

THE LENGTH OF REIGNS OF THE NEO-BABYLONIAN KINGS

PEOPLE MAY believe the most peculiar ideas, not because there is any evidence to show that they are *true*, but because there is little or no evidence to show that they are *false*. For many centuries people believed that the earth was flat, simply because this view could not easily be tested and falsified. Many ideas that have been tied to prophecies in the Bible also definitely belong to this category. These clearly include some appended to Jesus' statement about the "times of the Gentiles" at Luke 21:24.

For example, the Bible nowhere explicitly states:

- 1) that Jesus, in speaking of these "Gentile times," had in mind the "seven times" of Nebuchadnezzar's madness mentioned in the book of Daniel, chapter 4;
- 2) that these "seven times" were seven *years*;
- 3) that these "years" were not ordinary Babylonian calendar years, but "prophetic years" of 360 days each, and therefore should be summed up as 2,520 days;
- 4) that these 2,520 days not only applied to the period of Nebuchadnezzar's madness, but also would have a *greater* fulfillment;
- 5) that in this greater fulfillment *days* should be counted as *years*, so that we get a period of 2,520 years; and
- 6) that this 2,520-year period started when Nebuchadnezzar, in his 18th regnal year, desolated the city of Jerusalem.

None of these six assumptions can be verified by clear Biblical statements. They are, in fact, nothing but a *chain of guesses*. Yet, since the Bible does not discuss or even mention any of these ideas, it nowhere explicitly says they are false either.

However, when it is further claimed (7) that Nebuchadnezzar's desolation of Jerusalem took place in 607 B.C.E., we have reached a point in the train of thought that *can* be tested and falsified.

This is because the chronology of the Neo-Babylonian period does not fall within the area of unverifiable assumptions.

As will be demonstrated in this and the subsequent chapter, the length of the Neo-Babylonian period has been firmly established today by at least seventeen different lines of evidence, *fourteen* of which will be discussed in some detail in these two chapters.

In the previous chapter it was shown that the validity of the Watch Tower Society's prophetic interpretation of the 1914 date is intimately connected with the length of the Neo-Babylonian period.¹ That period ended when Babylon was captured by the armies of the Persian king Cyrus in 539 B.C.E., an acknowledged, reliable date.

In the first year of his reign over Babylon, Cyrus issued an edict which permitted the Jews to return to Jerusalem. (2 Chronicles 36:22, 23; Ezra 1:1-4) According to the Watch Tower Society this ended the seventy-year period mentioned at Jeremiah 25:11, 12; 29:10; Daniel 9:2, and 2 Chronicles 36:21.

If, as the Society maintains, the Jewish remnant returned to Jerusalem in 537 B.C.E., the period of Babylonian domination would have begun seventy years earlier, or in 607 B.C.E.² And since the

1 The term "*Neo-Babylonian*" usually refers to the period that began with the reign of Nabopolassar (dated to 625–605 B.C.E.) and ended with Nabonidus (555–539 B.C.E.). It should be noticed, however, that many scholars use the term "*Neo-Babylonian*" of a more extended period. *The Assyrian Dictionary* (eds. I. J. Gelb et al., Chicago: Oriental Institute, 1956–), for example, starts the period in 1150 B.C.E. and ends it somewhere in the fourth century B.C.E. In the present work the term is confined to the Babylonian dynasty that began with Nabopolassar and ended with Nabonidus.

2 The first year of Cyrus extended from the spring (Nisanu 1) of 538 to the spring of 537 B.C.E. If Ezra followed the Jewish method of counting the accession-year as the first year, he may have reckoned 539/38 as the first year of Cyrus. However that may be, the evidence is that Cyrus issued his edict not long after the fall of Babylon. The so-called *Cyrus Cylinder* shows that Cyrus, soon after the conquest of Babylon, issued a decree that allowed the different peoples that had been deported to Babylonia to return to their respective home countries. (James B. Pritchard [ed.], *Ancient Near Eastern Texts Relating to the Old Testament* [ANET], Princeton, New Jersey: Princeton University Press, 1950, p. 316.) Most likely the edict permitting the Jews to return to Jerusalem was a part of this general release of exiled peoples. As shown by the book of Ezra, the Jews who responded to the edict immediately began to organize themselves for the homeward journey (Ezra 1:5-2:70), and in "the seventh month" (Tishri, corresponding to parts of September and October) they had settled in their home cities. (Ezra 3:1) The context seems to imply that this was still in the "first year of Cyrus" (Ezra 1:1-3:1). Most authorities, therefore, conclude that this was in the autumn of 538 B.C.E. and *not* in 537 as the Watch Tower Society insists. (See for example Dr. T. C. Mitchell's discussion in *The Cambridge Ancient History*, 2nd ed., Vol. III:2, Cambridge: Cambridge University Press, 1991, pp. 430-432; also the thorough discussion of the historicity of Cyrus' edict by Elias Bickerman in *Studies in Jewish and Christian History*, Leiden: E. J. Brill, 1976, pp. 72-108.) The Watch Tower Society, however, cannot accept the 538 B.C.E. date for the return, as that would move the beginning of their seventy-year period back to 608 B.C.E. This, of course, would destroy their Gentile times calculation.

Watch Tower Society holds this seventy-year period to be a period of *complete desolation* of Judah and Jerusalem, we are told that it was in the year 607 B.C.E. that Nebuchadnezzar destroyed Jerusalem, in his eighteenth regnal year. (2 Kings 25:8; Jeremiah 52:12, 29) This event, it is assumed, started the 2,520 years, called the Gentile times, beginning in the year 607 B.C.E.

This starting-point, however, is incompatible with a number of historical facts.*

A. ANCIENT HISTORIANS

Up to the latter part of the nineteenth century the only way to determine the length of the Neo-Babylonian period was by consulting ancient Greek and Roman historians. Those historians lived hundreds of years after the Neo-Babylonian period, and unfortunately their statements are often contradictory.³

Those held to be the most reliable are 1) *Berosus* and 2) the compiler(s) of the kinglist commonly known as *Ptolemy's Canon*, sometimes also, and more correctly, referred to as the *Royal Canon*.

It seems appropriate to begin our discussion with a brief presentation of these two historical sources since, although neither of them *by themselves* provides conclusive evidence for the length of the Neo-Babylonian period, their ancient testimony certainly merits consideration.

3 These ancient historians include *Megasthenes* (3rd century B.C.E.), *Berosus* (c. 250 B.C.E.), *Alexander Polyhistor* (1st century B.C.E.), *Eusebius Pamphilus* (c. 260-340 C.E.), and *Georgius Syncellus* (last part of the 8th century C.E.). For a convenient overview of the figures given by these ancient historians, see Raymond Philip Dougherty, *Nabonidus and Belshazzar* (New Haven: Yale University Press, 1929), pp. 8-10; cf. also Ronald H. Sack, *Images of Nebuchadnezzar* (Selinsgrove: Susquehanna University Press; London and Toronto: Associated University Press, 1991), pp. 31-44.

* What follows in this and the subsequent chapter, in many cases involves information of a technical nature, accompanied by detailed documentation. While this contributes to the firm foundation of the dates established, it is also made necessary by attempts on the part of some sources to counteract the historical evidence, offering information that has an appearance of validity, even of scholarlyness, but which, on examination, proves invalid and often superficial. Some readers may find the technical data difficult to follow. Those who do not feel they need all the details may turn directly to the summaries at the end of each of these two chapters. These summaries give a general idea of the discussion, the evidence presented, and the conclusions drawn from it.

A-1: Berossus

Berossus was a Babylonian priest who lived in the third century B.C.E.

In about 281 B.C.E. he wrote a history of Babylonia in Greek known as *Babyloniaca* or *Chaldaica* which he dedicated to the Seleucid king Antiochus I (281–260 B.C.E.), whose vast empire included Babylonia. Later Berossus abandoned Babylon and settled on the Ptolemaic island of Cos.⁴

His writings, unfortunately, have been lost, and all that is known about them comes from the twenty-two quotations or paraphrases of his work by other ancient writers and from eleven statements about Berossus made by classical, Jewish, and Christian writers.⁵

The longest quotations deal with the reigns of the Neo-Babylonian kings and are found in Flavius Josephus' *Against Apion* and in his *Antiquities of the Jews*, both written in the latter part of the first century C.E.; in Eusebius' *Chronicle* and in his *Preparation for the Gospel*, both from the early fourth century C.E., and in other late works.⁶ It is known that Eusebius quoted Berossus indirectly via the Greco-Roman scholar Cornelius Alexander Polyhistor (first century B.C.E.).

Although some scholars have assumed that Josephus, too, knew Berossus only via Polyhistor, the evidence for this is lacking. Other scholars have concluded that Josephus had a copy of Berossus' work at hand, and recently Dr. Gregory E. Sterling has strongly argued that Josephus quoted directly from Berossus' work.⁷ Scholars agree

4 Erich Ebeling and Bruno Meissner (eds.), *Reallexikon der Assyriologie*, Vol. II (Berlin and Leipzig: Walter de Gruyter & Co., 1938), pp. 2, 3.

5 A translation with an extensive discussion of these fragments was published by Paul Schnabel in *Berossos und die Babylonisch-Hellenistische Literatur* (Leipzig and Berlin: B. G. Teubner, 1923). The first complete English translation of the surviving fragments of Berossus' work has been published by Stanley Mayer Burstein in *The Babyloniaca of Berossus. Sources from the Ancient Near East*, Vol. 1, fascicle 5 (Malibu, Calif.: Undena Publications, 1978).

6 See Flavius Josephus, *Against Apion*, Book I:19-21; *Antiquities of the Jews*, Book X:XI, 1. The *Chronicle* of Eusebius is preserved only in one Armenian and one Latin version, except for the excerpts preserved in the *Chronographia* of the Byzantine chronicler Georgius Syncellus (late eighth and early ninth centuries C.E.).

7 Gregory E. Sterling, *Historiography and Self-Definition* (Leiden, New York, Köln: E. J. Brill, 1992), pp. 106, 260, 261.

that the most reliable of the preserved quotations from Berossus' work are those of Flavius Josephus.⁸

Where did Berossus get his information on the Neo-Babylonian kings?

According to his own words he "translated many books which had been preserved with great care at Babylon and which dealt with a period of more than 150,000 years."⁹ These "books" included accounts of legendary kings "before the Flood" with very exaggerated lengths of reign.

His history of the dynasties after the Flood down to the reign of the Babylonian king Nabonassar (747–734 B.C.E.) is also far from reliable and evidently contained much legendary material and exaggerated lengths of reign.

Berossus himself indicates that it was impossible to give a trustworthy history of Babylonia *before Nabonassar*, as that king "collected and destroyed the records of the kings before him in order that the list of Chaldaean kings might begin with him."¹⁰

Despite these problems, however, for later periods, *and especially for the critical Neo-Babylonian period*, it has been established that Berossus used the generally very reliable Babylonian chronicles, or sources similar to these documents, and that he

- 8 Burstein, for example, says: "The earliest are those made by Josephus in the first century A.D. from the sections concerning the second and particularly the third book of the *Babyloniaca*, the latter indeed *providing our best evidence for Berossus' treatment of the Neo-Babylonian period*." (*Op. cit.*, pp. 10, 11; emphasis added.) Josephus' lengthy quotation on the Neo-Babylonian era in *Against Apion* is best preserved in Eusebius' *Preparation for the Gospel*, Book IX, chapter XL. (See the discussion by H. St. J. Thackeray in *Josephus*, Vol. I [Loeb Classical Library, Vol. 38:1], London: William Heinemann, and New York: G. P. Putnam's Sons, 1926, pp. xviii, xix.) The deficient textual transmission of Eusebius' *Chronicle*, therefore, is of no consequence for our study. The Watch Tower Society, in its Bible dictionary *Insight on the Scriptures* (Vol. I, p. 453), devotes only one paragraph to Berossus. Almost the whole paragraph consists of a quotation from A. T. Olmstead's *Assyrian Historiography* in which he deplors the tortuous survival history of Berossus' fragments via Eusebius' *Chronicle* (cf. note 6 above). Although this is true, it is, as noted, essentially irrelevant for our discussion.
- 9 Burstein, *op. cit.*, p. 13. The Armenian version of Eusebius' *Chronicle* gives "2,150,000 years" instead of "150,000," the figure preserved by Syncellus. None of them is believed to be the original figure given by Berossus. (Burstein, p. 13, note 3.)
- 10 Burstein, *op. cit.*, p. 22.

carefully reported their contents in Greek.¹¹ The figures he gives for the reigns of the Neo-Babylonian kings substantially agree with the figures given by those ancient cuneiform documents.

A-2: The Royal Canon

Ptolemy's Canon or, more correctly, the *Royal Canon* is a list of kings and their lengths of reign beginning with the reign of Nabonassar in Babylon (747–734 B.C.E.), through the Babylonian, Persian, Greek, Roman, and Byzantine rulers.

The kinglist had been included in the *Handy Tables* prepared by the famous astronomer and geographer *Claudius Ptolemy* (70–165 C.E.), who ended the list with the contemporary Roman ruler Antoninus Pius (C.E. 138-161).¹² That is why it has become known as *Ptolemy's Canon*. (See the facing page.) There is, however, evidence that kinglists of this type must have been in use long before the time of Claudius Ptolemy.

The reason why the kinglist could not have originated with Claudius Ptolemy is that a table of this kind was a prerequisite for the research and calculations performed by the Babylonian and Greek astronomers. Without it they would have had no means for dating the astronomical events their calculations showed as occurring in the distant past.

Ancient fragments of such kinglists written on papyrus have been found.¹³ The renowned expert on Babylonian astronomy, F. X. Kugler,

11 Burstein points out that, although Berossus made a number of surprising errors and exercised little criticism on his sources, “the fragments make it clear that *he did choose good sources, most likely from a library at Babylon, and that he reliably reported their contents in Greek.*” (Burstein, *op. cit.*, p. 8. Emphasis added.) Robert Drews, in his article “The Babylonian Chronicles and Berossus,” published in *Iraq*, Vol. XXXVII, part 1 (Spring 1975), arrives at the same conclusion: “That the chronicles were among these records cannot be doubted.” (p. 54) This has been demonstrated by a careful comparison of Berossus’ statements with the Babylonian chronicles. Paul Schnabel, too, concludes: “That he everywhere has used cuneiform records, above all the chronicles, is manifest at every step.” — Schnabel, *op. cit.* (see note 5 above), p. 184.

12 The three oldest manuscripts of Ptolemy’s *Handy Tables* containing the kinglist date from the eighth to tenth centuries. See Leo Depuydt, “More Valuable than all Gold’: Ptolemy’s Royal Canon and Babylonian Chronology,” in *Journal of Cuneiform Studies*, Vol. 47 (1995), pp. 101-106. The list of kings was continued by astronomers after Ptolemy well into the Byzantine period.

13 G. J. Toomer, *Ptolemy’s Almagest* (London: Gerald Duckworth & Co., 1984), p. 10, fn. 12. The fragments, however, are later than Ptolemy.

Namen der Régenten		ἔτη [Jahre]	ἰσιου- αγωγή [Summe]
1.	Ναβονασσάρου	ισ (14)	ισ (14)
	Ναβίου	β (2)	ισ (16)
	Χινθόσε και Πάρου	ϛ (5)	κα (21)
	Πουλαίου	ε (5)	κz (26)
	Μαροδομιάδου	ιβ (12)	λη (38)
	Δοκίανου	ε (5)	μγ (43)
	(ἄβασίλευτα)	β (2)	μz (45)
	Βαλίου	γ (3)	μη (48)
	Απαρναδίου	z (6)	νθ (54)
	Πηγεβήλου	α (1)	νε (55)
	Μεσημωρδάκου	δ (4)	νθ (59)
	(ἄβασίλευτα)	η (8)	ξz (67)
	Λακαδίνου	ιγ (13)	π (80)
	Λασοδονίου	κ (20)	ρ (100)
	Κινυλαδίου	κβ (22)	ρκβ (122)
	Ναβοπολασσάρου	κα (21)	ρμγ (143)
	Ναβοκολασσάρου	μγ (43)	ρπz (186)
Βλοκρονδάρου	β (2)	ρπη (188)	
Νηογασολασσάρου	δ (4)	ρzβ (192)	
Ναβοναδίου	ιz (17)	σθ (209)	
2.	Κύρου	θ (9)	ση (218)
	Καμβύσου	η (8)	σκz (226)
	Δαρείου πρώτου	λz (36)	σξβ (262)
	Ξέρξου	κα (21)	σπγ (283)
	Αρταξέρξου πρώτου	μα (41)	τad (324)
	Δαρείου δευτέρου	ιδ (19)	τμγ (343)
	Αρταξέρξου δευτέρου	μz (46)	τπθ (389)
	Βγου	κα (21)	υι (410)
	Αρωγοῦ	β (2)	υιβ (412)
Δαρείου τρίτου	δ (4)	υιz (416)	
Αλεξάνδρου Μακεδόνα	η (8)	υκδ (424)	
3.	Φίλιππου τοῦ μετ' Αἰλέ- ανδρον τὸν κτιστην	z (7)	υλα (431)
	Αλεξάνδρου ἐτέρου	ιβ (12)	υμγ (443)
	Πτολεμαίου Αἰγίου	κ (20)	υξγ (463)
	Φιλαδέλφου	λη (38)	φα (501)
	Εὐεργέτου	κε (25)	φκz (526)
	Φιλοπάτορος	ιz (17)	φμγ (543)
	Επιφάνους	κδ (24)	φξz (567)
	Φιλομήτορος	λε (35)	ζβ (602)
	Εὐεργέτου δευτέρου	κθ (29)	ζλz (631)
Σωτήρος	λz (36)	ζξz (667)	
Λιονύσου νίου	κθ (29)	ζzε (696)	
Κλεοπάτρας	κβ (22)	φιη (718)	
4.	Αύγουστου	μγ (43)	φξz (761)
	Τιβεριίου	κβ (22)	ψπγ (783)
	Γαίου	δ (4)	ψπz (787)
	Κλαυδίου	ισ (14)	ωz (801)
Ε῰νισιαι.	Νέρωνος	ισ (14)	ωιε (815)
	Οἰσπασιανού	ι (10)	ωκz (825)
	Τίτου	γ (3)	ωκη (828)
	Δομιτιανού	ιε (15)	ωμγ (843)
	Νέρουα	α (1)	ωμδ (844)
	Τραϊανού	ιδ (19)	ωξγ (863)
	Αδριανού	κα (21)	ωπθ (884)
Αἰλίου Αντωνίνου	κγ (23)	πθz (907)	

The Royal Canon ("Ptolemy's Canon")

The kinglist begins with the reign of Nabonassar in Babylon (747-734 BCE) and ends with the Roman emperor Antoninus Pius (138-161 CE). From F. K. Ginzel, *Handbuch der mathematischen und technischen Chronologie*, Vol. I (Leipzig 1906), p. 139.

concluded that the so-called Ptolemy's Canon "had evidently been worked out by one or more experts on the Babylonian astronomy and chronology, and through the use in the Alexandrian school successfully had passed scrupulous indirect tests."¹⁴ Dr. Eduard Meyer wrote in a similar vein about the canon in 1899, pointing out that, "as it belonged to the traditional material of knowledge of the astronomers, it was inherited from scholar to scholar; *not even Hipparchus* [2nd century B.C.E.] *could have gone without the Babylonian list.*"¹⁵

This is the reason why Professor Otto Neugebauer termed the expression "Ptolemy's Canon" a *misnomer*:

It is a misnomer to call such chronological tables 'Ptolemaic canon.' Ptolemy's 'Almagest' never contained such a canon (in spite of assertions to the contrary often made in modern literature), but we know that a *βασιλεπν χρονογραφια* [chronicle of kings] had been included in his 'Handy Tables' On the other hand, there is no reason whatsoever to think that royal canons for astronomical purposes did not exist long before Ptolemy.¹⁶

The canon, or kinglist, was therefore in use centuries before Claudius Ptolemy. It was inherited and brought up-to-date from one generation of scholars to the next.

It should be observed that the canon not only presents a running list of kings and their reigns; in a separate column there is a *running summary* of the individual reigns all the way from the first king, Nabonassar, to the end of the list. This system provides a double check of the individual figures, ensuring that they have been correctly copied from one scholar to the next. (See "The Royal Canon" on the preceding page.)

