

The Old Arabian Moon Religion And the Mosaic Tradition

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by

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Chapter Two:
Sacred Times

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Foreword

In this second chapter, Nielsen deals with calendar issues and the times of sacred importance in the lunar month. These issues are essential for an understanding of the religion of the ancient Levant—and, as we shall see, also for an understanding of early Christianity.

Though the descriptions “new moon” and “full moon” are plain enough, this chapter discusses aspects of these lunar phases which have been forgotten yet were important to Bronze Age man. The “new moon” is nothing less than the reappearance of god after three nights of abandonment. The “full moon” represents god’s full hegemony over the creation.

In this chapter we learn that the *sabbath* was a pre-Israelite concept, one with an ancient and venerable history associated with the moon. On the sabbath—that is, every seven days—the moon god rested in his ‘station.’ This clarifies the frequently encountered depictions of the Babylonian moon god ‘seated.’ Lest we suppose that the god was merely resting, it must be noted that the divinity’s seated position actually derives from the original meaning of the sabbath, namely, the “calming of the heart.”

Nielsen discusses important links between the flood story and lunar religion. Most important for those interested in Christian origins, he investigates the early history of the Semitic root *n-ts-r*. In footnotes 31 and 32 I notably expand on Nielsen’s text.

Though this chapter at times enters into mathematical complexities, the importance of the ancient lunar religion becomes clear when we accept its many lasting influences, such as the three days of darkness before the return of god (cf. Jesus’ three days in the tomb before his resurrection), the flood story, the trinity, and the enigmatic meaning of the root *n-ts-r*.

The pages translated here are now over one century old. It has been my aim to highlight sometimes surprising parallels between pre-Israelite South Arabian religion and Christianity, which I do in footnotes signed “RS.” A footnote is no place for extended discussion, but can merely indicate in the briefest way a path for further investigation. Footnotes that do not have my initials were found in the original text.

The original pagination is indicated in brackets, e.g. [23]. Occasionally, a few words of clarification have been added within the text. Headings have also been added for clarity.

—René Salm

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Character list

'	= "a"	(Heb. <i>alef</i>)
'	= (stop)	(Heb. <i>ayin</i>)
ĥ	= "ch"	(Heb. <i>het</i>)
š	= "ts"	(Heb. <i>tsade</i>)
š	= "sh"	(Heb. <i>shin</i>)
ṭ	= "th"	(Heb. <i>tav</i>)

Long vowels are marked by a superscript macron.

The month

[49] The moon was a symbol of the divine present in the sky. When this is properly appreciated, it can be readily seen that the various lunar phases were also revered. A sacred moon implies sacred lunar phases.

The first phase, the new moon ☾, was the new appearance of god. It was greatly venerated, as is revealed in a host of graphic portrayals from the earliest Arabian and Babylonian monuments. The recumbent form of the moon, with the crescent pointing upwards, can be explained by the fact that in equatorial regions as far north as 30 degrees latitude the new moon appears more or less horizontal. Of all the lunar depictions, the crescent of the new moon appears most often and was especially sacred. In fact, an ideogram for “moon” in Babylonian cuneiform is simply a depiction of its first phase. Similarly, in some personal names in Arabia (where the divine conception of the moon is multi-faceted) the word for “new moon,” *hilāl*, means “god.”

[50] The above, attested in the material finds, leads us to related considerations concerning the first lunar phase. At various points the Arabian evidence suggests that from earliest times the moonlight’s appearance after three nights of darkness was greeted with great celebrating. The astonishing fact is that *hilāl*, the word for “new moon,” also means “celebration.” It was first and foremost the cry of joy, the rejoicing and welcoming of god’s appearance in the sky.¹ But *hilāl* was later used for any celebration—which shows that the new moon festival held the central place in ancient Arabia. More importantly, however, are the facts that Arabian chronology was, from the very beginning, based on this first phase of the moon and on the new moon celebration.

The fundamental difference between Arabian and Babylonian religion manifests itself in their differing calendars. The Arabian calendar is based on the moon, the Babylonian on the sun. The concept “month” assumed a subordinate role among the Babylonians, as also did the Arabian moon-god in the Babylonian pantheon.

In Mesopotamia the Arabian lunar calendar was deformed, “babylonized,” and essentially debased. The only comprehensible origination of the concept “month” is the synodic period of one lunar cycle, that is, 29½ days. When imported into the Babylonian system, the month had to be accommodated to the native sexagesimal calendar, that is, to 1/12th of the solar year. In this way it becomes $360 \div 12 = 30$ days. Indeed, the Babylonians had a 30-day month from earliest times. [51] In fact, the numeral 30 is their written designation for the moon god *Sin*.

Not so among the Arabians. Even today, as they did long before the time of Mohammed, the Arabians begin the month at the time of the first visible lunar crescent, and alternate months of 30 and 29 days. This alternation may represent a small difference in terms of duration and number, but it is theoretically decisive. It means that the Arabian calendar is faithful to the moon’s astronomical manifestation, in that each month always represents a lunar cycle beginning with the new moon. It is a one ‘true month,’ that is, one ‘moon-time.’

On the other hand, the Babylonians changed the natural timespan of the lunar cycle. In so doing the basis of ‘moon-time’ was completely lost, regardless of whether that

¹ This explains the great celebrations at New Moon festivals, for the most important sacred event is the first appearance of light in the night sky, namely, the cosmic return of ‘god’ to man, and his dispelling of the darkness of night. This is the conquest of darkness by light. We need only apply the universal and primordial metaphors ‘darkness’ = ignorance, and ‘light’ = understanding to appreciate the rich gnostic implications of this early lunar theology, with its momentous implications upon much later Christianity (cf. GJn 1:5, 9).—RS

change was large or small. The result conformed to the Babylonian solar year but no longer had anything to do with the moon and its phases. Now, the day of the actual new moon (first lunar crescent) was no longer the first day of the month but could be any day in the month. After all, it is impossible to conform a rigidly repeating 30-day period with the actual lunar cycle (29.53 days) nor with the lunar phases.

The Babylonian 30-day periods are not 'months' at all (the word "month" has reference to the moon)² but are divisions of sun-time, perhaps better called 'sun-months.' On the other hand, the Arabian month at all times reflects the synodic lunar cycle including the progressive phases of the moon. As might a cosmic clock, the waxing and waning moon in the heavens temporally locates the onlooker in the month, through its changing light and appearance.

The week

[52] Once we recognize that the Arabian 'month' was a naturally occurring timespan in contrast to the artificial Babylonian month, then we may turn to an investigation of the various conceptions of "week." Among all the Semites, the week was originally a division of the month.

The Babylonian five-day week (the *hamuštu*) is one sixth of the Babylonian month. Sayce discovered³ that it is attested already in the third pre-Christian millennium. The 5th, 10th, 15th, 20th, 25th, and 30th days of the month were marked by characteristic offerings. One gauged one's progress through the month, and indeed through the entire year, according to these standardized five-day divisions. Among the Babylonians six was a sacred number, and their month was divided precisely into six parts conforming to their sexagesimal solar system.

As to the question of how the Arabians divided the month, we must first note that unfortunately no hemerologies and calendars marking holidays are among the many old Arabian inscriptions (Minaean as well as Sabaeen) that have been discovered in the last century or that have come down to us. The following argument, then, does not rely upon the evidence of the monuments, but rather upon conclusions which can be determined with greater or lesser probability. [53] Those probabilities derive from the well-attested inscriptional record of neighboring Babylonia, and from isolated details found in the later West Semitic calendars.

