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The Jubilee Cycle

A jubilee cycle consisting of 7 sets of 7 years is remarkably defined by phases of the Moon

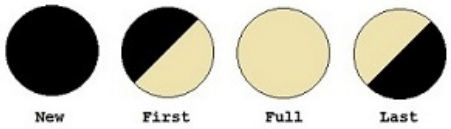
In early Israel, a span of 7 years was used to compute various long time cycles. One of these long time cycles was a span of 7 sets of 7 years (or 49 years). After 49 years were counted-out, a special jubilee celebration was held to announce the commencement of the jubilee year (or the 50th year).

The content of certain early-written manuscripts reveals that the jubilee year may have been celebrated in association with a system of lunar reckoning. As an example, Scroll 4QOtot is explicit in showing the routine occurrence of a lunar-cycle 'sign' in association with a count of the jubilee cycle. (The priests when revolving their courses throughout the jubilee time cycle appear to have reckoned a lunar-cycle 'sign' at a continuous frequency of each 3 years).

As is shown below, astronomy makes it more certain that if the priests had observed a lunar-cycle 'sign' (at the frequency or rate of each and every 3rd year) then the priests might have been observing one of the quarter phases of the Moon. It seems that the boundary of a quarter phase of the Moon does literally revolve into almost perfect alignment with the boundary of each 3rd year.

Note: There are 4 distinct quarter phases of the Moon: 1.New phase; 2. First-quarter phase; 3. Full phase; and 4. Third-quarter phase. The quarter phases are easy to recognize on the basis of observation. At the new phase the Moon is dark and appears to be completely invisible; at full phase, the Moon is fully-illuminated and is round-shaped; and at the first quarter and at the third quarter, the Moon is half illuminated and is distinctly divided into half-parts (half-light and half-dark, or the reverse).

1. Beginning Phase (Moon is Dark).
2. First Quarter (Half Moon).
3. Full Moon Phase (Whole Moon).
4. Last Quarter (Half Moon).



For the purposes of presenting a clear analysis, the lunar quarter (which completes in 7.38 days) will hereafter be referred to as a 'lunar week'.

Of interest about the content of Scroll 4QOtot is that 24 courses of Temple priests are shown to have revolved or rotated their respective courses throughout a jubilee cycle (of 49 years).

Each course that is listed is by name the same as is listed in those Bible records that pertain to the First-Temple (under King Solomon). Josephus, who flourished late in the era of the Second-Temple, also mentioned that 24 courses of priests were rotated, and that each priestly course served the Temple for a term that lasted for only one week.

What is unique about the priests that are listed on Scroll 4QOtot is that they are shown to have been on duty at, or even prior, to the epoch of creation. The rotation of the Temple priests (24 courses) is thus shown to have been timeless (or endless) in that they are shown to have been on duty and serving in Heaven (well prior to the time Temple services were instituted by King Solomon).

Even more unique about the 'heavenly' priests that are listed on Scroll 4QOtot is that (throughout the rotation of their 24 courses) a lunar-cycle 'sign' appears to have been reckoned (at a continuous frequency of each 3 years). Also unique is that each cycle of 7 years, and each jubilee cycle of 49 years, appears to have been endlessly accounted for.

This mystic depiction of 24 courses of priests performing unending services in pace with a 7-day cycle, a 3-year cycle, a 7-year cycle, and a 49-year cycle is puzzling in that 4 diverse time units are referenced.

Remarkable here is that the various cycles that are listed (on Scroll 4Qotot) can all be recognized to be elements of an effective time-tracking system (when all are brought under the lens of astronomy).

As is shown in the subsequent diagram, a jubilee calendar becomes the inherent, or the automatic, result of simply skipping the count of a lunar week each and every 3rd year:

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    A JUBILEE CALENDAR OF LUNAR WEEKS

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Year  1:  49 weeks    Year  8:  49 weeks
Year  2:  49 weeks    Year  9:  49 weeks
Year  3:  49 weeks    Year 10:  49 weeks
Year  4:  49 weeks    Year 11:  49 weeks
Year  5:  49 weeks    Year 12:  49 weeks
Year  6:  49 weeks    Year 13:  49 weeks
Year  7:  49 weeks    Year 14:  49 weeks
At 7th Year: 1 week  At 7th Year: 1 week
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Year 15:  49 weeks    Year 22:  49 weeks
Year 16:  49 weeks    Year 23:  49 weeks
Year 17:  49 weeks    Year 24:  49 weeks
Year 18:  49 weeks    Year 25:  49 weeks
Year 19:  49 weeks    Year 26:  49 weeks
Year 20:  49 weeks    Year 27:  49 weeks
Year 21:  49 weeks    Year 28:  49 weeks
At 7th Year: 1 week  At 7th Year: 1 week
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Year 29:  49 weeks    Year 36:  49 weeks
Year 30:  49 weeks    Year 37:  49 weeks
Year 31:  49 weeks    Year 38:  49 weeks
Year 32:  49 weeks    Year 39:  49 weeks
Year 33:  49 weeks    Year 40:  49 weeks
Year 34:  49 weeks    Year 41:  49 weeks
Year 35:  49 weeks    Year 42:  49 weeks
At 7th Year: 1 week  At 7th Year: 1 week
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            Year 43:  49 weeks
            Year 44:  49 weeks
            Year 45:  49 weeks
            Year 46:  49 weeks
            Year 47:  49 weeks
            Year 48:  49 weeks
            Year 49:  49 weeks
            At 7th Year: 1 week
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             Year 50:  49 weeks
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Take note that in order to keep pace with the turn of each tropical year, the diagrammed calendar requires the addition of a lunar week each 3rd year (a perpetual rate).

