

אלון בלוח

Research plan submitted for approval as the plan of PhD thesis

June 2010

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Studies in Middle Assyrian Chronology and
Its Implications for the History of the Ancient
Near East in the 13th Century B.C.E.

I. The Main Problems to Be Explored¹

A. General Outline of the Objectives of the Present Study

The construction of the absolute chronology of the Ancient Near East in the second half of the 2nd millennium B.C.E. is ultimately based on the Assyrian chronology of this historical period.² This situation is due to the fact that the Assyrian King List (AKL)³ presents an unbroken sequence of kings, with the lengths of their reigns specified, from the reign of Ellil-nāšir II (late 15th century B.C.E.) down to the 8th century B.C.E. – i.e., down to a period, for which the absolute dating of the regnal years of the Assyrian kings (in relation to the Common Era frame of reference) can be established precisely based on two lines of evidence: 1) the continuous lists of Assyrian eponyms, spanning the period 910-649 B.C.E., and 2) the fact that the eponym lists mention the solar eclipse in the month Simānu of the eponym year of Bur-Saggilê, which has been established, on astronomical grounds, to be the eclipse of June 15, 763 B.C.E. (Millard 1994: 2).⁴ Although there are a few discrepancies between the AKL and the eponym lists pertaining to the

¹ The PhD thesis described in this proposal will be submitted as a collection of articles, due to the reasons detailed below, “Explanation for the Proposed Submission of the Thesis as a Collection of Articles.”

² For utilization of the Assyrian chronology in constructing the absolute chronology of Babylonia in the second half of the 2nd millennium B.C.E., see Brinkman 1976: 28-31; Sassmannshausen 2006: 170-174. The absolute chronology of Egypt in the second half of the 2nd millennium B.C.E. is based to a large extent on synchronisms with Babylonia and hence, by implication, on the absolute chronology of Assyria (von Beckerath 1994: 17-29; von Beckerath 1997: 59-68). For the Hittite kingdom, a full-fledged absolute chronology cannot be established, but what little can be known about the regnal dates of the Hittite kings, depends almost entirely on synchronisms with Assyria, Babylonia and Egypt (Beckman 2000: 22-24).

³ For the text of the AKL, see Grayson 1980-83: 101-115.

⁴ All the dates utilizing the months employed by the Julian and the Gregorian calendars, specified here and below, are expressed in the terms of the Julian calendar.

11th-9th centuries B.C.E., each of those discrepancies amounts to a single year, and for all of them there is an overwhelming consensus among the scholars concerning the version that is to be preferred (see Boese and Wilhelm 1979: 19-20). This makes it possible to figure out with certainty the regnal years of the kings of Assyria up to Tiglath-pileser I (1114-1076 B.C.E.).⁵

For the century preceding the reign of Tiglath-pileser I, however, the data presented by the AKL are somewhat problematic. The most significant problem pertains to two kings belonging to the 12th century B.C.E.: Ninurta-apil-Ekur and his son Aššur-dān I, for whose reigns the Nassouhi manuscript of the AKL specifies the figures of 13 and [x+]26 years, whereas the Khorasabad and the SDAS manuscripts of the AKL specify the figures of 3 and 46 years, respectively (Grayson 1980-83: 111). Another problem is posed by the fact that the reigns of two sons of Aššur-dān I: Ninurta-tukulti-Aššur and Mutakkil-Nusku, are specified in the AKL as *ṭuppišu* (Grayson 1980-83: 111-112) – a term whose

⁵ It was the common practice in ancient Mesopotamia to count the first regnal year of a king as beginning with the first day of the first calendar year following his accession to the throne. The period between the accession of a king to the throne and the beginning of the following calendar year was originally considered as merely the last year of the preceding king (who died or was otherwise deposed by the new king within that year), but starting with the 13th century B.C.E., first in Babylonia and then in Assyria, this period became designated *šurrū/šurrāt šarrūti* or *rēš šarrūti* (lit., “the beginning of the reign”) of the new king, which is commonly rendered in modern scholarship as “accession year” (see Tadmor 1958: 27-29; Brinkman 1976: 403, 448-451). For the sake of consistency, we will employ the term “accession year” in relation to Babylonia and Assyria both before and after the beginning of the actual use of this term. Also, when specifying the periods of reign of Mesopotamian kings in the Common Era frame of reference, the first regnal year of a given king will be one year later than the last regnal year of his predecessor (we specify periods of reign by the beginning of the first and of the last regnal year of a given king).

chronological meaning is not entirely clear.⁶ One more problem concerning the chronology of the Assyrian kings in the century preceding Tiglath-pileser I pertains to the reign of Aššur-nādin-apli, the son, murderer and successor of Tukultī-Ninurta I,⁷ who reigned ca. 1200 B.C.E. and whose reign's length is specified in the Nassouhi manuscript of the AKL as four years, while in the Khorasabad and the SDAS manuscripts it is specified as three years (Grayson 1980-83: 110).

Moreover, the problems arising from diverging or unclear figures for the reigns of some Assyrian kings of the 13th-12th centuries B.C.E. in the different manuscripts of the AKL are not the only ones impeding a precise reconstruction of the Assyrian chronology in the second half of the 2nd millennium B.C.E. (the Middle Assyrian period). Another problem is posed by the question whether the years recorded in the AKL are luni-solar years (i.e., years of 12 or 13 lunar months, whose succession would be arranged so as to make the average length of the calendar year meet the length of the solar year of ca. 365.25 days) or purely lunar years consisting uniformly of 12 lunar months that included 29 or 30 days each (given the average length of the synodic lunar month – the interval between two successive identical phases of the moon – which is ca. 29.53 days, the average lunar year would consist of $29.53 \times 12 = 354.36$ days). The difference between the lunar and the luni-solar year, consisting of 10.89 days on the average, amounts to a full year in ca. 32 years – that is, 33 lunar years are approximately equal in duration to 32 luni-solar years.⁸ Since the reign of Tiglath-pileser I, Assyria had adopted the Babylonian

⁶ For the interpretations offered by different scholars for the term *tuppišu* in the AKL, see Boese and Wilhelm 1979: 21-23; Gasche et al. 1998: 53-54; Janssen 2007; Freydank 2007.

⁷ See Pedersén 1985: 107-108, n. 5; Pedersén 1999.