If we describe the Arabian month on purely theoretical grounds, in accordance with the natural changes of the heavens and in such a way that a moon-month corresponds to astronomical facts, then the full moon ○ reveals itself as a division naturally occurring in the middle of the month. The moon waxes until its face—as turned to us—is illuminated completely by the sun. Then, in an equivalent span of time, the moon wanes until it disappears entirely from view. Within these two great divisions are lesser ones naturally marked by the quarter-moons ◐ and ◑. Thus, astronomers speak in terms of the four phases of the moon: new moon, first quarter, full moon, and last quarter. This parallels the annual journey of the sun (or, as we now know, the journey of the earth around the sun) in that the year naturally divides itself also into four seasons. Thus, the

² In the South Arabian, Old Aramaic, and (most importantly) West Semitic inscriptions, *šahar* often means "moon" or "lunar god."—DN

³ A. H. Sayce, "Assyriological Notes No. 3," in *Proceedings of the Society of Biblical Archaeology*, Vol. XIX, 1897: 288.—DN

monthly course of the moon in its four divisions corresponds, on a certain level, with the annual course of the sun.⁴

The quartering of the cycles of moon (in weeks) and sun (in seasons) is reflected in the four differing heavenly states of the moon, as well as through changes in levels of moonlight. These are astronomically reflected in the four lunar phases. The heavenly quartering of time is the basis also of time calculation here on earth, for the sun and the moon—due to their changing astronomical states—have created the earthly time periods, that is, the seasons of the year and the “weeks” of the month (with varying tidal implications, etc.). The solar effects principally consist in the supply of light and warmth—the prerequisites for earthly life. These are delivered according to the four seasons of the sun’s apparent annual voyage: spring equinox, summer solstice, fall equinox, and winter solstice. [54] They represent the sun’s changing intensity in four distinct time periods: spring, summer, autumn, and winter.

We may similarly view the moon’s principal activity: its pull on the water manifested as the tide’s ebb and flood. The four lunar phases with their ‘principal stations’ (the new moon ☾, first quarter ☽, full moon ☉, and third quarter moon ☾) represent the moon’s varying power. It is strongest at the time of the syzygies (the flood tides at the new and full moons), and weakest at the two quadratures (the ebb tides at the first and last quarter).

In his outer action and interior feeling man is bound to the waxing and waning presence of the sun, which in the larger timespan of the year determines the seasons. The same can be said for the natural lunar stages which make up the “month.” The moon’s potency, divided into four periods or “phases,” produces mundane consequences beyond the calculation of earthly time according to lunar events. The changing tides have long been attributed to the power of the moon—by the ancient Semites, Greeks and Romans, and also by modern scientists. Variable weather, too, was attributed to the moon’s power by the ancients, and is today similarly attributed by the modern seafarer and coastal dweller.⁵ [55] Contemporary astronomers ascribe certain monthly weather phenomena to lunar influence, and even suggest that volcanic activity is tied to a fiery-watery link in the earth’s core.⁶

If we consider that the moon’s effects on the ocean were universally known and acknowledged, then we see that the tides also effectively divide the month into the same four periods as the four phases of the moon. The ancient Arabians, as a trading people, would have been keenly aware of the tides, which are particularly strong in equatorial regions and have more pronounced effects there than in Europe. After all,

⁴ The terms can be confusing. “Quarter” is a temporal, not a visual, designation. It refers to the state of the moon at the end of the first “quarter” of the month, namely, to its appearance at the end of the first week/first lunar phase. The moon appears “half”-illuminated at this time, which is admittedly non-intuitive. Nevertheless, using quarters is standard and yields the well-known progression of phases (“quarters”): new moon, first quarter, full moon, third quarter. The word “crescent” refers most often to the first and last light of the moon. The first crescent ☽ is at “new moon” and is sometimes used interchangeably with it. The last crescent ☾ is at the end of the fourth quarter.—RS

⁵ We shall see that the rising tide which takes place at the lunar conjunction (before new moon), together with inclement weather, are basic to the story of the flood.—RS

⁶ Many ancient Semitic texts emphatically ascribe the changing weather to lunar influence. This is perhaps most evident in the identification of the moon god with the weather god. In the inscriptions, storm, wind, and rain are attributed to various phases of the moon.—DN

much Arabian trade was waterborne, either across the ocean to India or up the Red Sea to the Mediterranean basin. For overland trade via bedouin caravans, the light of the moon was particularly important since such journeying was often carried out at night. Thus, the phases of the moon as well as the periods of the month played an especially important role for both the seafaring and the land-locked Arabian trader.

The moon was revered as divine—or, rather, as divine symbol. Its power was sacred, and thus the lunar periods, times, stages, or phases were holy. The moon divided the Arabian month into four sacred lunar weeks.

[56] Using a solar calendar—that is, “days” and “nights”—to describe these lunar periods is a convention, an artificiality. The incongruity between lunar and solar time has always been the biggest problem in constructing the calendar. After all, a complete lunar cycle amounts to an uneven number of days: $29\frac{1}{2}$. A meddling fraction likewise interposes in calibrating the lunar phase, that is, $\frac{1}{4}$ of the lunar cycle: $7\frac{3}{8}$ days. Because fractions are unusable in a calendar, the ancients tried to avoid them by using two lunar cycles, that is, a “bi-month” (or double-month) of 59 days. However, dividing this bi-month by eight now results in a remainder of three days ($8 \times 7 = 56$). This is the case unless, of course, one resorts once again to fractions or to lunar periods of varying length. The latter possibility—occasional weeks of eight or nine days—are impractical in a calendar, for such variation cannot be normalized nor occurs in nature.

However, the moon is ‘invisible’ to the eye for roughly three days each cycle. This disappearance might be calendrically observed (i.e. ‘counted’) only every other month.⁷ They were days of special solemnity and sadness, when ‘god’ was absent.⁸ This was indeed the solution adopted in Arabia.

One notes, then, that the Arabian recognized not four, but five phases of the lunar month, corresponding to apparent changes of the moon. [57] In addition to the four lunar ‘weeks’, there was a fifth shorter period, the three days of darkness before each new moon. Astronomically speaking, the true beginning of the month would be the midpoint in that dark period. This can be depicted as a dot between the old and new moons: ☾ • ☽. It is impractical, however, to begin the month with an invisible midpoint during darkness. Much more practical is to begin with the first light of the new moon. In any case, the dark period is quite well defined by the last light of the old moon and the first light of the new moon. Various surviving depictions show that this period of darkness played an important role in ancient lunar religion.

[58] When one includes the three days of darkness in calendrical computation, then one obtains periods of seven days and a period of three days. Such periods are attested in the cultural, calendrical, and religious records from Arabia but are not indigenous to Babylonia. This is as expected, for the recovered cuneiform documents reflect the lunar religion of Arabia and its moon-based periods.

The above is of interest when we consider the Epic of Gilgamesh. The cuneiform tablets of that saga have been found in Babylonia, yet they often have periods of seven

⁷ This results in months of varying length: 28 days alternating with 31 days, with the correct total of 59 days for the bi-month.—RS

⁸ The three days of lunar darkness are a sacred time of mourning for the ‘absent’ god. This survives in Christianity as the three days Jesus spends in the grave. Following this period of mourning comes the great joy of the reappearance of light in the sky. This three day sequence, of course, survives in the death, burial, and resurrection of Jesus.—RS

and three days.⁹ This tells us that the Epic of Gilgamesh is suffused with Arabian and lunar influences, for there is no place in the Babylonian month (nor in the Babylonian calendar year) for either a seven or a three day segment. We know that these periods refer to lunar time and correspond to the Arabian calendar, with its repeated seven day period complemented once every two months by three days, forming the bi-month described above.

[59] Furthermore, the week described in the Epic of Gilgamesh is often described as composed of six days and seven nights.¹⁰ This curious description clearly refers to the final week of the double-month, that from the last quarter ☾ to the final crescent ☾ which appears in the morning. Thus, the last week is twelve hours (one “day”) less. This diminution is made up during the ensuing period of darkness, when the new moon appears in the evening and thus adds twelve hours more. Once again, the Epic of Gilgamesh reflects lunar time.

Other cuneiform evidence found on Mesopotamian soil reflects Arabian influence. A version of the creation epic found in the ruins of Nineveh credits the moon-god with dividing the month into phases. There (unfortunately the ending is missing) we read:

- L. 12 He lets the new moon shine, subordinates the night to himself;
- L. 13 makes his presence known in the night, that also the day may be known;
- L. 14 monthly without cease he crowns [the moon], saying:
- L. 15 “At the beginning of the month, when you pass over the land,
- L. 16 command your horns to make six days distinguishable;
- L. 17 on the seventh day attenuate your horns,
- L. 18 on the fourteenth day. . .”

