Samaritan Chronology of Antediluvian Patriarchs in *Genesis 5* and Prime Numbers

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Summary

The chronogenealogy of antediluvian patriarchs, as given by the Samaritan Pentateuch, is almost identical to one where all dates of birth and death of the patriarchs are prime numbers, provided the 7 years in Eden of Adam and Eve are taken into account. Such combination can not occur by chance and the chronology with prime numbers should be assumed as the progenitor one.

Later a different more sophisticated symbolic meaning was assigned to prime numbers and some rounding and a copyist error produced the Samaritan chronology . This study also proves that the chronology of the Masoretic text was developed from the Samaritan one and not viceversa.

Introduction

The divergent chronogenealogies of the three biblical textual traditions (Samaritan Pentateuch, Septuaginta and Masoretic) were deeply investigated by John Skinner more than a century ago, but he could only conclude:

«These differences are certainly non accidental. They are due to carefully constructed artificial systems of chronology; and the business of criticism is first to ascertain the principles on which the various schemes are based, and then to determine which of them represents the original chronology of the Priestly Code. That problem has never been satisfactorily solved».[2]

Scholars have explored different principles, upon which to build an artificial chronological schema, but no solution ever approached consensus. For instance among the varied information summoned to provide an explanation of the Masoretic chronology, there are the synodic periods of the planets[3], the Babylonian algebra[4], various calendrical systems[5], etc.

In a previous paper I have shown that the Masoretic and the Samaritan chronologies are based on the same principles, which include the use of symbolic prime numbers as checksums of the partial durations of important time spans.[6] Prime number theory is very ancient. Important theorems are included in the work of Euclid (300 BC), but some knowledge is already implied by the Rhind mathematical papyrus (about 1650 BC). They are so deeply entrenched in ancient culture that it is hard to believe that they could have been ignored by the redactors of the Bible. In this short

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1 Please provide comments, suggestions and constructive criticism to: peano.alberto@libero.it.
2 John Skinner, *A critical and exegetical commentary on Genesis*, ICC, Edimburgh 1910, p.135.
3 Barnouin M.," Recherches Numériques sur la Généalogie de Gen. V", in *RB* 77 (1970), pp. 347-365.
4 Young D.W., "The Influence of Babylonian Algebra upon Longevity among the of Antediluvians", *ZAW* 102 (1990), pp. 321-335.
5 Stenring K., *The enclosed Garden*, Stockholm 1966; Gianantonio Borgonovo, *Significato numerico delle cronologie bibliche e rilevanza delle varianti testuali (TM – LXX – SAM)*, in « "Un tempo per nascere e un tempo per morire". Cronologie normative e razionalità della storia nell'antico Israele; Atti del IX Convegno di studi veterotestamentari (L'Aquila, 11-13 settembre 1995) », a cura di G.L. PRATO, Ricerche Storico Bibliche 9,1 (1997) 139-70.
6 Alberto G. Peano Cavasola, *Biblical Chronology Explained by Symbolic Prime Numbers*, Academia.edu, February 2018.

note an early use of prime numbers, later abandoned, is pointed out.

The Samaritan chronology and its precursor

The date of the Flood according to the Samaritan Pentateuch (SP), AM 1307, is of course a prime number. For important symbolic reasons, a different prime, 1657, is applied by the Masoretic text to measure the span from the birth of Adam to the end of the Flood. The two numbers have an important property in common: they are obtained by adding 7, the number of years Adam and Eve spent in Eden according to the Book of Jubilees[7], to a multiple of 50, the number of years of a jubilee. Clearly the years spent in Eden were different than the years of sinful mankind and jubilees counted only the latter. The date of the Flood computed by the *Septuaginta* chronogenealogies, 2262, is also related to prime numbers: if the years in Eden are added, the result is 2269, which is a very special prime number.

Both 1657 and 2269, infact, are cuban primes, a class of very rare numbers.[8] The cuban prime immediately before 1657 is 919 and the one immediately after is 1801: among them there are 780 numbers which are not cuban primes. Cuban primes are prime numbers that are obtained as the difference of the cubes of two successive integer numbers. The first few cuban primes, 7, 19, 37, are associated with the lunisolar calendrical cycles and ancient scribes may have associated all cuban primes to time intervals. Moreover Jews associated cubes to holiness; in Solomon's Temple the Holy of Holies had a cubic shape. Hence numbers 919 amd 1657 are associated to holy time intervals by the Masoretic text, as illustrated in the main paper, which deals in detail with Masoretic and Samaritan chronologies.

