

# Adam to Abraham: An Unconventional Dating Scheme

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## *Abstract*

A well-known method of arranging the genealogical data in Genesis 5 and 11 is to treat all the patriarchs after Adam as immediate sons. This study proposes an alternative scheme. The longevity of the patriarchs allowed their lifetimes to be used to keep track of time and events. A patriarch who cannot be identified as an immediate son is therefore counted *successively* rather than by his *begetting age*. For example, after Enosh died, Kenan became the next timekeeper patriarch. He was chosen because he was the youngest descendant in the promised lineage. For over eight centuries afterward, the patriarchal community dated notable events to Kenan's life.

This unconventional scheme gives an earliest possible flood date of 4383 BC when using the numbers in the Masoretic Text (MT), or 5308 BC when using the numbers in the Septuagint (LXX). It also addresses the following problems when counting by begetting age throughout:

- The MT data gives a flood date of 2518 BC. This disagrees with conventional Egyptian chronology, whose dynastic era began ca. 3000 BC.
- The LXX data has several higher begetting ages than the MT. This results in an earlier flood date of 3298 BC. A number of young earth creationists therefore prefer the LXX. However, the interval between the LXX flood date and the start of written history, which coincides with the start of Egypt's dynastic era, is only about 300 years (from 3298 BC to ca. 3000 BC). Did all the archaeological periods of prehistory occur in that short interval? This is unlikely given the evidence that supports the conventional dating of Egypt's dynastic era.

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# Abbreviations

## General Abbreviations

AM	.....	<i>Anno Mundi</i> , in the year of the world (since its creation)
BC	.....	Before Christ (same as BCE: Before Common Era)
ca.	.....	<i>circa</i> , approximately
cf.	.....	<i>confer</i> , compare
ed(s).	.....	editor(s) / edition
e.g.	.....	<i>exempli gratia</i> , for example
esp.	.....	especially
et al.	.....	<i>et alii</i> , and others
etc.	.....	<i>et cetera</i> , and other similar things / and so forth
fn(n).	.....	footnote(s)
ibid.	.....	<i>ibidem</i> , in the same textual reference
i.e.	.....	<i>id est</i> , that is
n.	.....	note
NT	.....	New Testament
OT	.....	Old Testament
p(p).	.....	page(s)
rev.	.....	revised
v(v).	.....	verse(s)
vol(s).	.....	volumes(s)
vs.	.....	versus

## Bible Translations / Texts

ESV	.....	English Standard Version
KJV	.....	King James Version
LXX	.....	Septuagint
MT	.....	Masoretic Text
NIV	.....	New International Version
SP	.....	Samaritan Pentateuch
YLT	.....	Young's Literal Translation

## Reference Works

- ISBE*..... *The International Standard Bible Encyclopedia*. Geoffrey W. Bromiley et al. (eds). 4 vols; revised. Grand Rapids: Eerdmans, 1979–1988.
- NIDOTTE* ..... *New International Dictionary of Old Testament Theology and Exegesis*. Willem A. VanGemeren et al. (eds). 5 vols. Grand Rapids: Zondervan, 1997.

- TDOT*..... *Theological Dictionary of the Old Testament*. G. Johannes Botterweck et al. (eds). 16 vols. Grand Rapids: Eerdmans, 1975–2018.
- TWOT* ..... *Theological Wordbook of the Old Testament*. R. Laird Harris et al. (eds). 2 vols. Chicago: Moody Press, 1980.

## **Bibliographical Abbreviations**

- AUSS* ..... *Andrews University Seminary Studies*
- BASOR* ..... *Bulletin of the American Schools of Oriental Research*
- BBR*..... *Bulletin for Biblical Research*
- Bib Sac* ..... *Bibliotheca Sacra*
- BJRL*..... *Bulletin of the John Rylands Library*
- CEN Tech. J.*..... *Creation Ex Nihilo Technical Journal*
- DBSJ*..... *Detroit Baptist Seminary Journal*
- EJT*..... *European Journal of Theology*
- HTR* ..... *Harvard Theological Review*
- JASA* ..... *Journal of the American Scientific Affiliation*
- JETS* ..... *Journal of the Evangelical Theological Society*
- JNES* ..... *Journal of Near Eastern Studies*
- VT*..... *Vetus Testamentum*
- WTJ*..... *Westminster Theological Journal*

# Notes

- Unless otherwise indicated, Scripture quotes are from the King James Version (KJV).
- This study uses the following names instead of the KJV names in brackets: Enosh (Enos); Kenan (Cainan); Mahalalel (Mahalaleel); Arpachshad (Arphaxad); Shelah (Salah). I have retained “Cainan” for Luke 3:36, although some authors prefer either Kainan or Kainam (both spellings are attested in ancient texts).
- In quotes from other sources, insertions in square brackets are mine, to aid understanding.
- Some chapters have tables with the words SPREADSHEET LINK. This link accesses a full chronology of that table’s data in Excel 2013 format.
- Apart from journal article references and video lecture links, this study does not offer detailed arguments in defence of a young earth. Creationist websites cover this admirably.
- This study uses the common abbreviation LXX to refer to the Septuagint, which is the earliest translation in Greek of the Hebrew Scriptures. The word Septuagint has different meanings depending on the time in history and one’s definition. It comes from the Latin *septuaginta*, which means “seventy,” hence the Roman numeration “LXX.” Originally, the word did not refer to the translated work itself. It was a shorthand way of referring to the legendary 72 elders from Jerusalem who were commissioned by Egypt’s King Ptolemy II (285–246 BC) to translate the Torah (the Five Books of Moses) into Greek. The story of that event is told in the famous Letter of Aristeas.

The Torah was translated on the island of Pharos off the coast of Alexandria around the mid-3rd millennium BC. This was the original Septuagint. During the next few centuries, the rest of the Hebrew Bible was translated by others in various locations. Despite the diverse origins of its books, the whole work became known as “the translation of the seventy” or Septuagint for short. Its use spread quickly throughout the Greek-speaking world. Early in the Christian era, the word Septuagint began to refer to the translated work rather than to the elders.

Later collections of the Greek Scriptures included non-canonical Jewish writings such as the apocryphal books. Some authors count them as part of the Septuagint. In this study, the terms LXX and Septuagint refer to the Greek translation of the Hebrew Old Testament.
- The three major witnesses to the genealogical lists in Genesis 5 and 11 are the MT, LXX, and SP (there are numerical divergences between them). This study focuses only on the lists in the MT and LXX. Because I do not take a position on which of those two witnesses preserves the numbers closest to the original, chronologies will be offered for both.
- Josephus was a first-century Jewish historian. Because his numbers for Genesis 5 and 11 generally agree with the LXX, this study does not review his data.

# Chapter 1 – Chronological Variables

Genesis 5 and 11 record the genealogies from Adam to Abram, whom God later renamed Abraham. The genealogies reveal a patriarch's begetting age and years of life. These figures invite the reader to construct a primeval chronology. A well-known example is the work of James Ussher (1581–1656). His creation date of 4004 BC is famous in church history, and was widely accepted for nearly three centuries:

1a AM, 710 JP, 4004 BC

In the beginning God created the heaven and the earth. (*Ge 1:1*) The beginning of time, according to our chronology, happened at the start of the evening preceding the 23rd day of October (on the Julian calendar), 4004 BC or 710 JP.<sup>1</sup>

Ussher's work suggests that one can date the creation precisely. This is not possible due to several variables involved. They divide into two groups:

1. six variables that affect the interval from the creation to Terah's birth
2. four variables that affect the dating of Terah's birth

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## 1. Six Variables that Affect the Interval from the Creation to Terah's Birth

### A) TEXTUAL DIFFERENCES

The three major witnesses to the text of Genesis 5 and 11 are:

- the MT (Hebrew)
- the LXX (Greek)
- the SP (Samaritan Hebrew)

All the witnesses have numerical divergences. For the LXX, numbers vary between individual manuscripts. For a listing of the LXX variations, see Ray 1985.

The largest chronological difference occurs between the MT and LXX. The LXX is 1,380 years longer than the MT for the interval between the creation and Terah's birth when counting by begetting age throughout.

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<sup>1</sup> Ussher (2003: 17). Regarding the dateline "1a AM, 710 JP, 4004 BC," the "a" in the first figure "1a AM" means autumn, and "1a AM" means *autumn in the first year of the world*. The second figure "710 JP" refers to the associated year in the *Julian Period*, which is used by astronomers to assign a unique value to every day. The Julian Period began on 1 January, 4713 BC. It will last for 7,980 years, after which the Julian Day will begin at zero again (in 3268 AD). The third figure, "4004 BC," is the BC date in the Julian calendar. (The Julian calendar and Julian Period are not identical.) For background on Ussher, and how he arrived at 4004 BC, see Barr 1985.

## B) THREE WAYS OF INTERPRETING THE DATA

As discussed in Chapter 5, there are three ways of interpreting the genealogical data in Genesis 5 and 11:

1. immediate son patriarchs (all the patriarchs are counted by begetting age)
  2. disconnected patriarchs (missing generations leave large chronological gaps)
  3. successive patriarchs (except for immediate sons, patriarchs are descendants who were born before, in, or after the year that their predecessor died)
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## C) WHEN A BABY WAS ONE YEAR OLD

The possibilities include:

- at birth, as implied by Genesis 7:6 vs. 7:11
  - at their first birthday
  - at conception
  - at some annual reference point like the turn of the New Year
- 

## D) ROUNDING OF YEARS

We do not know the rounding convention used in Genesis 5 and 11. Perhaps all years were rounded *down* with no consideration of the months remaining. This method would simplify record-keeping. In Genesis 5:3–5, for example, the reality might be that Adam was aged 130 years and 8 months (= 130) when he begat Seth, after which he lived for 800 years and 7 months (= 800) for a total lifespan of 930 years. Alternatively, years may have been rounded to the closest birthday (e.g. 129 years and 9 months = 130). It is possible that the rounding scheme changed over time.

Because we do not know the rounding scheme(s) used, the total of the begetting ages in Genesis 5 and 11 may be higher or lower than the true figure.

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## E) CALENDAR SYSTEM CHANGES

The different calendars in the ancient world attest to the problem of measuring the length of the year. On one or more occasions, the patriarchs may have switched to a calendar whose first month was in a different season. Hardy and Carter summarize the problem (2014: 91):

... we do not know which convention was used in the ancient past, and we do not know if all biblical data are reported with the same convention. Years may have been reported in systems other than ones that align with solar years, and multiple possible shifts of six months or more may have occurred when societies switched or reformed their calendar systems.

## F) TWO YEARS AFTER THE FLOOD

Genesis 11:10 states that Shem begat Arpachshad “two years after the flood.” This raises two problems. First, are the two years counted from the start or end of the flood? Other verses supply the answer. We know that the flood lasted for a little over a year (see 7:11 and 8:14). We also know that Noah lived for 350 years *after the flood* (9:28). Since the flood occurred when he was 600 (7:6), and since he lived for 950 years (9:29), the counting of 350 years after the flood must refer to the *start* of the flood when Noah was 600.<sup>2</sup> Otherwise, if 350 years are counted from the end of the flood in Noah’s next year (8:13–14), he then lived for 951 years, which is incorrect.

The second problem is more difficult. In both the MT and LXX, Genesis 7:11 states that the flood began in the 600th year of Noah’s life, in the 2nd month. (The MT says it was the 17th day, while the LXX says it was the 27th day.) There are four unknowns here:

1. the annual calendar used in Noah’s time (12 x 30-day months? solar? lunar?)<sup>3</sup>
2. how Noah’s years were counted (birthday to birthday? by the annual calendar?)<sup>4</sup>
3. did Shem beget Arpachshad *exactly* two years after the flood or, as discussed in #D above, did rounding occur (e.g. two years and seven months being rounded down to two years)?
4. does “two years” mean *sometime during the second year* (i.e. inclusive counting)?

The combined effect of these unknowns is that “two years after the flood” can refer to any of three years: Noah’s 601st, 602nd, or 603rd years. If Arpachshad was born in Noah’s 601st rather than his 602nd year, one year must be subtracted from the interval between Adam and Arpachshad’s birth. If he was born in Noah’s 603rd year rather than his 602nd year, one year must be added to the interval between Adam and Arpachshad’s birth.

\* \* \*

To account for #A, Chapters 2 to 4 review the genealogical data in the MT, LXX, and SP, respectively. On #B, Chapters 2 to 4 use immediate son patriarchs throughout to show the

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<sup>2</sup> Alternatively, the two years may be counted from the end of the first 40 days of the flood (compare Gen 7:12, 7:17, and 8:1–2). On this, see the lecture by Steve Boyd, *Literary Structures in the Flood Account and Our Understanding of the Flood*, available at [IGH \(Is Genesis History?\) 2017 Conference Lectures](#).

<sup>3</sup> A schematic calendar of 12 x 30-day months is favored by a number of creationist authors. This is because the first 150 days of the flood spanned from the 17th day of the second month (Gen 7:11) to the 17th day of the seventh month (8:3–4). This suggests that each of the five months was 30 days long. If this method was used, the question arises as to how the calendar was realigned with the seasons. Options include: adding intercalary months when needed; adding five extra days at the end of the calendar year; lengthening certain months by a day or more.

<sup>4</sup> There are five “hard” dates in the flood story: Gen 7:11; 8:4; 8:5; 8:13; 8:14. These dates constrain the positioning of Noah’s year with respect to the calendar year. As will be noted in the lecture by Steve Boyd (see fn. 2), the last day of Noah’s 600th year must fall in the two-month period between the first day of the tenth month and the day before the start of the next calendar year.



chronologies resulting from the begetting age method. On #C to #F, Chapters 2 to 4 adopt the following scheme, as do many primeval chronologies:

- #C..... a baby was one year old at their first birthday (i.e. zero at birth)
- #D..... the numbers given in the genealogies are exact, whole years
- #E ..... the same calendar was used from Adam to Abraham
- #F ..... “two years after the flood” means that Arpachshad was born in Noah’s 602nd year

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## 2. Four Variables that Affect the Dating of Terah’s Birth

### G) THE FOURTH YEAR OF SOLOMON

To date the year of Terah’s birth, one must first find a synchronism between the Bible and a known date (or dates) in history. A ground-breaking study that achieved this was the 1944 paper by Edwin Thiele, “The Chronology of the Kings of Judah and Israel.” The work was later expanded in his book, *The Mysterious Numbers of the Hebrew Kings*, which had three editions (1951, 1965, 1983).

Based on two synchronisms with Assyria, Thiele dated Solomon’s death and the start of the divided kingdom to the Nisan year 931/30 BC (i.e. between 1 Nisan 931 BC and the day before 1 Nisan 930 BC).

Solomon ruled for 40 years before his death (1 Kgs 11:42–43). The temple foundation was laid in the spring of his fourth year (1 Kgs 6:1). In Thiele’s scheme, the southern kingdom of Judah used Tishri years for regnal reckoning. By narrowing Solomon’s death to the first half of the Nisan year 931/30 BC (i.e. between 1 Nisan 931 BC and the day before 1 Tishri 931 BC), Rodger Young (2003) showed that Solomon’s temple was founded in the spring of 967 BC. (The possibilities are 967 and 966 BC.)

The date of 967 BC is not the only influential one for the founding of Solomon’s temple. Ussher’s date was 1012 BC (2003: 67). Similar dates have been offered by modern authors. For example, Charles Ozanne dates the founding to 1008 BC (2011: 231). Floyd Jones, like Ussher, has 1012 BC (2019: 23–24).

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### H) THE INTERVAL BETWEEN THE EXODUS AND SOLOMON’S FOURTH YEAR

First Kings 6:1 MT states that Solomon’s fourth year was “in the four hundred and eightieth year after the children of Israel were come out of the land of Egypt.” The LXX has “the four hundred and fortieth year” (III Kings 6:1).

Note that the numbers “480th” and “440th” are *ordinal* and not cardinal numbers. They therefore equate to elapsed intervals of 479 and 439 years, respectively. Working back 479

years from Solomon's fourth year of 967 BC gives an MT Exodus date of 1446 BC. Working back 439 years from the same datum gives an LXX Exodus date of 1406 BC. Many evangelical scholars favor the MT derived date of 1446 BC.<sup>5</sup>

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#### I) THE DURATION OF ISRAEL'S SOJOURN IN EGYPT

The three main views on the duration of Israel's sojourn in Egypt are 430 years, 400 years, and 215 years.<sup>6</sup> Assuming the Exodus occurred in 1446 BC, and that Israel's time in Egypt was 430 years, Israel's entry into Egypt dates to 1876 BC. Since Jacob was 130 when he entered Egypt (Gen 47:9), he was born in 2006 BC. Since Isaac was 60 at Jacob's birth (25:26), Isaac was born in 2066 BC. Since Abraham was 100 at Isaac's birth (Gen 21:5), Abraham was born in 2166 BC.<sup>7</sup>

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#### J) THE DURATION OF ABRAHAM'S STAY IN HARAN AFTER TERAH DIED

Terah died in Haran at the age of 205 (Gen 11:32). After that, Abraham left Haran for Canaan (Acts 7:4) at the age of 75 (Gen 12:4). We do not know, though, how long Abraham stayed in Haran after Terah's death. If Abraham left Haran in the year that Terah died, which is the commonly held view, this was in 2091 BC (= Abraham born in 2166 BC plus 75 years). Therefore, Terah was born 205 years earlier in 2296 BC. In this scenario, Abraham was born when Terah was 130<sup>8</sup> (= Terah's age of 205 minus Abraham's age of 75 when Terah died).

A longer stay for Abraham in Haran after Terah's death raises all the patriarchal dates from Adam to Terah by the number of years that Abraham stayed. For example, if Abraham left Haran ten years after Terah died, this is still 2091 BC (75 years after 2166 BC) but it is now 215 years after Terah's birth. His birth therefore dates to 2306 BC (2091 BC plus 215 years). Thus, all patriarchal dates from Terah back to Adam are raised by ten years. In this scenario,

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<sup>5</sup> See, for example: Andrew E. Hill and John H. Walton, *A Survey of the Old Testament* (2nd ed.; Grand Rapids: Zondervan, 2000), 147 also 83–87; Tremper Longman III and Raymond B. Dillard, *An Introduction to the Old Testament* (2nd ed.; Grand Rapids: Zondervan, 1994), 124; Steinmann 2011 (46); Tanner 2015 (36–38); Young 2003.

<sup>6</sup> For discussion of these three views, see my study [Redating the Hebrew Kings](#), Appendix A. Arguments are presented in favor of 430 years.

<sup>7</sup> Advocates for this date include: Merrill 2008 (96); Payne 1975 (830); Smith 2018a (128, 130); Steinmann 2011 (67); Tanner 2015 (39).

<sup>8</sup> Terah fathering Abraham at the age of 130 appears to contradict the statement that "Terah lived seventy years, and begat Abram, Nahor, and Haran" (Gen 11:26). This suggests that these three sons were triplets. However, we know from Genesis 11:32, 12:4, and Acts 7:4 that Terah was at least 130 years old when he fathered Abraham. This confirms that Abraham was not the firstborn son. The same apparent contradiction occurs in Genesis 5:32, which states that "Noah was five hundred years old: and Noah begat Shem, Ham, and Japheth." Other verses inform us that these three sons were not triplets. Ham was the youngest (9:24) and Japheth the oldest (10:21). Further, on comparing 7:6 and 11:10, we can conclude that Shem was born when Noah was 502 (if Shem was one year old at his first birthday) or when Noah was 503 (if Shem was one year old *at birth*).

Abraham was born when Terah was 140 (= Terah's age of 205 minus Abraham's age of 65 when Terah died).

\* \* \*

Chapters 2 to 4 assume that Abraham was born in 2166 BC, and that he left Haran at the age of 75 in the same year that Terah died. In Chapter 11, the theoretical earliest creation and flood dates for the MT and LXX data will be proposed. This will require different numbers for some variables, including when Abraham left Haran.

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### Dr. William H. Green

As noted in #B above, the “disconnected patriarchs” view upholds that there are large chronological gaps in Genesis 5 and 11 due to generations being omitted. These genealogies therefore cannot be used to date any of the patriarchs before Abraham. Consequently, neither the flood nor the creation can be dated. A champion of that view was William Henry Green, OT professor at Princeton Theological Seminary. In his influential 1890 essay *Primeval Chronology*, Green offered arguments in support of that belief. In closing, he wrote:

On these various grounds we conclude that the Scriptures furnish no data for a chronological computation prior to the life of Abraham; and that the Mosaic records do not fix and were not intended to fix the precise date either of the Flood or of the creation of the world. (1890: 303)

Green's essay was welcomed by Christians who had become persuaded by the scientific evidence that the earth was old, and that life arose through evolution. Against this view, J. Barton Payne commented (1976: 831):

A theory of disconnected patriarchs could thus allow Adam to be dated 100,000 B.C. or earlier. While granting unlimited freedom for anthropology, it leaves the Bible's detailed lists of figures as generally pointless and also posits an unusually high proportion of omitted links.

As discussed in Chapter 5, this study rejects the disconnected patriarchs theory.