Here, the moon divides time, makes possible the day, and acts “monthly without cease.” The signs of its action are its “horns,” that is, its crescent “crown.” [60] The changing moonlight, together with the waxing and waning periods, manifests the phases and makes the different times of the month known. All one needs is to look up at the moon. This is quite impossible in the Babylonian month of thirty days, which has absolutely nothing to do with the lunar cycle, with the changing lunar phases, and with the varying levels of moonlight. That a lunar month is described in the passage above also follows from the fact that the moon shines at the beginning of the month with its “horns”—they communicate the start of the month.¹¹ We know that the Arabians began the new month with the appearance of the “new moon’s horns,” while the Babylonian solar month had no link to the new moon nor to any other lunar phase. The month in Babylonia could begin on any day, even at full moon!

The passage above also confirms the division of the lunar month into weeks of seven days, conforming to the lunar phases. It shows that in Babylonia these phases

⁹ Tablet I, col. 2, line 44; col. 3:47; 4:21. Tabl. VIII, 5:29. X.2:5; 3:23, 49; 5:14. XI.130, 146, 208. It must be reckoned significant that the Epic of Gilgamesh, of such paramount importance to the history of civilization, is here considered “lunar.”—RS

¹⁰ Here the “day” and the “night” are each twelve hours in duration.—RS

¹¹ We recall that, in equatorial regions, the moon’s crescent is recumbent, resembling the horns of the bull. This became important in religious iconography and soon led to the identification of the moon with the bull.—RS

were converted over to periods of solar days. Now, in the lunar schema, the month begins with the horns (the first visible crescent), continues with the half moon, and proceeds to the full moon—each stage constituting a lunar phase equivalent to one week. If this week is rigidly expressed in solar “days” (of 24 hours) then soon all connection to the moon’s cycle and to its phases is lost. This obtains because seven days are not precisely a lunar period. We must add $\frac{3}{8}$ of a day to each week in order to maintain conformity with the moon’s changes—that is, we must add three full days every two months. [61] In fact, the rigid seven day week has as little relation to the moon as does the thirty day month. The former is $\frac{3}{8}$ of a day too short for “lunar time,” while the latter is $\frac{1}{2}$ day too long... Where the ancient texts mention a seven day week in relation to the moon, we can be sure that presupposed is the added three day period (as frequently noted in the Epic of Gilgamesh), one which supplies the necessary interval to bring the calendar into conformity with the moon.

An astronomical text reads: “When the moon is surrounded by a halo, it is day 7, 14, 21, and 28. . .” Those days refer to the lunar month, as calculated from the first visible light of the new moon. They define the phases which occur at approximately seven day intervals. The month is here divided explicitly into four periods of one week each. Implicit, however (and not always stated) is the addition of a three day period every eighth week—for only such an addition can bring those seven day periods into conformity with the lunar cycle and its phases as experienced in nature.

This text, among many others,¹² shows us that the ancient Semites observed the moon with careful attention. In particular, the days marking its four main phases played a distinct and quite public role in everyday life. We shall soon see why, when we come to consider the ways in which the the lunar periods were distinguished and marked in the calendar. [62] Those periods, of course, ultimately depend upon natural celestial and earthly observations.

The pre-Israelite sabbath and the ‘stations’ of the moon

In ancient Semitic thought, earthly activity and rest were (like all else on the mundane plane) reactions to that which had already taken place on the celestial plane—specifically, to the activity and rest observed in the heavenly bodies. The planets were particularly revered in Arabia. The two inner ones, Mercury and Venus, appear to modern eyes to alternate on both sides of the sun. However, the ancients supposed that these planets were for a time still; then they went to commune within the sun, hidden by its light; and finally they were again in independent motion. Thus, there were four periods, each ending in apparent rest, a ‘station.’¹³ In these stations the inner planets are subject to phases and give off varying light—which certainly did not escape the skilled eyes of the ancient Semites.

¹² A. H. Sayce, “The Astronomy and Astrology of the Babylonians,” in *Transactions of the Society of Biblical Archaeology* III, London 1874: 145–339.

¹³ Venus has a cycle of alternating morning and evening appearances, and is popularly named the Morning Star (when seen in the Eastern sky before sunrise) and the Evening Star (when seen in the Western sky after sunset). Each apparition lasts for several months, during which time the planet slowly moves away from the sun, reaches its greatest elongation (around 46 degrees) and then slowly moves back towards the sun, eventually disappearing into the morning or evening twilight (while remaining visible for most of the time). At its greatest elongation, Venus rises/sets some 3 hours before/after the sun.—Martin. J. Powell (<http://www.nakedeyepianets.com/#venus>)

The apparent movement and rest of the inner planets was empirically observed in the sky. These planets have elliptical orbits and seem to go faster or slower depending on their position at the two points of closest approach (perihelion) or two points of greatest distance (aphelion) from the sun. The moon, too, has variations in speed based on its orbit. Those variations are in fact quite marked, for the moon is by far the fastest among the planets and appears to move thirteen times more quickly than the sun. [63] The variations in its speed were linked to its movement, rest, and to its four observed phases. The irregularity in the moon's motion (technically known as 'evection') was already analyzed in Ptolemy's time. It was greatest ($1^{\circ} 15'$) at new moon and full moon, smallest at the first and third quarters.¹⁴

The ancient Semites were evidently aware of the moon's changing speed. In Babylonian astrological texts the apparent movement of a planetary body in the firmament is known as *alaktu*, while the path along which it moves is known as *harrānu*. The stationary points—that is, its times of apparent rest—are known as *manzazu* or, more frequently, *šubtu*.¹⁵ [64] The variant *manzaltu* means "place of settlement," while *šubtu* means "seat," "be seated/still." These terms contrast with motion. They yield the verbs *nazazu* "settle" and *ašabu* "sit down"—all used to describe the apparent rest of a heavenly body at a 'station' along its path.

In modern Europe we use the scientific words "node" or "apside," technical terms which describe the heavenly body at important points along its (elliptical) orbit. The Babylonians used the words *alaktu* and *šubtu* to describe the body's apparent motion or rest.

The moon, as we have seen, appears to move particularly quickly through the sky. It is quintessentially the "wanderer" and, like the other heavenly bodies, possesses a unique motion or path. This is illustrated in an ancient cuneiform saying: "The moon loses its way and goes another." Though a wandering planet, the moon also has a time of rest, *šubtu*, when it "sits," *ašab*. The lunar rest, referred to in the cuneiform texts, must be connected with the phases—the moon 'rests' in conjunction with its four phases.¹⁶

We have noted that, in practice, the beginning of the month was not counted from the time of the new moon, which occurs in the middle of the three day period of darkness and is astronomically invisible. Rather, the monthly chronology begins with the first visible light of the lunar crescent. Thus, the "resting stations" of the moon, as also its phases, were not calculated from any moment when the moon is unseen (its

¹⁴ "The general nature of the disturbing force on the moon may thus be stated. When the moon is either at the point between the earth and sun, or at that opposite to the sun (both which points are called syzygies), the force is entirely in the direction of the radius vector, and directed from the earth. When the moon is (very nearly) in the situations at which the radius vector is perpendicular to the line joining the earth and sun (both which points are called quadratures), the force is entirely in the direction of the radius vector, and directed to the earth. At certain intermediate points there is no disturbing force in the direction of the radius vector. Except at syzygies and quadratures, there is always a force perpendicular to the radius vector, such as to retard the moon while she goes from syzygy to quadrature, and to accelerate her while she goes from quadrature to syzygy." (Sir G. B. Airy, *Gravitation*, London 1884:62)—DN

¹⁵ Cf. Heb. *šabbat* ("sabbath") and *Enuma Eliš*, tabl. V.1: "He fashioned the stations [*manzaza*] of the great gods"; IV.R.5.66: "Ishtar stayed [*šubtu*] with Anu, the king, in his shining home."

¹⁶ This is a significant observation, portrayed over and over again in cylinder seals and other Mesopotamian depictions. The moon (the god Ea, etc.) characteristically *sits* while he receives devotees who are standing.—RS

conjunction), but rather from its first light. [65] Thus, one text: “On day 27 the moon descended (i.e., disappeared). On day 28, day 29, day 30, we looked upon darkness. But darkness he did not extend. On day 1 the moon was seen, on the *kūnu* day of the month of Tammuz.”