From what source did the compiler(s) of the Royal Canon get the kinglist? It was evidently compiled from sources similar to those used by Berossus. Friedrich Schmidtke explains:

14 Franz Xaver Kugler, *Sternkunde und Sterndienst in Babel*, II. Buch, II. Teil, Heft 2 (Münster in Westfalen: Aschendorffsche Verlagsbuchhandlung, 1924), p. 390. Translated from the German.

15 Eduard Meyer, *Forschungen zur alten Geschichte*, Zweiter Band (Halle a. S.: Max Niemeyer, 1899), pp. 453-454. Translated from the German. Emphasis added.

16 Otto Neugebauer, "'Years' in Royal Canons," *A Locust's Leg. Studies in honour of S. H. Taqizadeh*, ed. W. B. Henning and E. Yarshater (London: Percy Lund, Humphries & Co., 1962), pp. 209, 210. Compare also J. A. Brinkman in *A Political History of Post-Kassite Babylonia, 1158-722 B.C.* (Rome: Pontificium Institutum Biblicum, 1968), p. 22.

With respect to the dependence of the sources, the Canon of Ptol[emy] has certainly to a great extent taken its stuff from the Bab[ylonian] Chron[icles]. This is clear from the characteristic *αβασιλευτα ετη* [years of interregnum] 688-681, which is also found in the Chronicle (III, 28), while the King List A at this place introduces Sennacherib instead, as well as for the two *αβασιλευτα ετη* 704-703. The Canon of Ptol. like the Chronicle reproduces here the Babylonian tradition, which did not recognize Sennacherib as the legitimate king, as he had sacked and destroyed Babylon.¹⁷

There is also some evidence that the Royal Canon reflects not only Babylonian chronicles, but also ancient Babylonian kinglists compiled by Babylonian scribes. Thus scholars have concluded that it was based upon Babylonian chronicles and kinglists, probably through intermediary sources, *but evidently independent of Berossus*.¹⁸ This is a very important conclusion, as the figures given in the canon for the Neo-Babylonian kings are in substantial agreement with Berossus' earlier figures.

Thus we have two independent witnesses reflecting the length of the Neo-Babylonian era set out in the ancient chronicles, and even if those chronicles are only partially preserved on cuneiform tablets, their figures for the lengths of reign of the Neo-Babylonian kings have to all appearances been correctly transmitted to us via Berossus and the Royal Canon.¹⁹

- 17 Friedrich Schmidtke, *Der Aufbau der Babylonischen Chronologie* (Münster, Westf.: Aschendorffsche Verlagsbuchhandlung, 1952), p. 41. Translated from the German.
- 18 Burstein, for example, points out that the canon "represents a Babylonian tradition about the first millennium B.C. that is independent of Berossus as can be seen from the order and forms of the names of the kings." (*Op. cit.*, p. 38) On the same page Burstein gives a translation of the canon which, unfortunately, contains a couple of errors. The regnal years shown for Nebuchadnezzar, "23", is a misprint for "43"; and the name "Illoaroudamos" in the canon corresponds to "Awel-Marduk", not "Labashi-Marduk". For a reliable publication of the canon, see, for example, E. J. Bickerman, *Chronology of the Ancient World*, revised edition (London: Thames and Hudson, 1980), pp. 109-111.
- 19 Of the two sources, the Royal Canon is clearly the better witness. As Professor J. A. Brinkman points out, the canon "is of known and praiseworthy accuracy." (*Op. cit.* [note 16 above], p. 35) Modern discoveries of Babylonian chronicles, kinglists, astronomical texts, etc., written in cuneiform may be shown to be in complete agreement with the canon all the way from the eighth century to the first century B.C.E. The evidence of this is briefly discussed in C. O. Jonsson, "The Foundations of the Assyro-Babylonian Chronology," *Chronology & Catastrophism Review*, Vol. IX (Harpenden, England: Society for Interdisciplinary Studies, 1987), pp. 14-23.

TABLE 1: THE REIGNS OF THE NEO-BABYLONIAN KINGS
ACCORDING TO BEROSSUS AND THE ROYAL CANON

NAME	BEROSSUS	ROYAL CANON	B.C.E.
Nabopolassar	21 years	21 years	625-605
Nebuchadnezzar	43 years	43 years	604-562
Awel-Marduk*	2 years	2 years	561-560
Neriglissar	4 years	4 years	559-556
Labashi-Marduk	9 months	—	556
Nabonidus	17 years	17 years	555-539

*Called Evil-Merodach at 2 Kings 25:27 and Jeremiah 52:31.

The Royal Canon omits Labashi-Marduk, as it always reckons *whole* years only. Labashi-Marduk's short reign of only a few months fell in Neriglissar's last year (which was also the accession-year of Nabonidus).²⁰ The Royal Canon, therefore, could leave him out.

If these lists are correct, the first year of Nebuchadnezzar would be 604/603 B.C.E. and his eighteenth year, when he desolated Jerusalem, would be 587/86 B.C.E., not 607 B.C.E. as in Watch Tower chronology.

But even if these lists give a true representation of the lengths of reign given in the original Neo-Babylonian chronicles, how do we know that the chronological information originally contained in these chronicles is reliable? How can the lengths of reign of the kings be turned into an "absolute chronology"?²¹

20 As shown by contemporary cuneiform documents, Neriglissar died in the first month of his fourth regnal year (in late April or early May). His son and successor, Labashi-Marduk, was killed in a rebellion after a reign of about two months. The figure given by Berossus via Josephus, "9" months, is commonly regarded as a transmission error for an original "2" months, the Greek signs (=letters) for "9" (θ) and "2" (β) being quite similar. (R. A. Parker and W. H. Dubberstein, *Babylonian Chronology 626 B.C.-A.D. 75*, Providence: Brown University Press, 1956, p. 13.) The *Uruk King List* (discussed below) indicates a rule of three months for Labashi-Marduk, which undoubtedly refers to the city of Uruk, where he was recognized as king for parts of three months (Nisanu, Ayyaru, and Simanu) according to the contract tablets.—Paul-Alain Beaulieu, *The Reign of Nabonidus, King of Babylon, 556-539 B.C.* (New Haven and London: Yale University Press, 1989), pp. 86-90.

21 As pointed out in the previous chapter, an absolute chronology is best established by the aid of astronomically fixed dates. Claudius Ptolemy, in his famous work *Almagest*, records a large number of ancient astronomical observations, many of which are detailed descriptions of lunar eclipses. One of these is dated to the fifth year of Nabopolassar and has been identified with one that took place in 621 B.C.E. If this was the fifth year of Nabopolassar, his 21 years of reign would be fixed to 625-605 B.C.E. The first year of his

B. THE CUNEIFORM DOCUMENTS*

Today, historians do not need either Berossus or the Royal Canon in order to fix the length of the Neo-Babylonian period. Its length may be firmly established in many other ways, thanks to the numerous cuneiform documents discovered from this period.

It is a remarkable fact that more cuneiform documents have been excavated from the Neo-Babylonian period than from any other pre-Christian era. Literally *tens of thousands* of texts have been found, primarily consisting of business, administrative, and legal documents, but there are also historical documents such as chronicles and royal inscriptions.

Most important are the discovery of *astronomical* cuneiform texts recording dated observations of the moon and the planets from the period. Most of this material is written in the Akkadian language and has been unearthed in Mesopotamia since the middle of the nineteenth century.

The first group of documents of interest to us fall within the category shown on the following page, with others on subsequent pages.

son and successor, Nebuchadnezzar, would then have begun in 604 B.C.E. and his 18th year (when he desolated Jerusalem) in 587. Some scholars, however, have questioned the reliability of the astronomical observations recorded by Ptolemy. In his sensational book, *The Crime of Claudius Ptolemy* (Baltimore and London: The Johns Hopkins University Press, 1977), Dr. Robert R. Newton claimed that Ptolemy fudged, not only a large body of the observations he says he made himself, but also a number of the observations he records from earlier periods. (The evidence is, though, that all observations from earlier periods recorded by Ptolemy were taken over from the Greek mathematician Hipparchus [second century B.C.E.], who in turn got them directly from Babylonian astronomers. See G. J. Toomer's article, "Hipparchus and Babylonian Astronomy," in *A Scientific Humanist. Studies in Memory of Abraham Sachs*, eds. E. Leichty, M. deJ. Ellis, & P. Gerardi, Philadelphia, 1988, pp. 353-362.) On the assumption that Ptolemy was the originator of "Ptolemy's Canon," Newton also felt that Ptolemy's supposed forgery may have extended to *inventing* the lengths of reign in this kinglist. But as the kinglist was not a creation of Ptolemy, Newton was mistaken in this. In earlier editions of the present work Newton's claims and the ensuing debate they have caused in scholarly journals were discussed at some length. This digression from the main subject has been left out in this edition not only for reasons of space, but also because the observations recorded by Ptolemy really are of little importance for our discussion. It should be noted, however, that "very few historians of astronomy have accepted Newton's conclusions in their entirety." — Dr. James Evans in the *Journal for the History of Astronomy*, Vol. 24 Parts 1/2, 1993, pp. 145, 146. (Dr. Newton died in 1991.) An article on R. R. Newton and the Royal Canon is published on the web: <http://user.tninet.se/~oof408u/fkf/english/epage.htm>

* "Cuneiform" refers to the "wedge-shaped" script used on these ancient clay tablets. The signs were impressed on the damp clay with a pointed stick or reed (stylus).

B-1: Chronicles, kinglists, and royal inscriptions

a) *Neo-Babylonian Chronicles*

A chronicle is a form of historical narrative covering a sequence of events.

Several cuneiform chronicles covering parts of Neo-Babylonian history have been discovered, all of which are kept in the British Museum, London. Most of them are probably copies of (or extracts from) original documents written contemporary with the events.²²

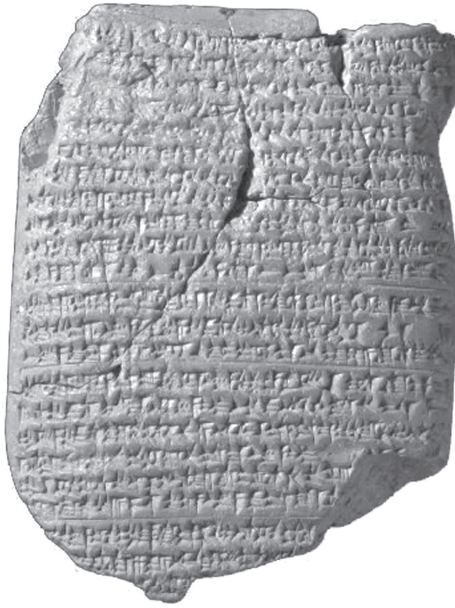
The most recent translation of them has been published by A. K. Grayson in *Assyrian and Babylonian Chronicles*.²³ Grayson subdivides the Babylonian chronicles into two parts, the first of which is called the Neo-Babylonian Chronicle Series (*Chronicles 1–7*). *Chronicle 1* (= B.M. 92502) begins with the reign of Nabonassar (747–734 B.C.E.) and ends with the accession-year of Shamash-shuma-ukin (668 B.C.E.). *Chronicles 2–7* begin with the accession-year of Nabopolassar (626 B.C.E.) and continue into the beginning of the reign of Cyrus (538 B.C.E.).

What do these “chronicles” consist of? With respect to the contents of the chronicles, Grayson explains:

The narrative is divided into paragraphs with each paragraph normally devoted to one regnal year. The text is concerned only with matters related to Babylonia and, in particular, her king, and the events, which are almost exclusively political and military in character, are narrated in an objective and laconically dry manner.²⁴

- 22 Professor D. J. Wiseman says: “The Neo-Babylonian Chronicle texts are written in a small script of a type which does not of itself allow any precise dating but which can mean that they were written from any time almost contemporary with the events themselves to the end of the Achaemenid rule [331 B.C.E.]” (*Chronicles of Chaldean Kings* [London: The Trustees of the British Museum, 1961], p. 4) Professor J. A. Brinkman is a little more specific, stating that the extant copies of the Neo-Babylonian chronicles are “slightly antedating the *Historiai* of Herodotus,” which was written c. 430 B.C.E. (J. A. Brinkman, “The Babylonian Chronicle Revisited,” in *Lingering Over Words. Studies in Ancient Near Eastern Literature in Honor of William L. Moran*, ed. T. Abusch, J. Huehnergard, and P. Steinkeller [Atlanta: Scholars Press, 1990], pp. 73, 85.) Dr. E. N. Voigtlander says that the copies of the Neo-Babylonian chronicles seem to come from the reign of Darius I (Voigtlander, *A Survey of Neo-Babylonian History* [unpublished doctoral thesis, University of Michigan, 1963], p. 204, note 45.) Chronicle 1A has a colophon in which it is explicitly stated that the text was copied (from an earlier original) in the 22nd year of Darius I (500/499 B.C.E.).
- 23 A. K. Grayson, *Assyrian and Babylonian Chronicles* (Locust Valley, New York: J.J. Augustin Publisher, 1975). The work will hereafter be referred to as *ABC*.
- 24 A. K. Grayson in *Reallexikon der Assyriologie und vorderasiatischen Archäologie* (henceforth abbreviated *RLA*), ed. D. O. Edzard, Vol. VI (Berlin and New York: Walter de Gruyter, 1980), p. 86.

Obverse



Reverse



The Babylonian Chronicle BM 21946

This chronicle covers the period from Nabopolassar's 21st year (605/04 B.C.E.) to Nebuchadnezzar's 10th year (595/94 B.C.E.). Photo used courtesy of D. J. Wiseman (shown in his *Nebuchadnezzar and Babylon*, Plate VI).

Most of these chronicles are incomplete. The extant (actually existing) parts of Chronicles 2-7 cover the following regnal years:

TABLE 2: EXTANT PARTS OF THE NEO-BABYLONIAN CHRONICLES 2-7

CHRONICLE NO.	RULER	REGNAL YEARS COVERED
No.2 = B.M. 25127	Nabopolassar	acc.-year – 3
3 = B.M. 21901	Nabopolassar	10 – 17
4 = B.M. 22047	Nabopolassar	18 – 20
5 = B.M. 21946	Nabopolassar	21
” ” ”	Nebuchadnezzar	acc.-year – 10
6 = B.M. 25124	Neriglissar	3
7 = B.M. 35382	Nabonidus	1 – 11
” ” ”	Nabonidus	17

In all, the Neo-Babylonian period (625–539 B.C.E.) includes a total of eighty-seven regnal years. As is seen in the preceding table, less than half of these years are covered by the preserved parts of the chronicles. Yet some important information may be gathered from them.

Chronicle 5 (B.M. 21946) shows that Nabopolassar ruled Babylon for twenty-one years, and that he was succeeded by his son Nebuchadnezzar. That part of the text says:

For twenty-one years Nabopolassar ruled Babylon. On the eighth day of the month Ab he died. In the month of Elul Nebuchadnezzar (II) returned to Babylon and on the first day of the month he ascended the royal throne in Babylon.²⁵

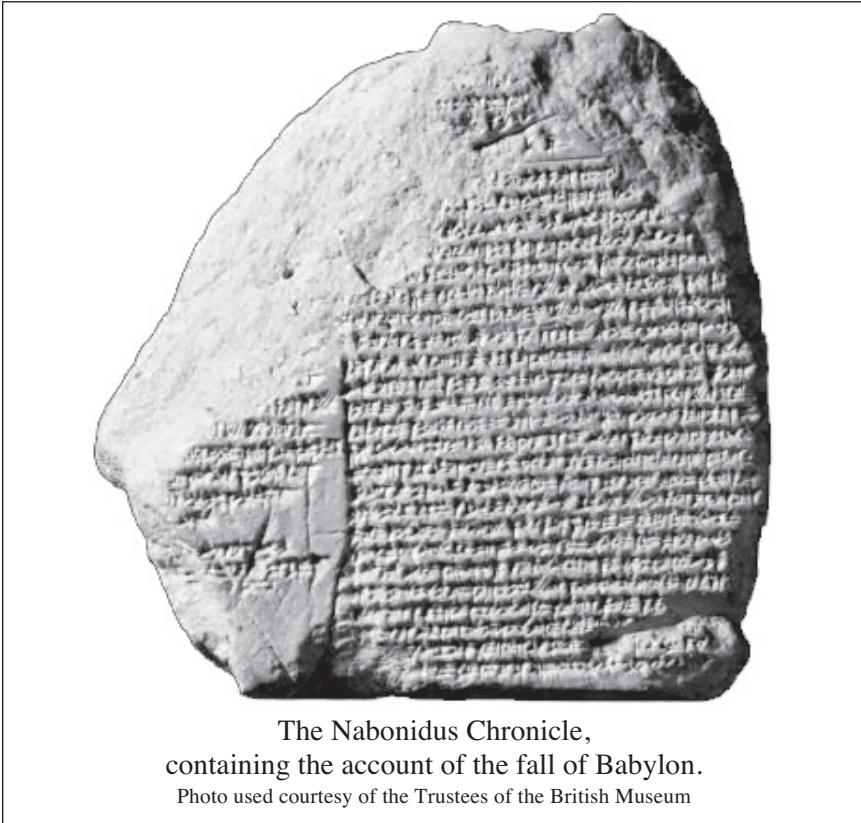
The last chronicle (B.M. 35382), the famous *Nabonidus Chronicle*, covers the reign of Nabonidus, who was the father of Belshazzar. This chronicle unfortunately is damaged. The portion covering Nabonidus’ twelfth year to his sixteenth year of rule is lacking, and the portion where the words for “seventeenth year” no doubt originally could be read, is damaged.²⁶

Notably, however, for the sixth year it is stated that Cyrus, king of Anshan, defeated the Median king Astyages and captured Ecbatana, the capital of Media.²⁷ If Nabonidus ruled for seventeen years and if he

25 Grayson, *ABC* (1975), pp. 99, 100.

26 *Ibid.* p. 109.

27 *Ibid.*, pp. 106, 107. “The sixth year,” too, is missing, but as the record for each year is separated from the next year by a horizontal line, and as the account of Astyages’ defeat immediately precedes the record for the seventh year, it is quite evident that it refers to the sixth year. – *Anshan* was a city and also an archaic name of the province in which it was situated, Parsa (Persis), which lay at the Persian Gulf southeast of Babylonia. At the time of Cyrus’ rise to power, Anshan (Parsa) was a Median tributary kingdom.



was dethroned by Cyrus in 539 B.C.E., his first year must have been 555/54 B.C.E. and his sixth year, when Cyrus conquered Media, must have been 550/49 B.C.E.

The Watch Tower Society, in fact, agrees with these datings. The reason is that the secular basis of its chronology, 539 B.C.E. as the date for the fall of Babylon, is directly connected with the reign of Cyrus. The Greek historian Herodotus, in the fifth century B.C.E., says that Cyrus' total rule was twenty-nine years.²⁸ As Cyrus died in 530 B.C.E., in the ninth year of his rule over Babylonia, his first year as king of Anshan must have begun in c. 559 B.C.E., or about three years before Nabonidus acceded to the throne of Babylon.

Suppose now that twenty years have to be added to the Neo-Babylonian era, which is required if the destruction of Jerusalem is

28 Herodotus' *Historiai* I:210-216. Other ancient historians such as Ktesias, Dinon, Diodorus, Africanus, and Eusebius roughly agree with this length of reign for Cyrus. — See *Insight on the Scriptures* (1988), Vol. 1, p. 454.

set at 607 rather than 587 B.C.E., and that we add these twenty years to the reign of Nabonidus, making it thirty-seven years instead of seventeen. Then his first year must have been 575/74 B.C.E. instead of 555/54. Nabonidus' sixth year, when Astyages was defeated by Cyrus, would then be moved back from 550/49 to 570/69 B.C.E.

Those dates, however, are impossible, as Cyrus did not come to power until c. 559 B.C.E., as was shown above. He clearly could not have defeated Astyages ten years before he came to power! This is why the Society correctly dates this battle in 550 B.C.E., thereby indicating Nabonidus' reign of seventeen years to be correct, as is held by all authorities and classical authors.²⁹

Though the chronicles available do not furnish a complete chronology for the Neo-Babylonian period, the information which they do preserve supports the dates for the lengths of the reigns of the Neo-Babylonian kings given by Berossus and the Royal Canon.

As the earlier-presented evidence strongly indicates that *both* of these sources derived their information from the Babylonian chronicles *independent* of each other, and as their figures for the Neo-Babylonian reigns *agree*, it is logical to conclude that the chronological information originally given in the Neo-Babylonian chronicles has been preserved unaltered by Berossus and the Royal Canon.

Even if this is agreed upon, however, can the information given by these Babylonian chronicles be trusted?