## Chapter 2 – The MT Data

In all known manuscripts of the MT, there are no variant figures in the genealogies of Genesis 5 and 11. Table 1 shows the numbers. Except for Terah, no “age at death” is given for the postdiluvian patriarchs. Those ages are shown in red. The bracketed numbers for Noah and Terah have been determined from other verses (see p. 10, fn. 8). The SPREADSHEET LINK accesses the full chronology in Excel 2013 format.

Table 1: Genesis 5 and 11 MT Data ([SPREADSHEET LINK](#))

PATRIARCH	BEGETTING AGE	REMAINING YEARS	AGE AT DEATH
Adam	130	800	930
Seth	105	807	912
Enosh	90	815	905
Kenan	70	840	910
Mahalalel	65	830	895
Jared	162	800	962
Enoch	65	300	365
Methuselah	187	782	969
Lamech	182	595	777
Noah	500 (502)	(448)	950
Shem	100	500	600
Arpachshad	35	403	438
Shelah	30	403	433
Eber	34	430	464
Peleg	30	209	239
Reu	32	207	239
Serug	30	200	230
Nahor	29	119	148
Terah	70 (130)	(75)	205

The time from the creation of Adam to the birth of Abraham is the total of the begetting ages in Table 1, which is 2,008 years. This can be expressed as 2008 AM.

The dates for the flood and the creation are as follows. Abraham was born in 2166 BC. The interval from the flood to Abraham’s birth is 352 years. The flood therefore occurred in 2518 BC. The creation occurred in 4173 BC (= 2166 BC + 2,007 years from 1 AM to 2008 AM).

The following arguments are made against the MT begetting age chronology:

- The flood occurred before the start of Egypt’s dynastic era. The conventional date for the start of that era is ca. 3000 BC. This disallows the MT flood date of 2518 BC, which is too late (Chapter 14 refers).

- Excluding Abraham’s father Terah, six descendants of Noah were alive at Abraham’s birth. They were Shem, Arpachshad, Shelah, Eber, Rue, and Serug. (Noah died two years earlier.) Abraham outlived Shem by 25 years, and Eber outlived Abraham by four years. On the improbability of this situation, the following authors write:

If Shem and Abram were contemporary, as a strict interpretation of the genealogy would require, it is difficult to understand how Abram’s immediate ancestors could have become paganized or indeed why Abram would have been called at all to his sacred mission, since believers were already available for the purpose God had in view. (Merrill 2008: 43)

. . . the main problem in the list of the MT [in Genesis 11] is that most of the patriarchs were still alive during Abraham’s lifetime . . . The implication of Gen 11:31 is that Terah took Abram, Lot, and Sarai with him and that his older relatives were left behind in Ur of the Chaldeans. The MT thus presents us with a problematic text. (Tov 2015: 49)

. . . the MT’s post-Flood chronology creates four genuine and irreconcilable errors when compared to Gen 25:8. The verse indicates that the 175-year-old Abraham “died in a good old age, an old man, and full of years. . .” (ESV). In the MT: 1. Eber was still alive at age 464 when Abraham died at 175. 2. Similarly, Shem’s death at age 600 occurs in the MT only 25 years before Abraham’s death, thrice Abraham’s age. 3. Most remarkably, Noah’s death at 950 occurs *only two years before Abraham was born*.

Lastly, Gen 11:10–25 (Table 1) repeatedly indicates that the named patriarchs had “{other} sons and daughters.” Thus, thousands of post-Flood descendants would have lived to ages similar to Arpachshad (438), Eber (464) and Shelah (433), making Abraham’s death premature when compared to other unnamed contemporaries. Using the MT, Abraham would have been neither “an old man,” nor “full of years” compared to the world around him. This would be analogous to applying similar statements to a modern man who died at the age of 30 or 35. (Smith 2018a: 123)

These arguments and observations indicate that the MT chronology from Adam to Abraham is too short. Might the LXX be more accommodating?

## Chapter 3 – The LXX Data

In contrast to the manuscripts of the MT whose numbers all agree with each other, the manuscripts of the LXX have numerous variant figures.

Table 2 shows the “proposed original numbers” in Genesis 5 and 11 offered by Henry Smith (2018b: 18). They derive from LXX manuscripts except for Lamech, whose numbers (182, 595, 777) are from the MT.

No “age at death” is given in the LXX for any postdiluvian patriarchs except for Terah. Table 2 shows those figures in red. The SPREADSHEET LINK accesses the full chronology in Excel 2013 format.

Table 2: Proposed Original Numbers for Genesis 5 and 11 LXX from Smith 2018b  
([SPREADSHEET LINK](#))

PATRIARCH	BEGETTING AGE	REMAINING YEARS	AGE AT DEATH
Adam	230	700	930
Seth	205	707	912
Enosh	190	715	905
Kenan	170	740	910
Mahalalel	165	730	895
Jared	162	800	962
Enoch	165	200	365
Methuselah	187	782	969
Lamech	182	595	777
Noah	500 (502)	(448)	950
Shem	100	500	600
Arpachshad	135	430	565
Cainan	130	330	460
Shelah	130	403	533
Eber	134	370	504
Peleg	130	209	339
Reu	132	207	339
Serug	130	200	330
Nahor	79	129	208
Terah	70 (130)	(75)	205

The time from the creation of Adam to the birth of Abraham is the total of the begetting ages in Table 2, which is 3,388 years. This can be expressed as 3388 AM.

The dates for the flood and the creation are as follows. Abraham was born in 2166 BC. The interval from the flood to Abraham’s birth is 1,132 years. The flood therefore occurred in

3298 BC. The creation occurred in 5553 BC (= 2166 BC + 3,387 years from 1 AM to 3388 AM).

The following observations are made regarding Table 2:

- Genesis 11 LXX includes Cainan the son of Arpachshad. Cainan does not appear in any existing Hebrew manuscript. Nor does he appear in the SP, Josephus, the Targums, the chronography of Africanus, or the Seder Olam. By contrast, Cainan appears in all known LXX manuscripts of Genesis 11 before 1100 AD, and in LXX manuscripts for Genesis 10 and 1 Chronicles 1. He also appears in over 40 Greek manuscripts preserving Luke 3:36, as well as the *Book of Jubilees*. His omission in Genesis 11 MT is therefore a problem. Chapter 7 discusses the issue.
- Twelve patriarchs have begetting ages that are 100 years higher than the MT, and Nahor is 50 years higher. As a result, the LXX chronology from Adam to the birth of Abraham is 1,380 years longer than the MT's chronology (3,387 vs. 2,007 years).
- The LXX flood date is 3298 BC. The start of written history, which coincides with the start of Egypt's dynastic era, is ca. 3000 BC. Therefore, an interval of only about 300 years separates these two events. Did all the archaeological periods of prehistory occur in that short interval? As discussed in Chapter 14, this is unlikely given the evidence that supports the conventional dating of Egypt's dynastic era.

## Chapter 4 – The SP Data

The Samaritan Pentateuch (SP) is the Samaritan version of the *Torah*, which refers to the first five books of the Hebrew Bible. The Torah is also known as the *Five Books of Moses* or *Pentateuch*.

The SP constitutes the entire Biblical canon of the Samaritan community. While there are competing accounts of its origin and early history, the evidence points to the SP originating from a pre-Samaritan text type in use during the 3rd to 1st centuries BC. This text type underwent sectarian editing, probably between the 1st century BC and 1st century AD, to produce the SP.<sup>9</sup>

The SP is distinct from the MT and LXX, with many grammatical, narrative, and ideological differences. A major difference is the Samaritan view that worship be conducted on Mount Gerizim (Jebel et-Tor) rather than Mount Zion in Jerusalem.

Table 3 shows the numbers in the SP for Genesis 5 and 11. The [SPREADSHEET LINK](#) accesses the full chronology in Excel 2013 format. Note that unlike the MT and LXX, the SP gives lifespans for the postdiluvian patriarchs.

Table 3: Genesis 5 and 11 SP Data ([SPREADSHEET LINK](#))

PATRIARCH	BEGGETTING AGE	REMAINING YEARS	AGE AT DEATH
Adam	130	800	930
Seth	105	807	912
Enosh	90	815	905
Kenan	70	840	910
Mahalalel	65	830	895
Jared	62	785	847
Enoch	65	300	365
Methuselah	67	653	720
Lamech	53	600	653
Noah	500 (502)	(448)	950
Shem	100	500	600
Arpachshad	135	303	438
Shelah	130	303	433
Eber	134	270	404
Peleg	130	109	239
Reu	132	107	239
Serug	130	100	230
Nahor	79	69	148
Terah	70 (130)	(75)	145 (205)

<sup>9</sup> On this, see Terry Giles, [Origin of the Samaritan Pentateuch](#).



The time from the creation of Adam to the birth of Abraham is the total of the begetting ages in Table 3, which is 2,309 years. This can be expressed as 2309 AM.

The dates for the flood and the creation are as follows. Abraham was born in 2166 BC. The interval from the flood to Abraham's birth is 1,002 years. The flood therefore occurred in 3168 BC. The creation occurred in 4474 BC (= 2166 BC + 2,308 years from 1 AM to 2309 AM).

The following observations are made regarding Table 3:

- The age of 145 for Terah's death is almost certainly a scribal revision. The SP scribe saw that Terah died in Haran at the age of 205 (Gen 11:32), and that Abraham was 75 when he and his entourage left Haran (12:4–5). The implied timing in the OT is that Abraham left Haran *after* Terah died. However, the scribe assumed from 11:26 that Abraham was born when Terah was 70. This created a problem. If Abraham left Haran at the age of 75 after Terah died, then Terah's lifespan was 145 and not 205 years (i.e. 11:32 is in error). Alternatively, if Abraham left Haran at the age of 75 but Terah lived on until the age of 205, then Terah remained in Haran for 60 years after Abraham left for Canaan (i.e. the implied timing of events is wrong). Although both options are problematic, the latter is inconceivable. How could Abraham abandon his father for 60 years? The scribe therefore reduced Terah's lifespan from 205 to 145 years. Thus, Abraham left Haran at the age of 75 in the year that Terah died, aged 145. (In the NT, Acts 7:4 confirms the implied timing in the OT that Abraham left Haran *after* his father died.)
- As discussed in Chapter 14, the LXX flood date of 3298 BC does not allow enough time for all the archaeological periods of prehistory to occur between the flood and the start of Egypt's dynastic era. The SP flood date is 3168 BC. This date is even less likely to accommodate all the periods of prehistory.
- Genesis 5 SP mirrors the MT numbers except for three men: Jared, Methuselah, and Lamech. These three men all died, implausibly, in the year of the flood. Further, all three men have lower begetting ages than in the MT or LXX. Henry Smith argues that their begetting ages were deliberately adjusted to align with the scheme in the *Book of Jubilees*, forcing their remaining years to be shortened:

The SP begetting ages for Jared (62), Methuselah (67) and Lamech (53) have been deliberately changed to conform with *Jubilees* (ca. 160–140 BC origin). The antediluvian chronology of the SP mirrors *Jubilees*, which imposes an artificial chronological framework onto the biblical text to create a schematic history spanning 50 cycles of jubilees (49 years each), totaling 2450 years from Adam to the Conquest (*Jub.* 50:4) . . . The jubilean scheme forced the author to also alter the *ry* [remaining years] and lifespans of Jared (785, 847), Methuselah (653, 720) and Lamech (600, 653) to prevent them from living through the Flood. Jerome's SP MSS with the correct numbers for Methuselah (MT/LXX: 187, 782, 969) and Lamech (MT/LAB: 182) are proof that the now extant SP was deliberately reduced to mimic *Jubilees*, and not vice-versa. (Smith 2018a: 130, n. 3; see also Smith 2018b: 20–24)

The primeval chronology proposed in this study uses a combination of *begetting ages* (for immediate sons) and *lifespans* (for all the patriarchs). Since both these figures for Jared, Methuselah, and Lamech in the SP are not original, only the MT and LXX will be considered from here on.

# Chapter 5 – Genesis 5 and 11: Three Approaches

There are three ways of interpreting the genealogical data in Genesis 5 and 11. The second and third ways are normally used in combination with the first:

1. immediate son patriarchs
2. disconnected patriarchs\*
3. successive patriarchs\*

\* The terms “disconnected patriarchs” and “successive patriarchs” derive from Payne 1976: 831.

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## 1. Immediate Son Patriarchs

This approach counts by *begetting age*. When used for all the patriarchs as in Chapters 2 to 4, it results in a “tight” chronology, meaning that Genesis 5 and 11 have no missing generations.

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## 2. Disconnected Patriarchs

The word “disconnected” is used to emphasize that there are *large* chronological gaps in Genesis 5 and 11 due to missing generations. This approach refers to theories that allow Adam to be dated far back in time (e.g. 100,000 BC or earlier).

Those who uphold this view point to abridged genealogies in the Bible to support their case. For example, the genealogy of priests in Ezra 7:1–5 omits six names (cf. 1 Chr 6:3–14). Matthew 1:8 omits three kings between Joram and Ozias (Uzziah).

This approach is rejected for two reasons: (1) it greatly devalues the existing numbers in the genealogies, and (2) this study upholds that the line of timekeeper patriarchs in Genesis 5 and 11 *has no gaps in time*. (For the line from Adam to Noah, see Chapter 12, Figure 1.)

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## 3. Successive Patriarchs

A successive patriarch was a descendant other than an immediate son. There are three options for his year of birth:

- A. BEFORE HIS PREDECESSOR DIED. This causes an overlap between the two lifespans.
- B. IN THE YEAR HIS PREDECESSOR DIED. This results in the two lifespans having no overlap or gap in time. This is the method used by Camping (see below).
- C. AFTER HIS PREDECESSOR DIED. This results in a gap between the lifespans. It is not a lengthy gap as in the “disconnected patriarchs” method. But it is long enough to allow the creation and flood dates to harmonize better with ancient Near Eastern prehistory. This is the method favored by Payne, and evaluated by Hasel (both are discussed below).

To my knowledge, the first primeval chronology that used successive patriarchs was proposed by Harold Camping in his 1970 *JASA* paper, “The Biblical Calendar of History.” In his scheme, immediate sons are counted in the normal manner by begetting age. All other patriarchs are descendants born in the year that their predecessor died. Their lifespans served as a calendar reference. On this, Camping explains (1970: 100):

Thus, for example, when Methuselah died bringing to an end his generation, a man who was born in the year of Methuselah’s death was selected to be the next reigning patriarch or at least the next man for calendar reference. After Methuselah, this was Lamech. None of the conditions of his selection are given except that he had to be a descendant of Methuselah. The Bible indicates that Methuselah was 187 years old when he begat Lamech; i.e., when he was 187 the forefather of Lamech was born to Methuselah (Gen. 5:25). This notice establishes the certainty of Lamech’s blood descent from Methuselah by showing where his forefather tied into the life of Methuselah.

The selection of the next patriarch had to include a birth date coinciding with Methuselah’s death date to insure a rational history. Had he been born one or more years earlier an overlap would have occurred which would have blurred history. If Lamech had been born one or more years later than Methuselah’s death, a gap would have occurred which would have confused history.

This chronology is in line with Option B above, in which the birth of the next patriarch occurred in the same year that his predecessor died. While Camping states that this was “to insure a rational history,” the coincidence of birth and death years is unrealistic. His chronology also treats Arpachshad and Peleg as successive patriarchs and not immediate sons. (See Chapter 8 for the known immediate sons of the primeval era. They include Arpachshad and Peleg.)

Also favoring successive patriarchs is J. Barton Payne. While he touches on the calendar aspect of a patriarch’s lifetime, his main interest in the method is the chronological space it affords for ancient Near Eastern history and also for the postdiluvian patriarchs (1976: 831):<sup>10</sup>

A third method of interpretation adduces W. F. Albright’s observation that ancient Near Eastern peoples “dated long periods by lifetimes, not by generations” (*BASOR*, 163 {1961}, 50; cf. K. A. Kitchen, *Ancient Orient and OT*, p. 54) . . . Applied to Genesis 5, this counting by “successive” patriarchs would mean, e.g., that while Adam begat an ancestor of Seth when he was 130 (Gen 5:3), Seth (5:6-8) actually arose as Scripture’s next prominent figure only after Adam’s full life of 930 years (5:4). Adam would then, theoretically, date from 10,000 B.C. or earlier; but, since Seth was prob. not born in the immediate year of Adam’s death, man’s creation may perhaps be dated 15,000 B.C. . . .

Ussher’s “overlapping” method of interpretation allowed only 353 years from the Flood to the birth of Abraham in 2166 B.C. . . . A flood of 2519, however, is difficult to harmonize with the known historical periods of Egypt and Mesopotamia, which develop steadily from 3000 B.C. onward. It would also imply that Shem, with the rest of Abraham’s postdiluvian ancestors (except Reu), were still living in 2166 and that Noah himself had died only three years previously (Gen 9:28). More likely is the system of successive counting, which would put the Flood at least 3,284 years before Abraham, as follows:<sup>11</sup>

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<sup>10</sup> Payne’s explanation of successive patriarchs is repeated, more briefly, in “Antediluvian Patriarchs,” *ISBE* 1.129–31.

<sup>11</sup> What follows is a table showing Payne’s successive reckoning of the patriarchs. Shem died 503 years after the flood. To that figure of 503, Payne adds all the ages at death from Arpachshad to Terah. He uses MT figures but includes Cainan’s 460 years from the LXX. This gives a total of 3,284 years = 503 + 438 + 460 + 433 + 464 + 239 + 239 + 230 + 148 + 130. While Payne does not date the flood, it

In Payne's tabulation of antediluvian and postdiluvian patriarchs, he assumes that Seth, Enosh, Noah, Arpachshad, and Peleg were not immediate sons, so he counts them successively. As discussed in Chapter 8, they were all immediate sons. Payne also suggests that Seth was probably born sometime *after* Adam's death. Such gaps in time make this an Option C chronology. It results in unknown creation and flood dates.

By contrast, I propose that the first descendant counted successively was Kenan. He was chosen because he was the youngest descendant in the promised lineage when his predecessor Enosh died.<sup>12</sup> This results in *overlaps* between the patriarchs. It therefore follows Option A, which offers a chronology that has *no gaps in time between any of the timekeeper patriarchs*. Although the Option A chronology has unknown creation and flood dates, their theoretical earliest limits can be determined, unlike for Option C.

Payne's approach was discussed by Gerhard Hasel but ultimately with a negative assessment (1980: 67). This is the first of two objections by Hasel to the successive counting of patriarchs (the second objection is discussed in the next chapter):

According to this "successive" reckoning the flood occurred 3284 years before Abraham and the creation of Adam 8225 years before the flood (Payne 1976, p 831), i.e., in 5458 B.C. and 13,683 B.C. respectively, if the birth of Abraham is dated to ca. 2170 B.C.

The successive method of reckoning is an accommodation to the needs of current historical study of the ancient world. History based on written records began in both Mesopotamia and Egypt at ca. 3000 B.C. This approach accounts admirably for the historical periods of the ancient Near East. However, the first indications of sedentary life in the Near East is presently dated between 9000 and 7000 B.C. The relative chronology also dates the beginnings of Jericho to ca. 7000 B.C. Thus a flood at about 5500 B.C. is of help, but if the dating procedures for the prehistoric period, i.e., before ca. 3000 B.C., are accepted, then this successive method of reckoning would still not be long enough.

A flood date in the sixth century BC is certainly helpful in harmonizing the Bible with established historical dates (ca. 3000 BC onward). Hasel points out, however, that while Payne's flood date of ca. 5500 BC is helpful, it does not allow for the first indications of sedentary life between 9000 and 7000 BC. I offer the following comments in reply to that:

- Payne treated his flood and creation dates as "latest dates." He suggested that Adam's creation may perhaps be dated to 15,000 BC. He also said that successive counting would put the flood *at least* 3,284 years before Abraham.
- Dates in ancient Near Eastern prehistory rely heavily on the radiocarbon ages of organic materials. Like many young earth creationists, I believe that radiocarbon dates in antiquity are inflated. On this, see the lecture by geologist Andrew Snelling, [Radiocarbon: In Need of Recalibration](#). See also Chapter 14, "The Begetting Age Flood Dates," Figure 2.

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is evidently no later than 5450 BC (= 3,284 years minimum + 2166 BC). His total from the creation to the flood is 8,225 years.

<sup>12</sup> The youngest descendant was chosen because he was expected to have the longest lifespan for timekeeping purposes. Note that he may have been a nearer rather than a more distant descendant. For example, if Enosh's immediate son (the one born to him when he was 90) sired his final son late in life a few years before Enosh died, then that grandson of Enosh would be the timekeeper patriarch rather than a great-grandson of Enosh born much earlier to one of his grandsons.

# Chapter 6 – The Verb “Beget”

Chapter 5 described the *successive patriarchs* approach to arranging the genealogical data in Genesis 5 and 11. This approach calls attention to the Hebrew verb “beget,” and its usage with descendants both immediate and distant.

The Hebrew root for “beget” is *yld* (יָלַד), which transliterates as *yālad*. The two most common forms of this verb are the Qal and the Hiphil. Qal verbs are primarily active in voice; they exhibit simple action (i.e. “give birth to”). The Hiphil is used to express causative action (i.e. “cause to be born”). There is debate over whether the Hiphil form is restricted to immediate offspring.