⁸ 32 luni-solar years with the average duration of 365.25 days contain 11,688 days. 33 lunar years with the average duration of 354.36 days contain 11,693.88 days.

calendar, which was luni-solar (Cohen 1993: 300-301);⁹ but whether under the predecessors of Tiglath-pileser I the Assyrian calendar employed a mechanism of intercalating the calendar years, upon necessity, to 13 months in order to keep them in line with the seasons of the solar year, has remained until now an open question (see below, “Survey of the Current State of Scholarship”). Of course, this question has direct implications for converting the calendar years of the Middle Assyrian period into solar (Julian) years in the Common Era frame of reference.

Finally, any chronological scheme for the Middle Assyrian period based solely on the AKL (on any possible interpretation thereof) can offer only a general outline and is not sufficient for a precise dating of any specific event belonging to this period, except the accession to the throne or the death of a given king. This is so because the only system of dating used by historical and administrative documents from the Middle Assyrian period is that of eponym years, where each year was named after a specific official; but in contradistinction to the first millennium B.C.E., there is no known list of eponyms arranged in the chronological order, which would cover a significant portion of the Middle Assyrian period and thus enable one to establish the absolute date of a given eponym.

The purpose of the present study is to offer a solution to the above problems. On some issues, the solution offered will be necessarily partial; given the currently available sources, we will not be able to establish a complete chronological sequence of eponyms for the entire Middle Assyrian period, or even for a complete century belonging to this period. On other issues, we believe that we can offer a complete solution – i.e., a solution that will lead to definite answers to the questions concerning the structure of the Middle

⁹ The date of the solar eclipse of June 15, 763 B.C.E., as specified in the Assyrian eponym lists – the month of Simānu, the eponym year of Bur-Saggiê – is expressed in the terms of the Babylonian calendar.

Assyrian calendar and the lengths of the reigns of those kings, for whom the different manuscripts of the AKL provide diverging data, or data whose chronological meaning is not immediately clear. In fact, with the present study, some fundamental questions concerning the chronology of the Middle Assyrian period – and hence, the chronology of the entire Near East in the second half of the 2nd millennium B.C.E. – can be given, for the first time, a definite answer (even though this answer, like any other scholarly conclusion, may be subject to revision upon discovery of new evidence).

Specifically, the objectives of the present study are the following:

- a) To establish a complete chronological sequence of eponyms for a period spanning 52 Assyrian calendar years in the 13th century B.C.E.: the 30 years of the reign of Shalmaneser I and the first 22 regnal years of his son, Tukultī-Ninurta I.¹⁰ (In fact, we will reconstruct a chronological sequence of 26 eponyms for the reign of Tukultī-Ninurta I, but only the first 22 of those will be shown to form a complete sequence – i.e., a sequence, within which no further eponyms can be reasonably expected to be placed.)
- b) To establish the group of eponyms, which is to be placed in the period from the death of Tukultī-Ninurta I to the death of Ninurta-apil-Ekur. It will be argued that this group consists of 28 eponyms, and that consequently, the length of the reign of Ninurta-apil-Ekur is to be established as 13 years, and the length of the reign of Aššur-nādin-apli – as four years (the lengths of the reigns of two other kings belonging to the period in question: Aššur-nērārī III and Ellil-kudur-ušur, is specified as six and five years, correspondingly, in all the manuscripts of the AKL).

¹⁰ The lengths of the reigns of Shalmaneser I (30 years) and Tukultī-Ninurta I (37 years) are known from the AKL; no discrepancies on these points appear in the known versions of the AKL.

- c) To adduce philological and historical arguments supporting Helmut Freydank's interpretation of the term *tuppišu* as an adverb, whose basic meaning is "besides, furthermore, in addition," etc., and which signifies in the AKL periods of rule that are to be included, from the chronological point of view, within the rule of the preceding king whose reign's duration is spelled out in numbers (Freydank 2007). The implication of this interpretation, and of the arguments that will be adduced to support it, is that Ninurta-tukulti-Aššur and Mutakkil-Nusku had probably exercised *de facto* rule over Assyria during the nominal reign of Aššur-dān I (who apparently could not carry out the royal functions for some reason). Consequently, for the purpose of reconstructing a continuous chronology of the Assyrian monarchy, Ninurta-tukulti-Aššur and Mutakkil-Nusku are to be accorded 0 regnal years each.
- d) To solve the question of the duration of the reign of Aššur-dān I. We will utilize the conclusions presented above, along with some synchronisms between the kings of Assyria and Babylonia in the 13th-11th centuries B.C.E., in order to demonstrate that his reign could have lasted 46 years, but not 36 years (as suggested by Boese and Wilhelm 1979).
- e) To demonstrate that the months of the Assyrian calendar rotated through the solar year cycle not only in the reign of Tiglath-pileser I (which has been long known,¹¹ yet could be attributed to a gradual abandonment of the original Assyrian calendar in favor of the Babylonian calendar adopted by Tiglath-pileser I) but also for at least a hundred years preceding his reign. This conclusion will necessitate rejection of the proposal made by Johannes Koch, according to which the Middle Assyrian calendar employed a mechanism for intercalation of years that would keep the Assyrian months in relatively fixed positions within the solar year cycle but would

¹¹ See below, "Survey of the Current State of Scholarship."

allow the beginning point of the year to move from one month to another, and thus through the whole solar year cycle (Koch 1989: 132-141).

- f) To demonstrate that, beside the rotation of the Assyrian calendar months through the solar year cycle, the beginning point of the Middle Assyrian calendar year was not fixed to a given season of the solar year, but was fixed in the terms of the Middle Assyrian calendar itself to the first day of the month Šippu. This conclusion will necessitate rejection of the proposal made by Ernst Weidner, according to which the Middle Assyrian calendar employed a mechanism of intercalation of years that would keep the Assyrian months rotating through the solar year cycle but would allow a given year to contain 13 instead of 12 lunar months by moving the beginning point of the year from one month to another (Weidner 1928-29; Weidner 1935-36: 28-29).
- g) To use the conclusions mentioned above in order to establish a precise Middle Assyrian chronology and to connect it with the chronologies of Babylonia, the Hittite empire and Egypt in the 13th century B.C.E. The connections to be established will allow to figure out with certainty the absolute chronology of the major Near Eastern kingdoms in the 13th century B.C.E. Sharpening the precision of chronological reconstruction will be also shown to have implications for understanding pivotal events in the history of the Near East during this period. Thus, on the one hand, our reconstruction will point out that the reign of Shalmaneser I of Assyria spanned the years 1269-1241 B.C.E., and that this king had conquered the kingdom of Ḫanigalbat (Mitanni), located in northeastern Syria, in 1262/1 B.C.E. On the other hand, we will show that out of the three astronomically possible dates for the enthronement of Ramesses II of Egypt: 1304, 1290 and 1279