It is often pointed out that the Assyrian scribes distorted history in order to glorify their kings and gods. "It is a well known fact that in Assyrian royal inscriptions a serious military set-back is never openly admitted."³⁰ Sometimes scribes garbled the narration by

29 *Insight on the Scriptures* (1988), Vol. 1, pp. 454, 566; Vol. 2, p. 612. That Astyages was defeated in 550 B.C.E. may also be argued on other grounds. If, as stated by Herodotus (*Historiai* I:130), Astyages ruled Media for thirty-five years, his reign would have begun in 585 B.C.E. (550+35=585). He was the successor of his father Cyaxares, who had died shortly after a battle with Alyattes of Lydia, which according to Herodotus (*Historiai* I:73, 74) was interrupted by a solar eclipse. Actually, a total solar eclipse visible in that area took place on May 28, 585 B.C.E., which is commonly identified with the one mentioned by Herodotus.—I. M. Diakonoff, *The Cambridge History of Iran*, Vol. 2 (Cambridge: Cambridge University Press, 1985), pp. 112, 126; cf. M. Miller, "The earlier Persian dates in Herodotus," *Klio*, Vol. 37 (Berlin: Akademie-Verlag, 1959), p. 48.

30 A. K. Grayson, "Assyria and Babylonia," *Orientalia*, Vol. 49, Fasc. 2, 1980, p. 171. See also Antti Laato in *Vetus Testamentum*, Vol. XLV:2, April 1995, pp. 198-226.

changing the date of a defeat and weaving it into an account of a later battle.³¹ Do the Neo-Babylonian chronicles treat history in this way, too?

Dr. A. K. Grayson, a well-known authority on the Assyrian and Babylonian chronicles, concludes:

Unlike the Assyrian scribes the Babylonians neither fail to mention Babylonian defeats nor do they attempt to change them into victories. The chronicles contain a reasonably reliable and representative record of important events in the period with which they are concerned.³²

We have reason for assurance, then, that the figures for the reigns of the Neo-Babylonian kings given by these chronicles and preserved to our time—thanks to Berossus and the Royal Canon—represent the actual reigns of these kings. This conclusion will be confirmed, over and over again, in the further discussion.

b) Babylonian king lists

A cuneiform *king list* differs from a chronicle in that it is usually a list of royal names with the addition of regnal years, similar to the later Royal Canon.

Although a number of king lists both from Assyria and Babylonia have been unearthed, only one of them covers the Neo-Babylonian era: the *Uruk King List*, shown on the following page. Unfortunately, as can be seen, it is badly preserved, and some portions of it are missing. Nonetheless, as will be demonstrated, it has definite historical value.

The preserved portions cover the periods from Kandalanu to Darius I (647–486 B.C.E.) and, on the reverse side, from Darius III to Seleucus II (335–226 B.C.E.). It was evidently composed from older sources sometime after the reign of Seleucus II.

31 Grayson, *ibid.* (1980), p. 171.

32 *Ibid.*, p. 175. This does not mean that the chronicles are infallible records. As Dr. J. A. Brinkman points out, “lack of nationalistic prejudice does not insure factual reliability; and the Babylonian chronicles have their share of proven errors.” Still, he agrees that the chronicles contain an essentially reliable record of events and dates for the period between the eighth and sixth centuries B.C.E.: “For the period from 745 to 668, these documents list rulers and exact dates of reign in Babylonia, Assyria, and Elam. Coverage thereafter is spotty, in part because of lacunae in the record; but these texts still furnish most of the precise chronological background for present knowledge of the downfall of the Late Assyrian Empire, the rise of the Neo-Babylonian Empire, the reign of Nabonidus, and the transition to Persian rule.”—Brinkman in *Lingering Over Words* (see note 22 above), pp. 74 and 100, note 148. For additional comments on the reliability of the Neo-Babylonian chronicles, see Chapter 7: “Attempts to overcome the evidence.”

		(Obverse)	
		Lacuna	
		(1) MU x x x	[. . .]
		(2) šá-niš	x(?) [(. . .)]
		(3) MU 21	=K[an-da]-la-an
		(4) MU 1	=Šin ₂ -šumu-išir ₂
		(5) u	=Šin ₂ -šarra-iš-ku-un
		(6) MU 21	=Nabū-apla-ušur
		(7) [MU] 43	=Nabū-kudurri-ušur (II)
		(8) [MU] 2	=Amil- ^a Marduk
		(9) [MU] '3' 8 ITI	=Nergal ₂ -šarra-ušur
		(10) [(. . .)] 3 ITI	=La-ba-ši- ^a Marduk
		(11) [MU] '17(?)'	=Nabū-nā'id
		(12) [MU] x	[K]ur-raš (II)
(13) [MU] x	[Kambu-2]i-i		
(14) [MU] x	[Daria-m]uš (I)		
		(Reverse)	
		Lacuna	
		Lacuna	
		(1) [š]u(?)-[m]u šá-nu-ú	=Ni-din- ^a B[š(?)]
		(2) [MU] 5	=Da-ra-a-mu[š] (III)
		(3) MU 7(?)	=A-lik-sa-an-šar (III)
		(4) MU 6	=Pi-il-ip-su (III)
		(5) MU 6	=At-tu-gu-ur
		(6) MU 31	=Si-lu-ku (I)
		(7) MU 22	=An-ti-'u-ku-su (I)
(8) MU 15	=An-ti-'u-ku-su (II)		
(9) [MU] '20'	=Si-lu-ku (II)		
Lacuna			

The Uruk King List (W 20030, 105)

As reproduced by J. van Dijk in *UVB* 18 (Berlin 1962), tablet 28a. The transcription to the right is that of A. K. Grayson in *RLA* VI (1980), page 97.

The Uruk King List was discovered during the excavations at Uruk (modern Warka in southern Iraq) in 1959–60 together with about 1,000 other cuneiform texts (mostly economic texts) from different periods.³³

The preserved portion of the obverse (front or principal side), which includes the Neo-Babylonian period, gives the following chronological information (damaged or missing portions are indicated by quotation marks or parentheses):³⁴

33 The first transcription and translation of the text, which included an extensive discussion by Dr. J. van Dijk, was published in 1962.—J. van Dijk, *UVB* (= *Vorläufiger Bericht über die von dem Deutschen Archäologischen Institut unter der Deutschen Orient-Gesellschaft aus Mitteln der Deutschen Forschungsgemeinschaft unternommenen Ausgrabungen in Uruk-Warka*), Vol. 18, Berlin, 1962, pp. 53-60. An English version of van Dijk's translation (of the kinglist) is published by J. B. Pritchard, *The Ancient Near East* (Princeton, New Jersey: Princeton University Press, 1969), p. 566. Another, more recent transcription by A. K. Grayson was published in 1980.—A. K. Grayson, *RLA* (see note 24 and the picture above), Vol. VI (1980), pp. 97, 98.

34 Based upon Grayson's transcription in *RLA* VI (1980), p. 97.

THE URUK KING LIST

(obverse)

21 years	K(anda)lanu
1 year	Sin-shum-lishir and Sin-shar-ishkun
21 years	Nabopolassar
43 (ye)ars	Nebuchadnezzar
2 (ye)ars	Awel-Marduk
‘3’ (years) 8 months	Neriglissar
(. . .) 3 months	Labashi-Marduk
‘17[?]’ (years)	Nabonidus

As is seen, the royal names and the preserved figures for the Neo-Babylonian period agree with those of Berossus and the Royal Canon: Nabopolassar is given 21 years, Nebuchadnezzar 43 years, and Awel-Marduk (Evil-merodach) 2 years. The only deviation is the length of Labashi-Marduk’s reign, which is given as 3 months against Berossus’ 9 months. The smaller figure is without doubt correct, as is proved by the economic documents unearthed.³⁵

In contrast to the Royal Canon, which always gives *whole* years only, the Uruk King List is more specific in also giving months for the reigns of Neriglissar and Labashi-Marduk. The damaged figures for Neriglissar and Nabonidus may be restored (reconstructed) as “3 years, 8 months,” and “17 years,” respectively. The economic texts also indicate Neriglissar’s reign to have been three years and eight months (August 560-April 556 B.C.E.).³⁶

Thus, once again, we find the figures of Berossus and the Royal Canon confirmed by this ancient document, the Uruk King List. Admittedly, this king list was composed (from older documents) more than 300 years after the end of the Neo-Babylonian era. On this basis it might be argued that scribal errors may have crept into it.

35 See note 20 above. At any rate, Labashi-Marduk’s reign was swallowed up by Neriglissar’s fourth year, which was also Nabonidus’ accession-year, and the total length of the era is not affected.

36 J. van Dijk, *UVB* 18 (see note 33 above), page 57. As Neriglissar died in his fourth regnal year, his reign would normally have been counted chronologically as four years, according to the Babylonian accession-year system. The Uruk King List deviates from this method at this point by giving more specific information. As van Dijk points out, “the list is more precise than the [Royal] Canon and confirms throughout the results of the research.”—*Archiv für Orientforschung*, ed. E. Weidner, Vol. 20 (Graz, 1963), p. 217. For further information on the month of Neriglissar’s accession and the Uruk King List, see the Appendix for Chapter 3.

So it is important to ask: Are there then no historical records preserved *from the Neo-Babylonian era itself* which establish its chronology? Yes, there are, as is immediately evident.

c) *Royal inscriptions*

Royal inscriptions of different kinds (building inscriptions, votive inscriptions, annals, etc.) from the Assyrian and Babylonian eras themselves have been found in great numbers.

In 1912 a German translation of the then-known Neo-Babylonian inscriptions was published by Stephen Langdon, but since then many new ones from the period in question have been unearthed.³⁷ A new translation of all the Neo-Babylonian royal inscriptions is therefore being prepared.³⁸

This is an enormous task. Paul-Richard Berger estimates that about *1,300 royal inscriptions*, one third of which are undamaged, have been found from the Neo-Babylonian period, most of them from the reigns of Nabopolassar and Nebuchadnezzar.³⁹

For the chronology that we are concerned with, three of the inscriptions are especially valuable. All of them are original documents from the reign of Nabonidus.⁴⁰ How do they aid in establishing the critical date for Jerusalem's destruction?

We have seen that in advocating a 607 B.C.E. date, the Watch Tower Society questions the reliability of the duration of the Neo-Babylonian period as presented by both Berossus and the Royal Canon (often called Ptolemy's Canon), finding the total 20 years too short. The first of the royal inscriptions to be discussed, called

37 Stephen Langdon, *Die neubabylonischen Königsinschriften* (=Vorderasiatische Bibliothek, Vol. IV) (Leipzig: J. C. Hinrichs'sche Buchhandlung, 1912).

38 The first of the three planned volumes was published in 1973 as Paul-Richard Berger, *Die neubabylonischen Königsinschriften* (=Alter Orient und Altes Testament, Vol. 4/1) (Neukirchen-Vluyn: Neukirchener Verlag, 1973).

39 About 75 percent of these documents were found in Babylon during the detailed excavations of R. Koldewey in 1899-1917. (Berger, *ibid.*, pp. 1-3) As explained by Dr. Ronald Sack, "a virtual mountain" of royal inscriptions have survived from the reign of Nebuchadnezzar alone. (*Images of Nebuchadnezzar* [Selinsgrove: Susquehanna University Press; London and Toronto: Associated University Press, 1991], p. 26.) Six of the inscriptions are from the reign of Awel-Marduk, eight from the reign of Neriglissar, and about thirty from the reign of Nabonidus. (Berger, *op. cit.*, pp. 325-388.)

40 In 1989 Paul-Alain Beaulieu, in his doctoral thesis *The Reign of Nabonidus*, included a new catalogue with detailed descriptions of the royal inscriptions from the reign of Nabonidus. — Paul-Alain Beaulieu, *The Reign of Nabonidus, King of Babylon 556-539 B.C.* (New Haven and London: Yale University Press, 1989), pp. 1-42.

Nabonidus No. 18, confirms the length of reign for that king as found in those ancient sources.

The second cuneiform tablet, Nabonidus No. 8, clearly establishes the *total length* of the reigns of the Neo-Babylonian kings up to Nabonidus, and enables us to know both the beginning year of Nebuchadnezzar's reign and the crucial year in which he desolated Jerusalem.

The third, Nabonidus No. 24, provides the length of the reign of each Neo-Babylonian king from the first ruler, Nabopolassar, onward and down to the ninth year of the last ruler, Nabonidus (Belshazzar was evidently a coregent with his father Nabonidus at the time of Babylon's fall).⁴¹

Following are the details for each of these cuneiform tablets:

(1) *Nabon. No. 18* is a cylinder inscription from an unnamed year of Nabonidus. Fulfilling the desire of Sin, the moon-god, Nabonidus dedicated a daughter of his (named En-nigaldi-Nanna) to this god as priestess at the Sin temple of Ur.

The important fact here is that an *eclipse of the moon*, dated in the text to Ulûlu 13 and observed in the morning watch, led to this dedication. Ulûlu, the sixth month in the Babylonian calendar, corresponded to parts of August and September (or, sometimes, parts of September and October) in our calendar. The inscription explicitly states that the moon "set while eclipsed," that is, the eclipse began before and ended after sunrise.⁴² Its end, therefore, was invisible at Babylon.

41 Unfortunately, scholars have arranged or numbered the inscriptions differently, which may cause some confusion. In the systems of Tadmor, Berger, and Beaulieu the three inscriptions are listed as follows:

	<u>Tadmor 1965:</u>	<u>Berger 1973:</u>	<u>Beaulieu 1989:</u>
(1)	Nabon. No. 18	Nbd Zyl. II, 7	No. 2
(2)	Nabon. No. 8	Nbd Stl. Frgm. XI	No. 1
(3)	Nabon. No. 24	(missing)	(Adad-guppi' stele)

Beaulieu's arrangement is chronological: No. 1 was written in Nabonidus' first year, No. 2 in his second year, and No. 13 after year 13, possibly in year 14 or 15. (Beaulieu, *op. cit.*, p. 42.) In Tadmor's list Nabonidus' inscriptions are numbered in the order of their publication, starting with the fifteen texts published by Langdon in 1912. (Hayim Tadmor, "The Inscriptions of Nabonaid: Historical Arrangement," in *Studies in Honor of Benno Landsberger on his Seventy-Fifth Birthday* [= *Assyriological Studies*, No. 16], ed. H. Güterbock & T. Jacobsen, Chicago: The Chicago University Press, 1965, pp. 351-363.) The systems of Tadmor, Berger, and Beaulieu, in turn, differ from that of H. Lewy in *Archiv Orientalní*, Vol. XVII, Prague, 1949, pp. 34, 35, note 32. In the discussion here presented Tadmor's numbers will be used.

42 This part of the text says, according to Beaulieu's translation: "On account of the wish for an *entu* priestess, in the month Ulûlu, the month (whose Sumerian name means) 'work of the goddesses,' on the thirteenth day the moon was eclipsed and set while eclipsed. Sîn requested an *entu* priestess. Thus (were) his sign and his

Of what significance is all this?

When sufficient details about a lunar eclipse are available and it is known that the eclipse occurred within a certain limited time period in the past, astronomical movements are so precise that the date of a specific eclipse in a particular area can be determined accurately. Since the details here meet the requirement, when during Nabonidus' reign did the eclipse described on the ancient tablet take place?

In 1949 Hildegard Lewy examined the eclipse and found that only once during Nabonidus' reign did such an eclipse take place at this time of the year, that is, on September 26, 554 B.C.E. (Julian calendar).⁴³ The eclipse began about 3:00 a.m. and lasted for about three hours. If Nabonidus ruled for seventeen years and his first year was 555/54 B.C.E., as is generally held, the eclipse and the dedication of Nabonidus' daughter took place in his second regnal year (554/53 B.C.E.).

A remarkable confirmation of this dating was brought to light twenty years later, when W. G. Lambert published his translation of four fragments of an inscription from Nabonidus's reign which he named the *Royal Chronicle*. The inscription establishes that the dedication of Nabonidus' daughter took place shortly before his third year, and obviously in his second, precisely as Lewy had concluded.⁴⁴

The lunar eclipse of Ulûlu 13, then, definitely fixes the second year of Nabonidus to 554/53 B.C.E. and his first year to 555/54, thus

decision." (Beaulieu, *op. cit.*, p. 127) The conclusion that this lunar eclipse indicated that Sin requested a priestess was evidently based on the astrological tablet series *Enuma Anu Enlil*, the "Holy Writ" of the Assyrian and Babylonian astrologers, who regularly based their interpretations of astronomical events on this old omnia collection. A lunar eclipse seen in the morning-watch of Ulûlu 13 is expressly interpreted in these tablets as an indication that Sin desires a priestess.—See H. Lewy, "The Babylonian Background of the Kay Kâûs Legend," *Archiv Orientalní*, Vol. XVII (ed. by B. Hrozný, Prague, 1949), pp. 50, 51.

43 H. Lewy, *op. cit.*, pp. 50, 51.

44 W. G. Lambert, "A New Source for the Reign of Nabonidus," *Archiv für Orientforschung*, Vol. 22 (ed. by Ernst Weidner, Graz, 1968/69), pp. 1-8. Lewy's conclusion has been confirmed by other scholars. (See for example Beaulieu, *op. cit.*, pp. 127-128.) The eclipse of September 26, 554 BCE, was examined in 1999 by Professor F. Richard Stephenson at Durham, England, who is a leading expert on ancient eclipses. He says:

"My computed details are as follows (times to the nearest tenth of an hour):
(i) Beginning at 3.0 h[our] local time, lunar altitude 34 deg[rees] in the SW.
(ii) End at 6.1 h[our] local time, lunar altitude -3 deg[rees] in the W.

The eclipse would thus end about 15 minutes after moonset. A deep penumbral eclipse may possibly be visible for a very few minutes and there is always the possibility of anomalous refraction at the horizon. However, I would judge that the Moon indeed set eclipsed on this occasion."—Letter Stephenson-Jonsson, dated March 5, 1999.

giving a very strong confirmation to the figures for Nabonidus' reign set forth by Berossus and the Royal Canon.⁴⁵

(2) *Nabon. No. 8*, or the *Hillah stele*, was discovered at the end of the 19th century in the neighborhood of Hillah, about four miles southeast of the ruins of Babylon.⁴⁶

The inscription "consists of a report on the accession year and the beginning of the first regnal year of Nabonidus" and may be shown, on the basis of internal evidence, to have been written toward the middle of his first regnal year (in the autumn of 555 B.C.E.).⁴⁷

The information given on this stele alone helps us to establish the *total length of the period from Nabopolassar to the beginning of the reign of Nabonidus*. How does it do this?

In several of his royal inscriptions (No. 1, 8, 24, and 25 in Tadmor's list) Nabonidus says that in a dream in his *accession year*, he was commanded by the gods Marduk and Sin to rebuild *Éhulhul*, the temple of the moon god Sin in Harran. In connection with this, the text under discussion (*Nabon. No. 8*) provides a very interesting piece of information:

(Concerning) Harran (and) the *Éhulhul*, which had been lying in ruins for 54 years because of its devastation by the Medes (who) destroyed the sanctuaries, with the consent of the gods the time for reconciliation approached, 54 years, when *Sîn* should return to his place. When he returned to his place, *Sîn*, the lord of the tiara, remembered his lofty seat, and (as to) all the gods who left his chapel with him, it is Marduk, the king of the gods, who ordered their gathering.⁴⁸

45 Someone might claim it is possible to find another lunar eclipse setting heliacally on Ulûlu 13 a number of years earlier that fits the description given by Nabonidus, perhaps about twenty years earlier, in order to adapt the observation to the chronology of the Watch Tower Society. However, modern astronomical calculations show that no such lunar eclipse, visible in Babylonia, took place at this time of the year within twenty years, *or even within fifty years* before the reign of Nabonidus! The closest lunar eclipse of this kind occurred fifty-four years earlier, on August 24, 608 B.C.E. The lunar eclipse of *Nabon. No. 18*, therefore, can only be that of September 26, 554 B.C.E. For additional information on the identification of ancient lunar eclipses, see the Appendix for Chapter 4: "Some comments on ancient lunar eclipses."

46 A translation of the text was published by S. Langdon in 1912, *op. cit.* (note 37 above), pp. 53-57, 270-289. For an English translation, see *Ancient Near Eastern Texts* (hereafter referred to as *ANET*), ed. James B. Pritchard (Princeton, N. J.: Princeton University Press, 1950), pp. 308-311.