This leads to the second objection by Hasel to the successive dating method. (The first objection was that Payne’s flood date of ca. 5500 BC, while helpful, still does not harmonize with early Mesopotamian history. Chapter 5 refers.) Hasel notes that in Genesis 5 and 11, *yālad* is in the Hiphil form *wayyōled* (וַיְיָלֵד). Observing that all other usages of *wayyōled* in the OT involve direct offspring, he argues that *wayyōled* in Genesis 5 and 11 must also refer to direct offspring, and not to later descendants (1980: 67):

A distinct difficulty of the successive method of reckoning is evident in the biblical text. The repeated phrase “and he fathered PN [Proper Name]” (*wayyōled* פֶּתַח-שֵׁם) appears fifteen times in the OT — all of them in Genesis 5 and 11. In two additional instances the names of three sons are provided (Gen 5:32; 11:26). The same verbal form as in this phrase (i.e., *wayyōled*) is employed another sixteen times in the phrase “and he fathered (other) sons and daughters” (Genesis 5:4, 7, 10, etc.; 11:11, 13, 17, etc.). Remaining usages of this verbal form in the Hiphil in the book of Genesis reveal that the expression “and he fathered” (*wayyōled*) is used in the sense of a direct physical offspring (Gen 5:3; 6:10). A direct physical offspring is evident in each of the remaining usages of the Hiphil of *wayyōled*, “and he fathered,” in the OT (Judg 11:1; 1 Chron 8:9; 14:3; 2 Chron 11:21; 13:21; 24:3). The same expression reappears twice in the genealogies in 1 Chronicles where the wording “and Abraham fathered Isaac” (1 Chron 1:34; cf. 5:37 [6:11]) rules out that the named son is but a distant descendant of the patriarch instead of a direct physical offspring. Thus the phrase “and he fathered PN” in Genesis 5 and 11 cannot mean Adam “begat an ancestor of Seth.” The view that Seth and any named son in Genesis 5 and 11 is but a distant descendant falters in view of the evidence of the Hebrew language used.

Hasel’s argument is based on only one Hiphil form of *yālad*. Presented below is an alternative view based on three lines of argument:

1. other Hiphil forms of *yālad*
2. the Table of Nations
3. LXX and SP translations of *yālad*

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## 1. Other Hiphil Forms of *yālad*

Other Hiphil forms of *yālad* can refer to a later descendant. There are three noteworthy examples. The first is Deuteronomy 4:25, where immediate sons and later descendants are referred to together:

When thou shalt **beget** [הוֹלִיד *tôlîd*] children, and children's children, and ye shall have remained long in the land, and shall corrupt yourselves, and make a graven image . . .

The second is 2 Kings 20:18, which is repeated in Isaiah 39:7. The context is Isaiah's prediction about Hezekiah's later descendants:

And of thy sons that shall issue from thee, which thou shalt **beget** [הוֹלִיד *tôlîd*] shall they take away; and they shall be eunuchs in the palace of the king of Babylon.

The third example is the genealogy of David. This is recorded in Ruth 4 (Pharez to David) and 1 Chronicles 2 (Ram to David). In both passages below, every "beget" is *hôlîd* (הוֹלִיד):

Now these are the generations of Pharez: Pharez begat Hezron, And Hezron begat Ram, and Ram begat Amminadab, And Amminadab **begat** [הוֹלִיד] **Nahshon** [נְהַשׁוֹן], and Nahshon begat Salmon, And Salmon begat Boaz, and Boaz begat Obed, And Obed begat Jesse, and Jesse begat David. (Ruth 4:18–22)

And Ram begat Amminadab; and Amminadab **begat** [הוֹלִיד] **Nahshon** [נְהַשׁוֹן], prince of the children of Judah; And Nahshon begat Salma, and Salma begat Boaz, And Boaz begat Obed, and Obed begat Jesse, And Jesse begat his firstborn Eliab, and Abinadab the second . . . Ozem the sixth, David the seventh. (1 Chr 2:10–15).

Note that the name *Nahshon* (נְהַשׁוֹן) is preceded by the untranslatable particle *et* (ֶת) followed by the hyphen-type sign  $\bar{\text{—}}$ . The particle *et* is the *direct object marker*. It appears before every person named in the above passages who was "beget." The direct object marker, when used, indicates that the word it prefixes is the object of the verb. In Sexton and Smith 2016 (43), an argument is made to show "that *et*, when used with *yālad*, identifies the person born." That is, the person born is the named person himself, not an ancestor. However, as the discussion below shows, the named person can be an ancestor.

What span of time does David's genealogy in Ruth 4 cover? The following calculation derives from Andrew Steinmann (2017a: 150). He dates the birth of Jesse's immediate son David to 1039 BC, and the birth of Judah's immediate son Pharez to about 1877 BC (i.e. just before Jacob's family entered Egypt). The elapsed time between those two births is 838 years. This results in an average begetting age of 93 years for the nine fathers from Pharez to Jesse, which is implausibly high. In other words, there are missing generations in Ruth 4:18–22 and 1 Chronicles 2:10–15 (i.e. their genealogies display "telescoping"). This means that *hôlîd*, a Hiphil of *yālad*, is used for both immediate and later descendants in the same passage. If a Hiphil of *yālad* can have a later descendant as its object in the genealogies of David in Ruth 4 and 1 Chronicles 2, this should also be possible for *wayyôled* in Genesis 5 and 11.

**wayyôled = hôlîd?** In David's genealogy in Ruth 4 and 1 Chronicles 2, *yālad* is in the Hiphil Perfect form, *hôlîd*. By contrast, the Genesis 5 and 11 genealogies use the Hiphil Imperfect with Waw Consecutive, which is *wayyôled*. The Waw Consecutive is an interesting grammatical form. Used primarily in narrative sequences, it involves prefixing an Imperfect verb with the letter "waw." The value of the verb then becomes Perfect (i.e. the verb's tense is reversed). Thus, in reply to Hasel's argument that *wayyôled* is restricted to direct physical offspring, Paul Ray (2016: 24, fn. 13) observes that *wayyôled* "would seem to equal the *hiphil* perfect found in genealogies with evidence of telescoping (e.g., the genealogy of David)." In other words,

*wayyôled* in Genesis 5 and 11 may include later descendants, just as *hôlîd* does in Ruth 4:18–22 and 1 Chronicles 2:10–15.

**Steinmann and Sexton.** There is a noteworthy exchange between Andrew Steinmann and Jeremy Sexton on the Hiphil of *yālad* in the OT (see Steinmann 2017a, 2018 vs. Sexton 2015, 2018a, 2018b). Sexton’s understanding of the semantics of causation allows only for the named person to be the object of a Hiphil of *yālad*. For example, when Enosh was 90, Kenan was born. Whether he was a son, grandson, or more distant descendant, Kenan himself was born when Enosh was 90. By contrast, Steinmann’s understanding permits an ancestor of Kenan to be born when Enosh was 90. His view is supported by the assessment of philologist Josef Schreiner:

The hiphil seems to be preferred in vertical genealogies traced from father through son, grandson, etc. (Gen. 5; Ruth 4:18–22); the qal, in horizontal genealogies that attempt to list all the offspring of a patriarch (cf. Gen. 10; 22:20–24) . . . Vertical genealogies trace the line of descent from the patriarch to an important descendant (Gen. 5; 6:10; 11:10–27).

[Schreiner, “**יָלַד**, *yālad*,” in *TDOT* 6.79]

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## 2. The Table of Nations

The Table of Nations in Genesis 10 contains the genealogy of the three sons of Noah: Japheth, Ham, and Shem. Compiled by Moses, it records the races on earth descended from them, and where they settled.

Of interest are the genealogies of Ham and Shem, which have a similar structure. Let us begin with Ham (my underlined names show further descent):

IMMEDIATE SONS OF HAM (10:6):

*And the sons of Ham; Cush, and Mizraim, and Phut, and Canaan.*

IMMEDIATE SONS AND GRANDSONS OF A SON OF HAM (10:7):

*And the sons of Cush; Seba, and Havilah, and Sabtah, and Raamah, and Sabtecha: and the sons of Raamah; Sheba, and Dedan.*

A PERSON OF INTEREST DESCENDED FROM HAM (10:8, 10–12):

*And Cush begat Nimrod . . . And the beginning of his kingdom was Babel, and Erech, and Accad, and Calneh, in the land of Shinar. Out of that land went forth Asshur, and builded Nineveh, and the city Rehoboth, and Calah, And Resen between Nineveh and Calah: the same is a great city.*

FURTHER DESCENDANTS AND THEIR LANDS (10:13–16, 19):

*And Mizraim begat Ludim, and Anamim, and Lehabim, and Naphtuhim, And Pathrusim, and Casluhim, (out of whom came Philistim,) and Caphtorim. And Canaan begat Sidon his firstborn, and Heth, And the Jebusite, and the Amorite . . . And the border of the Canaanites was from Sidon, as thou comest to Gerar . . .*

COLOPHON (10:20):

*These are the sons of Ham, after their families, after their tongues, in their countries, and in their nations.*

In Genesis 10:8, a change occurs in recording the genealogy. Rather than using “sons of” (בְּנֵי) as in 10:6–7, the Qal of *yālad* is used: “And Cush begat (יָלַד) Nimrod.” On Nimrod’s ancestry, Douglas Petrovich explains (2013: 276 – I have retained his footnotes):

While the verb יָלַד (“beget, bring forth”) most naturally refers to a mother who bears a child, it also is possible for a man to be in view, and thus a father who has sired a son.<sup>4</sup> Therefore, here Cush is said to have sired Nimrod. For two reasons, however, Cush should not be viewed as the biological father of Nimrod: (1) Nimrod is not listed among the five sons of Cush in Gen 10:7. What is more, Nimrod is not even listed among the two grandsons of Cush. (2) The contrast between בְּנֵי and יָלַד, used in Gen 10:7 and 10:8a, respectively, functions as a marker indicating a qualitative difference between Cush’s siring of his sons and grandsons versus Cush’s siring of Nimrod.

Thus Nimrod should be understood only as a remote descendant of Cush, clearly beyond even the possibility of being a grandson, given that Cush’s grandsons already are named as sons of one of Cush’s sons. Moreover, in the Table of Nations listed in Genesis 10, בְּנֵי places the emphasis on the ancestor, whereas יָלַד points to the descendant.<sup>5</sup> Therefore, while Gen 10:8a focuses the reader’s attention on Nimrod, as a remote descendant of Cush, the text offers no indication whatsoever as to just how distant of a descendant he is.

<sup>4</sup> Victor P. Hamilton, “יָלַד,” in *NIDOTTE* 2.455. The genealogies of Cain (Gen 4:17–24) and Seth (Gen 4:25–26) also utilize יָלַד for father-son siring.

<sup>5</sup> *Ibid.* 456.

Petrovich’s paper presents compelling arguments to show that Nimrod—a remote descendant of Cush—was Sargon the Great, the King of Sumer and Akkad (ca. 2320–2265 BC). The KJV states that Nimrod was “a mighty one in the earth . . . a mighty hunter before the LORD” (Gen 10:8–9). Petrovich’s alternative translation, based on careful analysis of the text, states that Nimrod “acted irreverently, in order to become powerful on the earth; he became a powerful slaughterer in the sight of Yahweh” (2013: 274).

Moses drew attention to Nimrod because of his tyrannical rule. (The name Nimrod is probably a nickname having a negative connotation.) Moses knew that the Israelites would eventually desire a king to rule over them (Deut 17:14). Nimrod slaughtered many people in his lust for power. He was the antithesis of a God-fearing monarch. His inclusion in Genesis 10 served, among other purposes, as a warning to the Israelites of what could happen if a king whom God did not choose was placed on the throne (cf. Deut 7:15).

The genealogical structure for Shem follows a similar pattern to that for Ham (my underlined names show further descent):

IMMEDIATE SONS OF SHEM (10:22):

*The children of Shem; Elam, and Asshur, and Arphaxad, and Lud, and Aram.*

IMMEDIATE SONS OF A SON OF SHEM (10:23):

*And the children of Aram; Uz, and Hul, and Gether, and Mash.*

A PERSON OF INTEREST DESCENDED FROM SHEM (10:24–25):

*And Arphaxad begat Salah; and Salah begat Eber. And unto Eber were born two sons: the name of one was Peleg; for in his days was the earth divided; and his brother’s name was Joktan.*



FURTHER DESCENDANTS AND THEIR LANDS (10:26, 30):

*And Joktan begat Almodad, and Sheleph, and Hazarmaveth . . . And their dwelling was from Mesha, as thou goest unto Sephar a mount of the east.*

COLOPHON (10:31):

*These are the sons of Shem, after their families, after their tongues, in their lands, after their nations.*

Based on the template for Ham, the following deductions can be made for Shem:

1. ARPACHSHAD WAS AN IMMEDIATE SON OF SHEM.<sup>13</sup> Identifying immediate sons is vital in this study, which uses two methods of reckoning: immediate sons and successive patriarchs.
2. ARPACHSHAD BEGAT SHELAH, WHO BEGAT EBER. In Ham's genealogy, his immediate son Cush begat Nimrod. Petrovich argued that Nimrod was a later descendant of Cush. I believe the same logic applies to Shem's genealogy. Shem's immediate son Arpachshad begat Shelah, who was a later descendant. Likewise, Shelah begat Eber, also a later descendant. In that case, the Hiphil form *wayyôled* in Genesis 11, which is used for the begetting of Shelah and Eber, has a later descendant as its direct object.
3. THE PERSON OF INTEREST WAS PELEG DUE TO THE EARTH BEING DIVIDED IN HIS DAY. Peleg was the immediate son of Eber.<sup>14</sup> Genesis 10:25 states that the earth was "divided" in Peleg's day. I uphold the traditional view that Peleg's day saw the *division of languages* at Babel (Gen 11:7–9). It is unlikely to be the *separation of continents*.<sup>15</sup> The division of languages was a world changing event, one that shaped the Table of Nations. Moses therefore drew attention to Peleg in Genesis 10. Note that the Table of Nations records that Peleg's brother Joktan begat 13 sons (Gen 10:26–29). Just as Cush begat the later descendant Nimrod (10:8), so Joktan's first begat son (Almodad) was probably a later descendant.

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### 3. LXX and SP Translations of *yālad*

**The LXX.** It appears that the translators of the LXX did not distinguish between the Qal and Hiphil forms of *yālad*. On this, Paul Ray writes (2016: 24–25):

Another problem in connection with the usage of this verb in *qal* and *hiphil* is whether or not direct physical offspring is necessitated by the use of the *hiphil* formation . . . In this connection, it is interesting to note the LXX translations of this verb in *qal* and *hiphil*. There are four verbs

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<sup>13</sup> For arguments in support of Shem having five immediate sons, see White 2015 (265–66, esp. fn. 34). See also Chapter 8.

<sup>14</sup> The name Eber is significant. The introduction to Shem's genealogy in Genesis 10:21 states, "Unto Shem also, the father of all the children of Eber." Moses evidently mentioned "all the children of Eber" to relate them to the *Hebrews*, a word that shares the same root as Eber.

<sup>15</sup> The evidence suggests that the separation of continents (i.e. the breakup of the Pangea landmass) occurred during the flood due to catastrophic plate tectonics. On this, see the lecture by Kurt P. Wise: [Geophysics of the Flood](#). See also Baumgardner 2003.

used to translate the *hiphil* of *yālad* in the LXX. They are γεννώω, (γί)γνομαι, (ἐκ)τίκτω, and τεκνοποιέω. These same four verbs (along with six others), are used to translate the *qal* of the Hebrew verb. It would seem then, that the translators of the LXX saw no basic difference between these two forms of the Hebrew verb *yālad*.

**The SP.** In Genesis 10:8 MT, the verb “begat” is in the Qal form: “And Cush begat (יִלְד) Nimrod.” However, as noted by Ronald Hendel (2000: 40), the SP has the Hiphil form, *hōlîd*: “And Cush begat (הוֹלִיד) Nimrod.” Like the LXX, this suggests that the SP did not distinguish between the Qal and Hiphil forms of *yālad*. Further, as discussed earlier, Petrovich argues that Nimrod was a remote descendant of Cush. In that case, a Hiphil of *yālad* in the SP has, as its direct object, a later descendant.

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## Semantic Range

As shown in this chapter, the Hiphil of *yālad* can refer to immediate sons or to later descendants. Interestingly, Moses used *wayyōled*, a Hiphil of *yālad*, for three sons *all at once*. A further complication is that the three sons are not listed in birth order:

*And Noah was five hundred years old: and Noah **begat** Shem, Ham, and Japheth. (Gen 5:32)*

*And Terah lived seventy years, and **begat** Abram, Nahor, and Haran. (Gen 11:26)*

If *wayyōled* in these verses was restricted to immediate sons at that point in time, then both Noah and Abraham had triplets at their respective begetting ages. However, from other Scripture, we know for both Noah and Abraham that their three sons were not triplets, and that the first named son was not the firstborn (see p. 10, fn. 8).

Moses therefore used the Hiphil of *yālad* in a flexible way. I believe one reason he did so was to economize on words in his genealogical listings. He knew that other verses would explain Genesis 5:32 and 11:26. To paraphrase Moses’ intent with 5:32:

*When Noah was 500, his first son was born. He had three sons in total: Shem, Ham, and Japheth, but they were not born in that order. Although Shem was not the oldest son, he is nevertheless mentioned first because he was chosen to be in the line of promise.*

\* \* \*

As argued in this chapter, Hiphil forms of the verb *yālad* can take the following direct objects:

- an immediate son (e.g. Gen 5:6; cf. 4:26)
- later descendants (2 Kgs 20:18 & Isa 39:7)
- immediate sons and later descendants (Deut 4:25)
- immediate sons at different times for the same parent (Gen 5:32; 11:26; 1 Chr 2:13–15)

- immediate sons and later descendants in the same genealogical listing (Ruth 4:18–22; 1 Chr 2:10–15)

I therefore submit that *wayyôled* is not restricted, as argued by Hasel, to direct physical offspring. Like other Hiphil forms of the verb, it includes later descendants in its semantic range. This allowed Moses to use a standard formula in Genesis 5 and 11 that economized on words.

## Chapter 7 – The Cainan Problem

Genesis 11:12 MT states that Arpachshad begat Shelah, as do the following MT verses:

*And Arphaxad begat Salah; and Salah begat Eber. (Gen 10:24)*

*And Arphaxad begat Shelah, and Shelah begat Eber. (1 Chr 1:18)*

*Shem, Arphaxad, Shelah (1 Chr 1:24)*

By contrast, Luke 3:36 adds another patriarch, *Cainan*, between Arpachshad and Shelah:

*Shelah, the son of Cainan, the son of Arphaxad, the son of Shem (Luke 3:35–36 ESV)*

Cainan appears in over 40 Greek manuscripts preserving Luke 3:36. He also appears in all known LXX manuscripts of Genesis 11 before 1100 AD, as well as LXX manuscripts for Genesis 10 and 1 Chronicles 1.

This is a problem. While Cainan's name does not appear in any extant Hebrew manuscript, he is testified to in both Luke and the LXX. As a result, Cainan's authenticity has been debated for centuries.

Below is a summary of the two main positions on Cainan. They derive from papers by Andrew Steinmann and Henry Smith. Steinmann upholds that Cainan was a copyist's error in Luke, and his name was subsequently inserted into the LXX. Smith upholds the authenticity of Cainan.

Steinmann presents the following arguments against Cainan (2017b, 2019):

- In most LXX manuscripts of Genesis 11, Cainan and Shelah have the same begetting age and remaining years (130 and 330). This is improbable. It is more likely that Shelah's numbers were copied for Cainan after he was added to the text.
- In Genesis 10:22 LXX A,<sup>16</sup> Cainan is listed incorrectly as a son of Shem. He appears correctly (as a descendant of Arpachshad) two verses later in Genesis 10:24 LXX. His clumsy placement in Genesis 10:22 is evidence of scribal insertion.<sup>17</sup>
- In technical arguments too lengthy to restate here, Steinmann shows that Cainan did not appear in the earliest manuscripts of 1 Chronicles 1. Together with the evidence of scribal insertions in Genesis 10:22 and 10:24, it is more likely that Cainan was added to Genesis 11 rather than being an original part of the LXX's Hebrew *Vorlage*.

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<sup>16</sup> The three major LXX manuscripts are: Codex Sinaiticus (mid-fourth century AD), labeled  $\aleph$  [Aleph] or 01; Codex Alexandrinus (fifth century AD), labeled A or 02; Codex Vaticanus (early fourth century AD), labeled B or 03. The inclusion of Cainan in Codex Sinaiticus cannot be verified because Genesis 10, 11, and 1 Chronicles 1 are missing from the extant codex.

<sup>17</sup> To my knowledge, LXX A is the only manuscript that adds Cainan to Genesis 10:22.