This describes lunar time, in which the days are calculated from the first visible light of the moon. The first day of the lunar month corresponded to the *kūnu* day of the Babylonian month of Tammuz. The 28th, 29th, and 30th days of the lunar month are the three days (nights) when the moon is unseen, that is, the three days of conjunction.

During the three nights of darkness the moon does not ‘sit’ but ‘passes over.’¹⁷ One text¹⁸ reads: “[The moon] was darkened; he did not sit on his royal throne.” Hence, the moon’s ‘sitting’ applies only to those times when the heavenly body is visible. The actual astronomical lunar conjunction (unseen and occurring during the period of darkness) does not enter into the calculation. Rather, the new moon becomes defined by two ‘stations’ where the deity ‘sits’—the last crescent of the old moon and the first crescent of the new. Many religious scenes depicted on the oldest cylinder seals show that quintessential wanderer, the moon, seated in a chair (stool or throne). The heavenly rest can belong to any of the four phases. The only modification required is that the astronomical new moon resolves into two visible phases.

How does the lunar power express itself on earth? More correctly: how does the combination of the moon’s power with that of the sun manifest here below? At the time of the quadratures (☾ and ☽), when lunar and solar pulls are working against one another, the consequent ebb and flood of the tides are weak. At those times the moon’s power is neutralized—it ‘rests’ in heaven. In the pictorial language of ancient astral religion, at these times god ‘sits’ on his throne and rests from his speedy wandering through the skies. The corresponding resting period on earth manifests in the weak tides and in the tranquillity of the ocean. [67] In contrast, at the time of the syzygies (new and full moons), when the solar and lunar powers are pulling together and when sun, moon, and earth are aligned—at those times we experience the strongest ebb and flood of the tide. In terms of astral religion, god is working doubly hard at these times, with especial intensity.

Accordingly, the new moon was not a time of heavenly rest when the divinity was ‘in his station.’ This was a time of motion, when the moon “passed over” (*usitiq*) and “did not sit” (*ul ašib*). But *at the first visible light of the new moon*, after three days of conjunction or spring tide,¹⁹ the sea is once again quiet—the moon ‘sits.’ Similarly, the full moon celebration occurred one or two days *after* its spring tide, marking the renewed quiescence of both the moon and the ocean. With both the new and full moon, heavenly and earthly peace occurred together, even though the phases of the moon were measured in seven day periods beginning with the first light. God rests in heaven as man rests on earth, according to the four lunar phases beginning with the first visible light of the new moon.

¹⁷ Thus, the three days of lunar darkness represent a ‘passing over’ from death to life—a resurrection, as it were—for they link the extinguished light of the old moon with the first light of the new moon.—RS

¹⁸ IV R. 5 in P. Jensen, *Die Kosmologie der Babylonier: Studien und Materialien*. Strassburg: Trübner, 1890:39–40.

¹⁹ ‘Spring tide’ refers to the fortnightly tides at new and full moon, when the lunar and solar tidal effect are in conjunction, resulting in the greatest change between low and high tide.—RS

In lunar religion, the foregoing phenomena were sufficient reason to end each lunar phase ('week') with a day of holiday and rest. This corresponds to the age-old predilection of Semitic peoples to celebrate the four seasons of the year with religious festivals and holy days on the solstices and equinoxes—solar 'stations,' as it were. Lunar religions had comparable holidays marking weeks and months. In both cases, astral religion demands that what first occurs in heaven must be emulated on earth. Religious endeavor, what one is to do, and mundane life all have their heavenly precursors. If god rests, man must also rest. [68]

Furthermore, man's thoughts will naturally gravitate to the four times in the month when god is resting, for on those days the deity has more time to care for man, to observe man, and to receive man's prayers and offerings. Where the official state religion was lunar, it is to be expected that not only would the calendar be based on weeks, but also that each week would be distinguished by a day of rest. God's rest is man's rest.

The cylinder seals, especially, depict the seated moon god. Offerings are brought before him, people (standing) are led to him by the priests, and various cultic proceedings take place. A passage in En-Nedim's *Fihrist* (c. 980 CE) relates that the moon-worshipping Harranians had four offering days in the month, corresponding apparently to the four lunar phases. The astronomical new moon (during the three nights of darkness) is not one of those holy times for, as we have seen, the deity does not 'sit' at that time. Rather, the principal offering would be on the ensuing night, that is, the night of the moon's first light. This, in fact, is the exact temporal setting for the seated god so frequently depicted on the cylinder seals.

On a broken piece of brick, from the library of Assurbanipal, is a lexical fragment which includes expressions referring to lunar chronology and astronomy.²⁰ The word *šabattum* occurs, and we venture that this is linguistically related to *šubtu*, and that it is a technical term specifically referring to the station or time when the lunar deity 'sits.' The cylinder seals depict the station in terms of a cultic performance. The lexical fragment, however, goes farther and describes the lunar station as "the day the heart is calm." We can infer that the Babylonians similarly celebrated the day in tranquillity. This would be a day removed from worldly affairs and dedicated to the calming influence of spiritual considerations. This 'calming day of the heart' is identical with *šabattum* ("sabbath" = *šubtu* = the stations of the moon) and is found at the end of each lunar phase or period, i.e., on days 7, 14, 21, and 28 of the lunar month, as calculated from the first light of the new moon.

[70] In Assurbanipal's extensive library a calendrical text was found which has aroused considerable interest among modern scholars. It originally derives from the third millennium and notes that days 7, 14, 21, and 28 are each an *umu limnu*, "unholy day" on which one should not do specified sorts of work. "The shepherd of the great people [perhaps a priestly epithet] must not eat prepared meat cooked with fire, nor prepared bread; he must not change his clothes nor put on clean ones; he must not make any offering. The king must not go up into a wagon, nor give an order. The priest must not speak in the sanctuary. The physician must not place his hand on the invalid. The day is not propitious for oaths."

The sabbath, then, is an official day of rest when the three most important functionaries—king, priest, and physician—are not permitted to carry out their duties.

²⁰ Nielsen's text has the five lines of cuneiform in transliteration.—RS

Furthermore, the day has religious significance, for the priest is especially enjoined to observe it (not to eat cooked meat, not even to change clothes). [71] Perhaps the most telling proscription is that upon the physician—religious reasons do not normally prevent the healing of the sick.

These official days of rest are not random days in the Babylonian 30-day month. Nor are they a 7-day span. They are the respective final days of each of the four lunar weeks—the *šabattu* days 7, 14, 21, and 28. Those days are calculated from the moon's first light, as we read in the following revealing description of day one: *Umu 1. . . inuma ina arhî sin innamaru*. "First day. . . when in the month the moon becomes visible."

The three nights of darkness

The Arabians considered the three dark nights at new moon as bereft of the divine light and, therefore, as entirely lacking in goodness. God has abandoned man.²¹ At this time the moon 'rests' insofar as it conserves its light and withholds it from man. Its cool light no longer bathes the Arabian wastes which are daily excoriated by the sun's fierceness. The pitch black night prevents all travel, and thus man is immobilized. [72] At this time high water overflows the riverbanks with potentially damaging consequences, and in the days before the new moon storms often accompany what is called the "spring tide," the high water which occurs twice a month (at new moon and full moon). The idea must have been near at hand that god had not only abandoned man, but that he was angry. The time before the first light of the new moon was, therefore, a time of mourning, of propitiation, and of abstinences.

According to Jensen, the technical terms for the lunar conjunction in Babylonian astronomy are *ud-na* and *bubbulum*. *Ud-na-a* means "day of rest." *Bubbulum* (and its variant, *biblum*) comes from the verb *abalu* (root: *wbl*), meaning "continuation" or "departure." "According to the Babylonian conception, the moon rests at this time." The rest associated with the conjunction lasted approximately three days, as attested in a number of passages which witness to more than a single day's rest (as would be the case with a "sabbath"). So, day 28 of the month is designated a "day of rest" in some texts, while day 30 is so designated in others.²²

In the passage noted above we find the word *šabattum*, "the rest/station of the moon," explained by the phrase *um nuh libbi*, "the day of the calming of the heart." [73] The astronomical conjunction is described by a synonym, *um idirti* = "the day of darkening," and three lines earlier as *um kispî* and *um nubattim*. These latter epithets are often found together. *Nubattu*, according to Delitzsch, means "time of atonement/prayer," also "remembrance of the dead." We are, then, speaking of a holy time when no work is done. The conjunction-rest was evidently solemnized by a ceremony of mourning. There could be no greater contrast with the ensuing festival of joy upon the first visible light of the new moon!