47 Col. IX mentions Nabonidus' visit to southern Babylonia soon after a New Years' festival. This visit is also documented in archival texts from Larsa dated to the first two months of Nabonidus' first year. — Beaulieu, *op. cit.*, pp. 21, 22, 117-127.

48 Translated by Beaulieu, *op. cit.*, p. 107.

The date when the temple Éhulhul in Harran was ruined by the Medes is known to us from two different reliable sources:

The Babylonian *Chronicle 3* (B.M. 21901) and the Harran inscription *Nabon. H 1, B*, also known as the *Adad-guppi' stele* (Nabon. No. 24 in Tadmor's list). The chronicle states that in the "sixteenth year" of Nabopolassar, in the month Marheshwan (parts of October and November), "the Umman-manda (the Medes), [*who*] had come [to *hel*]p the king of Akkad, put their armies together and marched to Harran [against Ashur-uball]it (II) who had ascended the throne in Assyria. . . . The king of Akkad reached Harran and [. . .] he captured the city. He carried off the vast booty of the city and the temple."⁴⁹ The Adad-guppi' stele gives the same information:

Whereas in the 16th year of Nabopolassar, king of Babylon, Sin, king of the gods, with his city and his temple was angry and went up to heaven—the city and the people that (were) in it went to ruin.⁵⁰

Thus it is obvious that Nabonidus reckons the "fifty-four years" from the sixteenth year of Nabopolassar to the beginning of his own reign when the gods commanded him to rebuild the temple.⁵¹

This is in excellent agreement with the figures for the Neo-Babylonian reigns given by Berossus and the Royal Canon. As

49 Grayson, *ABC* (1975), p. 95. The exact month for the destruction of the temple is not given, but as the chronicle further states that the king of Akkad went home in the month of Adar (the twelfth month, corresponding to February/March), the destruction must have occurred some time between October, 610 and March, 609 B.C.E., probably towards the end of this period.

50 C. J. Gadd, "The Harran Inscriptions of Nabonidus," in *Anatolian Studies*, Vol. VIII, 1958, p. 47. That the temple Éhulhul was *laid in ruins* at this time is confirmed by other inscriptions, including the *Sippar Cylinder* (No. 1 in Tadmor's list) which says: "(Sin) became angry with that city [Harran] and temple [Éhulhul]. He aroused the Medes, who destroyed that temple and turned it into ruins."—Gadd, *ibid.*, pp. 72, 73; Beaulieu, *op. cit.*, p. 58.

51 The rebuilding of the temple Éhulhul is referred to in a number of texts which are not easily harmonized. Owing to some vagueness in the inscriptions, it is not clear whether the Harran temple was completed early in Nabonidus' reign or after his ten year stay at Teima in Arabia. The problem has been extensively discussed by a number of scholars. Most probably, the project was started in the early years of Nabonidus' reign, but could not be completely finished until after his return from Teima, perhaps in his thirteenth regnal year or later. (Beaulieu, *op. cit.*, pp. 137, 205-210, 239-241.) "The different texts surely refer to different stages of the work," says Professor Henry Saggs in his review of the problem. (H. W. F. Saggs, *Peoples of the Past: Babylonians*, London: The Trustees of the British Museum, 1995, p. 170) Anyway, all scholars agree that Nabonidus reckons the fifty-four years from the sixteenth year of Nabopolassar until his own accession-year when the "wrath" of the gods "did (eventually) calm down," according to the Hillah stele (col. vii), and Nabonidus "was commanded" to rebuild the temple. For additional comments on the Hillah stele, see the Appendix.

Nabopolassar reigned for twenty-one years, *five years* remained from his sixteenth year to the end of his reign. After that Nebuchadnezzar ruled for *forty-three years*, Awel-Marduk for *two*, and Neriglissar for *four years* before Nabonidus came to power (Labashi-Marduk's few months may be disregarded).

Summing up these regnal years (5+43+2+4) we get *fifty-four years*—exactly as Nabonidus states on his stele.

If, as has been established, Nabonidus' first year was 555/554 B.C.E., Nabopolassar's sixteenth year must have been 610/609, his first year 625/624 and his twenty-first and last year 605/604 B.C.E. Nebuchadnezzar's first year, then, was 604/603, and his eighteenth year, when he desolated Jerusalem, was 587/586 B.C.E.—not 607 B.C.E. These dates agree completely with the dates arrived at from Berossus' figures and the Royal Canon.

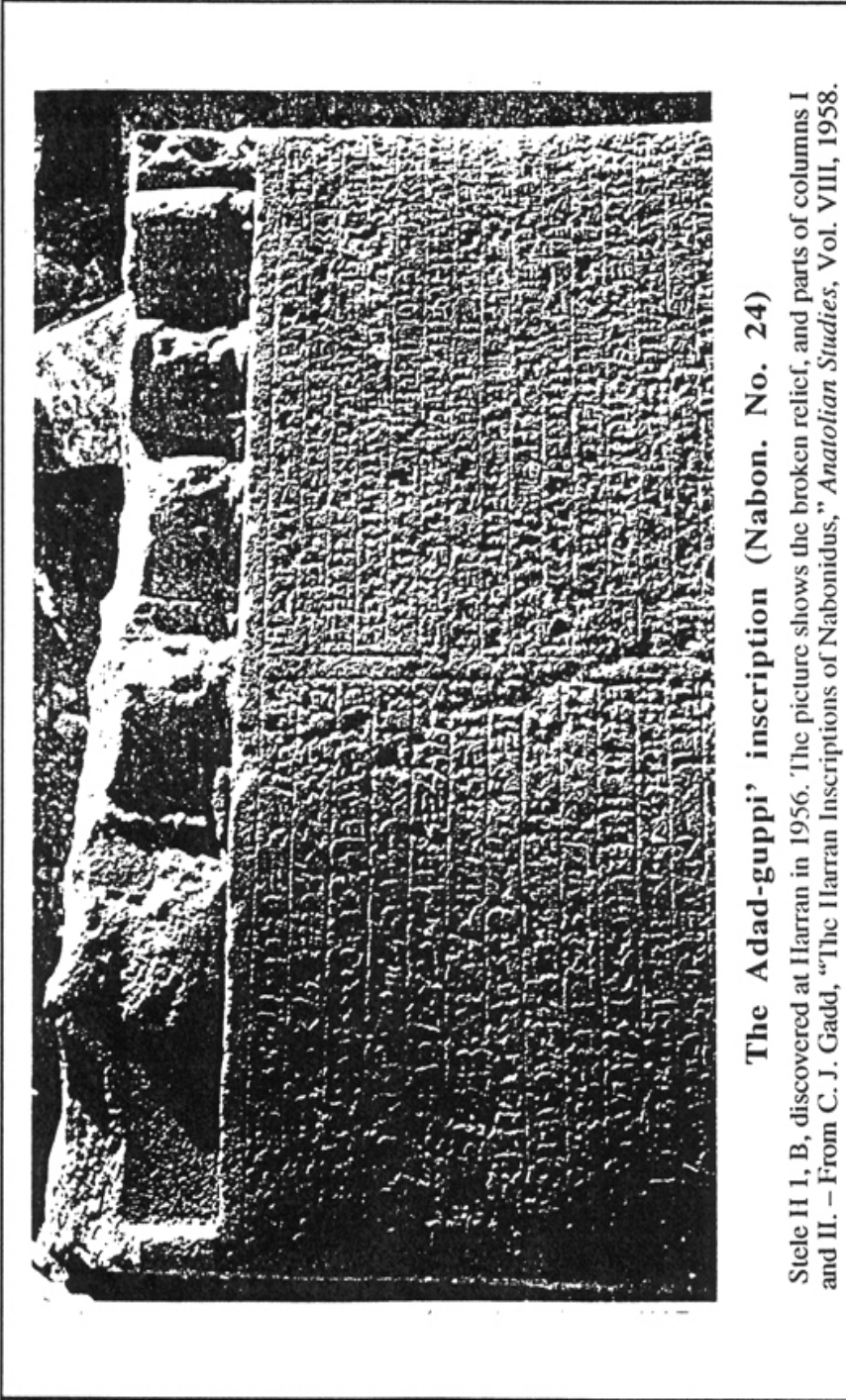
Consequently, this stele adds its testimony in establishing the total length of the reigns of all the Neo-Babylonian kings prior to Nabonidus. The strength of this evidence—produced right during the Neo-Babylonian era itself—cannot be insisted upon too strongly.

(3) *Nabon. No. 24*, also known as the *Adad-guppi' inscription*, exists in two copies. The first was discovered in 1906 by H. Pognon at Eski Harran in south-eastern Turkey, in the ruins of the ancient city of Harran (known as Haran in Abraham's time). The stele, now in the Archaeological Museum at Ankara, is a grave inscription, evidently composed by Nabonidus for his mother, Adad-guppi'.

The text not only includes a biographical sketch of Nabonidus' mother from the time of Assyrian king Ashurbanipal and on to the ninth year of Nabonidus (when she died), but also gives the length of reign of each of the Neo-Babylonian kings except, of course, of Nabonidus himself, who was still living. Unfortunately, in the first copy the portion of the text setting out the reigns is damaged, and the only readable *figures* are the forty-three years of Nebuchadnezzar's reign and the four years of Neriglissar's reign.⁵²

However, in 1956 Dr. D. S. Rice discovered three other stelae at Harran from the reign of Nabonidus, *one of which bore a duplicate inscription of the one discovered in 1906!* Fortunately, the sections

52 For an extensive discussion of the inscription, see B. Landsberger, "Die Basaltstele Nabonids von Eski-Harran," in *Halil-Edhem Hâtıra Kitabı*, Kilt I (Ankara: Turk Tarih Kurumu Basimevi, 1947), pp. 115-152. An English translation is included in Pritchard's *ANET*, pp. 311, 312. In *ANET* the translation of stele H 1, A, col. II says "6th" year of Nabonidus, which is an error for "9th". The original text clearly has "9th" year'.



The Adad-guppi' inscription (Nabon. No. 24)

Stele II I, B, discovered at Harran in 1956. The picture shows the broken relief, and parts of columns I and II. — From C. J. Gadd, "The Harran Inscriptions of Nabonidus," *Anatolian Studies*, Vol. VIII, 1958.

of the new stele containing the chronological information were *not* damaged. The first of these sections reads as follows:

From the 20th year of Ashurbanipal, king of Assyria, when I was born, until the 42nd year of Ashurbanipal, the 3rd year of his son Ashur-etil-ili, the 21st year of Nabopolassar, the 43rd year of Nebuchadnezzar, the 2nd year of Awel-Merodach, the 4th year of Neriglissar, during (all) these 95 years in which I visited the temple of the great godhead Sin, king of all the gods in heaven and in the nether world, he looked with favor upon my pious good works and listened to my prayers, accepted my vows.⁵³

It should be observed that the first two kings, Ashurbanipal and his son Ashur-etil-ili, were *Assyrian* kings, while the following kings were *Neo-Babylonian* kings. This indicates that Adad-guppi' first lived under Assyrian rule but then, in connection with Nabopolassar's revolt and liberation of Babylonia from the Assyrian yoke, was brought under Babylonian rule.⁵⁴ Nabonidus' mother lived to be a centenarian, and further on in the text a complete summary of her long life is given:

He [the moon god Sin] added (to my life) many days (and) years of happiness and kept me alive from the time of Ashurbanipal, *king of Assyria*, to the 9th year of Nabonidus, *king of Babylon*, the son

53 C. J. Gadd, *op. cit.*, pp. 46-56. Gadd translated the inscription in 1958 and titled the new stele *Nabon. H 1, B*, as distinguished from Pognon's stele which he titled *Nabon. H 1, A*. The quotation here is from the translation of A. Leo Oppenheim in James B. Pritchard (ed.), *The Ancient Near East. A New Anthology of Texts and Pictures*, Vol. II (Princeton and London: Princeton University Press, 1975), pp. 105, 106, col. I:29-33. As this passage is used as the basis for the calculation of Adad-guppi's age in col. II:26-29, the number of kings and their reigns are evidently meant to be complete. In a second portion the chronological information is repeated (col. II:40-46), but the reign of Awel-Marduk is left out, evidently because the purpose of this section is different, viz., to explain which of the Neo-Babylonian kings Adad-guppi' had *served* as an obedient subject. This is clearly indicated in the beginning of the section, which says: "I have obeyed with all my heart and have done my duty (as a subject) during . . ." etc. As suggested by Gadd "she was banished, or absented herself," from the court of Awel-Marduk, "no doubt for reasons, whatever they were, which earned that king an evil repute in the official tradition." (Gadd, *op. cit.*, p. 70)

54 Nabonidus and his mother descended from the *northern* branch of the Aramaeans, who earlier had been so thoroughly assimilated into the Assyrian society that even their moon-god Sin "came to be honored among the Assyrians on an equal plane with their native god Assur." (M. A. Dandamaev, *Slavery in Babylonia*, DeKalb, Illinois: Northern Illinois University Press, 1984, pp. 36-39.) In one of his inscriptions (Nabon. No. 9 in Tadmor's arrangement), Nabonidus explicitly speaks of the Assyrian kings as "my royal ancestors." — H. Lewy, *op. cit.* (cf. note 42 above), pp. 35, 36.

whom I bore, (i.e.) one hundred and four happy years (spent) in that piety which Sin, the king of all gods, has planted in my heart.⁵⁵

This queen died in the ninth year of Nabonidus, and the mourning for the deceased mother is described in the last column of the inscription. Interestingly, the same information is also given in the *Nabonidus Chronicle* (B.M. 35382):

The ninth year: . . . On the fifth day of the month Nisan the queen mother died in Dur-karashu which (is on) the bank of the Euphrates upstream from Sippar.⁵⁶

*All the reigns of the Neo-Babylonian kings are given in this royal inscription, from Nabopolassar and on to the ninth year of Nabonidus, and the lengths of reign are in complete accordance with the Royal Canon—a very significant fact, because the corroboration comes from a witness contemporary with all these Neo-Babylonian kings and intimately connected with all of them!*⁵⁷ More so than the individual testimony of any one source, it is the harmony of all these sources which is most telling.

55 Oppenheim in Pritchard, *op. cit.* (1975), p. 107, col. II:26-29. For additional comments on the Adad-guppi' inscription, see the Appendix for Chapter 3.

56 Grayson, *ABC*, p. 107. Until the last column (III 5ff.), the Adad-guppi' stele is written in the first person. But it is evident that the inscription was chiselled out after her death, undoubtedly by order of Nabonidus. That is why Dr. T. Longman III would like to classify it as a "fictional autobiography" (a literary method known also from other Akkadian texts), although he adds: "This, however, does not mean that the events and even the opinions associated with Adad-guppi' are unauthentic." (Tremper Longman III, *Fictional Akkadian Autobiography*, Winona Lake, Indiana: Eisenbrauns, 1991, pp. 41, 101, 102, 209, 210; cf. Beaulieu, *op. cit.*, p. 209.) But it is questionable if the Adad-guppi' inscription, even in this sense, can be classified as a "fictional autobiography." In his review of Longman's work Dr. W. Schramm points out that the text "essentially is a genuine autobiography. The fact that there is an addition in col. III 5ff. composed by Nabonidus (so already Gadd, *AnSt* 8, 55, on III 5), does not give anyone the right to regard the whole text as fictional. The inscription, of course, was chiselled out after the death of Adad-guppi'. But it cannot be doubted that an authentic *Vorlage* on the story of Adad-guppi's life was used."—*Bibliotheca Orientalis*, Vol. LII, No. 1/2 (Leiden, 1995), p. 94.

57 The *Royal Canon*, of course, does not give the reigns of the Assyrian kings Ashurbanipal and Ashur-etil-ili. For the earliest period (747–539 B.C.E.) the Canon gives a kinglist for *Babylon*, not for contemporary Assyria. The reigns of Assyrian kings are given only in so far as they also ruled directly over Babylon, which was true, for example, of Sennacherib, who ruled over Babylon twice (in 704/03–703/02 and 688/87–681/80 B.C.E.), and of Esarhaddon, who ruled over Babylon for thirteen years (680/79–668/67 B.C.E.). For the period of Ashurbanipal's reign in Assyria, the Canon gives the reigns of the contemporary vassal kings in Babylon, Shamash-shum-ukin (20 years) and Kandalanu (22 years).—Compare Gadd, *op. cit.*, pp. 70, 71.

The results from our discussion of the Neo-Babylonian historical records are summarized in the following table.

TABLE 3: THE REIGNS OF THE NEO-BABYLONIAN KINGS
ACCORDING TO THE NEO-BABYLONIAN HISTORICAL RECORDS

ROYAL NAME	THE NEO-BAB. CHRONICLES	THE URUK KING LIST	THE ROYAL INSCRIPTIONS	B.C.E. DATES
Nabopolassar	21 years	21 years	21 years	625-605
Nebuchadnezzar	43 years*	43 (ye)ars	43 years	604-562
Awel-Marduk	2 years*	2 (ye)ars	2 years	561-560
Neriglissar	4 years*	'3' (y's)+8 m's	4 years	559-556
Labashi-Marduk	some months*	3 months	—	556
Nabonidus	'17 years'	'17?' (years)	17 years	555-539

* These figures in the chronicles are preserved only via Berossus and/or the Royal Canon. See discussion.

As may be seen from the table, the Neo-Babylonian chronology adopted by secular historians is very strongly supported by the ancient cuneiform sources, some of which were produced during the Neo-Babylonian era itself. Three different lines of evidence in support of this chronology are provided by these sources:

(1) Although important parts of the *Neo-Babylonian Chronicles* are missing and some figures in the *Uruk kinglist* are partially damaged, the *combined* witness of these documents strongly supports the Neo-Babylonian chronologies of *Berossus* and the *Royal Canon*, both of which were actually—independently of each other—derived from Neo-Babylonian chronicles and kinglists.

(2) The royal inscription *Nabon. No. 18* and the *Royal Chronicle* fix the second year of Nabonidus astronomically to 554/53 B.C.E. The whole length of the Neo-Babylonian period prior to Nabonidus is given by *Nabon. No. 8*, which gives the elapsed time from the sixteenth year of Nabopolassar up to the accession-year of Nabonidus as fifty-four years. The stele thus fixes the sixteenth year of Nabopolassar to 610/09 and his first year to 625/24 B.C.E. These three inscriptions, therefore, establish the length of the whole Neo-Babylonian era.

(3) The *Adad-guppi' inscription* gives the reigns of all the Neo-Babylonian kings (except for Labashi-Marduk's brief, months-long reign, which may be disregarded) from Nabopolassar up to the ninth year of Nabonidus. As the Watch Tower Society indirectly accepts a seventeen-year rule for Nabonidus, this stele of itself overthrows their 607 B.C.E. date for the desolation of Jerusalem.

Thus the Babylonian chronicles, the Uruk kinglist, and the royal inscriptions firmly establish the length of the Neo-Babylonian era. *And yet this is just a beginning.* We must still wait to be introduced to the strongest lines of evidence in support of the chronology presented in the table above. Their added testimony should establish beyond any reasonable question the historical facts of the matter.

B-2: Economic-administrative and legal documents

Literally hundreds of thousands of cuneiform texts have been excavated in Mesopotamia since the middle of the nineteenth century.

The overwhelming majority of them concern economic-administrative and private legal items such as promissory notes, contracts (for the sale, lease, or gift of land, houses, and other property, or for the hiring of slaves and livestock), and records of law suits.

These texts are to a great extent *dated* just as are commercial letters, contracts, receipts and other vouchers today. The dating is done by giving the *year of the reigning king*, the *month*, and the *day of the month*. A text concerning ceremonial salt from the archives of the temple Eanna in Uruk, dated in the first year of Awel-Marduk (the Evil-merodach of 2 Kings 25:27-30, written Amel-Marduk in Akkadian but postvocalic m was pronounced w), is given here as an example:

Ina-sillâ has brought one and one-half talents of salt,
the regular *sattukku* offering of the month of Siman
for the god Usur-amassu.
Month of Simanu, sixth day, first year of Amel-Marduk,
the king of Babylon.⁵⁸

Tens of thousands of such dated texts have been unearthed from the Neo-Babylonian period. According to the well-known Russian Assyriologist M. A. Dandamaev, over *ten thousand* of these texts had been published prior to 1991.⁵⁹ Many others have been published since, but the majority of them are still unpublished. Professor D. J. Wiseman, another leading Assyriologist, estimates that “there are

58 Ronald H. Sack, *Amel-Marduk 562-560 B.C.* (Neukirchen-Vluy: Neukirchener Verlag, 1972), p. 79.

59 Dr. M. A. Dandamaev states: “The period of less than ninety years between the reign of Nabopolassar and the occupation of Mesopotamia by the Persians is documented by tens of thousands of texts concerning household and administrative economy and private law, over ten thousand of which have been published so far.”—*The Cambridge Ancient History*, 2nd ed., Vol. III:2 (Cambridge: Cambridge University Press, 1991), p. 252.

probably some 50,000 texts published and unpublished for the period 627-539” B.C.E.⁶⁰

Thus there exist large numbers of dated tablets *from every year during the whole Neo-Babylonian era*. Dr. Wiseman’s estimate would give an average of nearly 600 dated texts from each of the eighty-seven years from Nabopolassar to Nabonidus, inclusive.