- Supporting the above arguments, the following sources have no knowledge of Cainan:
  - Samaritan Pentateuch (ca. 100 BC)
  - Josephus (late first century)
  - Targum Onkelos (first–second century AD)
  - Theophilus of Antioch (second century AD)
  - Julius Africanus (late second or early third century AD)
  - *Seder ‘Olam Rabbah* (ca. AD 200–250)
  - $\mathfrak{P}^{75}$  (Papyrus 75) for Luke 3:36 (early third century AD)
  - Targum Neofiti (third–fourth century AD)
  - LXX B for 1 Chr 1:17–23 (early fourth century AD)
  - Targum Pseudo-Jonathan (ca. fifth century AD)
  - Codex Bezae for Luke 3:36 (fifth century AD)

After reviewing these sources, Steinmann concludes (2017b: 711):

The evidence suggests that Cainan was not original in Genesis, 1 Chronicles, or Luke. He was first included in the Gospel of Luke through a copyist’s error sometime in the mid-to-late third or early fourth century. By the fifth century, this name was a standard feature in manuscripts of Luke. During this same period, Genesis LXX and 1 Chronicles LXX were probably altered in order to insert Cainan between Arphaxad and Shelah, thereby harmonizing them with Luke. However, the insertions were rather clumsily executed, thereby exposing their true origin.

Henry Smith (2018c) argues for the validity of Cainan’s inclusion in manuscripts of Luke and the LXX. (See also Smith and Udd 2019 for a more detailed defence.) He also offers the following arguments and sources to confirm Cainan’s authenticity:

- LXX Genesis relied on a Hebrew *Vorlage* that included Cainan (ca. 281 BC)
- Demetrius the Chronographer (ca. 220 BC)
- The *Book of Jubilees* (ca. 160 BC)
- Luke’s likely use of the LXX for his genealogy in Luke 3 (ca. AD 60–70)
- $\mathfrak{P}^4$  (Papyrus 4) is the earliest known witness to Luke 3:36 (ca. AD 150–200)
- Hippolytus of Rome (ca. AD 225)
- Cainan’s possible inclusion in the damaged text  $\mathfrak{P}^{75}$  (early third century AD)
- The Berlin Genesis Fragment: LXX Papyrus 911 (late third century AD)
- Chester Beatty IV: LXX Papyrus 961 (early fourth century AD)

Based on the above, Smith concludes (2018c: 75–76):

Instead of being definitive evidence against Kainan, the textual and historical complexities outlined above support a larger argument favoring his original inclusion in both the Old and New Testaments. Conversely, the theory that Kainan originated as a scribal error in Luke and then was interpolated back into both the Greek OT and NT by the Church across the entire Mediterranean world is impossible . . . The only viable explanation is that Kainan was originally in the Hebrew text of Genesis 10:24, 11:13–14 and 1 Chronicles 1:18, 24 but disappeared from a major Hebrew archetype of Genesis 11, probably in Babylon in the sixth century BC. This was followed by the removal of Kainan by harmonization in a later archetypal Hebrew text of 1 Chronicles and Genesis 10:24. The subsequent chain of events and totality of complex evidence outlined above can only be explained by this scenario.

The Cainan issue is difficult. Because this study offers primeval chronologies based on both the LXX and MT, I do not take a stance on Cainan. The reader may choose their preferred textual witness. For those who favor the LXX, there is no disagreement between the OT and NT because Cainan appears in both.

For those who favor the MT, there is no disagreement if this study's proposed method of arranging the genealogical data is adopted. As discussed in Chapter 10, patriarchs who were not immediate sons are counted successively. That arrangement allows us to view Cainan as an *intermediate descendant* between Arpachshad (the immediate son of Shem) and Shelah (a successive patriarch in Arpachshad's lineage). Since Cainan did not affect the chronology, Moses did not include him in Genesis 11. By contrast, Luke listed Cainan in his genealogy because he was a noteworthy figure in the line of promise.

# Chapter 8 – Seven Immediate Sons

This study proposes an unconventional scheme for arranging the genealogical data in Genesis 5 and 11. Begetting ages are used for immediate sons. If a patriarch was not an immediate son, he is counted successively. Identifying immediate sons is therefore crucial to the correct chronological placement of the patriarchs.

The Biblical evidence shows that the following seven patriarchs were immediate sons: Seth, Enosh, Noah, Shem, Arpachshad, Peleg, and Abraham.

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## 1. Seth

According to Genesis 4:25, Eve viewed Seth as a replacement for their son Abel, whom Cain murdered. Seth is therefore an immediate son of Adam and Eve:

*And Adam knew his wife again; and she bare a son, and called his name Seth: For God, said she, hath appointed me another seed instead of Abel, whom Cain slew.*

If Seth is an immediate son, then the act of a parent *naming* a child in Genesis (“and she bare a son, and called his name Seth”) suggests immediate parentage.

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## 2. Enosh

The next verse, Genesis 4:26 states:

*And to Seth, to him also there was born a son; and he called his name Enos: then began men to call upon the name of the LORD.*

The phrase “to him also there was born a son” continues the immediate parentage context of Genesis 4:25, as does Seth *naming* Enosh.

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## 3. Noah

*And Lamech lived an hundred eighty and two years, and begat a son: And he called his name Noah, saying, This same shall comfort us concerning our work and toil of our hands, because of the ground which the LORD hath cursed. (Gen 5:28–29)*

Lamech’s words about Noah (“This same shall comfort us concerning our work and toil”) is incongruous if Noah was a later descendant. Also, Lamech *named* Noah.

## 4. Shem

Genesis 6:10 states: “And Noah begat three sons, Shem, Ham, and Japheth.” They were all immediate sons. See Genesis 6:18; 7:13; 9:8, 18–27; 10:1–32; 11:10; 1 Peter 3:20; 2 Peter 2:5.

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## 5. Arpachshad

*These are the generations of Shem: Shem was an hundred years old, and begat Arphaxad two years after the flood. (Gen 11:10)*

Genesis 10:22 lists Arpachshad as one of the five immediate sons of Shem:

*The children of Shem; Elam, and Asshur, and Arphaxad, and Lud, and Aram.*

On the sons of Shem in Genesis 10:22, White observes (2015: 266, fn. 34):

The way in which this material is organized makes it virtually impossible to understand the five “sons of Shem” in v. 22 as anything other than brothers. Arphaxad, unexpectedly, is placed in the middle of the list of five “sons” of Shem, meaning that two names (Lud and Aram) are mentioned after him. This cannot be understood lineally, for when Arphaxad’s descendants are listed (in v. 24), they are Salah and Eber, not Lud and Aram. The significant point is that Lud and Aram, along with Elam and Asshur, were his brothers. It is hard to believe that the Genesis author would have listed five *grandchildren* (or descendants) of Shem and omitted completely any reference to his children. Furthermore, if Elam, Asshur, Arphaxad, Lud, and Aram were whole people groups several generations removed from Shem, one would wonder why there are only five. The progeny in the intervening generations would have resulted in many more people groups that could lay claim to Shem as their ancestor.

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## 6. Peleg

*And unto Eber were born two sons: the name of one was Peleg; for in his days was the earth divided; and his brother’s name was Joktan. (Gen 10:25)*

Peleg being an immediate son is implied by the statement “unto Eber were born two sons: the name of one was Peleg.” This agrees with the immediate son language of Genesis 4:26: “to him [Seth] also there was born a son; and he called his name Enos.” Being an immediate son is also implied by Peleg and Joktan being brothers. Further, Peleg being named after an event that happened in his lifetime logically suggests that he was the direct son of Eber.

As discussed in Chapter 6, I uphold the traditional view that the “dividing of the earth” in Peleg’s day refers to the *division of languages* at Babel (Gen 11:7–9). In Chapter 10, I propose that we can narrow this event to a single year, being the year of Peleg’s birth.

The name *Peleg* (*plg*, פֶּלֶג) is probably a wordplay on *pālag* (*plg*, פָּלַג), a verb that means “to divide” (cf. Ps 55:9). On this, see Richard S. Hess, “פֶּלֶג,” in *NIDOTTE* 3.617.



## 7. Abraham

Genesis 11:31 shows, unmistakably, that Abraham was an immediate son of Terah:

*And Terah took Abram his son, and Lot the son of Haran his son's son, and Sarai his daughter in law, his son Abram's wife; and they went forth with them from Ur of the Chaldees, to go into the land of Canaan; and they came unto Haran, and dwelt there. (Gen 11:31)*

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## Enoch: The Seventh from Adam

Jude 14 states that Enoch was “the seventh from Adam.” Some view this statement as proof that Enoch was the seventh in a series of direct father-son relationships. However, Jude may simply be pointing to his *position* in Genesis 5 as the seventh named patriarch. Jude may also be linking Enoch to the number seven, which has spiritual significance in the Bible. Enoch was an exceptional OT figure, as the following passages confirm:

*And Enoch walked with God after he begat Methuselah three hundred years, and begat sons and daughters: And all the days of Enoch were three hundred sixty and five years: And Enoch walked with God: and he was not; for God took him. (Gen 5:22–24)*

*By faith Enoch was translated that he should not see death; and was not found, because God had translated him: for before his translation he had this testimony, that he pleased God. (Heb 11:5)*

*And Enoch also, the seventh from Adam, prophesied of these, saying, Behold, the Lord cometh with ten thousands of his saints, to execute judgment upon all, and to convince all that are ungodly among them of all their ungodly deeds which they have ungodly committed, and of all their hard speeches which ungodly sinners have spoken against him. (Jude 14–15)*

Enoch being the seventh from Adam through Seth invites a contrast with Lamech, who was the seventh from Adam through Cain. On this, Paul Tanner writes (2018: 13–14):

The genealogy of Gen 4:17-24 highlights Lamech in the seventh generation from Adam who has no fear of God and boasts in his sin of killing a fellow human being. Yet Lamech (and those who follow in his stead) will not undermine God's program of blessing. The genealogy of Gen 5 introduces us to another man in the seventh generation from Adam (but by way of Seth), namely, Enoch. He stands in stark contrast to Lamech, for he “walks with God” (Gen 5:22). The fact that “God took him” (Gen 5:24) clarifies that the curse of death is not the final answer. With God, there is hope beyond physical death (a hope not witnessed in the line of Cain). The contrast between Lamech and Enoch—both of the seventh generation—is not accidental.

## Chapter 9 – Was the Begotten Son the First Child?

Genesis 5 follows a consistent formula in presenting the patriarchal data:

*And A lived X years and begat B  
And A lived after he begat B, Y years, and begat sons and daughters  
And all the days of A were Z: and he died*

Genesis 11 uses the same formula but without the closing lifespan and death statement:

*And A lived X years and begat B  
And A lived after he begat B, Y years, and begat sons and daughters*

After stating that A begat B, both genealogies say that A “begat sons and daughters” in his remaining years (Y). Some authors interpret the A-B-Y statement to mean:

- B was the first child
- the first child was always a son
- further sons and daughters were born in the remaining years of A

This idea is contradicted by what we know about Adam. We read in Genesis 5:3–4:

*And Adam lived an hundred and thirty years, and begat a son . . . and called his name Seth: And the days of Adam after he had begotten Seth were eight hundred years: and he begat sons and daughters.*

Seth was not the first child. Cain was the first (Gen 4:1) followed by Abel (4:2). It appears there was a notable gap between the exile of Cain and the birth of Seth (cf. 4:3, 25). During that time, daughters were probably born (e.g. the daughter who became Cain’s wife).

Since the formula for Adam is the template for all the other patriarchs, we cannot assume that the male born when A begat B was the first son. While it is probable that the firstborn son was meant to establish the next branch of the patriarchal lineage, he may have died before siring his own son. Also, daughters may have been born before the first son.<sup>18</sup>

Additionally, we should not rule out that a later son (a third or fourth born) established the next branch of the patriarchal lineage. This may have been due to a combination of factors such as: a son died before siring his own son; a son (or his wife) was infertile; the son was deemed undesirable (e.g. sinful behavior as occurred with Adam and Eve’s first son Cain).

Because children may have been born before the father’s begetting age, the statement “A lived after he begat B, Y years, and begat sons and daughters” probably means that A *continued* to beget children in the Y years after B was born. This confirms the fulfillment of God’s command to populate the earth (Gen 1:28; 9:1).

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<sup>18</sup> In which case, using begetting age as a measure of fertility is invalid.

# Chapter 10 – An Unconventional Scheme

The MT data of Genesis 5 and 11 dates the flood to 2518 BC (Chapter 2 refers). This disagrees with conventional Egyptian chronology, whose dynastic era began ca. 3000 BC.

The LXX has more leeway. It dates the flood to 3298 BC (Chapter 3 refers). However, as discussed in Chapter 14, I uphold that this date is too late. It does not allow enough time for all the archaeological periods of prehistory to occur between the flood and the start of Egypt's dynastic era.

The problem is remedied by this study's proposed method of arranging the genealogical data. Most of the patriarchs served as timekeepers. Patriarchs who were not immediate sons are counted *successively* because lifespans are more efficient for calendar keeping than begetting ages.

The discussion below explains this method. It uses the MT data, a birth age of zero, and AM dating. In general, the same principles apply to the LXX data. Attention will be drawn to any noteworthy differences.

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## Patriarchal Timekeeping

On patriarchal timekeeping, William Albright's observation is relevant (1961: 50):

The early Hebrews (like the Assyrians, Etruscans and other peoples) dated long periods by lifetimes, not by generations . . .

Genesis 7:11 states:

*In the six hundredth year of Noah's life, in the second month, the seventeenth day of the month, the same day were all the fountains of the great deep broken up . . .*

The flood was dated to Noah's lifetime. Similarly, I propose that all but one or two patriarchs served as timekeepers, either during the latter years of their life (direct sons) or for most of their life (successive patriarchs). The antediluvian sequence for the successive patriarchs began after Enosh died. The postdiluvian sequence began after Arpachshad died. The inclusion of successive patriarchs allowed thousands of years to be covered by a minimum number of people.

I suggest that a successive patriarch was the youngest descendant in the promised lineage when his predecessor died. This is because, in theory, he had the most years of timekeeper life ahead of him. While his age when becoming the next timekeeper is unknown, people in those days knew that age. So, while the chronology offered in Chapter 12 has no gaps in time between any of the timekeeper patriarchs, it has *overlaps* of unknown duration. This does not prevent us, though, from fixing the theoretical earliest creation and flood dates (Chapter 11 refers).

The proposed counting scheme from Adam to Abraham is shown in Tables 4 and 5. Note that Peleg is an exception to the rule. His inclusion in Genesis 11 is discussed below.

Table 4: Counting Scheme for Antediluvian Patriarchs

	Counted by Begetting Age	Counted Successively
Adam	—	
Seth	X	
Enosh	X	
Kenan		X
Mahalalel		X
Jared		X
Enoch		X
Methuselah		X
Lamech		X
Noah	X	
Shem	X	

Table 5: Counting Scheme for Postdiluvian Patriarchs

	Counted by Begetting Age	Counted Successively
Arpachshad	X	
(Cainan LXX)		(X)
Shelah		X
Eber		X
Peleg	X	
Reu		X
Serug		X
Nahor		X
Terah		X
Abraham	X	

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## Adam to Lamech

**Adam, Seth, Enosh.** Adam lived for 930 years, and events were dated to his lifetime. When Adam died in 930 AM, his son Seth, who was 800, became the timekeeper patriarch. Thus, if an event occurred in 940 AM, it was dated to the language equivalent then of “Seth 810.” I suggest that families in those days knew the “offset” for dating back from Seth to the creation. That offset was Adam’s begetting age for Seth, which was 130 years (Gen 5:3 MT). Thus, if an event occurred in Seth 900, people knew it occurred in 1030 AM.

Seth lived for 912 years, so he served as the timekeeper for the period from Seth 800 to Seth 912. When Seth died, his son Enosh, who was 807, served as timekeeper from Enosh 807 to 905. His offset was 105 years (Gen 5:6 MT). Thus, if an event occurred in Enosh 900, people knew it occurred in 1135 AM (= Enosh 900 + the combined Seth and Enosh offset of 235).

As seen for Seth and Enosh, the begetting ages of immediate sons need to be known to calculate

AM dates. By contrast, begetting ages for successive patriarchs are not needed for any time-keeping purpose. Nevertheless, I suggest that Moses recorded them for *all* the patriarchs for at least four reasons:

- To document, with firm chronological data, the progress of the theologically important line of promise (cf. Gen 3:15).
- To distinguish the lineage. As noted in Chapter 9, the son who established the next branch of the patriarchal lineage may have been other than the first or second born son. Recording his begetting age ensured that there could be no future confusion or quarrel about the intended son.
- To emphasize that this was also a system of timekeeping, as shown by every begetting age being recorded.
- To maintain a standard formula throughout.

**Kenan.** After Seth died, Enosh knew that people lived for around 900 years. (Adam lived for 930 years and Seth lived for 912 years.) We may speculate that Enosh therefore decided to alter the method of timekeeping. Using lifespans was simpler and more efficient. Also, the patriarchal families were now sufficiently populated to adopt this scheme. It would come into effect after Enosh died:

*When Enosh had lived 90 years, he fathered Kenan. Enosh lived after he fathered Kenan 815 years and had other sons and daughters. Thus all the days of Enosh were 905 years, and he died. (Gen 5:9–11 ESV)*

There is no direct or implied statement in the Bible that Kenan was an immediate son of Enosh. This study therefore considers him to be a successive patriarch.

People in those days undoubtedly knew the age of the successor when he became the next timekeeper. However, the Bible does not disclose that age. It may have been anywhere from infancy to over 100 years in antediluvian times. I will refer to this age as the “overlap.” Consider the example of Kenan being 50 when Enosh died, meaning Kenan’s overlap was 50 years. If an event was dated to Kenan 400, it occurred in 1490 AM (= Adam 930 + Seth 800 to 912 + Enosh 807 to 905 + Kenan 400 minus his overlap of 50). I assume that families in those days knew the AM date of the death of the most recent patriarch, plus his successor’s overlap, so the equation for Kenan 400 was simple: Death of Enosh in 1140 AM + Kenan 350 = 1490 AM.

Note that building a chronology based on “timekeeper patriarchs” requires the lifespan of *every* patriarch to be known, even those who were not timekeepers. In the MT, two patriarchs were not timekeepers: Arpachshad and Peleg (both were immediate sons). In the LXX, Peleg is the only such person. We know they were not timekeepers because their lifespans confirm they were outlived by their predecessor, who continued as the timekeeper.

**Mahalalel to Lamech.** Like Kenan, the next five patriarchs were all successive: Mahalalel, Jared, Enoch, Methuselah, and Lamech. Enoch’s era as timekeeper was comparatively short. If his overlap was, say, 75 years, he was a timekeeper for only 290 years. This may be one reason for the explanatory statement about his short life: “And Enoch walked with God: and he was not; for God took him” (Gen 5:24).

## Noah to Arpachshad / Cainan

Noah was an immediate son of Lamech, who died five years before the flood. Noah then became the next timekeeper at the age of 595. The flood occurred in his 600th year (Gen 7:11).

Shem was Noah's immediate son. When Noah died at the age of 950, Shem became the next timekeeper at the age of 448. He served as such until his death at the age of 600.

Shem's immediate son was Arpachshad. However, in the MT, Shem outlived Arpachshad by 62 years. (In the LXX, Shem died 65 years *before* Arpachshad.) Thus, in the MT chronology, Arpachshad was not a timekeeper. Nevertheless, he was the first person in the line of promise born after the flood. This would explain his inclusion in the genealogy. It emphasized that Shem had obeyed God's command to "Be fruitful, and multiply, and replenish the earth" (Gen 9:1).

**Cainan.** Luke 3:36 records that Cainan was the son of Arpachshad. However, Cainan's name is not recorded in Genesis 11 MT. This can be explained by Cainan being an intermediate descendant between Arpachshad (the immediate son of Shem) and Shelah (a successive patriarch in Arpachshad's lineage). Cainan therefore does not affect the chronology, which explains his omission in Genesis 11 MT. Nevertheless, as submitted in Chapter 7, Cainan's inclusion in Luke 3:36 is genuine.

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## Shelah to Abraham

The first successive patriarch in the postdiluvian age was Shelah (MT) or Cainan (LXX). Shelah was followed by Eber, also a successive patriarch. Eber had two immediate sons: Peleg and Joktan. Regarding Peleg, Genesis 10:25 tells us that "in his days was the earth divided." As discussed in Chapter 6, I believe this refers to the *division of languages* at Babel (11:9).

This world changing event was probably why Moses broke the sequence of successive patriarchs to include Peleg in Genesis 11. Further, I propose that Moses used a timely coincidence to narrow the dating of the Babel event. Since Peleg was named because of the division of languages, he must have been named *at birth or soon after*. This is when names were normally given (cf. 4:25–26; 25:24–26; 35:17–18).<sup>19</sup> Thus, Eber's age of 34 (MT) or 134 (LXX) when Peleg was born (11:16) coincides with the Babel event. Moses may have also included Peleg in Genesis 11 to document the noteworthy decline in lifespans after Eber. The MT states that Eber lived for 464 years while Peleg lived for 239 years. Thus, lifespans were almost halved in one generation. (The LXX reduction is about one-third, from 504 to 339 years.)

In both the MT and LXX, Eber outlived Peleg. This means that Peleg was not a timekeeper patriarch. When Eber died, the successive patriarch Rue became the next timekeeper. He was a descendant of Peleg. He was followed by three successive patriarchs: Serug, Nahor, and Terah. At the age of 70, Terah begat his firstborn son. We know from other verses that Abraham was not the firstborn son (compare Genesis 11:32, 12:4, and Acts 7:4).

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<sup>19</sup> Josephus and Ussher both date the division event to Peleg's birth. See Josephus, *Antiquities* 1.6.4 and Ussher 2003 (21).