B.C.E.,¹² only the second date is feasible. Therefore, the peace treaty between Ramesses II and the Hittite king Ḫattušili III, which was concluded in the 21st regnal year of Ramesses II and which brought the end to the Egyptian-Hittite conflict that had lasted for almost two decades, must have been concluded eight years before the final Assyrian conquest of Ḫanigalbat. Consequently, the Assyrian conquest of Ḫanigalbat, which brought the expansionist Assyrian power to the boundaries of the Hittite empire and thus created a potential threat to the territorial integrity of the latter, cannot be understood as a factor that drove Ḫattušili III to conclude the peace treaty with Ramesses II (as often maintained in present-day scholarship).¹³

B. Explanation for the Proposed Submission of the Thesis as a Collection of Articles

Each of the objectives presented above has a standing of its own, insofar as its importance for the reconstruction of the chronology and for the study of the history of the Ancient Near East is concerned. The reconstruction of the chronological order of the Assyrian eponyms during the reigns of Shalmaneser I and Tukultī-Ninurta I helps to place

¹² For these dates, based on the record of a New Moon on day 27, month 6, of the 52nd regnal year of Ramesses II – which, on astronomical grounds, can be December 25, 1253 B.C.E., December 22, 1239 B.C.E. or December 19, 1228 B.C.E. – see von Beckerath 1997: 51. In an earlier study, von Beckerath added to this list of possible Julian dates for the New Moon in question also December 16, 1214 B.C.E. and December 13, 1203 B.C.E.; these dates, result in 1265 B.C.E. and 1254 B.C.E. as possible years of the enthronement of Ramesses II (von Beckerath 1994: 15). Since in the present study we will show that 1279 B.C.E. is too late to be considered a feasible possibility for the year of Ramesses II's enthronement, the same conclusion will apply, *ipso facto*, to 1265 B.C.E. and 1254 B.C.E.

¹³ See, e.g., Kitchen 1982: 74-75; Klengel 1999: 268-269; Klengel 2002: 127; Desroches-Noblecourt 2007: 145-146, 154.

the historical events in the reigns of these two kings, attested in Assyrian documents, in a secure temporal sequence, even without regard to the precise absolute dating of those events in the Common Era frame of reference. Figuring out the precise lengths of the reigns of the kings of Assyria in the 13th-12th centuries B.C.E. is obviously important for the reconstruction of the Middle Assyrian chronology. Understanding the nature of the Middle Assyrian calendar is also necessary for reconstructing the absolute chronology of Assyria during the second half of the 2nd millennium B.C.E. Finally, establishing an absolute chronology for the entire Near East in the 13th century B.C.E. is a task that requires a discussion of synchronisms connecting the different powers of the age – discussion, which is ultimately based on the inner chronology of Assyria during the relevant period, but does not contribute on its own to the establishment of a precise Assyrian chronology.

On the other hand, despite the importance of the Assyrian chronology in the second half of the 2nd millennium B.C.E. for establishing a chronological scheme for the history of the entire Near East in this period, it must be noted that the study of Assyria proper in the second half of the 2nd millennium B.C.E. has not enjoyed much popularity within the general framework of Ancient Near Eastern studies, or, more specifically, of Assyriology. Although this situation has somewhat changed in the last two decades, due to the publication of many newly-discovered or previously unpublished sources from the Middle Assyrian period,¹⁴ there are very few scholars in the world specializing in the study of Middle Assyrian sources, let alone the chronological implications thereof. None of those scholars resides in Israel or visits Israeli universities on a regular basis.

¹⁴ One should note, first of all, volumes III-IX of the *MARV* series published by Helmut Freydank, as well as the publications by Cancik-Kirschbaum 1996; Röllig 2008; Jakob 2009. But there are also smaller groups of sources recently published, such as Maul 1992; Maul 2005; Ismail and Postgate 2008.

In view of the above considerations, we find it most appropriate to present our thesis in the form of a series of articles. Each article will examine a specific problem in reconstructing the chronology of the Middle Assyrian period. The last article will consider the wider issues of the Near Eastern chronology during the 13th century B.C.E.

Based on the definition of the objectives of the present study as outlined above, the order of the articles planned to constitute our thesis will be as follows:

- 1) Article offering a reconstruction of the chronological order of the Assyrian eponyms in the reign of Shalmaneser I. This article has been recently published as Yigal Bloch, "The Order of Eponyms in the Reign of Shalmaneser I," *Ugarit-Forschungen* 40 (2008, published 2010): 143-178.¹⁵
- 2) Article offering a reconstruction of the chronological order of 26 eponyms in the reign of Tukulti-Ninurta I (of which the first 22 eponyms, starting with the first regnal year of Tukulti-Ninurta I, are to be considered a complete sequence – i.e., a sequence, to which no further eponyms are likely to be added). This article has been accepted for publication as Yigal Bloch, "The Order of Eponyms in the Reign of Tukulti-Ninurta I," *Orientalia*, N.S. (to be published in 2010-2011).¹⁶
- 3) Article dealing with the lengths of the reigns of the kings of Assyria in the 13th-12th centuries B.C.E., for whom the different manuscripts of the AKL present diverging data, or data whose chronological meaning is not immediately clear. This article

¹⁵ Attached is an authorized offprint of the article.

¹⁶ Attached is a letter from the editorial board of the journal *Orientalia* indicating the acceptance of the article for publication, with minor changes required. The separate treatment of the order of the eponyms in the reign of Shalmaneser I and in the reign of Tukulti-Ninurta I has been necessitated by the length of the discussion of the order of the eponyms belonging to each reign.

(currently in preparation) will establish the precise length of reign for each of the relevant kings.