It is true that among these texts there are many that are damaged or fragmentary, and that dates are often illegible or missing. Further, the texts are not evenly distributed throughout the period, as the number gradually increases and culminates in the reign of Nabonidus.

Nonetheless, *every single year throughout the whole period* is covered by numerous, often *hundreds* of tablets that are datable.

Because of this abundance of dated texts modern scholars are able to determine not only the length of reign of each king, but also the *time of the year when each change of reign occurred*, sometimes almost to the day!

The last known texts from the reign of Neriglissar, for example, are dated I/2/4 and I?/6/4 (that is, month I, day 2 and day 6, year 4, corresponding to April 12 and 16, 556 B.C.E., Julian calendar), and the earliest one from the reign of his son and successor, Labashi-Marduk, is dated I/23/acc. (May 3, 556).⁶¹ The last text from the reign of Nabonidus is dated VII/17/17 (October 13, 539), or one day after the fall of Babylon (given as VII/16/17 in the *Nabonidus*

60 Private letter Wiseman-Jonsson, dated August 28, 1987. This is probably a very conservative estimate. The most extensive collection of Neo-Babylonian texts is held in the British Museum, which includes some 25,000 texts dated to the period 626–539 B.C.E. Most of these belong to the “Sippar collection,” which contains tablets excavated by Hormuzd Rassam at the site of ancient Sippar (present Abu Habbah) in the years 1881 and 1882. This collection has recently been catalogued. (E. Leichty et al, *Catalogue of the Babylonian Tablets in the British Museum*, Vols. VI–VIII, London: British Museum Publications Ltd, 1986–1988. These catalogues will hereafter be referred to as *CBT*.) Substantial collections are also in Istanbul and Baghdad. Many other collections of Neo-Babylonian documents are held in museums and at universities in the U.S.A., Canada, England, France, Germany, Italy, and other parts of the world. It is true that many of the tablets are damaged and the dates are often illegible. Yet, there are still *tens of thousands* of Neo-Babylonian tablets with legible dates extant today. As a result of the continuous archaeological excavations that are being carried out in the Mesopotamian area, “the body of written sources expands significantly every year. For example, in the space of a single season of excavations in Uruk, about six thousand documents from the Neo-Babylonian and Achaemenid periods were discovered.” — M. A. Dandamaev, *Slavery in Babylonia* (DeKalb, Illinois: Northern Illinois University Press, 1984), pp. 1, 2.

61 R. A. Parker and W. H. Dubberstein, *Babylonian Chronology: 626 B.C.–A.D.* 75 (Providence: Brown University Press, 1956), pp. 12, 13.

Chronicle). The reason for the overlap of one day beyond Babylon's fall is easily explained:

Interestingly enough, the last tablet dated to Nabunaid from Uruk is dated the day after Babylon fell to Cyrus. News of its capture had not yet reached the southern city some 125 miles distant.⁶²

In view of this immense amount of documentary evidence, the question must be asked: If twenty years have to be added to the Neo-Babylonian era in order to place the destruction of Jerusalem in 607 B.C.E., *where are the business and administrative texts dated in those missing years?*

Quantities of dated documents exist for **each** of Nebuchadnezzar's forty-three years, for **each** of Awel-Marduk's (Evil-Merodach's) two years, for **each** of Neriglissar's four years, and for **each** of Nabonidus' seventeen regnal years. In addition, there are many dated texts from Labashi-Marduk's reign of only about two months.

If any of these kings' reigns had been longer than those just mentioned, large numbers of dated documents would certainly exist for *each* of those extra years. Where are they? Twenty years are about one fifth of the whole Neo-Babylonian period. Among the tens of thousands of dated tablets from this period, many *thousands* ought to have been found from those missing twenty years.

If one casts one die (of a pair of dice) tens of thousands of times without ever getting a 6, he must logically conclude: "There is no number 6 on this die." The same is true of the Watch Tower's twenty missing "ghost years" for which one must look in vain during the Neo-Babylonian period.

But suppose that a number of missing years really existed, and that, by some incredible chance, the many thousands of dated tablets that ought to be there have not been found. Why is it, then, that the lengths of reign according to the dated tablets *which have been unearthed* happen to agree with the figures of Berossus, those of the Royal Canon, of the Uruk King List, of the contemporary royal inscriptions,

62 *Ibid.*, p. 13. One text from the reign of Nabonidus, published by G. Contenau in *Textes Cuneiformes, Tome XII, Contrats Néo-Babyloniens*, I (Paris: Librairie Orientaliste, 1927), Pl. LVIII, No. 121, apparently gives him a reign of *eighteen* years. Line 1 gives the date as "VI/6/17," but when it is repeated in line 19 in the text it is given as "VI/6/18." Parker and Dubberstein (p. 13) assumed "either a scribal error or an error by Contenau." The matter was settled by Dr. Béatrice André, who at my request collated the original at the Louvre Museum in Paris in 1990: "The last line has, like the first, the year 17, and the error comes from Contenau."—Letter André-Jonsson, March 20, 1990.

as well as the figures of all the other evidence that is yet to be presented below? Why should it be that, *whatever type of historical source is considered*, the supposedly “missing” years consistently amount to exactly twenty years? Why not a period of, in one case, seventeen years, in another case thirteen, in yet another seven years, or perhaps different isolated years distributed throughout the Neo-Babylonian period?

Each year new quantities of dated tablets are unearthed, and catalogues, transliterations, and translations of such texts are frequently published, but the twenty missing years never turn up. Even improbability has a limit.⁶³

The importance of the economic-administrative and legal texts for the chronology of the Neo-Babylonian period can hardly be overestimated. The evidence provided by these dated texts is simply overwhelming. The reigns of all the Neo-Babylonian kings are copiously attested by tens of thousands of such documents, all of which were written during this era. As shown by the table below, these reigns are in full agreement with the Royal Canon and the other documents discussed earlier.

TABLE 4: THE NEO-BABYLONIAN CHRONOLOGY ACCORDING TO THE ECONOMIC-ADMINISTRATIVE AND LEGAL DOCUMENTS

Nabopolassar	21 years	(625 - 605 BCE)
Nebuchadnezzar	43 years	(604 - 562 BCE)
Awel-Marduk	2 years	(561 - 560 BCE)
Neriglissar	4 years	(559 - 556 BCE)
Labashi-Marduk	2-3 months	(556 BCE)
Nabonidus	17 years	(555 - 539 BCE)

B-3: Prosopographical evidence

Prosopography (from the Greek word *prósopon*, meaning “face, person”) may be defined as “the study of careers, especially of individuals linked by family, economic, social, or political relationships.”⁶⁴

63 As a matter of course, defenders of the Watch Tower Society’s chronology have made great efforts to discredit the evidence provided by these enormous quantities of dated cuneiform tablets. On perusing modern catalogues of documents dated to the Neo-Babylonian era, they have found a few documents that seemingly give longer reigns to some Babylonian kings than are shown by the Royal Canon and other sources. A fresh check of the original tablets, however, has shown that most of these odd dates simply are modern copying, transcription, or printing errors. Some other odd dates are demonstrably scribal errors. For a detailed discussion of these texts, see Appendix for chapter 3: “Some comments on copying, reading, and scribal errors.”

64 *Webster’s New World Dictionary*, 3rd college edition, eds. V. Neufeldt & D. B. Guralnik (New York: Webster’s New World Dictionaries, 1988), p. 1080.

As the names of many individuals often recur in the business and administrative documents — sometimes hundreds of times during the entire Neo-Babylonian period — scholars usually apply the *prosopographical* method in their analysis of these texts. Such an approach not only contributes to the understanding of the structure and social life of the Neo-Babylonian society, but it also provides additional, internal evidence in support of the established chronology of the period.

Of the tens of thousands of documents from the Neo-Babylonian era, more than half are the results of temple activities and have been found in *temple archives*, particularly in the archives of the Eanna temple in Uruk (the temple of the goddess *Ishtar*) and the Ebabbar temple in Sippar (the temple of *Shamash*, the sun god). But many thousands of texts also come from *private archives and libraries*.

The richest private archives are those of the *Egibi* and *Nur-Sîn* houses, centered in the Babylon area. Other private archives have been found, for example, in Uruk (the sons of Bel-ushallim, Nabû-ushallim, and Bel-supê-muhur), in Borsippa (the Ea-ilûta-bâni family), in Larsa (Itti-Shamash-balatu and his son Arad-Shamash), and in Ur (the Sîn-uballit family).

No *state archives* have been found from the Neo-Babylonian period, the reason being that at this time such documents are known to have been written (in Aramaic) on leather and papyrus, materials that were easily destroyed by the climatic conditions in Mesopotamia.⁶⁵

Consider now how a study of certain of the available archives can yield valuable information of a chronological nature.

a) The Egibi business house

By far the largest private archive of the Neo-Babylonian period is that of the *Egibi* business house. Of this enterprise Bruno Meissner says:

From the firm *the Sons of Egibi* we possess such an abundance of documents that we are able to follow nearly all business transactions and personal experiences of its heads from the time of Nebuchadnezzar up to the time of Darius I.⁶⁶

65 For a survey of the Neo-Babylonian archives, see M. A. Dandamaev's article in *Cuneiform Archives and Libraries*, ed. K. R. Veenhof (Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul, 1986), pp. 273-277.

66 Bruno Meissner, *Babylonien und Assyrien*, Vol. II (Heidelberg, 1925), p. 331. The quotation is translated from the German.

The business documents from the Egibi house were discovered by Arabs during the wet season of the year 1875-76 in a mound in the neighbourhood of Hillah, a town about four miles southeast of the ruins of Babylon. Some *three or four thousand tablets* were discovered enclosed in a number of earthen jars, resembling common water jars, covered over at the top with a tile, and cemented with bitumen.

The discoverers brought the tablets to Baghdad and sold them to a dealer there. In that same year George Smith visited Baghdad and acquired about 2,500 of these important documents for the British Museum.

The tablets were examined during the following months by W. St. Chad Boscawen, and his report appeared in 1878 in the *Transactions of the Society of Biblical Archaeology*.⁶⁷ Boscawen states that the tablets “relate to the various monetary transactions of a Babylonian banking and financial agency, trading under the name of Egibi and Sons.” The tablets “relate to every possible commercial transaction; from the loan of a few shekels of silver, to the sale or mortgage of whole estates whose value is thousands of *manas* of silver.”⁶⁸

Boscawen soon realized the importance of following the *sequence* of the heads of the Egibi firm, and after a more careful analysis he ascertained the main lines of the succession to be as follows:

From the third year of Nebuchadnezzar a person named Shula acted as head of the Egibi firm, and continued in that capacity for a period of twenty years, up to the twenty-third year of Nebuchadnezzar when he died and was succeeded by his son, Nabû-ahhê-iddina.⁶⁹

The son, Nabû-ahhê-iddina, continued as the head of affairs for a period of thirty-eight years, that is, from the twenty-third year of Nebuchadnezzar to the twelfth year of Nabonidus when he was succeeded by his son Itti-Marduk-balatu.⁷⁰

67 W. St. Chad Boscawen, “Babylonian Dated Tablets, and the Canon of Ptolemy,” in *Transactions of the Society of Biblical Archaeology*, Vol. VI (London, January 1878), pp. 1-78. As Boscawen points out (*ibid.*, pp. 5, 6), George Smith himself, during his stay at Baghdad in 1876, had begun a systematic and careful examination of the tablets, a study that was interrupted by his untimely death in Aleppo in August that year. Boscawen’s study was evidently based on Smith’s notebooks.—Sheila M. Evers, “George Smith and the Egibi Tablets,” *Iraq*, Vol. LV, 1993, pp. 107-117.

68 *Ibid.*, p. 6. A “mana” (mina) weighed about 0.5 kg.

69 *Ibid.*, pp. 9, 10. Shula died between the dates VII/21/23 (month/day/year) and IV/15/24 of Nebuchadnezzar’s reign (between October, 582 and July, 581 B.C.E.).—G. van Driel, “The Rise of the House of Egibi,” *Jaarbericht van het Vooraziatisch-Egyptisch Genootschap*, No. 29 (Leiden, 1987), p. 51.

70 Nabû-ahhê-iddina evidently died in the thirteenth year of Nabonidus, the year after his son had taken over the affairs. See Arthur Ungnad, “Das Haus Egibi,” *Archiv für Orientforschung*, Band XIV (Berlin, 1941), p. 60, and van Driel, *op. cit.*, pp. 66, 67.

Itti-Marduk-balatu in his turn remained head of the firm until the first year of Darius I (521/20 B.C.E.), which was the twenty-third year of his headship of the firm.

Boscawen epitomizes these findings as follows:

Now, summing up these periods, we get the result that from the 3rd year of Nebuchadnezzar II to the 1st year of Darius Hystaspis was a period of eighty-one years:

Sula at the head of the firm	20 years
Nabu-ahi-idina	38 years
Itti-Marduk-balatu	<u>23 years</u>
	81 years

This would give an interval of eighty-three years from the 1st year of Nebuchadnezzar to the 1st year of Darius Hystaspis.⁷¹

The significant fact is that this agrees exactly with Berossus, the Royal Canon, and the Neo-Babylonian historical records. Counting backwards eighty-three years from the first year of Darius I (521/20 B.C.E.) brings us to 604 B.C.E. as the first year of Nebuchadnezzar, which agrees completely with the other lines of evidence presented above.

The archive of the Egibi-house alone would suffice to establish the length of the Neo-Babylonian period. With this extensive set of dated commercial tablets from the archive of one of the “Rothschilds” of Babylon “there ought to be but little difficulty in establishing once and for ever the chronology of this important period of ancient history,” wrote Boscawen already back in 1878.⁷²

The evidence of these documents leaves no room for a gap in Neo-Babylonian history from Nebuchadnezzar onward, certainly not one of twenty years! The archive, containing tablets dated up to the forty-third year of Nebuchadnezzar, the second year of Awel-Marduk, the fourth year of Neriglissar and the seventeenth year of Nabonidus, gives a complete confirmation of the chronology of Berossus and the Royal Canon.

Since the last century still other collections of tablets belonging to the Egibi family have been discovered.⁷³ A number of studies on

71 Boscawen, *op. cit.*, pp. 10, 24. This conclusion had also been arrived at previously by George Smith in his study of the tablets.—S. M. Evers, *op. cit.* (note 67 above), pp. 112-117.

72 Boscawen, *op. cit.*, p. 11.

73 During excavations at Uruk in 1959-60, for example, an archive belonging to members of the Egibi family was unearthed, containing 205 tablets dating from the sixth year of Nabonidus to the thirty-third year of Darius I. Most of the tablets were dated as from the reign of Darius. See J. van Dijk, *UVB* 18 (cf. note 33 above), pp. 39-41. The earliest known text of the Egibi family is dated to 715 B.C.E. *Business documents of the family then appear regularly between 690 and 480 B.C.E.*—M. A. Dandamaev, *op. cit.* (1984; see note 60 above), p. 61.

the Egibi family have been produced, all of which confirm the general conclusions drawn by Boscawen.⁷⁴ Thanks to the enormous amount of texts from this family, scholars have been able to trace the history, not only of the heads of the firm, but also of many other members of the Egibi house, and even family trees have been worked out that extend through the whole Neo-Babylonian period and into the Persian era!⁷⁵

The pattern of intertwined family relations that has been established in this way for several generations would be grossly distorted if another twenty years were inserted into the Neo-Babylonian period.

b) Life expectancy in the Neo-Babylonian period

(1) Adad-guppi':

As was shown above in the discussion of the Harran stele (*Nabon. H I, B*), Adad-guppi', the mother of Nabonidus, was born in the 20th year of powerful Assyrian king Ashurbanipal, 649/648 B.C.E. She died in the ninth year of Nabonidus, in 547/546 B.C.E. at an age of 101 or 102 years, a remarkable life span.⁷⁶

What would happen to her age if we were to add twenty years to the Neo-Babylonian era? This would necessarily increase the age of

74 Some of the most important works are: Saul Weingart, *Das Haus Egibi in neubabylonischen Rechtsurkunden* (Berlin: Buchdruckerei Viktoria, 1939), 64 pages; Arthur Ungnad, "Das Haus Egibi," *Archiv für Orientforschung*, Band XIV, Heft 1/2 (Berlin, 1941), pp. 57-64; Joachim Krecher, *Das Geschäftshaus Egibi in Babylon in neubabylonischer und achämenidischer Zeit* (unpublished "Habilitationsschrift," Universitätsbibliothek, Münster in Westfalen, 1970), ix + 349 pages.; and Martha T. Roth, "The Dowries of the Women of the Itti-Marduk-balatu Family," *Journal of the American Oriental Society*, Vol. 111:1, 1991, pp. 19-37.

75 See, for example, J. Kohler & F. E. Peiser, *Aus dem Babylonischen Rechtsleben, IV* (Leipzig: Verlag von Eduard Pfeiffer, 1898), p. 22, and M. T. Roth, *op. cit.*, pp. 20, 21, 36. Another private enterprise, the *Nur-Sîn family*, which through intermarriage became annexed to the Egibi family, has been thoroughly studied by Laurence Brian Shiff in *The Nur-Sîn Archive: Private Entrepreneurship in Babylon (603-507 B.C.)* (Ph. D. dissertation; University of Pennsylvania, 1987), 667 pages.

76 The Adad-guppi' inscription itself stresses that her age was extreme: "I saw my [great] great-grandchildren, up to the fourth generation, in good health, and (thus) had my fill of *extreme old age*." — A. Malamat, "Longevity: Biblical Concepts and Some Ancient Near Eastern Parallels," *Archiv für Orientforschung*, Beiheft 19: *Vorträge gehalten auf der 28. Rencontre Assyriologique Internationale in Wien, 6.–10. Juli 1981* (Horn, Austria: Verlag Ferdinand Berger & Söhne Gesellschaft M.B.H., 1982), p. 217. Dr. Malamat also refers to a tablet found at Sultantepe which "categorizes the stages of life from age 40 through age 90 [as follows]: 40 – *lalātu* ('prime of life'); 50 – *umu kurātu* ('short life'); 60 – *metlutu* ('maturity'); 70 – *umu arkātu* ('long life'); [80] – *shibutu* ('old age'); 90 – *littutu* ('extreme old age')." — A. Malamat, *ibid.*, p. 215.

Adad-guppi' to *121 or 122 years*. The only way to avoid this consequence would be to add the twenty extra years to the reign of her surviving son Nabonidus *after her death*, making his reign thirty-seven instead of seventeen years, something the contemporary documents simply do not allow us to do.

This is not the only problem of this kind that confronts those who would defend the Watch Tower Society's chronology. Many people, whose names appear in the business and administrative texts from the Neo-Babylonian period, can be traced from text to text almost during the entire period, sometimes even into the Persian era. We find that some of these people—businessmen, slaves, scribes—must have been eighty or ninety years old or more at the end of their careers. But if we were to add twenty years to the Neo-Babylonian era, we would also be forced to add twenty years to the lives of these people, making them 100 to 110 years old—and still active in their occupations. A few examples will follow.

(2) *Apla, son of Bel-iddina:*

A scribe named *Apla, son of Bel-iddina*, who belonged to the trading house of Egibi, appears for the first time as a scribe in a text dated to the twenty-eighth year of Nebuchadnezzar (577 B.C.E.). Thereafter, his name recurs in many texts dated in the reigns of Nebuchadnezzar, Awel-Marduk, Neriglissar, Nabonidus, Cyrus, Cambyses, and Darius I.