## Summary and Comments

- All but one or two patriarchs in Genesis 5 and 11 served as timekeepers, either during the latter years of their life (direct sons) or for most of their life (successive patriarchs).
- A successive patriarch was chosen because he was the most recently born descendant in the promised lineage when his predecessor died. Thus, his selection was ultimately decided by the Lord because birth and death are in His hands. To simplify timekeeping, successive patriarchs were used after Enosh. They followed one after the other from Kenan to Lamech. The sequence was broken due to the flood of Noah's day.
- Noah was survived by his son Shem and grandson Arpachshad. In the MT, Arpachshad was not a timekeeper because Shem outlived him.
- The first successive patriarch after the flood was Shelah (MT) or Cainan (LXX). Their line continued through to Terah with one variation: the inclusion of Peleg the immediate son of Eber. Evidently, Moses added Peleg to Genesis 11 due to two key events associated with his birth: (1) the division of languages, and (2) a noteworthy decline in lifespans from Peleg onward.
- In both the MT and LXX, Peleg was not a timekeeper patriarch because Eber outlived him.
- It is important to distinguish between a *timekeeper patriarch* and a *head patriarch*. For example, at the age of 90, Enosh begat the line of descendants that led to Kenan. However, Kenan did not become the head patriarch; he was the patriarch whose lifetime was used to date events. It is likely that the person who became the head patriarch after Enosh died was the eldest descendant in the line begat by Enosh at age 90. When that descendant died, the next eldest descendant became the head patriarch, and so on.
- While Moses recorded begetting ages and lifespans, he did not record the age at which a successive patriarch became the next timekeeper. Either that data was not available to him or he intentionally omitted it. This means we do not know the length of the overlap associated with a successive patriarch. As a result, we cannot precisely date the creation or the flood, which is evidently God's intent. This may be why there are no "checksum" totals in the Bible for primeval history. (For example, there is no total figure from Adam to the flood, or from the flood to Abraham.) We are not prevented, though, from dating the theoretical earliest creation and flood dates.
- Young earth creationists believe that the numbers in Genesis 5 and 11 can be used to construct a primeval chronology. However, the Bible gives no guidance on how to arrange those numbers. This is also the case with the Hebrew kings and judges. For the Hebrew kings, their puzzling numbers became even more puzzling when the chronology of the Neo-Assyrian kings was discovered in the 19th century. In 1944, Edwin Thiele offered principles that harmonized those numbers both internally and with Assyrian history. I believe a similar approach should be adopted for Genesis 5 and 11. In conventional Egyptian chronology, the start of the Early Dynastic Period is ca. 3000 BC. This information was not known to earlier scholars. For example, Ussher was unaware that the historical evidence contradicted his flood date of 2349 BC (1656 AM). If he had known that, he may have examined others ways of arranging the data in Genesis 5 and 11.

# Chapter 11 – Earliest Creation and Flood Dates

This chapter proposes the theoretical earliest creation and flood dates using the approach outlined in Chapter 10. It will be offered for both the MT and LXX. (The LXX numbers are those shown in Chapter 3.) To calculate these dates, some of the variables discussed in Chapter 1 require adjustment. The list below shows all ten variables, and any changes that will be made.

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## A) TEXTUAL DIFFERENCES

Because of the different figures between the MT and LXX, separate chronologies will be offered. The reader may choose their preferred chronology.

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## B) THREE WAYS OF INTERPRETING THE DATA

Counting by begetting age will be used only for the seven immediate sons (Chapter 8 refers). All other patriarchs will be counted successively. It is assumed that a successive patriarch was born in the year his predecessor died. Although unrealistic, this is in keeping with “earliest date” reckoning.

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## C) WHEN A BABY WAS ONE YEAR OLD

As in preceding chronologies, a baby was one year old at their first birthday (i.e. he was zero at birth).

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## D) ROUNDING OF YEARS

It is feasible that only rounded down whole years were counted in Genesis 5 and 11. For example, the reality in Genesis 5:3–5 might be that Adam was aged 130 years and 8 months (= 130) when he begat Seth, after which he lived for 800 years and 7 months (= 800) for a total lifespan of 930 years. To allow for this possibility, I will raise the flood and creation dates as follows: flood date raised by 9 years; creation date raised by 18 years.

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## E) CALENDAR SYSTEM CHANGES

As in preceding chronologies, no adjustments have been made. This study assumes that the numbers recorded in Genesis 5 and 11 account for such changes.



#### F) TWO YEARS AFTER THE FLOOD

Genesis 11:10 states that Shem begat Arpachshad “two years after the flood.” This can refer to any of three years: Noah’s 601st, 602nd, or 603rd years. Preceding chapters used Noah’s 602nd year. This chapter uses Noah’s 603rd year because it results in creation and flood dates that are one year earlier.

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#### G) THE FOURTH YEAR OF SOLOMON

Earlier chapters used 967 BC for the founding of the temple in Solomon’s fourth year. In [Redating the Hebrew Kings](#), I argue that the Assyrian Eponym Canon has an eleven-year gap between 770 and 769 BC. This means that Solomon’s temple was founded in 978 BC,<sup>20</sup> and not 967 BC. This raises all dates before then by eleven years.

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#### H) THE INTERVAL BETWEEN THE EXODUS AND SOLOMON’S FOURTH YEAR

This interval is the same as in preceding chapters, which is 479 years. The Exodus therefore dates to 1457 BC (978 BC plus 479 years) and not to 1446 BC as in preceding chapters.

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#### I) THE DURATION OF ISRAEL’S SOJOURN IN EGYPT

The duration is 430 years throughout this study. Thus, the Israelites entered Egypt in 1887 BC (1457 BC plus 430 years). Since Jacob was 130 when he entered Egypt (Gen 47:9), he was born in 2017 BC. Since Isaac was 60 at Jacob’s birth (25:26), Isaac was born in 2077 BC. Since Abraham was 100 at Isaac’s birth (Gen 21:5), Abraham was born in 2177 BC (and not in 2166 BC as in preceding chapters).

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#### J) THE DURATION OF ABRAHAM’S STAY IN HARAN AFTER TERAH DIED

The figure chosen here will be the theoretical maximum time that Abraham could stay in Haran after his father Terah died. This scenario gives the earliest date for Terah’s birth, and therefore the earliest dates for all the patriarchs who preceded him.

Abraham was 75 when he left Haran sometime after Terah’s death at the age of 205 (Gen 12:4; 11:32). If Abraham was born in 2177 BC, he was 75 in 2102 BC. If Abraham left Haran

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<sup>20</sup> *Redating the Hebrew Kings* is a 376-page study. For a condensed explanation (in 11 pages) of why I prefer 978 BC for the founding of Solomon’s temple, see Chapter 17 of my study, [A Proposed Chronology of the Judges Era](#). That chapter discusses Edwin Thiele’s *original* chronology, and how it can be used to highlight the conspicuous gap in eponym office-bearers between 770 and 769 BC.

that same year, Terah was born in 2307 BC (2102 BC plus 205). This is the latest date for Terah’s birth. In that case, Terah was 205 when Abraham was 75, so Abraham was born when Terah was 130.

However, we are after the *earliest* date for Terah’s birth. It is calculated as follows. Abraham and Sarah (originally Sarai) were already married when they left Ur with Terah and Lot (Gen 11:31). Abraham was ten years older than Sarah (17:17). Assuming they married when Sarah was 15, the youngest age for Abraham arriving in Haran was 25. The year would have been 2152 BC (2177 BC when Abraham was born minus 25 years). If Terah died that same year (in Haran) at the age of 205, he was born in 2357 BC (2152 BC plus 205). This means Abraham stayed in Haran for the maximum possible time of 50 years, from 2152 BC (age 25) to 2102 BC (age 75). In that case, Terah was 205 when Abraham was 25, so Abraham was born when Terah was 180.

Since Canaan is where Terah ultimately intended to go after leaving Ur with his family (Gen 11:31; cf. Acts 7:2–4), it is unlikely that Abraham stayed in Haran for 50 years after Terah’s death. (I assume in the next chapter that it was no more than three years.) Nevertheless, for “earliest date” purposes, I will use 50 years.<sup>21</sup>

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## Age of the Earth

The theoretical earliest creation and flood dates are shown below. The [SPREADSHEET LINK](#) accesses the full chronology in Excel 2013 format.

	CREATION	FLOOD	
MT	10414 BC	4383 BC	<a href="#">SPREADSHEET LINK</a>
LXX	11539 BC	5308 BC	<a href="#">SPREADSHEET LINK</a>

To calculate the oldest possible age of the earth, one must add the present AD year to the creation dates above, then subtract one year because there is no “year zero” between BC and AD dates. As at 2021, the earth was no older than 12,434 years (MT) or 13,559 years (LXX). While these limit figures serve a purpose, the dates for the patriarchs are impractical. The next chapter proposes a more realistic chronology for the Genesis 5 and 11 genealogies.

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<sup>21</sup> Hardy and Carter 2014 (93) and Tanner 2015 (41) likewise calculate a maximum possible time in Haran of 50 years.

# Chapter 12 – Realistic Dates for Genesis 5 and 11

Chapter 11 proposed theoretical earliest creation and flood dates. This chapter offers more realistic chronologies for the MT and LXX data, with dates for all the patriarchs. (The LXX numbers are those shown in Chapter 3.) The following arrangement applies to both chronologies (see Chapter 1 for a review of these variables):

- immediate sons are counted by begetting age; all others are counted successively
- a baby was one year old at birth, as implied by comparing Genesis 7:6 and 7:11
- no rounding of ages; the numbers given in the genealogies are exact, whole years
- the calendar system used was the same from Adam to Abraham
- “two years after the flood” means that Arpachshad was born in Noah’s 602nd year
- after Terah died, Abraham stayed in Haran from age 73 to age 75 (i.e. 2 to 3 years)

Two other issues need to be addressed. The first is Abraham’s date of birth. Unlike preceding chapters, a baby is now one year old *at birth* (as opposed to being one year old at their first birthday). In Chapter 11, Israel’s entry into Egypt was dated to 1887 BC, and not to 1876 BC as in Chapters 2 to 4. Working back from 1887 BC using one year old at birth gives the following dates. Since Jacob was 130 when he entered Egypt (Gen 47:9), he was born in 2016 BC. Since Isaac was 60 at Jacob’s birth (25:26), Isaac was born in 2075 BC. Since Abraham was 100 at Isaac’s birth (Gen 21:5), Abraham was born in 2174 BC. This date is used in both chronologies below.

The second issue is the “overlap” between a successive patriarch and his predecessor. In the “theoretical earliest” chronologies of Chapter 11, every successive patriarch was born in the year his predecessor died. This is doubtful. A more realistic situation is that he was the youngest descendant in the promised lineage when his predecessor died. Because his age when becoming the next patriarch is not recorded in the Bible, it has to be estimated. My approach is to use *half the median begetting age*.<sup>22</sup> This is not an ideal figure to use because a patriarch may have fathered an earlier son who died before siring his own son (Chapter 9 refers). Nevertheless, it is the only figure we have to work with.

The median begetting age for all the patriarchs from Seth to Shem is 100 (MT) and 170 (LXX). I will use 50 (MT) and 85 (LXX) as the ages at which successive patriarchs in the antediluvian era followed their predecessor. The median begetting age for all the patriarchs from Arpachshad to Terah is 31 (MT) and 130 (LXX). I will use 16 (MT) and 65 (LXX) as the ages at which successive patriarchs in the postdiluvian era followed their predecessor.<sup>23</sup>

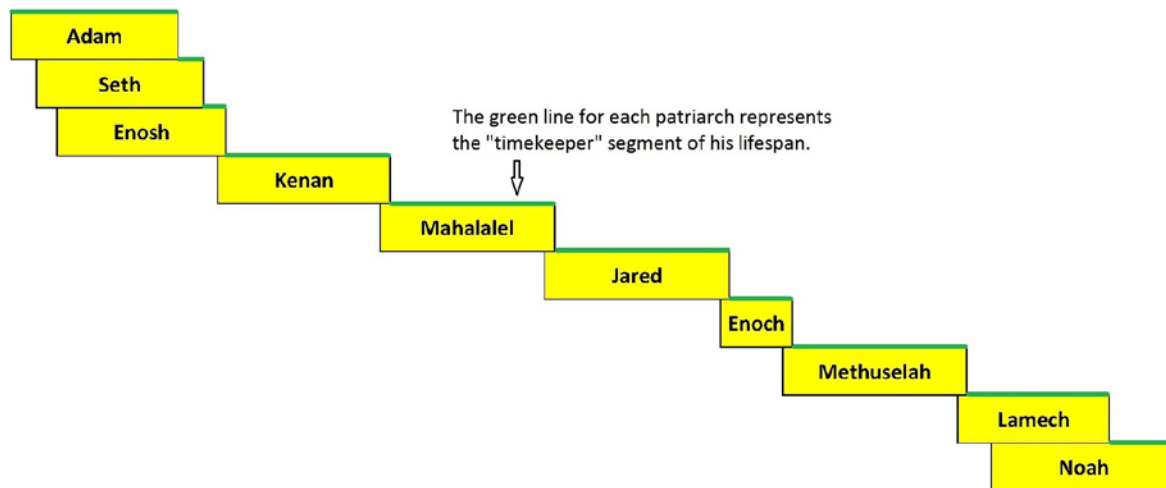
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<sup>22</sup> The *median* is that point where half the numbers are lower and half the numbers are higher. It is more representative than the *average* (also called the *mean*). This is particularly so if some values are skewed toward one end. To demonstrate the difference for the MT, the median begetting age from Seth to Shem is 100 years while the average is 114.

<sup>23</sup> Because of Eber’s significantly longer lifespan, he outlived his immediate son Peleg in both the MT and LXX. Peleg was therefore not a timekeeper patriarch. How does this affect the positioning

Figure 1 visualizes how the chronology is structured from Adam to Noah, as based on the MT data. (The timespans are not exactly to scale.)

Figure 1: The Line of Timekeeper Patriarchs from Adam to Noah



Tables 6 and 7 show the primeval chronology based on the “realistic” arrangement of the MT and LXX data. The SPREADSHEET LINK accesses the full chronology in Excel 2013 format.

Table 6: Realistic Chronology for Genesis 5 and 11 MT ([SPREADSHEET LINK](#))

PATRIARCH * Denotes a Successive Patriarch	BIRTH TO DEATH (AM)	BIRTH TO DEATH (BC)	BECAME THE TIME- KEEPER (BC)	AGE AT DEATH	BEGETTING AGE # Denotes a Calculated Figure
ADAM	1–930	9946–9017	9946	930	130
SETH	130–1041	9817–8906	9017	912	105
ENOSH	234–1138	9713–8809	8906	905	90
KENAN*	1089–1998	8858–7949	8809	910	70
MAHALALEL*	1949–2843	7998–7104	7949	895	65
JARED*	2794–3755	7153–6192	7104	962	162
ENOCK*	3706–4070	6241–5877	6192	365	65
METHUSELAH*	4021–4989	5926–4958	5877	969	187
LAMECH*	4940–5716	5007–4231	4958	777	182
NOAH	5121–6070	4826–3877	4231	950	503#

of Reu in the chronology? When Peleg died, Eber continued as the timekeeper. When Eber died, he was followed by the next timekeeper, Reu, who was a descendant of Peleg. Thus, in both chronologies in this chapter, the overlap for Rue is counted from the final segment of *Eber's* life (not Peleg's). The same applies to Arpachshad in the MT. He was not a timekeeper because Shem outlived him. Shelah's overlap is therefore counted from the final segment of *Shem's* life (not Arpachshad's).

SHEM	5623–6222	4324–3725	3877	600	100
ARPACHSHAD	5722–6159	4225–3788	—	438	35
SHELAH*	6207–6639	3740–3308	3725	433	30
EBER*	6624–7087	3323–2860	3308	464	34
PELEG	6657–6895	3290–3052	—	239	30
REU*	7072–7310	2875–2637	2860	239	32
SERUG*	7295–7524	2652–2423	2637	230	30
NAHOR*	7509–7656	2438–2291	2423	148	29
TERAH*	7641–7845	2306–2102	2291	205	133#
ABRAHAM	7773–7947	2174–2000	2102	175	100

Table 7: Realistic Chronology for Genesis 5 and 11 LXX ([SPREADSHEET LINK](#))

PATRIARCH * Denotes a Successive Patriarch	BIRTH TO DEATH (AM)	BIRTH TO DEATH (BC)	BECAME THE TIME- KEEPER (BC)	AGE AT DEATH	BEGGETTING AGE # Denotes a Calculated Figure
ADAM	1–930	10501–9572	10501	930	230
SETH	230–1141	10272–9361	9572	912	205
ENOSH	434–1338	10068–9164	9361	905	190
KENAN*	1254–2163	9248–8339	9164	910	170
MAHALALEL*	2079–2973	8423–7529	8339	895	165
JARED*	2889–3850	7613–6652	7529	962	162
ENOCH*	3766–4130	6736–6372	6652	365	165
METHUSELAH*	4046–5014	6456–5488	6372	969	187
LAMECH*	4930–5706	5572–4796	5488	777	182
NOAH	5111–6060	5391–4442	4796	950	503#
SHEM	5613–6212	4889–4290	4442	600	100
ARPACHSHAD	5712–6276	4790–4226	4290	565	135
CAINAN*	6212–6671	4290–3831	4226	460	130
SHELAH*	6607–7139	3895–3363	3831	533	130
EBER*	7075–7578	3427–2924	3363	504	134
PELEG	7208–7546	3294–2956	—	339	130
REU*	7514–7852	2988–2650	2924	339	132
SERUG*	7788–8117	2714–2385	2650	330	130
NAHOR*	8053–8260	2449–2242	2385	208	79
TERAH*	8196–8400	2306–2102	2242	205	133#
ABRAHAM	8328–8502	2174–2000	2102	175	100

## Discussion

- The above chronologies date the creation to 9946 BC (MT) and 10501 BC (LXX). Therefore, the approximate age of the earth as at 2021 is 11,966 years (MT) or 12,521 years (LXX).
- The flood dates to 4227 BC (MT) and 4792 BC (LXX).
- Both the MT and LXX chronologies disagree with the conventional periodization of Mesopotamian prehistory, which dates the first indications of sedentary life to ca. 9000 BC. However, as discussed in Chapters 5 and 14, young earth creationists maintain that radiocarbon dates in antiquity are inflated.
- In every MT and LXX chronology in this study, Lamech died either four or five years before the flood at the age of 777. The flood probably explains why he died at the youngest age of all the patriarchs from Adam to Noah. (Enoch, who lived for only 365 years, did not experience death – Heb 11:5.) One assumes Lamech knew ahead of time that he would die before the flood. Otherwise, the issue would have troubled him while the Ark was being built. (Based on the statement in 1 Peter 3:20 that “the longsuffering of God waited in the days of Noah, while the ark was a preparing,” it may have taken a number of decades for the Ark to be built.) Presumably, Lamech’s death was viewed by Noah as a “countdown” to the flood. This probably added urgency to Noah’s efforts as a “preacher of righteousness” (2 Pet 2:5) to warn people about the coming judgment.
- While all the MT and LXX chronologies in this study show that Lamech died four or five years before the flood, the MT and LXX begetting age chronologies (Chapters 2 and 3) show that Methuselah died *in the year of the flood*. Was that really the case? One doubts that Noah, with the weight of the world on his shoulders, had to bear the loss of his grandfather so close to entering the Ark. Also, if Methuselah died in the year of the flood, this would leave hardly enough time for Noah to establish himself as the head patriarch. With the successive counting method this is not an issue because Methuselah died around seven centuries before the flood.
- This study upholds the traditional view that Peleg was named due to the division of languages at Babel (Gen 10:25). As discussed in Chapter 10, it is logical to conclude that Peleg was named *at birth* (or soon after) when names were normally given. Because the next chapter discusses the Tower of Babel story, Peleg’s year of birth is of interest. In the “realistic” chronologies above, which are based on a successor’s overlap of *half the median begetting age*, Peleg was born in 3290 BC (MT) or 3294 BC (LXX).

However, these are not the only possible dates. To calculate the theoretical earliest year for Peleg’s birth, zero overlap is required. In other words, the *birth* of the next patriarch occurs in the same year that the preceding timekeeper died. To calculate the latest year for Peleg’s birth, the *begetting age* of the next patriarch occurs in the same year that the preceding timekeeper died. The exception is Terah. Because he is a successive patriarch and not an immediate son, he is assumed for “latest year” purposes

to be Nahor's grandson. Terah's birth is therefore assumed to occur in the 19th year after Nahor's begetting age (i.e. Nahor's first son begat Terah).

These arrangements result in the date ranges below for Peleg's birth. Note that dates closer to the earliest or latest limit are less likely:

MT..... 3350 to 3161 BC (the [SPREADSHEET LINK](#) shows the 3350 BC chronology)

LXX.... 3550 to 3101 BC (the [SPREADSHEET LINK](#) shows the 3101 BC chronology)

- As discussed in the next chapter, the archaeological evidence points to the division of languages, and therefore Peleg's birth, occurring in the Late Uruk Period (3400–3100 BC). His birth years in Tables 6 and 7 above, which are 3290 BC (MT) and 3294 BC (LXX), fall comfortably in the Late Uruk timeframe.