- 4) Article demonstrating that both the Middle Assyrian calendar months and the beginning point of the Middle Assyrian calendar year moved between different seasons of the solar year cycle – i.e., that the Middle Assyrian calendar is to be understood as purely lunar, without intercalation of years. Part of the argument to be presented in this article was delivered in a lecture at the international conference “Living the Lunar Calendar” held at the Bible Lands Museum in Jerusalem on January 30 - February 1, 2010, under the title “Middle Assyrian Lunar Calendar and Chronology”; the article was invited for publication in the refereed collection *Calendars and Years*, vol. III.¹⁷
- 5) Article drawing connections between the Assyrian chronology of the 13th century B.C.E. and the chronologies of Babylonia, the Hittite empire and Egypt in the same period. This article will attempt to establish a precise absolute chronology for the major Near Eastern powers in the 13th century B.C.E., and will also demonstrate the relevance of attaining the maximum possible precision in chronological reconstruction for understanding historical events. The latter demonstration will use, as an example, the impossibility of explaining Ḫattušili III’s readiness to conclude the peace treaty with Ramesses II by the Assyrian conquest of northeastern Syria, which would have brought Assyria into the position of constituting a threat for the territorial integrity of the Hittite empire.

The articles on the topics listed above are best presented as separate studies, with only occasional – although crucial – links to the each other. This will enable us to discuss

¹⁷ Attached is a letter of invitation from the editors of the collection.

each of these issues without doing damage to the comprehensiveness of the discussion. In addition, publication of the elements of our thesis as a series of articles in peer-reviewed journals will render them subject to immediate scrutiny by scholars specializing in the study of the Middle Assyrian period; in this way, the earlier articles, upon being accepted for publication, will be able to serve as secure foundations for further articles, until our study culminates with the final article offering a reconstruction of the absolute chronology of the entire Near East in the 13th century B.C.E. and exploring some historical implications thereof.

II. Survey of the Current State of Scholarship

The structure of the Assyrian calendar before the adoption of the Babylonian calendar by Tiglath-pileser I, the chronological placement of the eponyms of the Middle Assyrian period and the reconstruction of the Assyrian and the Ancient Near Eastern chronology of the second half of the 2nd millennium B.C.E. based on the data of the AKL are issues that have been studied repeatedly during the last century, but usually, no connections were drawn between these three topics. Moreover, the study of these issues has often been hampered by unsubstantiated assumptions.

The role played by such assumptions is most clear in regard to the structure of the Assyrian calendar. Already in 1920, Hans Ehelolf and Benno Landsberger had published a study, in which they identified the order of the months in the Assyrian calendar of the 2nd millennium B.C.E. (Ehelolf and Landsberger 1920). Their conclusions concerning the order of the months in the Assyrian calendar have remained in force until today,¹⁸ but with regard to the beginning point of the Assyrian calendar year, they assumed – without any

¹⁸ Except that the name of the month, which Ehelolf and Landsberger read *tanmarte* (in genitive), is now to be read *kalmartu* (see Donbaz 1971: 26, 28).

supportive evidence – that this point was equal to the beginning point of the Babylonian calendar year, i.e., to the first day of the month Nisannu. Since different Assyrian months are attested in the documents from the Middle Assyrian period as parallel to the month Nisannu, Ehelolf and Landsberger interpreted this situation as evidence that different Assyrian months could begin the Assyrian calendar year.

Subsequently, Ernst Weidner used the study of Ehelolf and Landsberger, supplemented by some additional evidence, to suggest that the twelve months of the Assyrian calendar always followed one after the other in an unbroken cycle without any further month being added to them for the purpose of intercalation, but the beginning point of the Assyrian calendar year could move from one month to another, and thus a given year could be intercalated by moving the beginning point of the next year one month later than it should have been after a normal twelve-months year (Weidner 1928-29).¹⁹ A few years later, in the publication of an administrative archive from the period of the rule of Ninurta-tukulti-Aššur, Weidner re-iterated this proposal, now supported by documents from the reign of Tiglath-pileser I, whose dating formulas indicate both an Assyrian and a parallel Babylonian month, and which demonstrate that in contradistinction to the Babylonian months, consigned to a relatively fixed position within the solar year cycle by the mechanism of intercalation (which kept the month Nisannu around the spring equinox), the Assyrian months rotated through the solar year

¹⁹ I.e., if a regular year started with the month Šippu, it would contain twelve months exactly and end with the month Ḫibur, the next year starting again on the first day of Šippu. If, however, a year starting with the month Šippu was to be intercalated, then the month Šippu following after the twelfth month of the year, Ḫibur, would be included in the same year as the thirteenth month, and the next calendar year would begin not on the first day of Šippu but on the first day of the following month, Qarrātu.

cycle (Weidner 1935-36: 28-29).²⁰ But though Weidner's conclusion concerning the movement of the Assyrian months through the solar year cycle was correct, his assumption about the beginning of the Assyrian calendar year being parallel to the first day of Nisannu is unsubstantiated. The placement of the beginning point of the calendar year in the Middle Assyrian period should be figured out based on the internal evidence of Assyrian documents – a task, which the present study is intended to accomplish.

Another proposal concerning a mechanism of intercalation that would be employed in the Middle Assyrian calendar was made by Johannes Koch (Koch 1989: 132-141). According to Koch's proposal, when, during a given year of the Middle Assyrian calendar, the decision about intercalation was made, the intercalary month would be added at the beginning of the following year, bearing the same name as the last month of the current year; the new year, containing twelve months just as the preceding one, would end with a month that occupied, in the terms of the twelve-months cycle, one position earlier than the last month of the preceding year.²¹ The mechanism suggested by Koch would keep

²⁰ E.g., a document from the eponym year of Tiglath-pileser I (excavation number Assur 18771bg, museum number VAT 16400, now published as *MARV I 73*) indicates the Assyrian month Ḫibur as contemporaneous with the Babylonian month Abu. Another document, from the eponym year of Ninurta-aḫa-iddina (excavation number Assur 18782ab, museum number VAT 16389, now published as *MARVI 25*), indicates the Assyrian month Qarrātu, two months later than Ḫibur in the cycle of the Assyrian months, as parallel to the Babylonian month Nisannu, eight months later than Abu. This means that from the eponym year of Tiglath-pileser I (which was probably his first regnal year) to the eponym year of Ninurta-aḫa-iddina, the Assyrian months moved about half a year in relation to the solar year cycle.