He appears for the last time as a witness in a document, a promissory note, dated to the thirteenth year of Darius, 509 B.C.E. That means the career of this scribe may be followed for a period of sixty-eight years, from 577 to 509 B.C.E. The Russian Assyriologist M. A. Dandamaev comments:

He should have been, at least, twenty years old when he became a scribe. Even if we assume that Apla died even in the same year when he was referred to for the last time or soon after, he must have lived about 90 years.⁷⁷

But if we allow twenty years to be added to the Neo-Babylonian era, we would not only increase Apla's age to 110 years or more—we would also be forced to conclude that at this old age he was still active as a scribe.

⁷⁷ Muhammad A. Dandamaev, "About Life Expectancy in Babylonia in the first Millennium B.C.," in *Death in Mesopotamia* (= *Mesopotamia. Copenhagen Studies in Assyriology, Vol. 8*), ed. Bendt Alster (Copenhagen: Akademisk Forlag, 1980), p. 184.

(3) Iddina-Marduk and his wife Ina-Esagila-ramât

Two other examples are the businessman *Iddin-Marduk, son of Iqisha, of the family of Nur-Sin, and his wife Ina-Esagila-ramât*. Iddin-Marduk appears as director of his business activities for the first time in a text that earlier had been dated to the *eighth* year of Nebuchadnezzar (597 B.C.E.). But a recent collation of the original tablet revealed that the year number is damaged and probably should be read as the 28th year (577 B.C.E.). Iddin-Marduk then appears in hundreds of dated documents, the last of which is from the third year of Cambyses, 527 B.C.E. Other documents indicate that he died shortly before the fifth year of Darius I (517 B.C.E.). If we assume that he was only twenty years old when he first appears as director, he must have been about eighty years old at the time of his death.

Iddin-Marduk's wife, Ina-Esagila-ramât, survived her husband. She, too, was involved in business activities. Documents show that she got married to Iddin-Marduk no later than the 33rd year of Nebuchadnezzar (572 B.C.E.). We must assume, therefore, that she was at least twenty years old when she first appears as a contracting party in a text dated to Nebuchadnezzar's 34th year (571 B.C.E.). She appears for the last time in a text dated to the 15th year of Darius I (507 B.C.E.), at which time she must have been at least 84 years old.⁷⁸

Again, if we were to add twenty years to the Neo-Babylonian era, we would increase the age of Iddina-Marduk to about 100 years, and the age of Ina-Esagila-ramât to at least 104 years. We would also be forced to hold that she, at this age, was still actively involved in the businesses.

(4) Daniel the prophet:

The Bible also provides some examples of its own. In the accession year of Nebuchadnezzar (605 B.C.E.), *Daniel*, then a youth of perhaps 15-20 years, was brought to Babylon (Daniel 1:1, 4, 6). He served at the Babylonian court until after the end of the Neo-Babylonian period, being still alive in the third year of Cyrus, in 536/35 B.C.E. (Daniel 1:21; 10:1). At that time he must have been close to ninety years old. If another twenty years were added to this period, Daniel would have been nearly 110 years old.

Is it really likely that people during the Neo-Babylonian period frequently reached ages of 100, 110, or even 120 years? True, we

⁷⁸ Cornelia Wunsch, *Die Urkunden des baylonischen Geschäftsmannes Iddin-Marduk*, 1 (Groningen: STYX Publications, 1993), pp. 19, 10 fn. 43, 12, 66.

sometimes have heard of people in southern Russia or northern India who are said to be 150 years old or more. But on close examination, all such statements have been proved to be false.⁷⁹ The oldest known individual in modern times has been a French woman, Jeanne Calment, who was born on February 21, 1875, and died on August 4, 1997, at an age of 122 years.⁸⁰ This Frenchwoman's record would have been equalled by Adad-guppi', had that Babylonian woman been 122 years old when she died, instead of about 102, as the ancient records indicate.

Considering these cases of exceptionally long age already presented, we rightly ask if we have any reason to believe that the life span of people at that time surpassed that of people of today?

The Russian Assyriologist M. A. Dandamaev has examined the life span of people in Babylonia from the seventh through to the fourth century B.C.E., using tens of thousands of business and administrative texts as the basis for his research. His conclusion is that the life span of people at that time was not different from what it is now. In his discussion, Dandamaev refers to Psalms 90:10: "As for the days of our life, they contain seventy years. Or if due to strength, eighty years" (*NASB*). These words were as true in the Neo-Babylonian era as they are today.⁸¹

Consequently, the extremely old ages which would be created by dating the destruction of Jerusalem to 607 instead of 587 B.C.E. provides one more argument weighing against the Watch Tower Society's chronology.

As has been shown in this section, a *prosopographical* examination of the cuneiform texts strongly supports the chronology established for the Neo-Babylonian period. The careers of business men, scribes, temple administrators, slaves, and others may be followed for decades, in some cases through almost the whole Neo-Babylonian period and on into the Persian era. Thousands of dated documents give a profound insight into their everyday activities. Notably, however, the lives and activities of these people never contain reference to any year lying outside the recognized time frame of the Neo-Babylonian period, never overlap or extend beyond this at any time so as to point to a single year of the twenty-year period required by the Watch Tower Society's chronology.

79 S. Jay Olshansky et al, "In Search of Methuselah: Estimating the Upper Limits of Human Longevity," *Science*, Vol. 250, 2 November 1990. p. 635.

80 *The Guinness Book of Records 2004*. According to some media reports, this record may have been beaten by a woman in El Salvador, Cruz Hernandez, who is said to have been born on May 3, 1878, and died on March 9, 2007, at an age of 128 years.

81 M. A. Dandamaev, *op. cit.* (1980), p. 183.

B-4: Chronological interlocking joints

There are only two possible ways of extending the Neo-Babylonian period to include the twenty extra years required by the Watch Tower chronology:

Either the *known Neo-Babylonian kings had longer reigns* than indicated by all the documents discussed above, or there were other, *unknown kings* who belonged to the Neo-Babylonian era in addition to those known to us from these documents.

Both of these possibilities, however, are completely excluded, not only by the several lines of evidence presented so far and the astronomical evidence that will be discussed in the next chapter, but also by a series of texts that *inseparably interlock* each reign with the next throughout the whole Neo-Babylonian period. Eleven such chronological interlocking joints will be discussed below.

a) Nabopolassar to Nebuchadnezzar

(1) In the earlier discussion of the *Neo-Babylonian chronicles*, one of them (*Chronicle 5*) was quoted as saying that Nabopolassar, the first Neo-Babylonian king, ruled “for *twenty-one years*,” that he died “on the *eighth day of the month Ab* [the fifth month],” and that on the *first day of the next month* (Elul) his son Nebuchadnezzar “ascended the royal throne in Babylon.”

At this point, then, there is no room for a longer reign of Nabopolassar beyond the recognized span of twenty-one years, nor for an “extra king” between him and Nebuchadnezzar.

b) Nebuchadnezzar to Awel-Marduk

(2) That Nebuchadnezzar was succeeded by his son Awel-Marduk (the Biblical Evil-Merodach) in the forty-third year of Nebuchadnezzar’s reign is confirmed by a business document, *B.M. 30254*, published by Ronald H. Sack in 1972.

This document mentions both the forty-third year of Nebuchadnezzar and the accession year of Awel-Marduk. A girl, Lit-kaidi, the slave of Gugua, “was placed at the disposal of Nabû-ahheiddina, the son of Shulâ, the descendent of Egibi *in the month of Ajaru* [the second month], *forty-third year of Nebuchadnezzar*, king of Babylon, and (for whom) twelve shekels of silver served as security.” Later in the same year, “*in the month of Kislimu* [the ninth month], *accession year of [Amel]-Marduk*, king of Babylon, . . . Gugua of her own will

sold Lit-ka-idi to Nabû-ahhe-iddina for the full price of nineteen and one-half shekels of silver.”⁸²

This document gives no room for a longer reign of Nebuchadnezzar, or for an “extra king” between him and Awel-Marduk.

(3) In the Neo-Babylonian period the yield of a field or garden was often estimated before harvest time. After the harvest the workers of the field were to turn over the estimated amount to the owners or buyers. Quite a number of documents recording such procedures have been found.

One of them, designated *AO 8561*, not only includes estimated yields of numerous fields for three successive years, the forty-second and forty-third years of Nebuchadnezzar and the first year of Awel-Marduk, but “is also a record of what portions of that yield were received by and distributed to various persons . . . in the month of Kislimu [the ninth month], accession year of Neriglissar.”⁸³

This document, then, provides another joint or dovetail between the forty-third year of Nebuchadnezzar and the reign of Awel-Marduk.

(4) Another, similar text, *YBC 4038*, dated to the “month of Addaru [the twelfth month], 15th day, accession year of Amel-Marduk,” describes the monthly portioning out of “500 bushels of barley” at the Eanna temple in Uruk from “the 43rd year of Nabû-kudurri-usur [Nebuchadnezzar]” to the “1st year of Amel-Marduk.”⁸⁴ Again, this text ties together the reigns of Nebuchadnezzar and his successor Awel-Marduk in a way that gives no room for any additional years between the two.

The Bible itself confirms that Awel-Marduk’s accession year fell in the forty-third year of his father Nebuchadnezzar. This may be inferred from the datings given in 2 Kings 24:12; 2 Chronicles 36:10,

82 Ronald Herbert Sack, *Amel-Marduk 562-560 B.C.* (Neukirchen-Vluyn: Verlag Butzon & Bercker Kevelaer, 1972), pp. 62, 63.

83 *Ibid.*, pp. 41, 116-118. The time interval from a harvest to the distribution of the yield was normally brief, a few years at the most. In the present case the yields of the three years’ harvests were distributed in the accession year of Neriglissar, that is, three years after the harvests of the first year. The insertion of twenty extra years somewhere between Nebuchadnezzar and Neriglissar would increase this time interval to *twenty-three years*—an extremely long wait for the yields, to say the least.

84 Ronald H. Sack, “The Scribe Nabû-bani-ahi, son of Ibnâ, and the Hierarchy of Eanna as seen in the Erech Contracts,” *Zeitschrift für Assyriologie*, Band 67 (Berlin, New York: Walter de Gruyter, 1977), pp. 43-45.

and Jeremiah 52:28, 31. A brief discussion of this evidence is included in the “Appendix for Chapter 3” (page 325).

c) Nebuchadnezzar to Awel-Marduk to Neriglissar

(5) In the Neo-Babylonian period, bookkeeping was already an ancient, highly complex and formalized business.⁸⁵ An interesting example of this is a tablet known as *NBC 4897*. The document is, actually, a *ledger*, tabulating the annual growth of a herd of sheep and goats belonging to the Eanna temple at Uruk *for ten consecutive years, from the thirty-seventh year of Nebuchadnezzar to the first year of Neriglissar*.

In the entries for each year the number of lambs and kids born during the year is added, and the number of animals killed (documented by their hides) or paid to the herdsman as wages, are subtracted. The grand totals are then given in the column farthest to the right. Thus it is possible to follow the numerical increase of the herd year by year. The text shows that the herdsman responsible for the herd, Nabû-ahhe-shullim, during the ten years succeeded in enlarging the herd from 137 sheep and goats to 922 animals.⁸⁶

True, the Babylonian scribe made a few miscalculations and mathematical mistakes which partially hampers the interpretation of the document.⁸⁷ There is no doubt, however, that it is an *annual* record, as year numbers are given for each successive year. In the entry for the first year of Neriglissar, for example, the grand total column contains the following information:

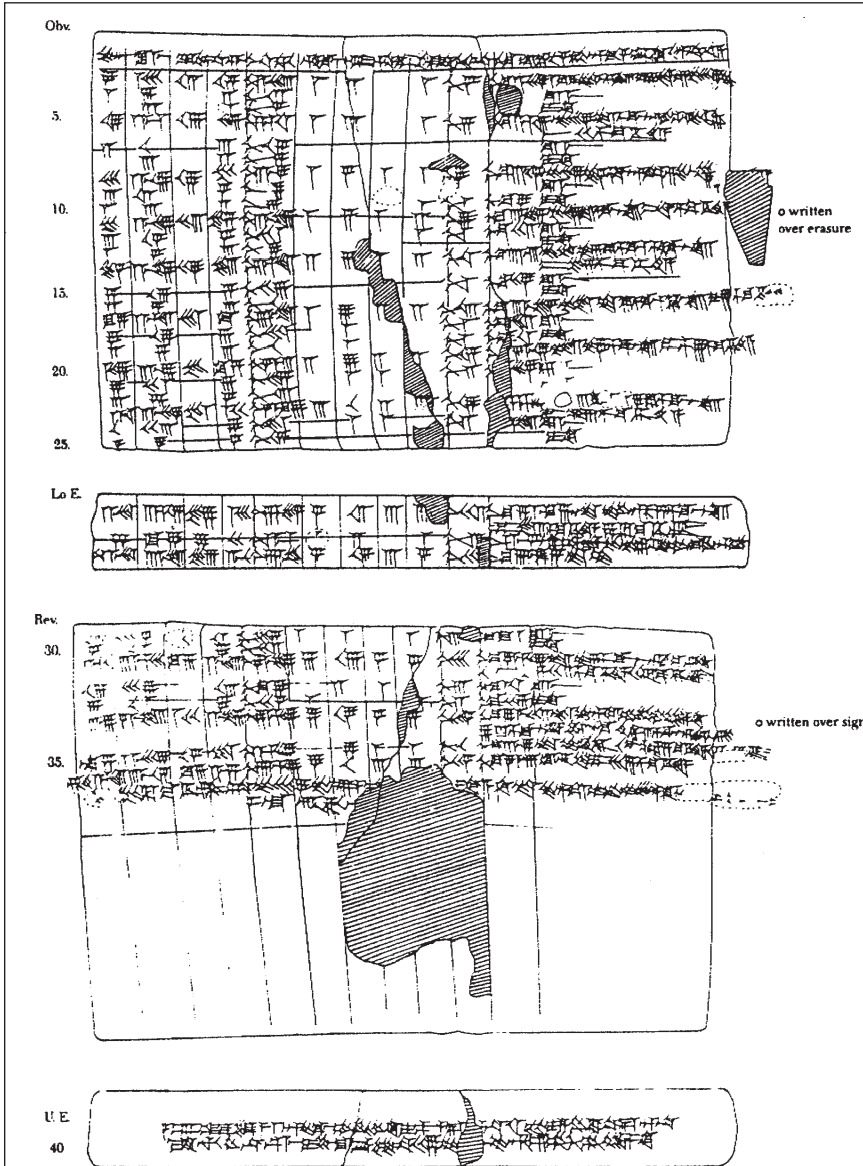
Grand total: 922, 1st year of Nergal-sharra-usur, king of Babylon, 9 lambs in Uruk were received (and) 3 lambs for shearing.

Similar information is given for each year from the thirty-seventh year of Nebuchadnezzar to his forty-third year, for the first and second

85 Bookkeeping is as old as the art of writing. In fact, the oldest known script, the *proto-cuneiform script*, which emerged at Uruk (and usually is dated to about 3200 B.C.E.), “was almost exclusively restricted to bookkeeping; it was an ‘accountant’s script’.” —H. J. Nissen, P. Damerow, & R. K. Englund, *Archaic Bookkeeping* (Chicago and London: The University of Chicago Press, 1993), p. 30.

86 G. van Driel & K. R. Nemet-Nejat, “Bookkeeping practices for an institutional herd at Eanna,” *Journal of Cuneiform Studies*, Vol. 46:4, 1994, p. 47. The form of record-keeping used in the text “involves accumulating data with cross-footing the accounts in order to prove that all entries are accounted therein.” —*Ibid.*, p. 47, note 1.

87 The errors occur in the totals, probably because the scribes had difficulties in reading the numbers in their ledgers. —*Ibid.*, pp. 56, 57.



The "ledger" NBC 4897

The document tabulates the annual growth of a herd of sheep and goats belonging to the Eanna temple at Uruk for ten successive years, from the 37th year of Nebuchadnezzar to the 1st year of Neriglissar (568-559 B.C.E.). - From G. van Driel & K. R. Nemet-Nejat, "Bookkeeping practices for an institutional herd at Eanna," *Journal of Cuneiform Studies*, Vol. 46:4, 1994, pp. 48, 49.

years of Awel-Marduk, and, as cited, for the first year of Neriglissar.⁸⁸

This document, then, not only provides an additional confirmation of the lengths of reigns of Nebuchadnezzar and Awel-Marduk, but it also demonstrates that *no extra kings or extra years* can be inserted between Nebuchadnezzar and Awel-Marduk, or between Awel-Marduk and Neriglissar.

d) Neriglissar to Labashi-Marduk

(6) A cuneiform tablet in the Yale Babylonian collection, *YBC 4012*, not only shows that Labashi-Marduk succeeded Neriglissar as king, but also that he did this *early in the fourth year* of his father's short reign.

The document records that "in the month of Addaru [the twelfth month], 3rd year of Nergal-[sharra-usur], king of Babylon" (March-April, 556 B.C.E.), Mushezib-Marduk, the overseer of the Eanna temple in Uruk, carried a considerable amount of money to Babylon, partly as payment for work and material for the Eanna temple. This document was drawn up about two months later, evidently at Babylon before Mushezib-Marduk's return to Uruk, and is dated to the "month of Ajaru [the second month of the next year], 22nd day, accession year of Labashi-Marduk, king of Babylon" (June 1, 556 B.C.E.).⁸⁹

According to this document, Labashi-Marduk succeeded to the throne sometime in the first or second month of Neriglissar's fourth year of reign. This is in good agreement with the evidence given by the contract tablets, which show that the demise of the crown occurred in the first month of Neriglissar's fourth year. (See "Appendix for Chapter 3", pages 326, 327.)

88 For Nebuchadnezzar, only the year numbers are given. The royal names only appear with the first year of each king. There are two entries each for the thirty-seventh, thirty-eighth, and forty-first years (of Nebuchadnezzar), and no entries for his thirty-ninth and fortieth years. As pointed out by van Driel and Nemet-Nejat, "these errors can be easily explained: the outcome of the count for the previous year is the starting point for the inventory of the next year. That is, if the 'accountant' had a complete file, he would find the same data in tablets dealing with consecutive years: once at the end of one text and again at the beginning of the succeeding text." (*Op. cit.*, p. 54.) From the forty-first year of Nebuchadnezzar until the first year of Neriglissar, though, the dates follow a regular pattern.

89 Ronald H. Sack, "Some Remarks on Sin-Iddina and Zerija, *qipu* and *shatammu* of Eanna in Erech . . . 562-56 B.C.," *Zeitschrift für Assyriologie*, Band 66 (Berlin, New York: Walter de Gruyter, 1976), pp. 287, 288. As mentioned earlier, in the Babylonian system the accession year of a king was the same as the last year of his predecessor. According to our text the accession year of Labashi-Marduk *followed upon* the third year of Neriglissar. Labashi-Marduk's accession year, therefore, was also the fourth and last year of Neriglissar.

e) Neriglissar to Labashi-Marduk to Nabonidus

(7) That Neriglissar was succeeded by his son Labashi-Marduk is plainly stated by Nabonidus in one of the royal inscriptions discussed earlier, *Nabon. No. 8* (the *Hillah stele*). In column iv of this stele, Nabonidus relates that the cult of the goddess Anunitum in Sippar had been renewed by Neriglissar. Then he goes on saying:

After (his) days had become full and he had started out on the journey of (human) destiny *his son Labashi-Marduk*, a minor (who) had not (yet) learned how to behave, *sat down on the royal throne* against the intentions of the gods and [three lines missing here].⁹⁰

After the three missing lines Nabonidus, in the next column, goes on to speak of his own enthronement, evidently as the immediate successor of Labashi-Marduk. In doing so, he also names the last four of his royal predecessors: Nebuchadnezzar and Neriglissar (whom he regarded as legitimate rulers), and their sons Awel-Marduk and Labashi-Marduk (whom he regarded as illegitimate usurpers). He states:

They carried me into the palace and all prostrated themselves to my feet, they kissed my feet greeting me again and again as king. (Thus) I was elevated to rule the country by the order of my lord Marduk and (therefore) I shall obtain whatever I desire — there shall be no rival of mine!

I am the real executor of the wills of Nebuchadnezzar and Neriglissar, my royal predecessors! Their armies are entrusted to me, I shall not treat carelessly their orders and I am (anxious) to please them [i.e. to execute their plans].