Precisely how people solemnized the three nights of darkness is not certain, and one can only speculate. Abstinence of all kinds was probably practiced. According to an old Arabian tradition, Abraham fasted for three days each month. One muslim author

²¹ This is the ancient origin of the "three days" spent in the underworld, in the belly of the whale, in the earth before resurrection, etc. (Ex 10:22; Jonah 1:17; Jn 2:19–22; Rev 11:9 & 11. Cf. Gen 42:18; Ex 15:22; Es 4:16; Mk 14:58; Acts 9:9.)—RS

²² The discrepancy disappears when we realize that the "rest" (at the lunar conjunction between months) lasted a full three days.—RS

maintains that the Harranians also fasted the first three days of the month.²³ According to a south Arabian temple inscription²⁴—one evidently dealing with the new moon celebration—we are led to believe that relations with women were permitted only on the third day of the solemnity. [74] A passage from the Epic of Gilgamesh points in the same direction, in that the hunter brings the whore to Gilgamesh only on the third day.²⁵

We began this investigation with the suspicion—on mathematical grounds alone—that the Arabians adopted a two-month timespan consisting of eight lunar weeks (56 days) and augmented with a single period of three days. That is in fact what we find in the record. Furthermore, the week of seven days corresponds with the lunar phases as well as with the periodic and well-attested ‘sabbath’ day of rest, while a three-day new moon solemnity appears quite probable. In other words, both the three- and the seven-day periods of the moon are well attested. Whether they were adopted at the same time in the above schema, however, cannot yet be absolutely proven by the recovered finds.

N-ts-r and the lunar origins of the flood story

One useful text which validates the above is the flood story from the Epic of Gilgamesh (tablet 11).²⁶ The flood, we recall, was ordained by an assembly of deities. Among these were Shamash (the sun) and Ea (the moon). The time indicated, then, must be new moon, when these planets are together (in ‘conjunction’). This happens also to be a time of unusually high water—namely, at spring tide, created by the combined pull of sun and moon in conjunction and occurring twice a month (at new moon and full moon). [75] In the Epic we are evidently dealing with such an event, for many heavenly deities are assembled together: Anu, Bel (the sun), Ninib (Mars), and Ennugi (Saturn), among others.²⁷ Some scholars have supposed that, due to this unusual conjunction, we can precisely date the flood. Be that as it may, the original report dates to the third millennium and deals with an unspecified time before its writing. For our purposes, we note that both Sun and Moon are ‘present’ at the flood. Furthermore, the New Moon, through some sort of omen, makes known to Ut-napishtim (the cuneiform Noah) the approaching catastrophe and orders him to build a ship.

Unlearned in shipbuilding, Ut-napishtim demands that Ea (the moon) provide a plan from which the boat is to be built. This plan was forthwith provided by the moon on day 5 of the lunar cycle. It should not escape our notice that on that day the moon has the approximate appearance of a boat ☾, ²⁸ as we know from Babylonian depictions.

²³ Chwolsohn II:74–75.

²⁴ Glaser 1054 (= Vienna Museum 7).

²⁵ Tablet 1, col. III, line 47.

²⁶ For the text in translation with discussion see, for example, A. Heidel, *The Gilgamesh Epic and Old Testament Parallels*. Chicago: University Press, 1946, p. 84.—RS

²⁷ In the religious myth of the ancient Levant such a conjunction of planets is ‘an assembly of gods’ and the necessary prelude to momentous events in heaven and/or on earth (cf. Gilgamesh XI:i.13–19; Baal and Anat AB-B [ANET I:94, lines 15, 18, 21] etc.). Modern science has shown that the only heavenly bodies with significant effect on the tides are, in fact, the moon and the sun (cf. <http://www.geocentricity.com/ba1/no092/wpa.html>).—RS

²⁸ We recall that in temperate and equatorial latitudes, the moon in its phases appears more horizontal than in northerly climes.—RS

The sign for the flood's beginning (tabl. 11, line 87) is ordained by the sun, Shamash, as follows: it takes place when the sun, earth, and moon are in a straight line (conjunction), and when the moon is opposite the sun, that is, when the face of the moon is entirely lit by the sun's rays. Hence, we are speaking of day 14 after the new moon. This is the time when the moon, being full, is completely "master over the darkness."²⁹ [76] This is the moment which, in the flood story, introduces the catastrophe, for on that night (*ina lîlâti*) "a heavy rain began to fall." Ut-napishtim found the weather "frightful to behold" and entered the ship. The ensuing verses describe how the spring tide *abûbu*, accompanied by storm and hurricane, inundated the entire Euphrates lowland via a giant tsunami from the sea, *tâmtu*. This was an exceptionally powerful spring tide, one which lasted not the ordinary few days, but a full six days and nights (line 128).

On the seventh day—that is, at the last quarter moon ☾—the storm abated, "the sea rested," *inûh tâmtu*. The sabbath was, then, the day of rest. The day when the moon "rests" in heaven—*šubtu, manzazu*—is, as we have seen, also the day when the earth (sea) and nature must rest. It is the time of low water, the *šabat* when people celebrate the "day of the calming of the heart."

Beginning with this day of rest,³⁰ the mountain in the "land of *Nitsir*"³¹ held the boat fast for six days.³² The seventh day, however, was no day of rest, for on that day Ut-napishtim released a dove which returned. This means that as yet there was symbolically no "resting place" or "station," *manzazu*. The first to find such a place was the raven—it did not return to the boat. At what particular times the various birds were released is not specified. One may suppose, however, that Ut-napishtim released the three birds on three consecutive days. This would correspond to the three days/nights of conjunction (darkness) following the "empty moon."

After these days of darkness is the "day of rest" which falls under the sign of Saturn, whose symbol is none other than the black raven. [77] This day of rest is the joyful day

²⁹ In this context, it is not possible to exaggerate the importance of the full moon as the religious symbol of victory over ignorance. The moon shines in the darkness, and the full moon does so completely and without reserve. The conquest of understanding over ignorance is, in fact, the essence of gnostic (lunar) religion.—RS

³⁰ Day 21, the day of the last quarter moon, and the beginning of the fourth lunar phase.—RS

³¹ In this early passage from the Old Babylonian flood story, we find the Semitic root which will be of such significance in Christianity (Jesus the "Nazarene") two millennia later. *Nitsir* has the same consonants (nun-tsade-resh) as the later Hebrew *natsar*, "watch, guard, keep" (BDB p. 665). Thus, already two thousand years before Christianity *n-ts-r* had important sacred connotations. It was the name of the mountain (and region) which offered safety ("salvation") to the ark (Tablet XI:140, Heidel p 86). *N-ts-r* was also the name of the ark itself, as is attested in an Old Babylonian fragment where the ark which "preserves" the seed of life is called *natsirat* ("savior") *napishtim* ("of life." Lambert & Millard 126–27). Finally—and perhaps most remarkably—*nitsirtu* in Akkadian means "secret knowledge," particularly received from the moon god Ea/Enki. One scholar (Noegel) proposes that the letters (ideograms) of *nitsirtu* themselves may be a "hidden" (cryptic) reference to the name of the moon god. (See Thomas:57, n. 55.)—RS

³² Thus, the top of the mount *nitsir* was barely submerged. That summit was at once the spiritual, symbolic, and physical 'top of the world,' the gathering place of the gods—and, now, where Ut-napishtim resided and from whence all future life would originate. For all these reasons, the significance of *nitsir* cannot be overestimated. It is at once the goal of the enlightened person (Ut-napishtim means "he found life") as also the dwelling place of the gods, that very unique location where god and man meet.—RS

of the new moon ☽, a return to the beginning point of the story. On this day and on the peak of the mountain *Nitsir* Ut-napishtim solemnly offered a new-moon offering. It was there, too, that the gods/heavenly bodies once again assembled as they did earlier at the time of new moon, when they first ordained the awful flood judgment for mankind.