²¹ I.e., if a given calendar year began on the first day of the month Šippu, ended twelve months later with the last day of the month Ḫibur, and the decision about intercalation was made during that year, then the month following Ḫibur would be not Šippu but yet another Ḫibur, reckoned as the first month of the next calendar year, and that next year would now end not on the last day of Ḫibur (located twelve months after

each Assyrian month in a relatively fixed position within the solar year cycle but would make the beginning point of the Assyrian calendar year move, on the average, 10.89 days backwards with the completion of each solar year cycle. However, there is no evidence indicating that the months of the Assyrian calendar were consigned to relatively fixed positions within the solar year cycle; and moreover, Koch's proposal required him to see the changing correspondences between Assyrian and Babylonian months in the reign of Tiglath-pileser I as resulting from artificial recording conventions adopted by the Assyrian court scribes, which did not routinely reflect the actual Babylonian calendar. The present study will show this assumption to be problematic and will bring evidence indicating that the Assyrian months had actually moved through the solar year cycle for at least a century prior to the beginning of the reign of Tiglath-pileser I.

It has to be noted that in general, scholars have tended to accept Weidner's proposal concerning the mechanism of intercalation that would be employed in the Middle Assyrian calendar, despite the fact that this proposal rests on an unverified assumption (see, e.g., Hunger 1976-80: 299; Cohen 1993: 240). Recently, when a group of scholars suggested that the Assyrian calendar prior to the reign of Tiglath-pileser I was purely lunar, with each year consisting of 12 lunar months (Gasche et al. 1998: 50), their proposal has drawn a considerable amount of criticism (see, e.g., Huber 1999-2000; Reade 2000; Sassmanshausen 2006: 165). Yet, much of this criticism is based on extrapolating the characteristics of the Assyrian calendar in a different historical period – the Old Assyrian period (20th-19th centuries B.C.E.), for which there is evidence of the Assyrian calendar year beginning regularly in autumn (Veenhof 2000: 141-147) – on the Middle Assyrian

the end of the intercalary month) but one month earlier, on the last day of the month Abu-šarrāni; the subsequent year would then begin on the first day of ḫibur, and so on.

calendar of the 15th-12th centuries B.C.E.²² Given the large temporal distance between the Old and the Middle Assyrian periods, such extrapolation is not justified *a priori*, and the examination of the evidence from the 13th-12th centuries B.C.E. to be undertaken in the present study will show that at least for this period, the proposal made by Gasche et al. is indeed correct. (In fact, there is evidence that the rotation of the Assyrian months through the solar year cycle had begun already by the end of the Old Assyrian period, i.e., by the early 18th century B.C.E.)²³

As for the dating of the eponyms of the Middle Assyrian period, research in this field has been generally hampered by the absence of eponym lists arranged in chronological order, such as are attested for the 10th-7th centuries B.C.E.²⁴ Different scholars attempted to assign specific eponyms to the reign of this or that particular king based on criteria such as the mention of eponyms in the dating formulas of royal inscriptions, or attestation of some eponyms in family archives of the Middle Assyrian period, where those eponyms date the activity of a generation that can be supposed to match roughly the reign of a given king. The most important studies of this kind are Weidner 1939-41: 112-119; Fine 1952-53; 1954; Wilcke 1976: 229-233 and Saporetti 1979. A major step forward was made with the study of Freydank 1991, which both utilized the data of many Middle Assyrian texts kept in the Vorderasiatisches Museum zu Berlin and still unpublished at the time of the publication of Freydank's study (many, but not all of

²² The autumn new year in the Old Assyrian calendar is mentioned explicitly, as evidence of intercalation and hence a counter-argument to the proposal of Gasche et al., by Reade 2000: 151-152 and Sassmanshausen 2006: 165.

²³ See Cohen 1993: 237-238.

²⁴ The eponym list KAV 21-22 covers partly the reigns from Tiglath-Pileser I (1114-1076 B.C.E.) to Aššur-dān II (934-912 B.C.E.). However, this list (published in transcription by Ungnad 1938: 436) is very fragmentary, and the names of only few eponyms contained therein can be read or restored with reasonable certainty.

those texts have been published later by Freydank in the *MARV* series) and was the first study to link the structure of the Middle Assyrian calendar with the problem of reconstructing the chronological order of the eponyms.²⁵ It can be generally said that with each subsequent study, the dating of eponyms to the reigns of specific kings became more substantiated, although many of the datings remained conjectural, and some of them will be rejected in the present study.

In any event, completely new prospects for the project of reconstructing the chronological order of the eponyms in the reigns of Shalmaneser I and Tukultī-Ninurta I have opened with the discovery of the Middle Assyrian administrative archive from Tell Šēḫ Ḥamad (Dūr-Katlimmu), the residence of the Assyrian governors of northeastern Syria on the Lower Ḥabūr. The first major attempt at reconstructing the temporal order of the eponyms from this archive was undertaken by Wolfgang Röllig (Röllig 2004). Subsequently, Helmut Freydank offered substantial corrections to Röllig's reconstruction (Freydank 2005), and those corrections have been accepted by Röllig in his latest publication of a group of documents from Tell Šēḫ Ḥamad dealing with agriculture and livestock management (Röllig 2008: 4). Interestingly, in the latter publication Röllig has introduced further changes into the sequence of eponyms reconstructed by Freydank, without explaining the reasons for those changes. But what is most important is that following the studies by Röllig and Freydank, for the first time, we have now a sequence of about 40 eponyms dating to the reigns of Shalmaneser I and Tukultī-Ninurta I, with the

²⁵ Specifically, the changing correspondences between Assyrian and Babylonian months in different eponym years belonging to the reign of Tiglath-pileser I were utilized to reconstruct partly the temporal order of those eponyms (Freydank 1991: 82-88).

eponym year of Tukultī-Ninurta I himself – likely the first full regnal year of this king²⁶ – forming a clear boundary between the groups of eponyms belonging to the two reigns.

However, on the one hand, the sequence of the eponyms from Tell Šēḫ Ḥamad reconstructed by Freydank (and essentially adopted by Röllig in his 2008 publication) is, on some points, erroneous and requires correction; and on the other hand, this sequence can be supplemented by other eponyms, attested in documents from the capital city of Aššur,²⁷ from Tell al-Rimāḫ (ca. 60 km southwest of Mosul),²⁸ from Tell Ali (on the Lower Zāb, ca. 40 km west of Kirkuk)²⁹ and from Tell Ḥuwēra (Assyrian Ḥarbe, located in northeastern Syria halfway between the Upper Balīḫ and the Ḥabūr triangle).³⁰ Correcting and supplementing the order of the eponyms from Tell Šēḫ Ḥamad as reconstructed by Freydank is one of the tasks of the present study, and as mentioned above, our study will reconstruct a chronological sequence of 52 eponyms: 30 eponyms of the reign of Shalmaneser I and 22 eponyms belonging to the reign of Tukultī-Ninurta I. Moreover, the present study will argue that this sequence of 52 eponyms is complete, i.e., that no further eponyms are likely to be placed within this sequence.