Awel-Marduk, son of Nebuchadnezzar, and Labashi-Marduk, son of Neriglissar [called up] their [troo]ps and . . . their . . . they dispersed. Their orders (7-8 lines missing).⁹¹

90 James B. Pritchard, *Ancient Near Eastern Texts* (Princeton, New Jersey: Princeton University Press, 1950), p. 309.

91 *Ibid.*, p. 309. Berossus, whose Neo-Babylonian history was shown to be based on the Babylonian chronicles, gives a similar account of these events: "After Eveil-maradouchos had been killed, Neriglissaros, the man who had plotted against him, succeeded to the throne and was king for four years. Laborosoarchodos [Labashi-Marduk], the son of Neriglissaros, who was only a child, was master of the kingdom for nine [probably an error for "2"; see note 20 above] months. Because his wickedness became apparent in many ways he was plotted against and brutally killed by his friends. After he had been killed, the plotters met and jointly conferred the kingdom on Nabonnedus, a Babylonian and a member of the conspiracy." — Stanley Mayer Burstein, *The Babyloniaca of Berossus. Sources from the Ancient Near East*, Vol. 1, fascicle 5 (Malibu, Calif.: Undena Publications, 1978), p. 28.

This inscription, then, interlinks the reigns of Neriglissar and Labashi-Marduk, and evidently also those of Labashi-Marduk and Nabonidus. The possibility of inserting an “extra king” somewhere between these three kings is ruled out by this text.

(8) Some *legal* documents, too, contain information that spans the reigns of two or more kings. One example is *Nabon. No. 13*, which is dated to “the 12th day of (the month) Shabatu [the eleventh month], the accession year of Nabonidus, king of Babylon [February 2, 555 B.C.E.]” The inscription tells about a woman, Belilitu, who brought up the following case before the royal court:

Belilitu daughter of Bel-ushezib descendant of the messenger declared the following to the judges of Nabonidus, king of Babylon: ‘In the month of Abu, *the first year of Nergal-shar-usur* [Neriglissar], *king of Babylon* [August-September, 559 B.C.E.], I sold my slave Bazuzu to Nabu-ahhe-iddin son of Shula descendent of Egibi for one-half mina five shekels of silver, but he did not pay cash and drew up a promissory note.’ The royal judges listened (to her) and commanded that Nabu-ahhe-iddin be brought before them. Nabu-ahhe-iddin brought the contract that he had concluded with Belilitu and showed the judges (the document which indicated that) he had paid the silver for Bazuzu.⁹²

Reference is thus made to the reigns of Neriglissar and that of Nabonidus. The generally accepted chronology would indicate that about *three and a half years* had passed since Belilitu had sold her slave in the first year of Neriglissar until she, in the accession year of Nabonidus, made a fraudulent but futile attempt to receive double payment for the slave. But if twenty years were to be added somewhere between the reigns of Neriglissar and Nabonidus, then Belilitu waited for *twenty-three and a half years* before she brought her case before the court, something that appears extremely unlikely.

f) Nabonidus to Cyrus

That Nabonidus was the king of Babylon when Cyrus conquered Babylonia in 539 B.C.E. is clearly shown by the *Nabonidus Chronicle* (B.M. 35382).⁹³ The chronicle evidently dated this event to the

92 M. A. Dandamaev, *Slavery in Babylonia* (DeKalb, Illinois: Northern Illinois University Press, 1984), pp. 189, 190.

93 As early as 1877, W. St. Chad Boscawen found a document among the Egibi tablets dated to the reign of Cyrus, “which stated that money was paid in the reign of ‘Nabunahid the former king’.” — *Transactions of the Society of Biblical Archaeology*, Vol. VI (London, 1878), p. 29.

“seventeenth year” of Nabonidus, but as was pointed out earlier, this portion of the chronicle is damaged and the year number is illegible. Nonetheless, a whole group of economic texts has been found that provides chronological interlocking connections between Nabonidus’ seventeenth year and the reign of Cyrus. These include the tablets with the catalogue numbers *CT 56:219*, *CT 57:52.3*, and *CT 57:56*.⁹⁴

(9) The first of the three documents (*CT 56:219*) is dated to the *accession year* of Cyrus, and the next two (*CT 57:52.3* and *CT 57:56*) are dated to his *first year*. But all three tablets also refer to the preceding king’s “year 17,” and since it is accepted as fact that Nabonidus was the final king of the Neo-Babylonian line, preceding Cyrus the Persian’s rule, this confirms that Nabonidus’ reign lasted 17 years.⁹⁵

(10) One of the more graphic examples of a chronological linkage between two reigns is a cuneiform tablet in the archaeological museum at Florence known as *SAKF 165*. As Professor J. A. Brinkman points out, this document “presents a unique year-by-year inventory of wool stuffs made into garments for the cult statues of the deities in Uruk. . . . Furthermore, it covers the vital years before and after the Persian conquest of Babylonia.”⁹⁶

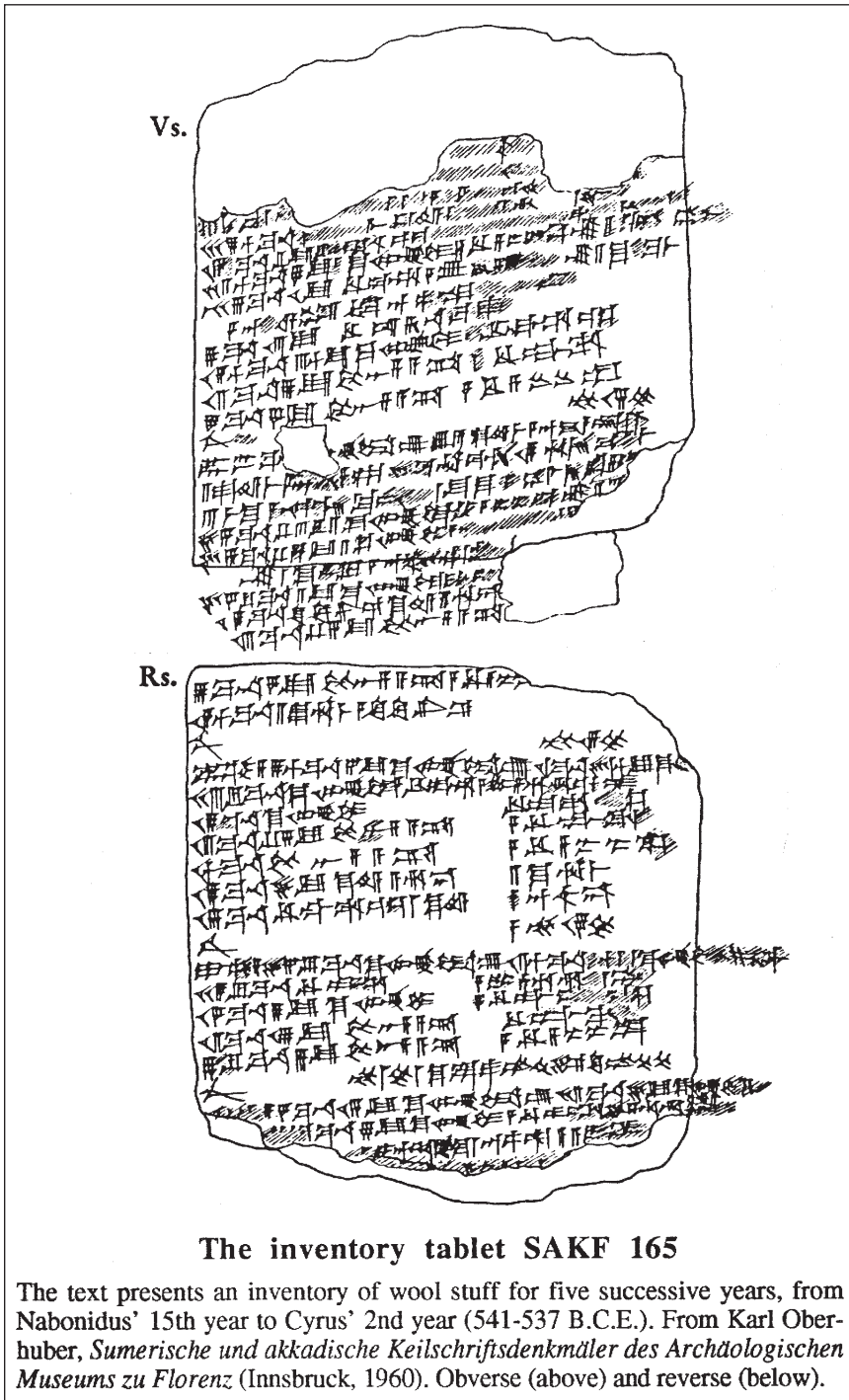
The inventory is arranged chronologically, and the preserved portion of the text covers five successive years, from the fifteenth year of Nabonidus to the second year of Cyrus, with year numbers given at the end of the inventory for each year:

Lines 3 - 13:	year 15 [of Nabonidus]
14 - 25:	year 16 [of Nabonidus]
26 - 33:	year 17 [of Nabonidus]
34 - 39:	year 1 of Cyrus
40 - :	[year 2 of Cyrus]

94 “CT 55-57” refers to the catalogues *Cuneiform Texts from Babylonian Tablets in the British Museum*, Parts 55-57, containing economic texts copied by T. G. Pinches during the years 1892 to 1894 and published by British Museum Publications Limited in 1982.

95 Stefan Zawadzki, “Gubaru: A Governor or a Vassal King of Babylonia?,” *Eos*, Vol. LXXV (Wrocław, Warszawa, Kraków, Gdansk, Łódz, 1987), pp. 71, 81; M. A. Dandamayev, *Iranians in Achaemenid Babylonia* (Costa Mesa, California and New York: Mazda Publishers, 1992), p. 91; Jerome Peat, “Cyrus ‘king of lands,’ Cambyses ‘king of Babylon’: the disputed co-regency,” *Journal of Cuneiform Studies*, Vol. 41/2, Autumn 1989, p. 209. It should be noted that one of the three tablets, *CT 57:56*, is dated to Cambyses as *co-regent* with Cyrus in his first year.

96 J. A. Brinkman, “Neo-Babylonian Texts in the Archaeological Museum at Florence,” *Journal of Near Eastern Studies*, Vol. XXV, Jan.-Oct. 1966, p. 209.



The inventory tablet SAKF 166

The text presents an inventory of wool stuff for five successive years, from Nabonidus' 15th year to Cyrus' 2nd year (541-537 B.C.E.). From Karl Oberhuber, *Sumerische und akkadische Keilschriftsdenkmäler des Archäologischen Museums zu Florenz* (Innsbruck, 1960). Obverse (above) and reverse (below).

The royal name was evidently given only for the first year of each ruler. But as the immediate predecessor of Cyrus was Nabonidus, “year 15”, “year 16”, and “year 17” clearly refer to his reign. The inventory of the year following upon “year 17” ends with the words, “year 1, Cyrus, King of Babylon, King of the Lands” (line 39). The last lines of the entry for the fifth year of inventory are damaged, and “year 2” (of Cyrus) can only be understood as implied.⁹⁷

(11) In ancient Mesopotamia, in the various temples the presence of the deities was represented by their statues. In times of war, when a city was taken, the temples were usually looted and the divine statues were carried away as “captives” to the land of the conquerors.

As such captures were seen by the citizens as an omen that the gods had abandoned the city and called for its destruction, they often tried to protect the statues by moving them to a safer place at the approach of a military force.

This is what happened shortly before the Persian invasion of northern Babylonia in 539 B.C.E., when according to the *Nabonidus Chronicle* Nabonidus ordered a gathering of the gods of several cities into Babylon. The same chronicle also tells that Cyrus, after the fall of Babylon, returned the statues to their respective cities.⁹⁸

As discussed by Dr. Paul-Alain Beaulieu, there are several documents from the archive of the Eanna temple of Uruk which confirm that, in the *seventeenth* year of Nabonidus, the statue of Ishtar (referred to in the documents as “Lady-of-Uruk” or “Lady of the Eanna”) was brought upstream by boat on the river Euphrates to Babylon. Further, these documents also show that the regular offerings to this statue of Ishtar were not interrupted during her temporary stay at Babylon. Cargoes of barley and other kinds of foodstuff for her cult were sent from Uruk to Babylon.

One example of this is given by a tablet in the Yale Babylonian Collection, *YOS XIX:94*, which is dated to the seventeenth year of Nabonidus and records a deposition before the assembly of the noblemen of Uruk:

(These are) the *mar banî* [noblemen] in whose presence Zeriya, son of Ardiya, has thus spoken: Bazuzu, son of Ibni-Ishtar, descendant of

97 *Ibid.*, p. 209. A transliteration of the tablet is given by Karl Oberhuber in his *Sumerische und akkadische Keilschriftendkmäler des Archäologischen Museums zu Florenz* (= *Innsbrucker Beiträge zur Kulturwissenschaft*, Sonderheft 8, Innsbruck, 1960), pp. 111-113.

98 A. K. Grayson, *ABC* (1975), pp. 109, 110.

Gimil-Nanaya, has brought a boat from Babylon to lease it fo[r the sum of], and he said thus: “I will take the barley for the regular offerings of the Lady-of-Uruk to Babylon.”

City of the quay of Nanaya, domain of the Lady of Uruk: *Month Abu [the fifth month] - Day 5 - Seventeenth year of Nabonidus, king of Babylon* [= August 4, 539 B.C.E., Julian calendar].⁹⁹

These documents clearly demonstrate that Cyrus’ conquest of Babylon occurred in the *seventeenth* year of Nabonidus, which thus once again is proved to have been the last year of his reign.

The many examples cited above demonstrate that the activity recorded in a text at times spans over and ties together two successive reigns. They also demonstrate that it is possible to establish the length of the entire Neo-Babylonian era by the aid of such “chronological joints” alone. In fact, the lengths of reign of some kings (Nebuchadnezzar, Nabonidus) are established by more than one text of this kind.

C. SYNCHRONIC LINKS TO THE CHRONOLOGY OF EGYPT

An excellent proof of the correctness of a chronology is when it is in agreement with the chronologies of *other* contemporary nations, provided that these other chronologies are independently established and there are *synchronisms*, that is, dated connecting links that serve to join the two or more chronologies together at one or more points.

The reason why it is important that they be independently established is to rule out any attempt to discredit their worth by claiming that the chronology of a certain period in one nation has been established simply by the aid of the chronology of the contemporary period in another nation.

During the Neo-Babylonian period there are at least *four* such synchronisms between Egypt and the kingdoms of Judah and Babylon. Three of these are given in the Bible, in 2 Kings 23:29 (where Egyptian pharaoh Necho and Judean king Josiah appear), Jeremiah 46:2 (Necho, Nebuchadnezzar and Jehoiakim all appearing), and Jeremiah 44:30 (pharaoh Hophra, kings Zedekiah and Nebuchadnezzar listed).

99 Paul-Alain Beaulieu, “An Episode in the Fall of Babylon to the Persians,” *Journal of Near Eastern Studies*, Vol. 52:4, October 1993, pp. 244, 245; cf. also Beaulieu, *The Reign of Nabonidus, King of Babylon, 556–539 B.C.* (New Haven and London: Yale University Press, 1989), pp. 221, 222.

The fourth is given in a cuneiform text, *B.M. 33041*, which refers to a campaign against Amasis, king of Egypt, in Nebuchadnezzar's thirty-seventh regnal year.¹⁰⁰ The meaning of these synchronisms will be unravelled further on.

C-1: The chronology of the Saite period

The kings reigning in Egypt during the Neo-Babylonian period belonged to the *Twenty-Sixth Dynasty* (664-525 B.C.E.). The period of this dynasty is also referred to as the *Saite period*, as the pharaohs of this dynasty took the city of Sais in the Delta as their capital.

If the four synchronisms mentioned above are to be of any definitive help to our study, it first needs to be shown that the chronology of that twenty-sixth dynasty of Egypt is fixed independently from the *contemporary* Neo-Babylonian chronology, and can thus stand on its own, as it were.

This can be determined in a quite unusual way, of which Dr. F. K. Kienitz writes:

The chronology of the kings of the 26th dynasty, from Psammetichus I onwards, is completely established through a series of death stelae and stelae of holy Apis bulls, which list the birth date in 'Day x, Month y, Year z, of King A' and the death date in 'Day x, Month y, Year z, of King B', and also the length of life of the [bull or person] in question in years, months, and days.¹⁰¹

This means that, if a death stele says that a sacred Apis bull or a person was born in the *tenth year* of King A and died at the age of twenty-five in the *twentieth year* of King B, we know that King A ruled for *fifteen years*.

100 B.M. 33041 was first published by T. G. Pinches in *Transactions of the Society of Biblical Archaeology*, Vol. VII (London, 1882), pp. 210-225.

101 Friedrich Karl Kienitz, *Die politische Geschichte Ägyptens vom 7. bis zum 4. Jahrhundert vor der Zeitwende* (Berlin: Akademie-Verlag, 1953), pp. 154, 155. (Translated from the German.) The Apis cult was practiced already in the First Dynasty of Egypt. At death the Apis bulls were mummified and buried in a coffin or (from the reign of Amasis onwards) in a sarcophagus made of granite. The burial place from the reign of Ramesses II onwards—a vast catacomb known as the "Serapeum" in Saqqara, the necropolis of Memphis—was excavated by A. Mariette in 1851. From the beginning of the Twenty-Sixth Dynasty and on the burials were marked by grave stelae with biographical data on the Apis bulls such as dates of installation and death and the age at death. — László Kákosy, "From the fertility to cosmic symbolism. Outlines of the history of the cult of Apis," *Acta Classica Universitatis Scientiarum Debrecenienses*, Tomus XXVI 1990 (Debreceni, 1991), pp. 3-7.



Grave stele of the 1st Apis of the 26th dynasty

The inscription shows that the first Apis of the 26th dynasty was born in the 26th year of Taharqah and died in the 20th year of Psammetichus I at an age of 21 years, which shows that Taharqah ruled for 26 years. This is also confirmed by other inscriptions. – From Aug. Mariette, *Le Sérapeum de Memphis* (Paris: Gide, Libraire-Éditeur, 1857)

This is the kind of contemporary evidence to which Dr. Kienitz refers. A translation of Kienitz' survey of this material is given here.¹⁰²

1. GRAVE STELE OF THE 3RD APIS OF THE 26TH DYNASTY

Date of Birth: Year 53 of Psammetichus I, Month 6, Day 19

Installation: Year 54 of Psammetichus I, Month 3, Day 12

Date of Death: Year 16 of Necho II, Month 2, Day 6

Date of Burial: Year 16 of Necho II, Month 4, Day 16

Length of Life: 16 years, 7 months, 17 days

Result: Length of reign of Psammetichus = 54 years.

2. GRAVE STELE OF THE 4TH APIS OF THE 26TH DYNASTY

Date of Birth: Year 16 of Necho II, Month 2, Day 7

Installation: Year 1 of Psammetichus II, Month 11, Day 9

Date of Death: Year 12 of Apries, Month 8, Day 12

Date of Burial: Year 12 of Apries, Month 10, Day 21

Length of Life: 17 years, 6 months, 5 days

Result: As the date of Psammetichus II's death is elsewhere attested as Year 7, Month 1, Day 23,¹⁰³ the length of Necho's reign amounts to 15 years, that of Psammetichus II to 6 years.

3. TWO GRAVE STELAE OF A PRIEST NAMED PSAMMETICHUS

Date of Birth: Year 1 of Necho II, Month 11, Day 1

Date of Death: Year 27 of Amasis, Month 8, Day 28

Length of Life: 65 years, 10 months, 2 days

Result: The sum of the lengths of reign of Necho II, Psammetichus II, and Apries = 40 years. As Necho II reigned for 15 years, and Psammetichus II for 6 years, Apries' reign amounts to 19 years.

4. GRAVE STELE OF ANOTHER PSAMMETICHUS

Date of Birth: Year 3 of Necho II, Month 10, Day 1 or 2

Date of Death: Year 35 of Amasis, Month 2, Day 6

Length of Life: 71 years, 4 months, 6 days

Result: The same as under 3.

5. GRAVE STELE OF ONE BESMAUT

Year of Birth: Year 18 of Psammetichus I

Year of Death: Year 23 of Amasis

Length of Life: 99 years

Result: The total of 94 years for the lengths of reign from Psammetichus I to Apries inclusive is once more confirmed.

¹⁰² Kienitz, *op. cit.*, pp. 155, 156. The grave stelae under no. 1, 2, and 3 were translated and published by James Henry Breasted in *Ancient Records of Egypt*, Vol. IV (Chicago: The University of Chicago Press, 1906), pp. 497, 498, 501-503, 518-520. For no. 4 and 5, see the references by Kienitz, *op. cit.*, p. 156, notes 1 and 2.

