipses): in Sasanian times, it was really known that it is the moon which extinguishes the light of the sun during solar eclipses, but nevertheless the influence of the old dragon myth was still strong enough to make astrologers refrain from calling the moon by her proper name in this connection. The precise significance of the moon's chief epithet in the Avestan period, *gao-čithra*, had probably fallen into oblivion and, therefore, this same *gao-čithra*, then considered a neutral term vaguely connected with the moon, could finally be found fit to be applied to the eclipsing monster. My assertion that the proper meaning of *gao-čithra* had been completely forgotten in post-Avestan times is supported by the fact that, in the mutilated Pahlavi form *gūrčīhar*, it seems impossible to recognize any relation to the "primordial ox," Pahlavi *gāv* (expressed by the Semitic ideogram *TWR*'), which otherwise occurs frequently enough in the *Bundahishn*.