Of significance about the shown jubilee calendar is that with the stated rate of required intercalation applied, each calendar year--on the average--becomes equal to 365.2442 days. Each year of the cited jubilee calendar then compares very closely with the revolution of the tropical year--which rolls over in 365.2422 days. The jubilee calendar (as diagrammed) thus depicts a time cycle (in years) that can effectively be measured and metered out in association with a number of lunar weeks (or lunar quarters).

It should be clear from the week counts shown in the diagram that--when the rate of one lunar week every 3rd year is counted apart (or leaped) from out of the time stream--a grid of lunar weeks (2457 weeks) can be counted (repeated) in correspondence with a cycle of 50 years. Essentially, an effective calendar of lunar weeks is the inherent or automatic result of leaping one week each 3rd year from out of the time stream. (This respective rate of calendar intercalation is equivalent to 0.33333 weeks per solar year on the average).

Thus, it becomes of considerable significance to a study of interrelated time design that an effective annual calendar is the inherent result of counting lunar weeks.

The above shown calendar of lunar weeks would inherently remain accurate relative to the pace of the tropical year over many centuries of time. The time difference between the respective 49-week calendar and the length of the solar year (which turns every 365.2422 days) would eventually become a factor if enough time were to pass by. To be specific, assume that a new phase of the Moon was observed (as the first day of the calendar) at say 7 days prior to the day of the vernal equinox. From this origin and alignment, the first day of the calendar would inherently shift (on average) from year to year so that after 3600 years the first calendar day would arrive in alignment with the equinox, and after 7200 years the first calendar day would come 7 days after the equinox. Somewhat remarkable here is that the Bible (and associated records) DO point to a literal epoch day for the creation [= right at 7 days prior to the day of the vernal equinox]. For more information about Creation's epoch day, refer to:

Genesis Flood Record .

While Scroll 4QOtot doesn't explicitly show that a lunar week was specially accounted for at the distance of each 3rd year, it seems very clear that the heavenly priests were believed to have perpetually reckoned a lunar-cycle 'sign' at this respective distance

(each and every 3 years). This leaves some latitude in interpreting how the lunar cycle was once reckoned. For example, in reckoning the 'sign', the priests may have reckoned the lunar cycle at the resolution of the half or the whole of the lunar cycle.

The main reason for believing that the lunar cycle was once reckoned at the resolution of the quarter phase is that ancient literature is explicit in describing the priestly courses as being rotated once each week. The routinely appearing 'sign' was then accounted for right when one priestly course ended (refer to Scroll 4QOtot). The combination of this rotating schedule and the time when the 'sign' was routinely observed does not seem to allow for an alternate interpretation. Essentially, if the 'sign' was observed at the end of a 'week' cycle then it is obvious that the priests were reckoning lunar weeks.

For pertinent information confirming that Temple priests did once track lunar-quarters or lunar weeks, refer to the following online publications:

Significant Lunar Week ***The Day-of-the-Sun***

The indicated track of a lunar 'sign' points to the possibility that the priests recognized certain among the lunar weeks to be very special. The respective week which corresponded to the lunar 'sign' was apparently not counted the same as were other calendar weeks.

Note that a leap week occurring each 3rd year is not shown in the following calendar chart.

7 sets of 7 years can be
defined by counting
7 sets of 7 lunar weeks

7-Yr Seg	No. Yrs	Number of Lunar Weeks	At Each 7th Year
1.	7	7 times 7 times 7	+ 1 week
2.	7	7 times 7 times 7	+ 1 week
3.	7	7 times 7 times 7	+ 1 week
4.	7	7 times 7 times 7	+ 1 week
5.	7	7 times 7 times 7	+ 1 week
6.	7	7 times 7 times 7	+ 1 week
7.	7	7 times 7 times 7	+ 1 week
50th	= 1 yr	7 times 7	

Note that a leap week (a 3-year rate)
is required to keep the depicted 7 sets
into alighment with 7 sets of years.

The diagram shown above is synonymous to the previous diagram in showing that primal priests may have tracked lunar phases to effectively track the limits of a 50-year cycle.

Somewhat puzzling about the jubilee cycle shown on Scroll 4QOtot is that a jubilee cycle of 49 years is listed while Leviticus (Chapter 25) shows the addition of a 50th year (throughout which the jubilee year was celebrated).

In terms of astronomy and of accuracy, a calendar of lunar weeks (a 50-year calendar) is automatic or inherent when a lunar week is leaped each 3rd year as a perpetual rate. (The cited grid of lunar weeks very, very closely paces the rate of the solar year through the intercalation of 0.33333 weeks per solar year--as an average rate).

Thus, a given conclusion from the 'lunar sign' is that the biblical jubilee cycle (of 50 years) can be cross-referenced to a calendar of lunar weeks. This remarkable lunisolar cross-reference is easy to recognize when a lunar week is perpetually intercalated each 3rd year.

It is possible that the indicated 'sign' does in someway relate to an early used tithing cycle. However, a more easy to recognize reason is that the 'sign' was tracked across 3 years in tandem with the renewal of 30 days.

For pertinent information about the interpretation of a tithe in the 3rd year, refer to the following publications:

Tithe of the Third Year | **The Day-of-the-Sun**

For more comprehensive information concerning the once observed jubilee cycle, refer to the following online publications:

Significant Jubilee Cycle | **Chronology of Jubilees**

Of related significance is that early-written literature indicates that primal priest-astronomers once used axioms and time formulas to effectively measure and meter the lunar and solar orbits. (Certain of these early used axioms/formulas are so very accurate that even a contemporary/modern astronomer would find them to be of use). For additional information concerning the early use of axioms and time formulas, refer to the following online publications:

Portals or Annual Gates | Interrelated Time Design

Significance of 40 Days | Ancient Astronomy

Significant Lunar Week | The Day-of-the-Sun

A Circle-of-Seven

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