According to the above explanation, the story takes place within the timeframe of one complete lunar cycle. It begins with a new moon and ends with a new moon. The “flood” is an ordinary spring tide which, however, has been magnified beyond all bounds by a unique and historic planetary alignment, with catastrophic consequences for the weather here below—indeed, resulting in global inundation and destruction.³³ In the story, the beginning of the flood coincides with the spring tide that occurs at full moon—that is, in the middle of the month. Incidentally, this agrees with a statement of Berossus, who also begins the flood on the fifteenth day of the month.

The mathematical basis of the lunar calendar

[78] The flood story implies that the three days function as an integral part of the moon’s calendar. We know then, that we are dealing with the supplementary period at the end of each second month, when three days are added after each eight weeks have passed. The precise calculation assigns $7\frac{3}{8}$ days to each week. The remaining $\frac{3}{8}$ day is put aside and thus eight weeks amount to 56 days, calculated from the new moon ☽ and ending at the fading lunar crescent ☾ of the following month. The three-day remainder takes place from the last crescent ☾ to the new moon ☽. This completes the bi-month of two lunar cycles, namely, $56 + 3 = 59$ days. In this way, the new month begins again with the first crescent of the new moon. The bi-month of two lunar cycles is the natural basis of a lunar calendar, one in which the synodic cycle of the moon (a “month”) is reflected in four lunar phases, these accounted as four “weeks.”

We can now explain a surprising fact associated with the names of months in the Arab calendar from ancient times to the present day. The six months of the winter semester have not six, but only three names. This is known from north Arabic literature and its calendar system. *Tsafar* refers to the first pair of months, *Rabî* to the next pair, and *Gumâdâ* to the final pair.³⁴ When the Arab wishes to specify a particular month, he refers to 1 or 2 *Tsafar*, 1 or 2 *Rabî*, and so on.³⁵ As regards the summer semester, the fifth and sixth months are called *Dhu-lqa’da* and the equivalent *Dhu-lhigga*, both names meaning “celebration month.”

[79] The cult of the ancient moon religion, with its associated time periods and symbols, endured the longest in the northern city of Harran.³⁶ Even far into Christian times—at least in Harranian ecclesiastical calculations—time was accounted there in

³³ The story of the flood is thus directly bound up with ancient astrological belief and speculation. The planets were not remote bodies in the sky. Their positions and motions were carefully studied, for it was thought that they largely caused events here on earth.—RS

³⁴ The Syrians use 1 and 2 *Tishri* as well as 1 and 2 *Kanûn* for *Rabî* and *Gumâdâ*.—DN

³⁵ *Muḥarrem* is a secondary name for 1 *Tsafar*.—DN

³⁶ Throughout recorded history, Harran was a noted hotbed of heresy and the northern center of the lunar cult. The lunar-solar opposition came to a head several times in history, perhaps most famously in the elevation of Nabonidus (champion of the moon god and of Harran) to the throne of Babylon—much to the chagrin of the powerful Marduk priesthood, which allied itself with the foreign Persians and the exiled Jews to defeat Nabonidus and bring about the end of the Babylonian empire.—RS

terms of true lunar weeks and months. A revealing notice by En-Nedim reads: "There are four periods in the month, the new moon, the first quarter, day 17, and day 28." We must be dealing here with the the lunar month, the four phases ("periods") being weeks. Two of the phases are named. For the other two, En-Nedim gives a corresponding day. Since the last phase is noted as "day 28" (counted from the new moon), the phases must be reckoned as four periods of seven days each. These, we have seen, require the existence of a supplemental three-day period. However, the mention of "day 17" at first appears entirely incomprehensible. Nevertheless, it is a direct consequence of the three-day period, as we shall now see.

When three days are added to each bi-month, the result is that the eighth week has 10 days. The months, then, alternate in durations of 28 and 31 days.³⁷ [80] Though, according to the natural order,³⁸ the three days occur around the time of the new moon, two possible ways of inserting them into the calendar exist: one can add the three days either to the old month or to the new. Which of these was used cannot be proven in every case. Perhaps both possibilities were variously employed in different regions and eras.

According to the first possibility, the closing days of the week ("sabbath") fall on days 7, 14, 21, and 28 of the month, except that every eighth week has ten days. When the three added days are included, the number 31 appears.

According to the second possibility, one adds the supplemental three days to the beginning of the following month. The supplementary period, because it occurs at the beginning of the month, adds three days to all the dates in that month. Thus, the sabbaths are now 7+3, 14+3, 21+3, and 28+3. Thus, the first week of the new month has ten days, and the closing days of its weeks are days 10, 17, 24, and 31. Astronomically, the phases (or 'stations') of the moon are in this case not calculated as usual from the first light of the new moon. Rather, they are calculated from the last light of the old moon, and the interim three nights/days of darkness between ☾ and ☽ are included as part of the oncoming month. The resulting second month technically has 31 days. Yet, the texts may still describe 28 days,³⁹ [81] for they are usually interested in the lunar phases and ancillary data are often ignored.⁴⁰ Nevertheless, we know that either the previous or oncoming month must have 31 days, for 28 days are not a lunar cycle. Rather, 28+31 = 59 days make up two lunar cycles = one bi-month.

The lunar calendars in Harran and in Islam

In Harran the calendar was lunar, but the precise way the months were calculated there is difficult to determine, for the Arabic authors who have passed on this information give the times and durations after Islamic custom, or mix their descriptions

³⁷ See n. 7 above.—RS

³⁸ That is, the three nights of lunar darkness.—RS

³⁹ Thus, many of the ancient texts are not technically precise. They still refer to the longer month in the usual 28 day format, ignoring the 3-day supplementary period (see previous footnote). This is perhaps in order to avoid confusion, but also because the texts, festivals, and calendar are generally concerned with the 7-day lunar phases and rarely with the 3-day supplementary period of darkness.—RS

⁴⁰ That is, mention will only rarely be made to day 10, 17, etc., because the lunar phases are in weeks, and the lunar calendar thus naturally deals with the multiples of 7. What this means is that day 10, 17, etc. are in practice mentioned only when attention is being directed to the three-day supplement.—RS

therewith. Presently, the Muslim calendar has months alternating between 29 and 30 days, and in such a calendar true lunar weeks cannot be calculated. In this case, though lunar weeks have been abandoned, the bi-month of 59 days is still practical, consisting of 29+30 days rather than 28+31 days.

According to a passage from En-Nedim, a mixing of elements is also noted in the Harranian calendar. After the first quarter one awaits the full moon, which the author gives as “day 17.” By this we surmise with security that he is describing the second month of the lunar bi-month, when the full moon falls on day 17 and closes the second lunar phase. The number is resolved into 14+3 and 10+7. It encompasses a seven day week, a supplemental three day period, and also a ten day week ([7+3]+7). During the month when the full moon falls on day 17, the first quarter must fall on day 10 and the new moon on day 3. [82] The last crescent of the old moon is the new month’s beginning.

The Fihrist (Bk. 9.5 §1,12) mentions a thirty day fast which begins on the 8th of the month *Adhâr* and continues until evening on the 6th of the following month. This shows that *Adhâr*, the twelfth month of the year, had 31 days. Theoretically, only the second of each bi-month had 31 days, with its weeks ending on days 10, 17, 24, and 31. If the twelfth month has 31 days, then the same must be the case with the tenth month, 2 *Kânûn*. In fact, in §10 of the same book we read that on the 24th day (21+3) of 2 *Kânûn* a moon festival took place.⁴¹

Among Arabs of the present day, the great annual pilgrim celebration to Mecca—in which every upstanding Muslim must participate at least once in his life—takes place in the twelfth Arab month and focusses on day 10 *Dhu-lhîgga*, that is, day 10 of the second month in a bi-month. This festival has been taken over from the ancient pagans, where it was an old moon festival whose ceremonies were patterned after what had taken place in the skies.⁴² [82] The actual festival, the so-called *Hajj* of ‘*Arafa*, begins in the evening on day 9. The pilgrim stays awake during the ensuing night which is celebrated with various rites. On the following day 10, the biggest holiday of the year takes place, also celebrated by Muslims everywhere who are not participating in the *Hajj*. Not only is day 10 specially distinguished as a holy-day—the entire first ten days 1–10 of the month are celebrated and constitute an especially holy period. These are the “ten nights” (cf. Sura 89:1) in which certain things are forbidden.