## Chapter 13 – The Tower of Babel Story

This chapter refers to the following periods in Mesopotamian history. Conventional dates (all approximate) are shown. The dates vary between sources.

- Ubaid Period (6000–3900 BC)
- Uruk Period (3900–3100 BC)
  - a) Early Uruk Period (3900–3600 BC)
  - b) Middle Uruk Period (3600–3400 BC)
  - c) Late Uruk Period (3400–3100 BC)
- Jemdet Nasr Period (3100– 2900 BC)

The earliest true writing systems—Sumerian cuneiform and Egyptian hieroglyph—appear during the Jemdet Nasr Period. Dates before then are therefore considered to be “prehistory.” These writing systems arose from protoliterate forms (based on pictographs) that were used during the Late Uruk Period. Hence, that period is also called the Protoliterate Period.

The periods above are distinguished archaeologically, and must be accounted for in primeval chronologies. However, I believe the conventional dates assigned to those periods are open to question. This is because they derive from radiocarbon measurements.

As discussed in Chapter 14, radiocarbon dating assumes that the atmospheric  $^{14}\text{C}/^{12}\text{C}$  ratio has been reasonably constant over time. The method does not accept that a catastrophic worldwide flood occurred. The flood altered the global distribution of carbon isotopes. As a result, the  $^{14}\text{C}/^{12}\text{C}$  ratio after the flood gradually increased until the atmosphere, climate, and regrowth of vegetation stabilized (see Chapter 14, Figure 2).

As discussed below, the post-Babel dispersion correlates with a notable migration event that took place during the Late Uruk Period. Because Chapter 12 dates Peleg’s birth—and so the Babel story—to early in the Late Uruk Period, I suggest that the  $^{14}\text{C}/^{12}\text{C}$  ratio stabilized early in the Late Uruk Period. This means that radiocarbon dates before then become more inflated the further one goes back in time to the flood. Consequently, radiocarbon dates in the early Ubaid Period are far more inflated than those in the Middle Uruk Period.

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### Identifying Babel

Genesis 10:25 states: “And unto Eber were born two sons: the name of one was Peleg; for in his days was the earth divided.” This study upholds the traditional view that the earth being “divided” refers to the division of languages at Babel. Because Peleg was named as a result of that event, it is logical to conclude that the division of languages occurred in the year of Peleg’s birth (see Chapter 10, “Shelah to Abraham”).

Peleg’s birth is dated in Chapter 12 to ca. 3290 BC (MT) or ca. 3294 BC (LXX). These dates fall in the Late Uruk Period. Archaeology supports this timing. A notable phase of



migration emanating from southern Mesopotamia took place during that period. Known as the *Uruk Expansion*, its characteristics correlate with the post-Babel dispersion.

For discussion of the Uruk Expansion, the Ubaid Expansion, and the location of the Tower of Babel, see the following two lectures by Douglas Petrovich: [Identifying the Post-Babel Dispersion](#); [Identifying Babel and Its Tower](#). His arguments and observations, on which this chapter draws, include:

- Since Babel (*Bābel*) is the Hebrew word for Babylon, it is often concluded that the Tower of Babel was located in the famous ancient city of Babylon. The weight of the evidence, however, points to the Tower of Babel being located in Eridu (Tell Abu Shahrain). There are four key aspects of this evidence. First, the Uruk Expansion originated in southern Mesopotamia. The great city of Babylon was located in *central* Mesopotamia. Second, Babylon was not yet in existence during the Late Uruk Period. It began later as a small town in the Jemdet Nasr Period. Third, ancient Near Eastern sources show that other Mesopotamian cities were also called Babylon.<sup>24</sup> Of these other “Babylons,” the only one that fits all the evidence for being the Biblical Babel is Eridu, which is located about 8 miles southwest of Ur (Tell Muqayyar). Fourth, the famous city of Babylon was also called Eridu. The names “Babylon” and “Eridu” are therefore interchangeable in Mesopotamian thinking.
- Genesis 11:1–2 states that “the whole earth was of one language . . . and it came to pass, as they journeyed from the east, that they found a plain in the land of Shinar.” From this statement, some Christians conclude that the *entire* earth’s population journeyed to Shinar. However, this passage is narrating two separate details to set the post-flood scene: (1) everyone on earth spoke the same language, and (2) at an unknown time after the flood, an undisclosed number of people journeyed to Shinar (= Sumer).
- The Tower of Babel was almost certainly a ziggurat, which was a stepped temple-tower. Because the inhabitants wanted to build a tower with “its head in the heavens” (Gen 11:4 YLT), they probably planned it to be the tallest structure in the region.
- Genesis 11:8 states that the inhabitants “left off to build the city,” meaning that building works ceased (because the people had left). The archaeological evidence supports this. Eridu was abandoned during the Late Uruk Period, and remained that way for a number of centuries. (On this, see Appendix A, which also discusses the outdated view that village life in Eridu ended during the Ubaid to Uruk transition.)
- Further to the above, a ziggurat was built at Eridu toward the end of the 3rd millennium BC. Inscribed bricks name the builders as Ur-Nammu (2111–2094 BC) and his grandson Amar-Sin (2046–2037 BC). Both were kings of the Third Dynasty of Ur (2111–2004 BC). Ur-Nammu probably began the work but the bulk of it was completed by

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<sup>24</sup> As discussed in Dalley 2008, “Babylon” was the name given deliberately to other locations in Mesopotamia. They were Borsippa, Eridu, Ku’ara, Kullab, and possibly Kish and Tentir. The naming model was then extended by Neo-Assyrian kings to cities that may have included Calah, Assur, Arbela, and Nineveh. The Assyrians did this as a sign of admiration and emulation owing to the enormous prestige of Babylon.

Amar-Sin. The archaeological team who discovered this ziggurat in the 1940's believe it was built on top of another large structure dated to the Late Uruk Period. In all likelihood, that earlier structure was the unfinished Tower of Babel. Unfortunately, the archaeologists were unable to penetrate the tough masonry of Amar-Sin's ziggurat. The existence of an earlier monumental building was therefore not confirmed.

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## **Eighteen Successive Temples in Eridu**

Offered below is a commentary on the Tower of Babel story (Gen 11:1–9). As Petrovich submits (see his lectures linked above), Eridu is the only site that fits all the requirements for being the southern Mesopotamian location in which this event occurred.

Eridu was founded sometime between ca. 5400 to ca. 4800 BC (dates vary between sources). Although this date range is earlier than the flood dates offered in Chapter 12, I believe that radiocarbon dates in antiquity are inflated, especially in the Ubaid Period.

Chapter 12 dates the flood to ca. 4227 BC (MT) / 4792 BC (LXX). The commentary below assumes that Eridu was founded 87 years after the flood. This is in ca. 4140 / 4705 BC. If the Babel event occurred in the year of Peleg's birth, which is ca. 3290 / 3294 BC, then Eridu was continuously inhabited for ca. 850 / 1,411 years before its abandonment. In this chapter, I have chosen the more limiting figure to work with, which is the ca. 850-year period based on the MT flood date.

There were 18 phases of temple building in Eridu,<sup>25</sup> with the temples becoming larger over time. When called for, the existing temple was levelled. A bigger, more elaborate one was then built over it. (Temples were normally built over each other because the location was considered to be hallowed ground.)

Eridu's temples were made of sun-dried mudbricks. (Temple I and possibly Temple II may have also used *kiln-fired* bricks. On these, see the Genesis 11:3–4a commentary below.) As a guide to how long the temples may have stood for before being rebuilt, mudbrick houses in prehistoric Çatalhöyük (in Anatolia) “spanned from 50 to 80 years . . . [but] the bricks could retain durability only if well maintained” (Stevanović 2012: 181–82). Fitting 18

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<sup>25</sup> The earliest evidence of human occupation in Eridu was found at Level XVIII. It consisted of four parallel mudbrick walls. They sat on virgin soil (being Level XIX). Directly above the Level XVIII walls, at Level XVII, were the remains of the earliest recognizable building. How did archaeologists conclude that the Level XVIII and XVII remains were temples? It is unquestioned that later buildings at the same location in Levels XI–VI were temples (Safar et al. 1981: 111). Two of their most conspicuous features were an altar and a free-standing podium. Both these features appear in the building at Level XVI. This implies that the Level XVI building was a temple, a conclusion supported by it being built at the same location as Temples XI–VI. Because the provision for a circular oven was almost in the same position, relative to Temple XVI, as it occupied in Levels XV, XVII and XVIII (whose structures were all built at the same location as Temple XVI), the evidence suggests that the structures in Levels XV, XVII and XVIII likewise served a ritual purpose (Safar et al. 1981: 111). In other words, there were 18 phases of temple building in Eridu.

temples in the space of ca. 850 years is therefore possible if the following progression is assumed: (1) the early, small temples stood for less than a few decades before they were replaced due to population increase and/or maintenance issues; (2) subsequent temples stood for longer periods (up to 80 years) due to advances in building technology and maintenance.

Based on Eridu's later temples having longer lives, I suggest the ca. 850-year span of temple history proceeded roughly as follows. The first five temples stood for ca. 110 years. The next eight stood for ca. 430 years. The final five occupied a period of ca. 310 years (Temple I may still have been under construction at the time of the Babel event – see below).

**Temples V–I.** According to Safar et al. (1981), the final five temples in Eridu date to the Uruk Period. The authors divide this period and its temples into two subphases, as follows:

- the Early Uruk Period..... Temples V–III
- the Late Uruk (or Protoliterate) Period ..... Temples II–I

The only remains of Temples V–III are the platforms on which they once stood. Regarding Temples II–I, “all that is left to us are its foundations and retaining-walls, while even of these a large proportion are buried beneath the massive masonry of the Third Dynasty ziggurat [built in the late 3rd millennium BC]” (Safar et al. 1981: 78). Thus, owing to the lack of archaeological remains, it is unknown if Temple I was still under construction when Eridu was abandoned due to the division of languages. Despite the scarcity of temple remains, we can assume that Temples II–I were magnificent, richly appointed buildings.

**Was Eridu a city?** As discussed in Appendix A, the archaeological evidence shows that Eridu expanded greatly during the Early Uruk Period. Henry Wright estimates its total area to be “perhaps 40 hectares” (1981: 325). He also calls it a “large town” (1969: 27). In Adams 1981, the author often refers to settlements greater than 40 hectares as cities, suggesting that Eridu was basically a city. However, its leaders evidently did not think so (see the commentary below on Genesis 11:4a). Nevertheless, Eridu is frequently called a city in literature. Its prestige and renowned temples undoubtedly contribute to that status.

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## The Mesopotamian God Enki

Eridu was the principal site of the Ubaid period. Its later, more elaborate temples were renowned, making Eridu the religious center of Sumer, and a religious hub in Mesopotamia. The temples were devoted to Eridu's patron god *Enki*, whose Akkadian name was *Ea*. He was god of the subterranean freshwater ocean called the *Abzu*. It was believed that springs, wells, streams, etc., drew their water from the Abzu.

The Mesopotamians were polytheistic and worshipped a pantheon of gods. Regarding Enki, he appears in various Sumerian and Akkadian literary works. The excerpt below is from *Enki's Journey to Nibru*, as translated by Black et al. (2004: 331). The story is in four parts, only one of which narrates the journey itself. In Part 1, Enki oversees the building of his temple at Eridu. The temple was named *E-Engur*. The excerpt comes from Part 2, where Enki's minister *Isimud* delivers a hymn of praise to the temple. The excerpt reflects the importance that the Mesopotamians placed on their gods and temples:

Before lord Enki, Isimud the minister praises the temple; he goes to the temple and speaks to it. He goes to the brick building and addresses it: ‘Temple, built from precious metal and lapis lazuli; whose foundation pegs are driven into the Abzu; which has been cared for by the prince in the Abzu! Like the Tigris and the Euphrates, it is mighty and awe-inspiring. Joy has been brought into Enki’s Abzu.

‘Your lock has no rival. Your bolt is a fearsome lion. Your roof beams are the bull of heaven, an artfully made bright headgear. Your reed-mats are like lapis lazuli, decorating the roof-beams. Your vault is a bull raising its horns. Your door is a lion who seizes a man. Your staircase is a lion coming down on a man.

‘Abzu, pure place which fulfils its purpose! E-Engur! . . . In your midst a lofty throne is erected, your door-jamb is the holy locking bar of heaven.

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## Commentary on Genesis 11:1–9

Gordon Wenham states that “The tower of Babel is a short but brilliant example of Hebrew story telling . . . Word play, chiasmus, paronomasia, and alliteration are just some of the devices used to unify and accentuate the message of the tale” (1987: 234). However, the brevity of the story leaves a number of questions unanswered. They include:

- How soon after the flood did people journey to Shinar?
- How long after they arrived did they decide to build a tower?
- Why did they fear being scattered?
- What was the sin (or sins) committed by them that made the Lord take action?
- Who gave the name “Babel” to Eridu?
- Despite Babel (בָּבֶל, *Bābel*) normally being translated as *Babylon* in the OT, most Bible versions have “Babel” in Genesis 11:9. Undoubtedly, this is in recognition of the long history of *Bābel* being associated with the word *bālal* in 11:9. which is variously translated as *confound*, *confused*, *mixed up*, or *mingled*. How does this association correlate with the Mesopotamian meaning of Babylon, which is “gate of god?”

The following commentary attempts to answer these questions, and also to harmonize the Tower of Babel story with the archaeological evidence. The dates suggested are approximate, and Babel is identified as Eridu. The flood date is ca. 4227 BC (MT).

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**11:1 *And the whole earth was of one language, and of one speech.***

The post-flood world had a common language and vocabulary. While this verse sets the scene, it may also be hinting that the pre-flood world had more than one language.<sup>26</sup>

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<sup>26</sup> Both the MT and LXX chronologies in Chapter 12 show that the antediluvian age lasted ca. 5,700 years. Over those millennia, different dialects and even different languages probably arose.

**11:2 *And it came to pass, as they journeyed from the east, that they found a plain in the land of Shinar; and they dwelt there.***

An undisclosed number of people travelled from the east, or possibly from the northeast, looking for a place to settle. (In my view, neither Noah nor his immediate family members were among them.) They discovered a suitable plain in Shinar, which is Sumer in southern Mesopotamia. There, as this chapter assumes, Eridu was founded 87 years after the flood<sup>27</sup> in ca. 4140 BC. Presumably, other people groups also entered Mesopotamia and surrounding regions before, during, and after this notable group set out from the east.

I uphold that the division of languages occurred in the year of Peleg's birth, which for the MT is ca. 3290 BC. An interval of ca. 850 years therefore elapsed from the founding of Eridu to its abandonment. Thus, the statement "and they dwelt there" covers a long period of time.<sup>28</sup> This lengthy interval is not discernible in the story because chronological details have been set aside.

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**11:3-4a *And they said one to another, Go to, let us make brick, and burn them thoroughly. And they had brick for stone, and slime [bitumen] had they for mortar. And they said, Go to, let us build us a city and a tower, whose top may reach unto heaven.***

As discussed above, Eridu expanded to a size of around 40 hectares during the Early Uruk Period. While this size may qualify Eridu as a city (Algaze 2008: 171), that was evidently not the view of its leaders. Because they wanted to "build us a city," they must have considered Eridu at that time to be a *large town*. Their upgrade plan most likely involved expanding the acropolis (Mound 1), which was where the temple was located. By adding new public buildings there, the acropolis would grow from town size to city size. The crowning work would be a "tower," or ziggurat, whose "top may reach unto heaven." This implies a desire both for spiritual connection with their god(s) and to build the tallest structure in the region.

Through these building projects, along with the population growth they would attract, Eridu would achieve fame and undeniable "city status." It is not until the next verse that we find out why Eridu's leaders undertook this ambitious venture. (The planned duration of the works may have spanned many years.)

The first task was to make and stockpile bricks in preparation for construction ("Go to, let us make brick, and burn them thoroughly").<sup>29</sup> Kiln-fired bricks would be used where needed. First attested in the Late Uruk Period, this brick type was more costly to make than

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<sup>27</sup> The figure of 87 years is somewhat arbitrary. It is based on two factors: (1) speculated population growth after the flood, and (2) using a figure that results in a "rounded" number for Eridu's occupation (ca. 850 years).

<sup>28</sup> Regarding the time spanned by the first 13 temples in Eridu (XVIII–VI), Max Mallowan observes (1970: 334): "they must have spanned many centuries, for the total depth of the sounding which embraced them amounted to no less than 12 m. in all."

<sup>29</sup> In the famous Babylonian poem *Enuma Elish*, the gods want to honor Marduk by building Babylon's temple (the *Esagila*). They mold bricks for a year in preparation (*Enuma Elish* 6.60).

sun-dried mudbricks. For mortar they used bitumen, which was also a costly material as Singer et al. explain (1954: 250, 255):

In antiquity, particularly in Mesopotamia, bitumen was used as a building material and, to a smaller extent, as a paint. It adheres firmly to porous bricks of the kind then used, and forms an excellent waterproof coating . . . Being expensive, it was very seldom used for walls of sun-dried bricks (which were usually laid in mud), except to make the walls and floors of such buildings impervious to water . . . It was, however, widely used in baked-brick buildings. These, again because of the cost of fuel, were expensive, and were normally used only for palaces, temples, and other official buildings. The low firing temperature of the bricks (550–600° C) resulted in a high porosity; thus the mastic was freely absorbed, and gave ‘such strength that the walls made of it are stronger than rock and any kind of iron’ . . . Modern excavators have found that it is virtually impossible to separate brick from mortar in these buildings.

The materials used showed that cost was no object. On this building project, John Walton writes (1995: 163–64):

Kiln-fired bricks are first noted during the late Uruk period . . . Bitumen is the usual mortar . . . Whole cities were not generally built of these materials. Even ziggurats themselves only used burnt brick and bitumen for the outer layers while using regular sun-dried mud brick for the inner layers. The core was then filled with dirt. The mention of the expensive building materials would thus suggest that the discussion is focusing on public buildings . . . Thus, when the people in Genesis 11 speak of building a city, they are most likely not referring to building of a residential settlement, but would have in mind the building of public buildings, which in ancient Mesopotamia would be largely represented by the temple complex . . . The focus of any major temple complex would have been the ziggurat.

The decision to build a ziggurat at Eridu is supported by the archaeological evidence. A massive platform extension is associated with Temples II and I. The platform’s total area dwarfs that of Temples II and I, which stood adjacent to it.<sup>30</sup>

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**11:4b *and let us make us a name, lest we be scattered abroad upon the face of the whole earth.***

The reason for building a city and a tower is now given. It was to make an enduring name for themselves, so preventing them from being scattered across the earth. Their fear of being scattered suggests that, at an earlier time in the settlement’s history, a significant number of people left to live elsewhere. The remaining inhabitants therefore feared that Eridu would not survive.

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<sup>30</sup> For a diagram that shows the temple size vs. the platform extension on which Amar-Sin’s large ziggurat sits, see Safar et al. 1981, p. 32, Fig. 3. On p. 81, the authors state: “We therefore appeared to have been right in thinking that the platform of our Protoliterate temple had been extended to support another equally important building, subsequently displaced by the ziggurat” [of Amar-Sin]. This “equally important building” was, most likely, the unfinished Tower of Babel.

I suggest that this exodus happened early in the Ubaid Period, and agricultural setbacks may have been one of the reasons for it. Eridu lay on the edge of the alluvial plains of Sumer. Successful agriculture in those plains was labor intensive, and required extensive irrigation works. These were not fully developed until the Uruk Period. (Southern Mesopotamia has low rainfall. Its total reliance on irrigation contrasts with northern Mesopotamia's rain-fed agriculture.) Because life was initially difficult in southern Mesopotamia, people may have left Eridu to settle in more agriculturally friendly places. The decline in Eridu's population, particularly its laborers, jeopardized the city's continued existence.<sup>31</sup>

I further suggest that the inhabitants of other sites in southern Mesopotamia relocated as well, probably for reasons similar to those who departed from Eridu. These migrations would have contributed to the wide-ranging distribution of Ubaidian material culture styles referred to as the *Ubaid Expansion* or, more flexibly, the *Ubaid horizon*.

Unlike the later Uruk Expansion, the Ubaid Expansion was characterized by the gradual, peaceful spread of material culture, with the sharing of goods, ideas, and technologies. Its horizon encompassed a vast expanse, which included: northwest Syria; southeast Anatolia; northern, central, and southern Mesopotamia; western Iran, and the western littoral of the Persian Gulf. Unlike the Uruk expansion, population movements in the Ubaid Expansion were believed to be minimal, but they undoubtedly occurred. On the difference between the two expansions, Gil Stein and Rana Özbal write in the abstract to their 2007 essay (329–30):

A contextual analysis comparing different regions shows that the Ubaid expansion took place largely through the peaceful spread of an ideology, leading to the formation of numerous new indigenous identities that appropriated and transformed superficial elements of Ubaid material culture into locally distinct expressions. Volumes of interregional trade were low, and population movements were minimal. By contrast, the Uruk expansion was an actual colonial phenomenon, involving the founding of Mesopotamian trading enclaves among pre-existing local polities and emulation by local groups in the so-called peripheral areas. Relations between Uruk colonists and local polities varied from coercive to cooperative, depending on the distance from Mesopotamia and the degree of preexisting indigenous social complexity.