¹⁰³ Lines 5/6 of the Ank-nes-nefer-ib-Re Stele. See G. Maspero, *Ann. Serv.* 5 (1904), pp. 85, 86, and the translation by J. H. Breasted, *op. cit.*, IV, p. 505.

Consequently, these contemporary death stelae conclusively establish the lengths of reign of the first four kings of the twenty-sixth dynasty of Egypt as follows:

Psammetichus I	54 years
Necho II	15 years
Psammetichus II	6 years
Apries (= Hophra)	19 years

For the last two kings of the twenty-sixth dynasty, Amasis and Psammetichus III, material of this kind unfortunately is lacking. However, both Greek historian Herodotus (c. 484-425 B.C.E.) and the Graeco-Egyptian priest and historian Manetho (active c. 300 B.C.E.) give forty-four years to Amasis and six months to Psammetichus III.¹⁰⁴ And these lengths of reign have been confirmed by modern discoveries, as follows:

In the papyrus *Rylands IX* (also called “Petition of Petiese”) dating from the time of Darius I (521-486 B.C.E.), the *forty-fourth year* of Amasis is mentioned in a context indicating it was his last full year. Each year, a prophet of Amun of Teuzoi (Psammetkmenempe by name) who lived in the Nile Delta, used to send a representative to fetch his stipend. This he did until the *forty-fourth year* of Amasis. This, in itself, is not decisive. But in the “Demotic Chronicle,” a report on the compilation of Egyptian laws written under Darius I, there are also two mentions of the forty-fourth year of Amasis as some sort of terminal point. Finally, the same figure is given in an inscription from Wâdi Hammâmât.¹⁰⁵ The figure given by Herodotus and Manetho, therefore, is strongly supported by this combination of inscriptions.

104 Manetho’s *Egyptian History*, which was written in Greek and probably was based on the temple archives, is preserved only in extracts by Flavius Josephus and Christian chronographers, especially by Julius Africanus in his *Chronographia* (c. 221 C.E.) and by Eusebius of Caesarea in his *Chronicon* (c. 303 C.E.). Africanus, who transmits Manetho’s data in a more accurate form, gives forty-four years to Amasis and six months to Psammetichus III. This agrees with Herodotus’s figures.—W. G. Waddell, *Manetho* (London: Harvard University Press, 1948), pp. xvi-xx, 169-174.

105 W. Spiegelberg, *Die Sogenannte Demotische Chronik* (Leipzig: J. C. Hinrichs’sche Buchhandlung, 1914), p. 31; Kienitz, *op. cit.*, p. 156; and Richard A. Parker, “The Length of Reign of Amasis and the Beginning of the Twenty-Sixth Dynasty,” *Mitteilungen des Deutschen Archäologischen Instituts, Kairo Abteilung*, XV, 1957, p. 210. For some time it was held that Amasis died in his forty-fourth regnal year, and because of the Egyptian nonaccession year system, whereby a king’s accession year was reckoned as his first regnal year, they gave Amasis only forty-three full years. But in 1957, in the article referred to above, R. A. Parker demonstrated conclusively that Amasis reigned for forty-four full years. This, of course, moved the reigns of the earlier kings of the Saite dynasty one year backwards. The beginning of the dynasty, therefore, was re-dated to 664 instead of 663 B.C.E., as had been held previously. (R. A. Parker, *op. cit.*, 1957, pp. 208-212.) Since 1957, Parker’s conclusions have obtained general acceptance among scholars.—For additional information on the nonaccession year reckoning, see Appendix For Chapter Two: “Methods of reckoning regnal years.”

As to Psammetichus III, the highest date available for this king is Year Two. Three documents (papyri) dated to the third, fourth, and fifth months of his second year have been discovered. And yet, this is no contradiction to the statement made earlier that the rule of this king actually covered only *six months*. How so?

The Egyptians used a nonaccession year system. According to this system *the year in which a king came to power* was reckoned as his first regnal year. Psammetichus III was dethroned by the Persian king Cambyses during his conquest of Egypt, generally dated to 525 B.C.E. by the authorities.¹⁰⁶ At this time the Egyptian civil calendar year almost coincided with the Julian calendar year.¹⁰⁷ If the conquest of Egypt occurred in the sixth month of the reign of Psammetichus III, this must have been in May or June, 525 B.C.E.¹⁰⁸ With this prerequisite, his six months of rule began at the end of the previous year, 526 B.C.E., quite possibly only a few days or weeks before the end of that year. Though he ruled for only a fraction of that year, this fraction of a few days or weeks was reckoned as his *first* regnal year according to the Egyptian *nonaccession* year system. Thereby his *second* regnal year began to count only a few days or weeks after his accession to the throne. Thus, although he ruled for only six months, documents dated up to the fifth month of his second year are, in view of the supporting evidence, only what we should expect to find. The following illustration makes the matter plain:

106 Kienitz, *op. cit.*, p. 157, note 2. This date is also accepted by the Watch Tower Society, as can be seen from *Insight on the Scriptures*, Vol. 1 (1988), pp. 698, 699.

107 In the two years 526 and 525 B.C.E. the Egyptian civil calendar year began on January 2 in the Julian calendar.—Winfried Barta, “Zur Datierungspraxis in Ägypten unter Kambyzes und Dareios I,” *Zeitschrift für Ägyptische Sprache und Altertumskunde*, Band 119:2 (Berlin: Akademie Verlag, 1992), p. 84.

108 The *exact* time of the year for Cambyses’ capture of Egypt is not known. (Compare Molly Miller, “The earlier Persian dates in Herodotus,” in *Klio*, Band 37, 1959, pp. 30, 31.)—In the nineteenth century E. Revillout, one of the founders of the scholarly journal *Revue Égyptologique* in the 1870’s, claimed that Psammetichus III ruled for at least two years, as one document dated to the *fourth* year of a king Psammetichus seemed to be written at the end of the Twenty-Sixth Dynasty. (*Revue Égyptologique*, Vol. 3, Paris, 1885, p. 191; and Vol. 7, 1896, p. 139.) But since then many new documents have been discovered that make Revillout’s theory untenable. The document evidently refers either to one of the earlier kings known by the name of Psammetichus, or to one of the later vassal kings by that name. There were three kings by the name Psammetichus during the Saite period, and also two or three vassal kings by that name in the fifth century, and sometimes it has been difficult to decide which of them is referred to in a text. Some documents that an earlier generation of Egyptologists dated to the reign of Psammetichus III have later had to be re-dated.—Wolfgang Helck & Wolfhart Westendorf (eds.), *Lexikon der Ägyptologie*, Band IV (Wiesbaden, 1982), pp. 1172-75.

Second synchronism—Jeremiah 46:2: For Egypt, concerning the military force of Pharaoh Necho the king of Egypt, who happened to be by the river Euphrates at Carchemish, whom Nebuchadrezzar the king of Babylon defeated in the fourth year of Jehoiakim the son of Josiah, the king of Judah. (NW)

This battle in the “fourth year of Jehoiakim” is placed in the year 625 B.C.E. by the Watch Tower Society (*Insight on the Scriptures*, Vol. 2, p. 483.), which again cannot be harmonized with the contemporary chronology of Egypt. But if this battle at Carchemish took place twenty years later, in the accession-year of Nebuchadnezzar, that is, in June, 605 B.C.E. according to all the lines of evidence presented earlier, we find this date to be in perfect harmony with the recognized reign of Pharaoh Necho, 610–595 B.C.E.

Third synchronism—Jeremiah 44:30: This is what Jehovah has said: ‘Here I am giving Pharaoh Hophra, the king of Egypt, into the hand of his enemies and into the hand of those seeking for his soul, just as I have given Zedekiah the king of Judah into the hand of Nebuchadrezzar the king of Babylon, his enemy and the one seeking for his soul.’ (NW)

As the context shows (verses 1ff.) these words were uttered not long after the destruction of Jerusalem and its temple, when the rest of the Jewish population had fled to Egypt after the assassination of Gedaliah. At that time Egypt was ruled by Pharaoh Hophra, or Apries, as he is named by Herodotus.¹¹¹

If Apries ruled Egypt at the time when the Jews fled there some months after the desolation of Jerusalem, this desolation cannot be dated to 607 B.C.E., for Apries *did not begin his reign until 589 B.C.E.* (see table above). But a dating of the desolation of Jerusalem to 587 B.C.E. is in good agreement with the years of reign historically established for him: 589–570 B.C.E.

Fourth synchronism—B.M. 33041: As mentioned earlier, this text refers to a campaign against king Amasis ([Ama]-a-su) in Nebuchadnezzar’s thirty-seventh year. A. L. Oppenheim’s translation of this scanty fragment reads as follows: “. . . [in] the 37th year, Nebuchadnezzar, king of Bab[ylon], mar[ched against] Egypt (*Misir*) to deliver a battle. [Ama]sis (text: [. . .]-a(?)-su), of Egypt, [called up his a]rm[y] . . . [. . .]ku from the town *Putu-Iaman* . . .

111 His name in the Egyptian inscriptions is transcribed as *Wahibre*. In the Septuagint version of the Old Testament (LXX), his name is spelled *Ouaphre*.

distant regions which (are situated on islands) amidst the sea . . . many . . . which/who (are) in Egypt . . . [car]rying weapons, horses and [chariot]s . . . he called up to assist him and . . . did [. . .] in front of him . . . he put his trust”¹¹²

This text is badly damaged, but it does definitely state that the campaign into Egypt took place in Nebuchadnezzar’s “thirty-seventh year,” and while it is true that the name of the pharaoh is only partly legible, the cuneiform signs that are preserved seem only to fit Amasis, and no other pharaoh of the twenty-sixth dynasty.

The Watch Tower Society dates the thirty-seventh year of Nebuchadnezzar to 588 B.C.E. (*Insight on the Scriptures*, Vol. 1, p. 698), but this was during the reign of Apries (see the table). On the other hand, if Nebuchadnezzar’s thirty-seventh year was 568/67 B.C.E., as is established by all the lines of evidence presented earlier, this date is in excellent agreement with the reign of Amasis (570–526 B.C.E.).

Consequently, not one of the four synchronisms with the independently established chronology of Egypt agrees with the chronology developed by the Watch Tower Society. The discrepancy in that Society’s reckoning is consistently about twenty years out of harmony.

Interestingly, however, all four synchronisms are in perfect harmony with the dates arrived at from the other lines of evidences that have been discussed. These synchronisms to the Egyptian chronology, therefore, add *yet another* line of evidence to the others, which point consistently to 587 B.C.E. as the definitive date for the destruction of Jerusalem.

SUMMARY AND CONCLUSION

Seven lines of evidence have been presented above against any possible dating of the destruction of Jerusalem to the year 607 B.C.E., all of which lines of evidence agree in dating that event twenty years later. At least *four* of these lines of evidence are clearly *independent of each other*.

Consider first the three which give evidence of interdependence:

(1) Early historians, the Neo-Babylonian chronicles, and the Uruk kinglist

We first saw that in the third century B.C.E., Babylonian priest *Berosus* wrote a history of Babylonia, quoted from by later historians, both in the B.C.E. and early C.E. periods. The validity of the

¹¹² Translated by A. Leo Oppenheim in Pritchard’s *ANET* (see note 2 above), p. 308.

dates presented by Berossus in his history is evidenced by their accurate reflection of historical material now available on ancient cuneiform tablets unearthed in Babylon, particularly the *Neo-Babylonian Chronicles* (a series of historical vignettes setting out certain episodes relating to the Babylonian empire, notably records of kingly succession and of military campaigns waged), and also the *Babylonian kinglists* (particularly the one known as the Uruk kinglist) which list the Babylonian rulers by name along with the years of their reign.

Likewise with the source known as the *Royal Canon*, a list of Babylonian rulers, which, though only fully extant in manuscripts of Ptolemy's *Handy Tables* dated to the eighth century C.E. and in later manuscripts, seems clearly to have been the common source relied upon by astronomer Claudius Ptolemy (70-161 C.E.) and by earlier scholars, such as Hipparchus of the second century B.C.E., when these dealt with and dated events of the Neo-Babylonian period. Though the Royal Canon evidently drew upon sources common to those employed by Berossus—that is, the ancient *Neo-Babylonian chronicles and kinglists*—the order and forms of the names of kings found in it differ from his presentation sufficiently to indicate that it is a record developed independently of his writings.

It is acknowledged that the *Neo-Babylonian chronicles* unearthed up to this point are still incomplete, and also that some of the figures in the *Uruk kinglist* for the reigns of the Neo-Babylonian kings are damaged and only partially legible. However, the figures that *are* there and *are* legible on these cuneiform tablets all agree with the corresponding figures found both in the writings of Berossus and in the listing of the Royal Canon.

There is, then, strong reason to believe that the chronological information originally given in those Neo-Babylonian sources has been preserved unaltered by Berossus and the Royal Canon. Both of these agree as to the overall length of the Neo-Babylonian era. In the crucial area here under investigation, their figures point to 604/03 B.C.E. as the first year of Nebuchadnezzar's reign, and 587/86 B.C.E. as his eighteenth year when he desolated Jerusalem.

Though this evidence is substantial, it remains true that Berossus and the Royal Canon are secondary sources, and even those ancient tablets known as the Babylonian Chronicles and the Uruk kinglist are evidently copies of earlier originals. What supporting evidence is there, then, to believe the records involved were actually written *contemporaneously* with the times and events described?

(2) Inscriptions Nabon. No. 18 and Nabon. No. 8 (the Hillah stele)

Aside from the Babylonian Chronicles and kinglists there are other ancient documents which give evidence of being, not copies, but originals. The royal inscription *Nabon. No. 18*, dated by the aid of another inscription known as the *Royal Chronicle* to the second year of Nabonidus, fixes this year astronomically to 554/53 B.C.E. As Nabonidus' reign ended with the fall of Babylon in 539 B.C.E., the total length of his reign is shown by this inscription to have been seventeen years (555/54—539/38 B.C.E.).

The *whole length of the Neo-Babylonian period prior to Nabonidus* is given by *Nabon. No. 8 (the Hillah stele)*, which gives the time elapsed from the sixteenth year of initial ruler Nabopolassar up to the accession-year of final ruler Nabonidus as *fifty-four years*. The stele thus fixes the sixteenth year of Nabopolassar to 610/09 B.C.E.

If this was Nabopolassar's sixteenth year, his twenty-first and last year was 605/04 B.C.E. Nebuchadnezzar's first year, then, was 604/03 B.C.E. and his eighteenth year was 587/86, during which Jerusalem was destroyed.

(3) Nabon. H 1, B (the Adad-guppi' stele)

Nabon. H 1, B (the Adad-guppi' stele) gives the reigns of all the Neo-Babylonian kings (except for that of Labashi-Marduk, as his brief reign does not affect the chronology presented) from Nabopolassar up to the ninth year of Nabonidus. Since the Watch Tower Society indirectly accepts a seventeen-year rule for Nabonidus (as was shown above in the discussion of the *Nabonidus Chronicle*), this stele of itself overthrows their 607 B.C.E. date for the desolation of Jerusalem and shows this event to have taken place twenty years later, in 587 B.C.E.

These three lines of evidence may logically be grouped together because it cannot be clearly established that the various documents involved are wholly independent of one another. Reasons for believing that Berossus and the Royal Canon both got their information from Babylonian chronicles and kinglists have already been pointed out. It is also possible that the chronological information given in the royal inscriptions was derived from the chronicles (although this is something that cannot be proved).¹¹³ Grayson's suggestion, that the chronicles themselves may have been composed with the help of the

113 A. K. Grayson, "Assyria and Babylonia," *Orientalia*, Vol. 49 (1980), p. 164.

information given in the astronomical “diaries” has been strongly argued against by other scholars.¹¹⁴

This possible interdependence of some of these sources, however, does not nullify their conclusive power. As the *ancient royal inscriptions* preserve chronological information that is *contemporary with* the Neo-Babylonian era itself, we have every reason to accept it as *factual* and *true* information. This would be true even if this information was based upon contemporary Babylonian chronicles. For, although the chronology of these chronicles is preserved only in a few fragmentary copies, in a late kinglist, and by Berossus and the Royal Canon, the *agreement* between these later sources and the ancient royal inscriptions is striking. This agreement confirms that the figures of the original Neo-Babylonian chronicles have been correctly preserved in these later sources.

There remain four lines of evidence which have sound claim to independence.

(4) *Economic-administrative and legal documents*

Tens of thousands of economic, administrative and legal texts, dated to the year, month, and the day of the reigning king, have come down to us from the Neo-Babylonian period. A large number of dated tablets are extant *from each year* during this whole period. The length of reign of each king may, then, be established by these documents, *sometimes almost to the day*.

The results arrived at are in good agreement with the figures given by Berossus, the Royal Canon, the chronicles, and the contemporary royal inscriptions from the reign of Nabonidus.

The twenty years demanded by the chronology of the Watch Tower Society are totally missing.

The business and administrative documents are *original* documents, *contemporary with* the Neo-Babylonian era itself, which makes this line of evidence exceedingly strong. These documents definitely point to 587/86 B.C.E. as Nebuchadnezzar’s eighteenth regnal year, when he desolated Jerusalem.

(5) *Prosopographical evidence*

The *prosopographical study* of the cuneiform tablets provides various checks on the accuracy of the Neo-Babylonian chronology.

¹¹⁴ *Ibid.*, p. 174. Cf. John M. Steele, *Observations and Predictions of Eclipse Times by Early Astronomers* (Dordrecht, etc: Kluwer Academic Publishers, 2000), pp. 127, 128. The astronomical observations recorded in these diaries must anyway be treated as separate and independent lines of evidence.

The careers of scribes, temple administrators, slaves, business men, and others may be followed for decades, in some cases through almost the whole Neo-Babylonian period and on into the Persian era. Thousands of dated documents give insight into the business, legal, religious, family and other activities of these individuals. Many texts deal with matters that extend over weeks, months, or even years, such as inventories, lease of land or houses, instalments of debts, hire of slaves and livestock, run-away slaves, court proceedings, and so on.

The activities of some individuals may be followed through almost their whole lives. But never do we find that their activities cross the established chronological borders of the period into some unknown twenty-year period that the Watch Tower Society would add to the Neo-Babylonian era. The insertion of these twenty years would, in fact, not only distort the understanding of the careers, activities, and family relations of many individuals, but it would also give many of them abnormal life spans.

(6) Chronological interlocking joints

Sometimes a text may contain activities and dates that intersect two or more consecutive reigns in a way that chronologically ties them together and excludes every possibility of inserting extra kings and years between them.

As was demonstrated in this particular section, quite a number of such documents exist that interlock each reign with the next *throughout the whole Neo-Babylonian period*. Although eleven documents of this kind were presented earlier, a close examination of the tens of thousands of unpublished tablets from the Neo-Babylonian period would probably multiply the number. Those presented, however, suffice to show that the length of the whole Neo-Babylonian era may be securely established by the aid of such “chronological joints” alone.

(7) Synchronisms with the contemporary Egyptian chronology

The chronology of contemporary Egyptian kings provides an excellent test of Neo-Babylonian chronology, as there are four synchronisms tied to it, three of which are given in the Bible.

These synchronisms are of the utmost importance, as the contemporary chronology of Egypt has been established *independently* of the chronologies of other nations of that time. Yet it was shown that the Egyptian chronology is in complete harmony with the data given by Berossus, the Royal Canon, and all the cuneiform documents

discussed above, while a comparison with the chronology of the Watch Tower Society shows a consistent difference of about twenty years.

These four synchronisms to Egyptian chronology all refute the 607 B.C.E. date for the desolation of Jerusalem and once again uphold 587/86 B.C.E. as the correct date for that event.

The evidence from all this material is overwhelming and should certainly be *conclusive*. For most scholars, just *two or three* of these seven lines of evidence would be sufficient proof of the accuracy of the Neo-Babylonian chronology. For the leaders of the Watch Tower Society, however, not even *seven* lines of evidence are enough to change their minds, as shown by their consistent rejection of such evidence presented to them earlier.

Since the chronology constitutes the very foundation for the major claims and message of the organization, they evidently feel that too much is at stake for abandoning their Gentile times chronology, not least of this being their own claimed position of divine authority. It is extremely unlikely, therefore, that even *twice* the number of lines of evidence will have any influence on their minds.

For the sake of completeness, however, *another seven lines* of evidence will be presented in detail in the next chapter, and a few others will be briefly described. As all of them are based on ancient Babylonian *astronomical* texts, they will be shown to turn the chronology of the whole Neo-Babylonian era into what is termed an *absolute chronology*.