While Muslim scholars aver that this holy 10-day period was taken over from paganism, and while it undoubtedly reflects an old lunar celebration, we must admit that the ancient pagan significance of these ten holy days and nights is lost to us. The present festival, as is common with religious observances, no longer retains its original significance. A celebration of ten days duration has meaning in the lunar (though not solar) calendar—namely, at the beginning of the second month of the bi-month, the month which begins with the light’s disappearance at the end of the previous lunar cycle. In this case, the new moon occurs on day 3 and the end of the first week on day 10. A celebration on that day corresponds to the first quarter ☾. This was lost when calendars began to calculate all months from the new moon. The 10-day week was

⁴¹ We may suppose that moon celebrations also took place on days 10, 17, and 31 of the twelfth month. —RS

⁴² Hugo Winckler, *Mitteilungen der Vorderasiatischen Gesellschaft*, 1901:4–5; and by the same author, *Arabisch-Semitisch-Orientalisch*, Berlin, 1901:96–101.

uprooted from its original starting point and became a mere number, one reflecting a time period which no longer corresponded to any phase of the moon.

The Koran reads: "It is he who has ordained the sun to shine by day, and the moon for a light by night; who has appointed her [i.e. the moon's] stations, that you might know the number of years and the computation of time. God has not created this, but with truth. [84] He explains his signs to people who understand" (Sura 10.5, Sale's translation). So, the lunar stations *manâzil* (Bab. *manzaltu*), as reflected in the phases of the moon, serve to calculate the passage of time, implied in the foregoing discussion. They are the "signs" *âjât* (Bab. *adannu*)—that is, the signs marking time—which enable man to have any chronology at all. "The sun goes to his resting place." "And the moon, we have appointed certain stations for it, until it resembles the old cluster of a palm tree" (Sura 36:38–39).⁴³ Here, the sun's station is described as "resting place," *mustaqarrun*. The moon's stations are *manâzil*, identified with its phases.

The Babylonians borrowed from Arabia

It is easy to see the advantages offered by a calendar with days, weeks, and months based on nature, on that which is directly observable in the sky. This applies particularly to a wandering people such as the bedouins of Arabia, accustomed to extended travel by night. The lunar calendar offers practicality, in that the weeks and months are neatly synchronized.⁴⁴ The first day of the month is also the first day of the first week in the month. The last day of the month is the last day of the last week. The lunar calendar also harkens back to the origins of the week, which is a division of the month in a repeating and predictable cycle.

Four weeks, one month—these concepts can be applied to any time in the calendar. The same, admittedly, can be said for the Babylonian calendar with its five-day weeks. But the great difference lies in the fact that the Arabian lunar month, with its seven-day week, reflects the *natural* periods of lunar phase (week) and lunar cycle (month). Where there is no artificial month, there is no need of an artificial calendar. [85] Anyone can immediately see, by looking at the moon's phases, what day and what week of the month it is. This is why the lunar stations (phases) are indicators or signs to man, signs which interpret the time—even as in the modern clock the hour hand moves through a complete circle twice a day, and the time is immediately read from its position. So also, in one month the moon completes one cycle through the heavens, originating (as it were) in the sun. Its location visibly changes daily, and so it communicates the day and the week. Its appearance also changes from day to day through 28 mini-phases, 'signs' which convey the day of the month even as the numbers of a modern clock convey the hour.

Dr. Glaser informs me that, for practical purposes, the South Arabians of the present day also reckon the days of the month according to the phases of the moon. They name the latter with corresponding time referents. For example, 'first' and 'last' quarter are the names for days 7 and 21 respectively. Thus, we surmise that in modern as in ancient

⁴³ This Koranic verse is quaint to modern readers. Among its curiosities we highlight the comparison of the moon to the datepalm—more precisely, to the palm's cluster of fruit. Though the meaning of this comparison is obscure, the palm tree figures importantly in ancient representations of the tree of life, the *axis mundi*, and the acquisition of the "beyond"—that is, of gnosis.—RS

⁴⁴ This is not the case with the solar calendar, in which the month can begin in the middle of a week.—RS

times the phases of the moon guide the Arabian in matters of time, even though the official reckoning of the modern state is different.

The seven-day lunar week also plays a special role in the astronomical division of the firmament, which among the Arabs is in 28 parts rather than the 12 of the Babylonians. This surely owes to the lunar division of the month into four weeks of seven days. Interestingly, in primeval India and China we also find this astronomical division into 28 “houses.” In China one encounters seven “early-year” houses, seven “summer” houses, and so on.

[86] In one South Arabian inscription⁴⁵ we find the word *mšhrm*, vocalized *mušahhirm*. Embedded in the word is *šahar*, the South Arabian name for both “moon” and “month.” Winckler translates *mušahhirm* as “maker of the month,” a divine agency which ensures order in the very irregular wanderings of the moon. *Mušahhirm* is a sort of astronomical and calendrical overseer who makes the necessary adjustments to the monthly and yearly calendar.

In another inscription,⁴⁶ the word *hagg* shines additional light on ancient South Arabian religious festivals. The phrase “on the third day of the *hagg*” (ll. 3–4) could refer to the three day celebration at new moon. If that is true, the South Arabian *hagg* was identical with the Babylonian *udna* or *bubbulum* and was originally an astronomical term, even as *bubbulum* refers to the lunar conjunction at new moon. [87] In later Arabic *hagg* is the general word for any religious celebration, while *hilâl* denotes any celebration (both religious and secular)—but most especially the one applied to the festivities and solemnities at new moon. The meanings of both *hagg* and *hilâl* could have become more general in the course of time. As regards the festivities at new moon, both were eventually used interchangeably.

Regarding the word *šabat* in cuneiform, we saw above that this was a terminus technicus for the lunar “station.” The form *šabattu* seems at first glance to be foreign—genuine Babylonian would be *šabtu* (from *wašab*, “sit, rest”). [88] The presumed astronomical meaning of the word is *šubtu*, undoubtedly the correct nominal form in Babylonian. Therefore, *šabat* must be considered a foreign word in Mesopotamia. We have already seen that its associated rites were of Arabian origin. All signs, then, point to the probability that *šabat* was an astronomical/chronological term imported into Mesopotamia from Arabia. Its derivation would be from *thabat* < *wathaba* “sit,” for Arabian “th” yields “š” in Babylonian. We end this etymological discussion with the daring conclusion that both *hagg* and *šabat* were originally Arabian words referring to a lunar festival.

The trinity, sacred numbers, and the stars

A sacred moon means that the lunar phases are sacred; sacred lunar phases mean that the lunar periods are sacred; and sacred lunar periods mean that certain numbers are sacred. Heavenly light is the manifestation of god, and in the different phases of the moon god reveals himself in different forms, manifesting sacred time—“now”—in his ever-changing form. Every new day (night) he offers a new form, a new reality. The calculation of time here on earth is modeled after changes in the heavens. The ‘resting-places’ of god (the ‘stations’ and conjunctions) are models for the resting of man on

⁴⁵ D. Chwolsohn & J. Euting, *Corpus Inscriptionum Hebraicarum*, St. Petersburg: Schmitzdorff, 1882. 83: no. Os. 14.

⁴⁶ Vienna Museum Gl. 1054 no. 7.

earth. [89] Those stations can be calculated, and therefore the sacred times of the heavens become sacred numbers, while those numbers become sacred to man.

3, 7, and 10 (3+7) are sacred numbers associated with the week. The moon requires seven days to make its journey from station to station. It disappears from the sky for three days, hence 7 and 3 are divine or sacred numbers. Other reasons also reveal to man the sacrality of these numbers. The sun and moon, together with the five planets known to the ancients, make up seven heavenly bodies. They are distinguished from the fixed stars that never appear to move in that they have unique motions and paths. The Babylonians thought of the seven heavenly bodies as special deities. It is little wonder that the seven days of the week have been named after these deities, a custom which still survives in the West and harkens back to the most ancient times.