²⁶ Prior to the late 10th century B.C.E., the Assyrian kings carried out the office of the eponym in their first full regnal year (see Tadmor 1958: 28, n. 53; Finkel and Reade 1995: 167).

²⁷ The documents from Aššur to be utilized in the present study in reconstructing the order of the eponyms during the reigns of Shalmaneser I and Tukultī-Ninurta I belong to different archives. Those of them belonging to the family archive of Urad-Šerū'a have been published by Postgate 1988; others have been published in the *MARV* series.

²⁸ Documents from the 1964 excavations season at Tell al-Rimāḫ have been published in facsimiles only, *Iraq* 30 (1968), pls. lxvii-bxxiv. Documents from the 1965 excavations season have been published by Saggs 1968. Documents from the 1966 excavations season have been published by Wiseman 1968.

²⁹ The archive from Tell Ali has been published by Ismail and Postgate 2008.

³⁰ The archive from Tell Ḥuwēra has been published by Jakob 2009.

Insofar as the reconstruction of a continuous chronological scheme for the Middle Assyrian period is considered, a sound basis for such reconstruction has been available since the discovery of the three main manuscripts of the AKL covering the Middle Assyrian period: the Nassouhi manuscript (Nassouhi 1927), and the Khorasabad and the SDAS manuscripts (Gelb 1954). In fact, already in the 1940s, Arno Poebel had offered a study of the Khorasabad manuscript of the AKL, not yet completely published by then (Poebel 1942; Poebel 1943). Poebel's study, which also paid attention to the Nassouhi manuscript of the AKL that had been published fifteen years earlier, succeeded to establish a chronological outline of the Middle Assyrian period that won universal scholarly acceptance for almost forty years.³¹

A major change came in 1979. In that year, Johannes Boese and Gernot Wilhelm published a study dealing with the element of uncertainty in the AKL tradition, which has the greatest influence on the reconstruction of the chronological outline of the Middle Assyrian period: the question of the length of the reigns of Ninurta-apil-Ekur and Aššur-dān I. As noted above, the Khorasabad and the SDAS manuscripts of the AKL specify the figures of 3 and 46 years for the reigns of these two kings, while the Nassouhi manuscript's figure for the reign of Ninurta-apil-Ekur is 13 years, and the figure for the reign of Aššur-dān I in that manuscript was established, through a collation of the cuneiform tablet by John A. Brinkman, as [x+]26 years (Brinkman 1973: 309). Boese and Wilhelm argued, based on the so-called *Distanzangaben* of Assyrian royal inscriptions – the

³¹ The chronological scheme worked out by Poebel for the Middle Assyrian period is reproduced, e.g., in the chronological appendix to the final edition of A. L. Oppenheim's influential introduction to the study of ancient Mesopotamia (Brinkman 1977: 345), even though in contradistinction to Poebel's study, this appendix does not venture to reconstruct a continuous chronology for the Assyrian kings preceding Ellil-nāšir II.

periods of time from the building activities of Aššur-dān I to those of Tiglath-pileser I as specified in an inscription of the latter (RIMA 2, A.O.87.1, vii 60-78), from the building activities of Shalmaneser I to those of Esarhaddon (680-669 B.C.E.) as specified in the inscriptions of the latter (Borger 1956, Ass. A, iii 30 - iv 6; Ass. B), and from the activity of (probably) Shalmaneser I to that of Aššur-rēša-iši I as specified in an inscription of some later king (RIMA 1, A.O.86.11) – that the period of time covered by the reigns of Nínurta-apil-Ekur and Aššur-dān I was 49 years in all, and that Aššur-dān I had probably reigned for only 36 years (Boese and Wilhelm 1979).

The chronology of the Middle Assyrian period suggested by Boese and Wilhelm, which we shall term the Low Chronology (as opposed to the High Chronology based on the premise that Nínurta-apil-Ekur had reigned 13 years and Aššur-dān I – 46 years), has been accepted by most scholars since the 1980s until present (see, e.g., Naʾaman 1984: 117-19; Freydank 1991: 32-33; Cancik-Kirschbaum 1996: 10; Janssen 2009: 77-80). However, some scholars still support the High Chronology of the Middle Assyrian period (e.g., Sassmanshausen 2006: 165); and the present study will show, based on Assyro-Babylonian synchronisms³² and on calendrical considerations, that the Low Chronology of the Middle Assyrian period is to be rejected in favor of the High Chronology. J

Finally, in drawing a connection between the Middle Assyrian chronology and the chronology of Egypt in the 13th century B.C.E., scholars have generally used the chronology of Babylonia as a link between the chronologies of Assyria and Egypt. Yet, the “Babylonian link” approach has not been able to yield a definite date for the

³² One of those synchronisms will be the dating of the end of the reign of Kaštiliaš IV of Babylonia (i.e., his capture by Tukultī-Nínurta I in an Assyro-Babylonian war) to the 18th regnal year of Tukultī-Nínurta I. This synchronism will be established based on our treatment of the order of the eponyms in the reign of Tukultī-Nínurta I (see below).

enthronement of Ramesses II; scholars utilizing this method came out with all the three astronomically possible dates for the beginning of Ramesses II's reign: 1304 B.C.E. (Rowton 1966), 1290 B.C.E. (Edel 1958; Nemirovsky 2007), and 1279 B.C.E. (von Beckerath 1994: 24-28; von Beckerath 1997: 65-67). One reason for this is that while the succession of the Babylonian kings and the duration of their reigns in the 13th-11th centuries B.C.E. are established based on the Babylonian King Lists A and C (BKL-A and BKL-C),³³ the reconstruction of the absolute chronology of Babylonia for the period in question is dependent on the synchronisms between some Babylonian kings and their Assyrian counterparts. In the current state of scholarship, these synchronisms can only be construed as approximate (amounting to the fact that a given king of Babylonia reigned contemporaneously with a given king of Assyria, without a precise correspondence between the regnal years of those kings), which leads to a factor of uncertainty of ca. 10 years in establishing the absolute chronology of Babylonia. This factor of uncertainty is further magnified to ca. 20 years if one allows for the possibility of reconstructing the period covered by the reigns of Ninurta-apil-Ekur and Aššur-dān I of Assyria as either 49 or 59 years (see Brinkman 1976: 28-33, esp. nn. 85, 89).