By my assumed dating, Eridu was founded in ca. 4140 BC. People may have begun departing from Eridu possibly around 100 years later (ca. 4040 BC). Peaceful interactions would be expected of people who relocated to other regions in those days. Because they were still living for over 400 years then (e.g. Arpachshad), they had closer family ties than was the case during the Uruk Expansion centuries later. So, when people moved to other areas, they were mixing with near relatives, which assisted peaceful integration.

I propose that history repeated in the Uruk Period. Due to the growth of towns and cities then, there was strong demand in the region for laborers. As a result, some of them left Eridu. Presumably, they were lured by the growth of these towns and cities, and also by inducements (e.g. access to irrigation water). Once again, Eridu's residents feared they might be

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<sup>31</sup> Towns and cities in ancient Mesopotamia would have required a continual flow of immigrants to maintain equilibrium, and an even higher flow to grow in size (Algaze 2018: 23–30). Regarding the principal sources of labor in 3rd millennium BC Mesopotamia (i.e. corvée, menial, hired, and slavery), as well as corvée labor in prehistoric times, see Steinkeller 2015.

scattered. To prevent losing more workers, and to entice laborers and other immigrants to live in Eridu, its leaders decided to build a city that would be defined by the tallest religious structure of its day. Through this highly visible ziggurat, the people would make a name for themselves, and the city would be renowned throughout the region.<sup>32</sup>

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### **Excursus: A Discontinuity in the Temple Building Sequence for Levels XIII and XII**

An exodus of people from Eridu during the Ubaid Period, especially of laborers, may be hinted at in a discontinuity in the temple building sequence. There are no traces of temple remains in Levels XIV to XII (which is why those three Ubaid Period temples are not mentioned in the discussion in p. 50, fn. 25). The only evidence for an assumed Temple XIV is the brick packing of the ruins of Temple XV. Regarding the two levels above Temple XIV, being Levels XIII and XII, Safar et al. write (1981: 90):

After Temple XIV, there were two successive occupation-levels at which no traces of actual buildings were to be found within the area of our sounding. If, indeed, a temple had been rebuilt at these two periods, it must have been sited some distance to the northwest, and the only evidence which we could find of its existence was due to a chance circumstance. The treasure-seekers of a later age had here sunk a deep shaft from the surface, and from its base, had directed a tunnel northwards beneath the ziggurat. We followed this tunnel for a short distance, and, in the process came upon a liben [mudbrick] wall, corresponding to Level XII. This could not, of course be traced further owing to the congested conditions in the tunnel; but it was possible to observe that it was buried in clean sand, and, since in Level XI the temple was again resited, it was possible to imagine that this sand represented a temporary break in the continuity of temple-building.

On this break in continuity, Max Mallowan offers (1970: 334): “it seems that at that period the site of the main temples was shifted to ground which subsequently underlay the zikkurat.” (Mallowan had a strong interest in the Eridu excavations, and was a close friend of Seton Lloyd, one of the authors of Safar et al. 1981.) If the temple site had indeed been shifted, it was a major event. Temples were normally built over each other owing to their location being considered holy ground. Did a shortage of laborers restrict Eridu’s leaders to building one or two temples that were not grand enough to be sited at the normal location?

After the lapse in time caused by the broken continuity in Levels XIII and XII, an obviously ritual building reappears at the customary location in Level XI. Temple XI was larger and more sophisticated than any preceding temple. Clearly, there were sufficient laborers to undertake that work.

The temple building discontinuity suggests a low point in Eridu’s history that ended when work began on the grandest temple to that time, Temple XI.

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<sup>32</sup> This idea of preserving, and even growing, Eridu’s population through a grand building project is consistent with the increasing size of its temples. Larger temples were not only a ritual attraction that helped to unify the public and entice immigration, but it further empowered Eridu’s elite.



**11:5-7** *And the LORD came down to see the city and the tower, which the children of men builded. And the LORD said, Behold, the people is one, and they have all one language; and this they begin to do: and now nothing will be restrained from them, which they have imagined to do. Go to, let us go down, and there confound their language, that they may not understand one another's speech.*

At some point during the renovation and construction works, the Lord came down to inspect what had been completed so far. He saw that the people were of one accord. We can assume they were driven to finish the task, and that work was proceeding in a coordinated way. No doubt, the ziggurat was growing skyward.

In my view, it was not the building works that concerned the Lord. Rather, He recognized a future problem that needed to be addressed sooner rather than later. The Lord saw that the people, by their united efforts, were committing a number of sins. They were doing so not wilfully but through ignorance. Their sins included: worshipping other gods; pride; boasting; coveting worldly things; glorifying themselves through the works of their hands; viewing themselves as the masters of their own fate (they were not accountable to their Creator).

While this does not represent the height of sinfulness, the behavior of the people (“and this they begin to do”) portended a problem of global scale. As God had witnessed at Eridu, the unity of the people in both language and purpose made them powerful.<sup>33</sup> Since the human race is innately sinful (Rom 3:10–12; Jer 17:9; Gen 6:5), such power would increase the potential for committing even worse sins if people groups (“the children of men”) banded together in an unrighteous cause (“now nothing will be restrained from them, which they have imagined to do”). This would limit God’s salvific scope in future dealings with humanity. In short, the world would become a far more sinful place if nothing changed.

To curtail humanity’s ability to band together as one and intensify sin, the Lord came down to “confound their language,” which translates literally as “*mix* their language.”<sup>34</sup> He caused the people at Eridu to speak different languages to ensure the whole world ended up with multiple tongues. While this commentary dates the event to Peleg’s birth in ca. 3290 BC (MT), earlier or later dates for his birth—and thus for the Babel event—are possible (see Chapter 12, “Discussion”).

**Replenish the earth.** It is commonly held that the sin committed by the people was their disregard for God’s command to “Be fruitful, and multiply, and replenish the earth” (Gen 9:1). Instead, desiring not be scattered, they started building a city and a tower to make a

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<sup>33</sup> Eridu in the Late Uruk Period probably had a sizeable immigrant population (see p. 55, fn. 31). This may be one reason why the term “children of men” (= “sons of men”) is used to describe its inhabitants. The term is used later in Scripture to refer to humanity in general, irrespective of race or origin (e.g. 1 Kgs 8:39; Ps 33:13). Despite their different places of birth, people in Eridu had a common language, which enhanced cooperation. Thus, when the Lord came down to see what “the children of men builded,” He saw people who previously had little or no connection with Eridu taking pride in the construction work. They were indeed “as one.”

<sup>34</sup> On the verb for “mix,” *bll*, see Wilma A. Bailey, “בלל,” in *NIDOTTE* 1.663–64. She writes, “there is a divine call for the mixing (‘confuse’ and ‘confused,’ NIV) of the languages, which results in the scattering of humankind, the desired outcome” (1.664).

name for themselves. Against this view, Creighton Marlowe observes that “The arrival in Shinar shows the people were already migrating and multiplying” (2011: 29). He also notes that “they likely have no knowledge of the Lord or his commands” (2011: 32). This would be true of people who worship other gods building a city and tower centuries after the Lord’s command to replenish the earth.

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**11:8** *So the LORD scattered them abroad from thence upon the face of all the earth: and they left off to build the city.*

The result of speaking in different languages was that, over time, Eridu’s descendants were scattered across the face of the earth. The very thing they wanted to avoid became their fate.

Although we are not told how they were scattered, it is logical to assume that those who spoke the same language banded together to find places to live. Their dispersion patterns agree with the archaeological evidence for the *Uruk Expansion*, which originated from southern Mesopotamia in the Late Uruk Period. Unlike the peaceful integration of the Ubaid Expansion, the Uruk Expansion was characterized by colonialism, which sometimes involved forceful takeover.

In all likelihood, the division of languages hastened the development of writing systems, which are first attested in the Jemdet Nasr period (3100–2900 BC). As for Eridu (Babel), it lay unpopulated for several centuries probably until the rise of Nimrod (Gen 10:8–12), who is identified in Petrovich 2013 as Sargon the Great (ca. 2320–2265 BC). Later, during the reign of Amar-Sin, who was the third king of the Third Dynasty of Ur (ca. 2046–2037 BC), a ziggurat was completed on the large platform built originally for the Tower of Babel. (Amar-Sin is known for his efforts to restore and improve the ancient sites at Sumer.) This “new” tower was presumably built over the unfinished work of the former one.

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**11:9a** *Therefore its name was called Babel, because there the Lord confused the language of all the earth. (ESV)*

Because of the division of languages, the location where it occurred (Eridu) was given the name “Babel,” which is the normal Hebrew word for *Babylon*.

We do not know who called the location Babel, as Victor Hamilton notes (1990: 357): “It is not clear whether the name Babel is given to this city by Yahweh, by the narrator, or by somebody else.” Nor are we told the precise reason for the location being called Babel. It is clearly linked to “confused,” but the link is left for the reader to interpret. In this section, I posit that Eridu was called Babylon by the Mesopotamians because it means “gate of god.” They believed Eridu was the “gate” through which a mighty god came to mix their speech. Moses correctly recorded that the place was named Babel (= Babylon). He then crafted a wordplay between the Hebrew words for *Babel* and *confused*.

***Bābel* and *bālal*.** Babel is normally translated as “Babylon” in the OT because this is the Greek spelling of that famous city. However, for Genesis 11:9, most Bible versions have

“Babel.” Undoubtedly, this is in recognition of the traditional association in 11:9 between the words *Bābel* (בְּבֶל) and *bālal* (בָּלַל = “mix” or “confuse”). Two common interpretations of this association are:

1. THE PRIMARY MEANING OF *BĀBEL* IS “CONFUSION.” This is seen prominently in the LXX, which normally translates *Bābel* as βαβυλών (*Babylon*). The exception is Genesis 11:9, where *Bābel* is translated as Σύγχυσις (*Confusion*): “Therefore its name was called Confusion, because there the Lord confused the lips of all the earth.” Here, the word “confusion” was chosen at the expense of the proper name, Babylon.

As well as *Bābel* meaning “confusion,” some authors ascribe a secondary meaning, being “gate of god” (see below for the etymology of the name Babylon). Advocates of this view normally locate the Tower of Babel in the famous city of Babylon. For example, J. Barton Payne writes (1954: 22):

The [Babel] project terminated in man’s being scattered over the earth; the means of disruption was God’s confounding their speech, Gen. 11:1–9. Formerly, all spoke one language; but God replaced this with a number of unrelated tongues. Babel means “confusion,” though the Babylonians themselves gave it a secondary derivation, *Bab-ilu*, “gate of God.”

2. *BĀBEL* AND *BĀLAL* ARE A WORDPLAY. The phonetic similarity between these two words and the swapping of the letters “b” and “l” underscore the *mixing of languages*. Thus, Walter Kaiser maintains that “Babel itself does not mean ‘confuse’; it sounds enough like *bālal* for the paranomasia” (“בְּבֶל,” in *TWOT* 1.111–12).

Whatever view one holds on the *Bābel* / *bālal* association, it cannot be ignored that Eridu and Babylon are strongly equated in ancient literature, as Stephanie Dalley explains (2008: 25; see also p. 49, fn. 24):

Another city whose name became interchangeable with Babylon was Eridu. The lexical list Erimhuš V 26 and the topographical list TIN.TIR<sup>ki</sup> I 21 and V 90–91 show that Eridu was a name for Babylon proper. A version of the Sumerian King List gives Eridu as the first city ever to receive kingship from heaven . . . Eridu is the city in which Hammurabi king of Babylon was crowned . . . According to TIN.TIR<sup>ki</sup>, Eridu was the name for the religious quarter of Babylon . . . The text gives an equation of the kind characteristic of lexical texts: “Eridu = Babylon the pleasant city,” in I 21.

I propose that Moses did not recruit the Hebrew word *Bābel* to mean “confusion.” Rather, he knew that the toponyms Eridu and Babylon were interchangeable, and had religious connotations. He therefore used *Bābel* in its normal sense, which means Babylon (= Eridu).

**Gate of god.** Regarding the etymology of “Babylon,” its earliest form appears to have been *babil(a)*. While the origin and meaning of *babil(a)* are lost to antiquity, later Mesopotamian forms have the meaning “gate of god.” On this, Bill Arnold writes (2004: 2):

. . . the name of the location “Babil(a)” was of neither Sumerian nor Akkadian origin and so perhaps derives ultimately from the population inhabiting Mesopotamia before the Sumerians, the so-called proto-Euphratean population.

This ancient and now obscure name for the city gave rise to an Akkadian form, created through popular etymology, *bāb-ilim*, “Gate of God,” which then assumed a Sumerian equiv-

alent, ka-dingirra, also meaning “Gate of God.” Earlier scholarship assumed this Sumerian version was older and more original and that the Akkadian *bāb-ilim* was derivative. However, Ignace J. Gelb argued that the Akkadian preceded the Sumerian equivalent and was probably created by wordplay on the even older *babil(a)*. It is currently impossible to determine which was primary. The later plural form, *bāb-ilāni*, “Gate of the Gods,” became *babylōn* in Greek, resulting in the modern name “Babylon.”<sup>35</sup>

Given the upheaval caused by the division of languages, I suggest that people in the region began to view Eridu’s temple complex as the “gate” through which a powerful god entered the world to cause language confusion.<sup>36</sup> Eridu was subsequently called “gate of god” in whatever language the people spoke. They did this out of a mixture of religious respect, awe, and superstition. On this line of interpretation, Todd Marshall writes (1997: 25–26):

According to the events of Gen 11:9 it appears that the city gained its name as a result of God’s judgment . . . If this is the case, then the origin of the name of the location lies in the event described in Gen 11:9 itself. Though the language of that original name is uncertain, the place came to be recognized as “the gate of god” and this was translated into whatever language was being used to refer to the city. If the city was named as a result of this divine intervention, then the name would not reflect man’s desire to meet with a god or the God, but God’s initiative in meeting man in this place. Here is where God “entered” history and where he “visited” man. Subsequently, this could have led to the superstition surrounding the event and site and led to it becoming a “holy place” and thus a site of cultic activity. Though this interpretation can not be proven it does not ignore the linguistic or biblical data.

If this interpretation is accepted, Eridu was named Babylon because the Mesopotamians believed a mighty god had displayed his power there. In my view, Moses was aware that Babylon meant “gate of god” in Akkadian. However, he did not want to mention this meaning, preferring instead to craft a wordplay between *Bābel* and *bālal*. On the narrator’s intent in Genesis 11:9, David Payne offers:

The name Babel has no connection with the Heb. *bālal*, “He confused.” Its meaning is in fact patent in its Assyrian form, *bāb-ilī*, “gate of god.” The final syllable, *’ēl* in Hebrew, is common to all Semitic languages, and means “god”; while *bāb* is well-known in Assyrian, Arabic, Aramaic, and late Hebrew [for “gate”]. It seems probable, then, that the narrator of Gen. 11:9 is indulging in a play on words, a verbal irony, or else relating a folk etymology, rather than attempting a serious etymology of the name. He must surely have known that such a word could not possibly derive from a root *b-l-l*.

[Payne, “Babel, Tower of,” in *ISBE* 1.382]

Because Moses did not want to mention a “gate,” he omitted the ethnoreligious details in Genesis 11:9a. Had he included them, the verse may have read something like this (the added text is in brackets):

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<sup>35</sup> On the etymology of Babel, see also: George 1992 (253–256 [*Tintir* I 22]); Louis Goldberg, “בָּבֶל,” in *TWOT* 1.89.

<sup>36</sup> One school of thought holds that the people at Babel wanted the tower to “reach unto heaven” so they could ascend it, and be closer to heaven and their god(s). It is more likely, though, that the ziggurat was built to enable their god(s) to *descend* to dwell in their temple. Ironically, God does descend: “And the LORD came down to see the city and the tower” (Gen 11:5).

Therefore the name of the place was called Babel [by people in the region, as it means “gate of god”]. This is because [they believe it is the gate through which] the Lord there confused the language of all the earth.

Instead, Moses set up a word play between *Bābel* and *bālal*. I propose two reasons for his avoidance of a “gate”:

1. Moses knew from his encounters with God, both in Egypt and the wilderness, that true divine visitation does not occur by way of Gentile religious structures. He therefore ignored any reference to a gate. Interestingly, Umberto Cassuto (1964: 227) observes that the Babel story always uses the Tetragrammaton, *YHWH*. It never uses *'Elohim*, a word that also applies to Gentile gods. *YHWH* translates as “He who is,” which emphasizes His eternity. Besides other reasons, Moses may have used “He who is” throughout the story to contrast the astonishing power of Israel’s eternal God with the complete inability of Eridu’s lifeless god(s) to save them from their fate.
2. When we look at Israel’s later history, we find that God used the empire of Babylon (*Bābel*) to judge His people. Prophetic Scripture emphasizes that this mighty nation will speak a language the Hebrews will not understand:

*Therefore shalt thou serve thine enemies which the LORD shall send against thee . . . until he have destroyed thee. The LORD shall bring a nation against thee from far, from the end of the earth, as swift as the eagle flieth; a nation whose tongue thou shalt not understand. (Deut 28:48–49)*

*Lo, I will bring a nation upon you from far, O house of Israel, saith the LORD: it is a mighty nation, it is an ancient nation, a nation whose language thou knowest not, neither understandest what they say . . . and I will give all Judah into the hand of the king of Babylon, and he shall carry them captive into Babylon [Bābel], and shall slay them with the sword (Jer 5:15; 20:4)*

Babel was where the world’s multiplicity of languages began. Ultimately, the Hebrews would suffer greatly because of that event. It is possible, therefore, that the *Bābel* / *bālal* association in Genesis 11:9 is also prophetic. It anticipates the judgment of the Hebrews by a nation governed from a city also called Babel, speaking a language they will not understand because of the *bālal* at *Bābel*.

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**11:9b** *and from thence did the LORD scatter them abroad upon the face of all the earth.*

The account begins with a unified group. They speak one language and travel in one direction. It ends with separate groups speaking different languages, travelling in different directions.

\* \* \*

The Babel episode is the third of three events in Genesis 1–11, each of which involves a judgment that affects all humanity: the fall, the flood, and the division of languages. As well as explaining how different languages arose in the earth, the Tower of Babel story confirms

humanity's innate sinfulness. This sets the scene for the account of Abraham, and how God established a covenant with him to deal with the problem of sin and separation from God.

## Chapter 14 – Conventional Egyptian Chronology

Most Egyptologists date the start of the Early Dynastic Period sometime between 3150 and 2900 BC. Table 8 shows the chronologies offered in two well-known works. Note that variation in dates between different chronologies, as seen below, is normal. This is because no single chronology has gained universal consensus.

Table 8: Conventional Egyptian History: Two Chronologies (Years BC)

Period	Shaw 2003	Hornung et al. 2006
Early Dynastic Period	Dyn. 1: ca. 3000–2890 Dyn. 2: 2890–2686	Dyn. 1: 2900–2730 <sup>+25</sup> Dyn. 2: 2730–2590 <sup>+25</sup> Dyn. 3: ca. 2592–2544 <sup>+25</sup>
Old Kingdom	Dyn. 3: 2686–2613 Dyn. 4: 2613–2494 Dyn. 5: 2494–2345 Dyn. 6: 2345–2181 Dyn. 7 & 8: 2181–2160	Dyn. 4: 2543–2436 <sup>+25</sup> Dyn. 5: 2435–2306 <sup>+25</sup> Dyn. 6: 2305–2118 <sup>+25</sup> Dyn. 7 & 8: 2150–2118 <sup>+25</sup>
First Intermediate Period	Dyn. 9 & 10: 2160–2025 Dyn. 11 (Thebes only): 2125–2055	Dyn. 9 & 10: 2118–1980 <sup>+25</sup>
Middle Kingdom	Dyn. 11 (all Egypt): 2055–1985 Dyn. 12: 1985–1773 Dyn. 13: 1773–after 1650 Dyn. 14: 1773–1650	Dyn. 11 (Theban): 2080–1940 <sup>+16</sup> Dyn. 12: 1939 <sup>+16</sup> –1760
Second Intermediate Period	Dyn. 15: 1650–1550 Dyn. 16: 1650–1580 Dyn. 17: ca. 1580–1550	Dyn. 13: 1759–ca. 1630 Dyn. 14: ? Dyn. 15: ?–ca. 1530 Dyn. 16 & 17: ?–1540
New Kingdom	Dyn. 18: 1550–1295 Dyn. 19: 1295–1186 Dyn. 20: 1186–1069	Dyn. 18: ca. 1539–1292 Dyn. 19: 1292–1191 Dyn. 20: 1190–1077
Third Intermediate Period	Dyn. 21: 1069–945 Dyn. 22: 945–715 Dyn. 23: 818–715  Dyn. 24: 727–715 Dyn. 25: 747–656	Dyn. 21: ca. 1076–944 Dyn. 22: 943–ca. 746 Dyn. 23 (UE): 845–? Dyn. 23 (LE): ca. 730 Dyn. 24: 736–723
Late Period	Dyn. 26: 664–525 Dyn. 27: 525–404 Dyn. 28: 404–399 Dyn. 29: 399–380 Dyn. 30: 380–343	Dyn. 25: ca. 722–ca. 655 Dyn. 26: 664–525 Dyn. 27: 525–404 Dyn. 28: 404–399 Dyn. 29: 399–380 Dyn. 30: 380–343
Second Persian Period	343–332	343–332

## The Begetting Age Flood Dates

The flood occurred before the start of Egypt's dynastic era. The conventional date for the start of that era is ca. 3000 BC. The MT begetting age flood date (see Chapter 2) is 2518 BC. This date is too late. As discussed below, it is difficult to begin Egypt's dynastic era later than the conventional dating.