Of the seven heavenly bodies, three were particularly venerated. The sun, moon, and Venus made up the threefold divine symbol—the trinity—among both the Arabians and the Babylonians. Hence, the number three is the special number of the divine. For three days each month—during the three days of conjunction—the sun and moon appear to stay together. This reinforces the sacrality of the number 3.

In almost all theological systems of the western Semites and Babylonians, the highest godhead is associated with the number three. The learned priesthood of Babylon venerated the seven heavenly bodies that had motion, but above them it placed a divine trinity, with the highest god at the center. [90] Anu, Bel, and Ea represented the firmament, the air, and the earth. In other words, all that was visible to the eye was associated with the divine and divided, as it were, into three. Three pantheistic gods, and seven planetary gods comprised ten Babylonian divinities.

About 2,000 BCE, the constellation Taurus (the divine ox) was located in the ecliptic at the beginning of spring. The year began when either the sun or the new moon entered this constellation. Here one also finds the Pleiades—the seven stars—next to the triangle of Taurus. Not far away in the night sky are the ten stars of Orion, of which the three stars in its 'belt' are especially bright. One sees what one looks for, and ancient man saw the sacred numbers 3 and 10 as recurring, brilliant, and permanent fixtures in the heavens, numbers which he in turn used to divide the months throughout the year. In the zodiac—god's sacred path—Sagittarius is made up of seven stars, Scorpio likewise, Libra with three, Virgo and Leo with seven. The Great and Little Bear at the celestial north pole both have seven stars, and so forth. When these numbers are associated with the lunar stations and with the conjunction of the moon, the sacredness of the numbers 3, 7, and 10 receives redoubled confirmation in astral theology.

Not only were 3 and 7 sacred numbers associated with lunar chronology. The sun's course through the year was divided into four seasons, and the month into four weeks. The moon god makes his journey twelve times annually. So, the numbers 4 and 12 also had a certain degree of sacrality with respect to the moon. The Minaeans of southern Arabia had four principal divinities, the Assyrians twelve.

[91] As we shall see, the astronomical numbers first manifested themselves in the disposition of shrines and the organization of cultic rites, then in theology, and finally in all aspects of life. Astronomical compass points were essential in laying the foundations of temples and in the orientation of rituals. So were sacred numbers. Such numbers brought luck in daily life, and one took care that they appeared whenever possible. They were used as 'round' numbers, as we witness in calculations where those numbers are used at the expense of precision.

Because we know that the sacred numbers followed the calendar and affected the cult as well as life in general, it is possible to reconstruct certain primary features even when a calendar has not survived—as is the case with South Arabia. Unfortunately, the inscriptions which have survived depart little from stereotypical dedications. Larger internally-consistent narratives are rare, as are inscriptions with historical information. Numbers often occur in clay fragments with gaps, preventing definite conclusions. Nevertheless, we can at least say with confidence that the numbers 3, 7, and 10 often served cultic functions and were used with above average frequency.

The two principal festivals

We know that the pre-Islamic Arabs, and also the Babylonians, had a solar year in which it was necessary to intercalate some days at the end of twelve lunar months. In this way, the annual and monthly feasts were harmonized with the seasons. The two principal seasons that witnessed major festivals were spring and autumn. The spring festival was the celebration of new life after the birthing of the cattle. The autumn festival was the celebration of plenty after the harvest. With almost all ancient Semitic peoples, the year was divided into these two semesters, and the principal annual festival was in the one or the other.

On Arabian soil the nomadic element predominated, and it appears that the primary annual celebration was in the spring. The first month *Ragab* is “the holy month,” *al-šahar al-ḥaram*:

The feuds are suspended, one can leave his own territory and travel everywhere in security... The sacred period began with the new moon.⁴⁷

[93] The second annual festival period corresponded with the harvest in autumn. It took place in the first month of the winter semester, *Tsafar 1* (not *Dhu-lḥigga*), and was called “the sanctified,” *muḥarram*:⁴⁸

Tsafar received its name from the markets in Yemen, called *al Tsfariya*.
The Arabs brought to them all their grain, and who stayed behind starved.
[Mas’ûdi 3.417]

Wellhausen correctly observes: “Markets accompany feasts and places of celebration. If *Tsafar* was the month of markets, it was likewise the month of feasts” (*Reste* p. 99).

After the coming of Islam, the spring *Ragab* festival was suppressed on account of its heathen origins. The autumn festival, on the other hand, was canonized, and today it still draws muslims from throughout the Arab world to Mecca. The presumption is strong that originally it was customary to bring an offering to either festival—a newborn animal in the spring, a portion of the harvest in the fall. Indeed, according to Mas’ûdi the Arabs brought grain with them to the harvest festival. Yemenite inscriptions very often have the stereotypical expression: ‘*aššara wa farra’a*, “[he gave] one tenth and firstborn.” [94]

⁴⁷ J. Wellhausen, *Reste arabischen Heidentums*. Berlin: G. Reimer, 1897, p. 98.

⁴⁸ The *Ragab* new year festival generally took place in April, the *Tsafar muḥarram* in October. Both months and their celebrations would have been aligned with the equinoxes, that is, March 21 and Sept. 21.—DN

The “firstborn” certainly refers to the offering of newborn animals and hence to the spring festival. The “tenth” no doubt to the autumn festival. This is verified in an inscription reported by Glaser, now in the British Museum, which explains the “tenth” by the harvest. One can conclude, then, that these offerings marked the two principal festivals of the year. The “tenth” can be interpreted as 1/10 of the harvest, or as the offering anciently brought on the 10th day of the month to the temple. In the latter case the “tenth” would betray a cultic holdover from the ancient Arabian moon religion, a sacred number deeply embedded in later times. These primary festivals took place in specified months and were hence bound to the sacred lunar phases.⁴⁹ As annual celebrations they were also bound to the sacred solar seasons.

The Babylonians inserted extra days in the year from time to time in order to accommodate the sun’s annual cycle to nature. They needed to do this because the Babylonians used 5-day weeks, and hence their month was of thirty days. [95] Twelve such months amounted to 360 days—five days short of the annual solar cycle. Thus, every six years the Babylonians added an entire month consisting of thirty days (6 x 5). Thus they brought their artificial calendar back into synchronization with nature. How this calendar affected the timing of the festivals we do not know.

Those who adopted a lunar calendar had a similar problem. After twelve lunar months (or six bi-months) there are eleven days left over in the solar year.⁵⁰ One can be fairly certain that the ancient Arabs approached this problem in a similar way to the Babylonians, namely, by adding a month at intervals. The Arabs must have added a month of 33 days (3 x 11) every three years. This extra-long month is more than one lunar cycle, and produces secondary difficulties. To bring the scheme into alignment with the moon’s phases, one must abandon a regular 3-yearly addition and make the adjustment more frequently and somewhat irregularly. In one known system, an extra month of 33 days was added in years 3, 5, 8, 11, 13, 16, and 19.⁵¹

There is evidence that whenever a thirteenth month was added, it was a month of fasting and solemnity, even as exists today among the Arabs. Islamic writers note that the Harrarians fasted “a full month.” They ended the fast at the time of the new moon, and also at the time of the entry of the sun in the constellation of Aries.⁵² At about the turn of the era, the entrance of the sun into the constellation of Aries marked the vernal equinox and the beginning of the year. So, the fast occurred at the conclusion of the old year and ended with the beginning of the new. This fast can only refer to the added thirteenth month, for it begins with a new moon and ends with a true new year.

The additional month is a manifestation of the incongruity, evidenced by nature, between lunar and solar chronologies. If it was solemnized with a fast—as was the three-day addition to the first week every two months—then this added month was also a time of sadness and reflection. According to Hommel, the raven symbolized the added month. The raven is the old “enemy,” the evil deity. The thirteenth month was an unhappy time and, hence, the number 13 became an unlucky number.

⁴⁹ The spring festival began with the new moon ☽. The ten sacred days of the autumn festival began certainly with the old moon ☾ and continued through the three nights of darkness and the first week, ending at the first quarter ☾.—DN

⁵⁰ The lunar cycle lasts 29.53 days. 12 x 29.53 = 354.36 days, almost 11 days short of the year.—RS

⁵¹ Nielsen discusses further mathematical complications which are omitted here.—RS

⁵² Chwolsohn II:75.

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