The Samaritan Pentateuch seems not to include any cuban prime and in general exhibits a symbolism less sophisticated than the Masoretic text. For these and other reasons its chronology can be considered very close to the progenitor chronology. In particular the chronogenealogy of *Gn 5* is considered by several scholars to be identical to the progenitor one.[9] Its chronological data are:

Patriarch	Begetting Age	Lifespan
Adam	130	930
Seth	105	912
Enosh	90	905
Kenan	70	910
Mahalalel	65	895
Jared	62	847
Enoch	65	365
Methuselah	67	720
Lamech	53	653
Noah	500	950

Table 1. Chronological data of antediluvian patriarchs in the Samaritan Pentateuch

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7 Book of Jubilees 3:15
8 See https://en.wikipedia.org/wiki/Cuban_prime or http://mathworld.wolfram.com/CubanPrime.html. Below 4000 there are only nineteen cuban primes (less than 0,5 %): 7, 19, 37, 61, 127, 271, 331, 397, 547, 631, 919, 1657, 1801, 1951, 2269, 2437, 2791, 3169, 3571.
9 This was first proposed by Alfred Jepsen, "Zur Chronologie des Priesterkodex", 1929, *ZAW* 47: 252-255.*,* and recently by Northcote, J., "The schematic development of Old Testament Chronography: Towards an integrated model", *Journal for the Study of the Old Testament*, 29 (1), 2004, pp. 3-36.

The logic behind these numbers has never been found. As we noticed that the date of the Flood is a prime number, it could be surmised that the chronographer has hidden other prime numbers behind these data. It will be shown that this is very true if three small corrections of the data are enforced:

1) The lifespans of Enosh and Kenan must be exchanged, probably to eliminate a copyist error. After this corrections, infact, all lifespans decrease gradually, with the acceptable exceptions of Enoch and Noah, two special pariarchs.

2) The 7 years in Eden have to be explicitly added to the data of Adam. So his total begetting age is 137 and his total lifespan becomes 937: both 137 and 937 are prime numbers. By adding the time in Eden, however, three patriarchs will live beyond the Flood, unless we reduce the lifespan and the begetting age of Jared.

3) As, obviously, births and dates did not all occur in the same day of the year, the begetting ages and the lifespans of a few patriarchs can be rounded differently and their value can be modified by 1 year. In particular the lifespan of Enoch is taken as 364, a value more consistent with the calendar used in Genesis.

4) The only exception is the lifespan of Noah, which was reduced by 2. Probably the year in the Ark was not counted as "life on earth" and the other missing year comes from a different rounding. In this chronology the Flood started when Noah was aged 598 and Arphaxad was born "two years after deluge" in year AM 1309.

With these few corrections the following table is obtained:

	Begetting Age	Lifespan	AM Birth Date	AM Death Date
Adam	7+130	7+930	0	937
Seth	104	912	137	1049
Enosh	90	910	241	1151
Kenan	70	906	331	1237
Mahalalel	66	896	401	1297
Jared	56	840	467	1307
Enoch	64	364	523	887
Methuselah	66	720	587	1307
Lamech	56	654	653	1307
Noah	500	948	709	1657

Table 2. Progenitor chronogenealogy. All dates in column 4 and 5 are prime numbers

In the above table all dates of birth and of death are prime numbers. Such result (19 prime numbers with no exception) can not happen by chance. Skepticals are invited to try and achieve a similar result with the dates of the postdiluvian patriarchs or simply by using the Masoretic numbers for Jared, Methuselah and Lamech. As prime numbers are neither frequent[10] nor evenly spaced, biblical numbers have to be modified extensively and with no clear governing principles.

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10 Among the first 4000 integers there are 550 prime numbers.

Conclusion

The values of Table 2 must really be those of the progenitor chronology. Later, however, it was realized that prime numbers should be reserved for special symbolic roles and in particular to be used as checksums of important time intervals. Their use for all the patriarchal dates of *Genesis 5* was probably considered an arbitrary literary virtuosity, difficult to replicate in other biblical chronogenealogies. Then, years in Eden were not counted anymore, patriarchal ages were rounded differently and the numbers of the Samaritan Pentateuch were obtained.

This study also proves that Masoretic text dates were developed by modifying Samaritan ones and not viceversa. The begetting ages and the lifespans of the first five patriarchs are the same in both the Masoretic and the Samaritan Scriptures and therefore the birth and death dates are prime in both cases. The Masoretic text, however, has different begetting ages for Jared, Methuselah and Lamech and does not yield prime dates for the births and lifespans of the other 5 patriarchs. Clearly the ages of the Masoretic text were selected with the goal of obtaining a different symbolic date for the Flood (this symbolism is explained in the other paper), while the prime numbers of the first five patriarchs can be explained only as derived from the progenitor chronology.