The LXX begetting age flood date (see Chapter 3) is 3298 BC. Although this date has more leeway, it is also problematic. The interval between that date and the start of written history, which coincides with the start of Egypt's dynastic era, is only about 300 years (from 3298 BC to ca. 3000 BC). This interval is too short to fit all the archaeological periods of prehistory. In my opinion, at least 950 years are needed.

Consider the 18 phases of temple building at Eridu (Babel), which began early in the Ubaid Period and ended in the Late Uruk Period (Chapter 13 refers). On the time spanned by the first 13 temples, Mallowan observes (1970: 334): "they must have spanned many centuries, for the total depth of the sounding which embraced them amounted to no less than 12 m. in all." Five temples then followed, all built during the Uruk Period. Undoubtedly, they featured the latest technology, and were designed to stand for a long time. Therefore, to Mallowan's "many centuries" of Temples XVIII–VI, we may add the fewer centuries of Temples V–I.

It is reasonable to conclude, therefore, that Eridu's 18 temples were in use for at least 800 years before the site was abandoned after the Tower of Babel event. Assuming that Eridu was founded around 80 years after the flood, at least 880 years elapsed from the flood to the division of languages. However, we do not know how many years intervened between the division of languages and the start of Egypt's dynastic era. Assuming it was 70 years or more, the dynastic era began at least 950 years after the flood. If the flood occurred in 3298 BC (LXX), Egypt's dynastic era began not before 2348 BC. The evidence argues against this ultra low date. In fact, it is difficult to argue for *any* lowering of the conventional dating for the start of the dynastic era. On this, Mark Snoeberger writes (2013: 13–14, 16):

Prior to the nineteenth century, Manetho's list took pride of place in dating Pre-Ptolmeic Egyptian history, and a linear/sequential reading of that list prompted many to date the unification of Egypt under Menes (the point at which the dynastic system commenced) to around 3400 B.C. Manetho's list is no longer afforded the prominence it once held . . . Most mainstream Egyptologists today date the rise of Menes to a more recent date between 3150 and 2950 B.C., and place only minimal weight on Manetho's list to come to this conclusion. This compression may seem to be something of a vindication of the 6000-year model, but it really is not. There is no evidence forthcoming that the Egyptian chronology will be compressed any further than this . . . The network of ANE sources that argues consistently for an earlier flood-date is extensive, complex, cross-disciplinary, and even multi-cultural. The task of explaining it away is overwhelming in its scope.

**Radiocarbon dating.** If anything, the trend today is to begin the dynastic era *earlier* than ca. 3000 BC. Advances in radiocarbon dating have enabled Egypt's First Dynasty to be dated with more precision than in previous decades. According to Dee et al. (2013), the First Dynasty began between 3111 and 3045 BC (with 68% probability) or between 3218 and 3035 BC (with 95% probability). The median value is 3085 BC, which agrees with the high Egyptian historical chronology. This agreement, however, has only been made possible by using radiocarbon dating and *Bayesian statistical modelling*, which relies on the input of



historical data. Without statistical modelling, offsets occur as seen in the Oxford University radiocarbon dating project “Old and Middle Kingdom Monuments” by Bonani et al. (2001). This led to the following caution by archaeologist Manfred Bietak (2013: 94):

When speaking of the offset between the radiocarbon and the archaeological/historical chronology and the good fit of both with the results of the Oxford Laboratory, we should not forget that the biggest radiocarbon project of Ancient Egypt before the Oxford programme . . . showed for the Old and Middle Kingdoms without the application of Bayesian statistics distinct higher offsets which are 200–300 years older than the historically produced estimates (Bonani et al. 2001). Oxford showed that the differences could be reduced by Bayesian statistics . . . It is only the statistical mix of radiocarbon dates and historical data which helps to forge a chronology in harmony with historical data. Without this detailed historical knowledge, there should not be such overconfidence shown over radiocarbon accuracy.

A case in point regarding the accuracy of radiocarbon dating is the volcanic eruption that devastated the Aegean island of Thera. The eruption has been carbon dated to between the mid-17th and early 16th century BC. The historical dating is between the mid-16th and early 15th century BC. This difference has caused much debate between scientists and archaeologists because the date of the eruption is crucial to synchronizing regional chronologies, and to anchor paleo-environmental records.

But there has been some progress recently in addressing the Thera problem. The latest radiocarbon calibration curve is called “IntCal20.” Certain time periods in that curve now include *annual* tree-ring measurements instead of the usual *decadal* (10-year) or *semi-decadal* (5-year) measurements.<sup>37</sup> As a result, radiocarbon dates now display the possibility for the Thera eruption occurring in the latter half of the 16th century BC.

Another contention is the dating of the strata at Tell el-Dab‘a in the Nile Delta. They have radiocarbon dates that are offset by an average of 120 years higher than the historical dating. The samples span around 600 years, from ca. 2000 to 1400 BC (Kutschera et al. 2012: Figure 7). One reason for this offset has been offered by Bietak, who led numerous excavations at Tell el-Dab‘a. He argues that sites with a continuous stratigraphy experience an upward shift of soil and carbon matter when trenches and tombs, etc., are constructed (2021: 51–52). This elevates the mean radiocarbon ages of strata. Bietak also suggests that:

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<sup>37</sup> In the history of radiocarbon dating, it took some time to recognize that radiocarbon years were not aligning with historical dates. The solution was to measure the carbon in calendar-dated tree rings. (Trees normally grow one ring per year.) An organic sample with the same  $^{14}\text{C}/^{12}\text{C}$  ratio as the tree-ring could then be calendar dated. This led to the internationally accepted “IntCal” curves, which are periodically updated (IntCal13 preceded IntCal20). These curves use, among other sources that can be annually dated, the average  $^{14}\text{C}/^{12}\text{C}$  measurement of a number of adjacent tree-rings. Blocks of ten adjacent rings, called decadal blocks, are common. By contrast, sampling *every* tree-ring (annual measurements) can improve the accuracy of problem areas in the curve. On this, Pearson et al. explain in their Thera eruption date paper (2018: 5): “This study demonstrates the advantages of annual  $^{14}\text{C}$  time series to beneficially augment the coarser-resolution measurements of IntCal13. We show that this can be particularly important in transition periods around  $^{14}\text{C}$  plateaus, where small changes in the curve can have a large effect on calibrated ages. Here, annual measurements are able to provide finer detail than measurements on multiyear blocks. The results indicate that the Thera eruption occurred during a plateau in  $^{14}\text{C}$  production, making current radiocarbon ranges less precise and limiting the potential of radiocarbon dating to provide an exact date for the event.”

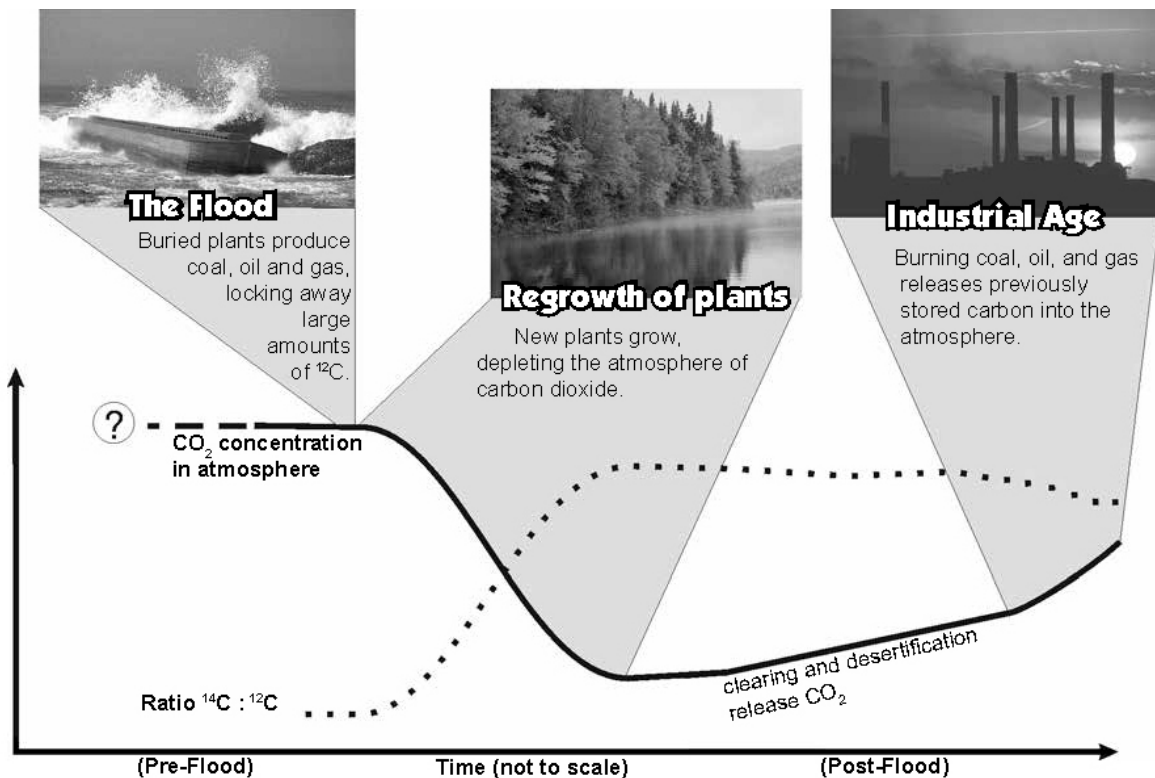
- Research into  $^{14}\text{C}/^{12}\text{C}$  variations should be encouraged in the following areas: exploration of regional carbon reservoir effects; the uptake of depleted radiocarbon by upwelling, estuary or riverine effects; degassing near volcanos (2021: 51).
- The Tell el-Dab‘a radiocarbon results “should be now recalibrated with the new IntCal20 curve, which is based for the first time on annual tree-ring measurements between 1700 and 1500 BC” (2021: 21, fn. 2).

While differences between radiocarbon and historical dates occupy scholars, young earth creationists point to a much larger, global issue: the inflation of radiocarbon dates in antiquity. These dates become more inflated the further one goes back in time to the flood.

Radiocarbon scientists apply the principle of *uniformitarianism*, which assumes that the present is the key to the past. Therefore, because they do not believe that a catastrophic global flood occurred, they assume that the  $^{14}\text{C}/^{12}\text{C}$  ratio has been reasonably constant throughout the timescale of measured dates.

By contrast, young earth creationists believe that the  $^{14}\text{C}/^{12}\text{C}$  ratio has not remained constant with time. Figure 2 shows a theorized plot of this ratio from “[What about carbon dating](#)” in Batten et al. 2009 (70). It shows the pre-flood value of the  $^{14}\text{C}/^{12}\text{C}$  ratio, and its variation after the flood. (The variation is due to the atmosphere and climate stabilizing in the “rebooted” earth during the centuries after the flood.) The lower the ratio, the greater the inflation of radiocarbon dates. Samples originating from the pre-flood world (e.g. fossils) would be dated in the tens of thousands of years. The inflation decreased post-flood.

Figure 2: Likely Effect of the Flood and Man’s Activities on Carbon Isotopes



**When did the  $^{14}\text{C}/^{12}\text{C}$  ratio stabilize?** This study upholds that the Babel event occurred in the year that Peleg was born. His birth is dated in Chapter 12 to ca. 3290 BC (MT) or ca. 3294 BC (LXX). These dates for Peleg fall in the Late Uruk Period (3400–3100 BC). As discussed in Chapter 13, the event known as the *Uruk Expansion*, which also occurred in the Late Uruk Period, correlates with the post-Babel dispersion. Since the date of Peleg's birth falls within the conventional dating for the Late Uruk Period, I suggest that the  $^{14}\text{C}/^{12}\text{C}$  ratio stabilized by early in the Late Uruk Period. Dates before then become more inflated the further one goes back in time to the flood.

Inflated radiocarbon dates *after* the  $^{14}\text{C}/^{12}\text{C}$  ratio stabilized may be due to technical issues or regional effects in isolation or in combination. They include imprecisions in the calibration curve, and other effects as discussed, with research suggestions, in Bietak 2021 (51–52).

## Appendix A – Eridu After the Ubaid Period

Chapter 13 discusses the Tower of Babel story. The chapter identifies Babel as the ancient southern Mesopotamian site of Eridu. After the division of languages occurred there (Gen 11:7), “the LORD scattered them abroad from thence upon the face of all the earth” (11:8). In other words, Eridu was abandoned, and its inhabitants dispersed to live in other locations.

The post-Babel dispersion correlates with the *Uruk Expansion*. This is an archaeologically identifiable phase of migration emanating from southern Mesopotamia during the Late Uruk Period. A Late Uruk timeframe for the Babel event disagrees with the theory (now outdated) that normal village life in Eridu ended during the transition from the Ubaid to the Uruk Period. As the discussion below shows, Eridu experienced considerable growth after the Ubaid Period.

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### A Brief History of Excavations at Eridu in the 19th and 20th Centuries

Ancient Eridu, which is modern day Tell Abu Shahrain (or Tell Abu Shahrein), is located in southern Iraq. The site consists of seven mounds. Being one of the earliest settlements in Mesopotamia, it is of enormous archaeological relevance. However, difficulties in climate, logistics, and politics have made it a challenging site in which to conduct excavations.

The first three excavations were small-scale, and were all led by British directors. Tell Abu Shahrain was initially excavated by John George Taylor for some weeks in 1855. Sixty-three years later, Reginald Campbell Thompson excavated for about three weeks in 1918. His work was resumed by Harry Reginald Holland Hall for about three weeks in 1919.

Major excavations then took place over three seasons between 1946 and 1949. They were directed by Fuad Safar on behalf of the Iraqi Directorate General of Antiquities and Heritage. His technical advisor was Seton Lloyd. Due to a variety of difficulties, there was a long delay in publishing the results of those excavations in a single volume. The completed work, *Eridu*, was finally published in 1981 (see Bibliography, Safar et al.). Although the volume has typographical and formatting issues, it is made valuable by its detailed excavation reports, and its many diagrams, plans, and photographs.

Most of the text of *Eridu* was not revised before publication. As a result, some of the commentary is outdated. This includes the theory that Eridu underwent a major change during the Ubaid-Uruk transition.

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### Did Village Life in Eridu Cease After the Ubaid Period?

According to the authors of *Eridu*, the transition from the Ubaid to the Uruk Period was a time of ethnic upheaval owing to a migration of people from the north. This migration was the catalyst for Eridu ceasing its normal village life. Another contributing factor may have

been the desiccation of farming land. After that, Eridu became a cultic center. An even grander temple was built, and the acropolis became occupied by religious buildings and residences for priests. This was the situation throughout the first half of the Uruk Period, which ended with the total abandonment of the site for a time. In the second half of the Uruk Period, some cultic activity resumed at Eridu. This is confirmed by the temple being rebuilt twice, both times on a magnificent scale. On these events, Safar et al. write (1981: 45–46):

The ethnic upheaval, which marked the end of the Al'Ubaid period, seems also to have brought about a very remarkable change in the character of the Eridu settlement. There is reason to believe that, whether on account of the desiccation of the surrounding country or for some other reason, Eridu now ceased to be a village supporting an agricultural community. Its shrine, however, the tradition of whose sanctity remained and whose importance had correspondingly increased, was now rebuilt on a larger scale, and the whole of the ancient mound soon came to be occupied by subsidiary buildings of a religious character and dwelling-places for priests. These were built in the formal architecture of the new immigrants from the north . . . This was the situation at Eridu during the first half of the Uruk period, which appears to have been brought to a conclusion by no less an event than the total abandonment of the site . . . The possibility that the temple itself remained standing while the remainder of the site was thus deserted is confirmed by the fact that, during the succeeding proto-literate period, it was twice rebuilt on a rich and magnificent scale.

At the heart of this reconstruction is a theory that was explained more fully in a paper by Seton Lloyd in 1960. Both excerpts below from Lloyd refer to this theory. Note that while the first excerpt discusses the shrine in Al 'Ubaid, that same paper applies the theory also to the shrines in Eridu and 'Uqair:

Here then, in the 'Ubaidian period we have a prehistoric village [Al 'Ubaid] with its own shrine . . . Towards the end of that period it is finally abandoned as a place of habitation, but subsequently the shrine alone is repeatedly rebuilt. In later periods its embellishments seem to increase, perhaps in proportion to the sanctity with which its antiquity invests it. By the time of the early dynasties as is shown by Hall's and Woolley's discovery of architectural decorations, they have become very considerable and, in addition, the abandoned site of the old settlement has become a burial-ground for pious individuals, perhaps from Ur and elsewhere. In fact, in its relationship with Ur, the Al 'Ubaid shrine could by now have become a place of pilgrimage. (Lloyd 1960: 30)

All of this fits well into a fuller theory, put forward by myself in 1960, (Iraq 22 [1960], 28–31), about the posthumous sanctity of ancient places such as Eridu, 'Ubaid and 'Uqair, which in 'Ubaid times had been inhabited settlements, but which, when abandoned by their population became mere burial-grounds or destinations for pilgrimage. (Lloyd 1974: 137)

Against this theory of “posthumous sanctity,” Marco Ramazzotti comments (2015: 11):

The emergent result of Lloyd and Safar field-works was a strongly supported thesis of the posthumous sanctity of Abu Shahrein, like other important ancient sacred places such as Tell el-Ubaid and Tell-Uqair, which were inhabited settlements in the Ubaid period, and then, when abandoned, became mere burial-grounds or destinations for pilgrimage . . . This image of Eridu as a progressive isolate[d] religious cathedral in the desert was drastically reduced by the Oriental Institute of Chicago surveys in southern Mesopotamia. In particular, by the Ur and Eridu regional survey directed by Henry Wright and analytically discussed as the *Southern Margin of Sumer* in the Appendix of the monumental *Heartland of Cities* of Robert McAdams (Chicago - London 1981).

Ramazzotti refers here to the archaeological surveys of southern Mesopotamia carried out between 1968 and 1975 by Robert McCormick Adams. The resulting pioneering work was *Heartland of Cities* (Adams 1981). It includes an appendix by Henry Wright on his survey of the Ur region. Contrary to the scenario posited by Safar and Lloyd, the evidence gathered during that survey shows that Eridu blossomed after the Ubaid Period (Wright 1981: 325–26):

#### THE FIRST STATES (URUK TO EARLY DYNASTIC)

If the Terminal Ubaid period was one of slight diminution in settlement [i.e. there was a small decrease in the total number of settlements in the survey area], the Early Uruk period was one of fundamental change . . . The various excavations of Eridu have exposed a number of substantial buildings, some decorated with cone mosaic, all on the central platform, which had grown to cover 4 hectares . . . Around this must have been an extensive lower town covering perhaps 40 hectares, as indicated by the sherd scatter. An early test excavation visible approximately 700 meters northwest of the ziggurat revealed Early Uruk ceramics and copper fragments. Little else is known about this lower settlement. However, it is clear that while small settlements were abandoned, Eridu had expanded greatly. Such nucleation may imply unsettled conditions. If our estimates of the town sizes are correct, population would have been at most 6,200 to 10,000 in the area.

In the succeeding portion of the Uruk period, Ur continued as a small town, but Eridu was abandoned . . . The buildings on its acropolis filled with more than 2 meters of windblown sand . . . The encroachment of sand on the central precinct of Eridu may represent a cutting off of the southernmost channel of the Euphrates and desiccation of the Eridu plain.

Whatever the situation around Eridu proper, to the north and east the Late Uruk period is one of proliferation of smaller settlements. Ur itself remains a small town of about 10 hectares.

Wright concludes that Eridu expanded greatly during the Early Uruk Period. The settlement grew to cover an area of perhaps 40 hectares, with a maximum population of between 6,200 to 10,000. In the above excerpt, Wright considers Eridu to be a town and not a city (“If our estimates of the town sizes are correct”). This is consistent with his earlier conclusion that “Eridu became a large town” during the Uruk Period (Wright 1969: 27). Its leaders evidently thought the same because they desired to upgrade their settlement to city status: “Come, let us build ourselves a city and a tower with its top in the heavens, and let us make a name for ourselves” (Gen 11:4 ESV).

During the Late Uruk Period, Eridu was abandoned. Wright suggests this may have occurred due to the desiccation of the surrounding plain. Chapter 13 upholds that Eridu was abandoned due to the Tower of Babel event.

**Nimrod and Babel.** Eridu remained abandoned, aside perhaps from maintenance visits, until the Early Dynastic III Period (2450–2300 BC). This is when the northern mound at Eridu (Mound 2) became the site of two palaces (Wright 1981: 327). It is likely that those palaces were built by Sargon the Great, the King of Sumer and Akkad. He ruled from ca. 2320 to 2265 BC. Douglas Petrovich (2013) argues that Sargon was the Biblical Nimrod, and that the Babel of his kingdom (Gen 10:10) was Eridu. This fits the evidence of palaces being built in Eridu during the Early Dynastic III Period.

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