In the present study, we will suggest for the first time that a precise synchronism between Assyria and Babylonia can be established for the 13th century B.C.E.: the end of the reign of the Babylonian king Kaštiliaš IV (i.e., his capture by Tukultī-Ninurta I of Assyria) is to be dated to the 18th regnal year of Tukultī-Ninurta I.

In addition to this synchronism, we will use the set of two less precise synchronisms relating to the reign of the Hittite king Ḫattušili III: one indicating that Ḫattušili III was still alive and reigning in the 42nd regnal year of Ramesses II of Egypt at the earliest,³⁴ and

³³ For the texts of the BKL-A and the BKL-C, see Grayson 1980-83: 90-97.

³⁴ Edel 1976: 29-30; von Beckerath 1994: 25, 28; Nemirovsky 2003: 4-7.

the other based on the fact that the death of Ḫattušili III and the enthronement of his son and successor, Tudḫaliya IV, took place within the reign of Shalmaneser I of Assyria.³⁵ These synchronisms will be used in order to establish a precise connection between the chronologies of Assyria and Egypt in the 13th century B.C.E. and to single out with certainty the year 1290 B.C.E. as the year of the enthronement of Ramesses II.

III. The Sources to Be Used in the Present Study and the Ways of Their Utilization

The sources to be used in the present study can be divided into several categories, based on the specific issues for which they are relevant (see above, “The Main Problems to Be Explored”).

The reconstruction of the chronological sequence of Assyrian eponyms for the 30 years of the reign of Shalmaneser I and the first 22 years of the reign of Tukulti-Ninurta I will take as its starting point the order of the eponyms in the documents from Tell Šēḫ Ḫamad as reconstructed by Freydank 2005, based on the earlier study by Röllig 2004. In order to supplement or correct the order of the eponyms reconstructed by Freydank, we will use the following groups of sources:

- a) Inscriptions of Shalmaneser I (RIMA 1, A.0.77.1-10), which will be analyzed in order to figure out the chronological order of the building projects described therein. The order of the building projects will establish the chronological order of the eponyms dating the inscriptions in question (all of those eponyms belong to the first half of

³⁵ As shown by the letter KUB 23.99 (published most lately by Mora and Giorgieri 2004, no. 18); see also Freu 2007: 284.

the reign of Shalmaneser I, and only a part of them are attested in the archive from Tell Šēḫ Ḥamad).

- b) The tablet IM 82970 from Tell Ali (Ismail and Postgate 2008, no. 19) and the documents KAJ 121, 109 and 113 from the family archive of Urad-Šerū'a (Postgate 1988, nos. 29, 34, 35), which, together with the inscription RIMA 1, A.0.77.1 narrating the final conquest of Ḥanigalbat by Shalmaneser I, will be used to establish the chronological order of the eponyms around the time of this conquest (only a part of those eponyms are attested in the archive from Tell Šēḫ Ḥamad).
- c) The documents MARV II 23 from Aššur (Freydank 1994: 15-20), KAJ 73 from the family archive of Urad-Šerū'a (Postgate 1988, no. 13) and TR 3012 from Tell al-Rimāḥ, which supply several more eponyms, unattested in the archive from Tell Šēḫ Ḥamad, that should be dated to the reign of Shalmaneser I (thus, the total number of eponyms, which can be securely dated to his reign, will amount to thirty).
- d) Documents from Tell Šēḫ Ḥamad (some of them unpublished, but the eponyms dating them cited by Jakob 2003: 55-57) and a letter from Tell Šābī Abyaḍ on the Upper Balīḫ (published by Wiggermann 2006), indicating the order of succession of the Assyrian Grand Viziers (*sukkallū rabī'ūtu*) who served as the Assyrian governors of northeastern Syria (the former kingdom of Ḥanigalbat). The order of the succession of the Grand Viziers will necessitate some corrections to the order of the eponyms from the reign of Tukultī-Ninurta I, attested at Tell Šēḫ Ḥamad, as reconstructed by Freydank.
- e) Royal inscriptions of Tukultī-Ninurta I (RIMA 1, A.0.78.6 and 18), the Tukultī-Ninurta Epic (published by Machinist 1978) and some administrative documents from Aššur: MARV I 1 (Freydank 1974: 55-79), MARV VIII 7, KAJ 103, 106 (Postgate 1988, nos. 57, 58), and documents from the Middle Assyrian archive discovered at Tell Ḥuwēra,

located halfway between the Upper Balīḥ and the Ḥabūr triangle (published by Jakob 2009). These sources will be used to establish the chronological order of the eponyms during the war of Tukultī-Ninurta I against Kaštīliaš IV and subsequently thereafter. The order of the eponyms to be established based on these documents will necessitate some corrections to the order of the eponyms from the reign of Tukultī-Ninurta I attested at Tell Šēḥ Ḥamad, as reconstructed by Freydank.

- f) The document *MARV V 83* from Aššur (Freydank 1997: 129-134) will be used to argue that the eponym Adad-šamši attested in this document is to be placed in the reign of Tukultī-Ninurta I, immediately preceding the eponym Abī-ilī son of Katiri, which is attested in the archive from Tell Šēḥ Ḥamad and which will be argued (based on the documents detailed in section (d) above) to belong to the period after the final defeat of Kaštīliaš IV by Tukultī-Ninurta I.
- g) The specific placement of the eponyms mentioned in the documents detailed in section (c) above within the sequence of the eponyms belonging to the reign of Shalmaneser I, and the argument that the sequence of the eponyms for the first 22 regnal years of Tukultī-Ninurta I to be reconstructed in the present study is complete – i.e., that no further eponyms are likely to be added to this sequence – will be based on the age-categories of certain persons attested in ration lists from Tell Šēḥ Ḥamad (those ration lists are presently unpublished, but the eponyms dating them and the age-categories of the persons mentioned therein, which have a bearing on the order of the eponyms in the archive from Tell Šēḥ Ḥamad, have been presented in the study of Röllig 2004). We will establish a parallel between one of the pre-adult age-categories mentioned in these ration lists and an age-category mentioned in the so-called Ḥarrān Census Texts from the 7th century B.C.E. (Fales and Postgate 1995). Then, we will use the demographic characteristics of the

working-class population of Mesopotamia in the 1st millennium B.C.E. established in a study of Martha Roth (Roth 1987) – characteristics which we will argue can be reasonably extrapolated to the Middle Assyrian period – in order to establish the approximate span of biological age covered by each of the administrative age-categories employed in the Middle Assyrian documents. We will use these age-spans, in conjunction with the age-categories of specific persons mentioned in the ration lists from Tell Šēḫ Ḥamad, to locate those periods within the reign of Shalmaneser I, in which the eponyms mentioned in the documents listed in section (c) above should be placed. Finally, we will use the age-categories listed for a specific woman in the documents from Tell Šēḫ Ḥamad to argue that no further eponyms are likely to be added to the sequence from the first to the 22nd regnal years of Tukultī-Ninurta I, which can be established based on the documents listed in sections (d)-(f) above.

The reconstruction of the lengths of the reigns of the kings of Assyria in the 13th-12th centuries B.C.E., for whom the different manuscripts of the AKL provide diverging data, or data whose chronological meaning is not immediately clear, will be based on the following groups of sources:

- a) Documents dated by the eponyms, which are to be placed in the period from the death of Tukultī-Ninurta I to the death of Ninurta-apil-Ekur. This group includes, first of all, administrative documents from the archive of the chief officials responsible for the regular offerings in the temple of the god Aššur in the city of Aššur (published by Freydank 1992). Other documents to be included in the same group are administrative documents dated to the eponym years of the kings who reigned in the relevant period (Aššur-nādin-apli, Aššur-nērārī III, Ellil-kudur-ušur

and Ninurta-apil-Ekur);³⁶ Aššur-nādin-apli's royal inscription RIMA 1, A.O.79.1, dated to the eponym year of Erīb-Sîn;³⁷ documents from the farmstead of the Assyrian Grand Vizier, Ilī-padâ, at Tell Šābī Abyaḍ, belonging to the period of the activity of the last two administrators of the farmstead (Buria and Tammitte);³⁸ and some additional administrative documents from the city of Aššur, whose dating to the period from the death of Tukultī-Ninurta I to the death of Nīmurta-apil-Ekur will be substantiated in the present study.

- b) The document A.842 (published by Donbaz 1992: 119-121, 125), indicating that Ninurta-tukulti-Aššur was probably responsible for the royal cult in the city of Aššur in the eponym year of Pišqīya son of Kaššu, and the administrative archive from the city of Aššur known by the excavation number Assur 6096 (for references to the publications of the documents from this archive see Pedersén 1985: 56-68). The documents from the latter archive indicate that Ninurta-tukulti-Aššur carried out functions appropriate for a king (though not being mentioned by a royal title) for the period of twelve months, from the month Ḫibur of the eponym year of Aššur-šēzibanni son of Pa²uzu to the month Abu-šarrāni of the eponym year of Sîn-šēya. Taken together, the document A.842 and the archive Assur 6096 indicate that Ninurta-tukulti-Aššur carried out royal or quasi-royal functions for at least ca. two years, and thus the term *tuppišu*, specified for his rule in the AKL, cannot signify a

³⁶ For the documents dated to the eponym years of these kings, see Freydank 1991: 121-122, 131, 158.

³⁷ The mention of the eponym year of Erīb-Sîn in the Middle Assyrian chronicle fragment VAT 10803+11063 (Frahm 2009, no. 61) indicates that the eponym year of Aššur-PAP-apli mentioned in the same chronicle fragment is, most likely, the first regnal year of Aššur-nādin-apli.

³⁸ For these documents, see Jakob 2003: 98-99.

reign of less than a full calendar year, as commonly held by scholars (e.g., Boese and Wilhelm 1979: 21-23; Gasche et al. 1998: 53-54; Janssen 2007).

- c) Documents dating the activity of the official Samnuḫa-ašarēd as the administrator of the royal palace in the city of Aššur (listed by Jakob 2003: 96). One of these documents (MARV III 46) dates to the eponym year of Sîn-šēya, i.e., to the period of the activity of Ninurta-tukulti-Aššur in royal or quasi-royal capacity; another document (MARV I 51) mentions the eponym Ātamar-dēn-Aššur,³⁹ which will be argued in the present study to have been the fourth regnal year of Aššur-dān I. Whether Aššur-dān I reigned 46 or 36 years, it would be unlikely for Samnuḫa-ašarēd to survive in the high office of the administrator of the royal palace in the city of Aššur from the fourth regnal year of Aššur-dān I until after the death of that king. It is more plausible that the eponym year of Sîn-šēya, during which Samnuḫa-ašarēd was still the administrator of the royal palace, should be placed a few years before the death of Aššur-dān I; this would indicate that Ninurta-tukulti-Aššur exercised quasi-royal functions during the nominal reign of Aššur-dān I.
- d) Historical and literary sources dealing with the capture of the cultic statue of the chief Babylonian deity Marduk by Tukultī-Ninurta I, its subsequent return to Babylon by Ninurta-tukulti-Aššur, and its capture in the Elamite invasion of Babylonia, which brought the end to the Kassite dynasty and thus provided the opportunity for the rise of the Second Dynasty of Isin. It will be argued that these sources – more specifically, the Babylonian Chronicle P (Glassner 2004, no. 45) and the Marduk Prophecy (Borger 1971) – indicate that the return of the statue of Marduk to Babylon by Ninurta-tukulti-Aššur took place prior to the capture of the statue by the Elamites, and that the Elamite invasion of Babylonia, which brought

³⁹ See Freydank 1991: 74.

the end to the Kassite dynasty, took place a number of years before the death of Aššur-dān I. These considerations will necessitate the conclusion that Ninurta-tukulti-Aššur ruled Assyria for a few years during the nominal reign of Aššur-dān I.

- e) The text known in first-millennium B.C.E. copies from Assyria and Babylonia, which is formulated as a letter of a Babylonian king to an Assyrian ruler, who was involved in a conflict with Ninurta-tukulti-Aššur (the addressee of the letter is probably to be identified as Mutakkil-Nusku, hence we will term it *the Mutakkil-Nusku Letter*). Despite the literary nature of this text (published most recently by Llop and George 2001-2002), we will argue that it was based probably on an actual diplomatic letter sent by a Babylonian king to Mutakkil-Nusku. We will demonstrate that the Mutakkil-Nusku Letter reflects a political situation, in which several contenders struggled for power in Assyria, attempting to enlist the support of the Babylonian king (who prudently maintained connections with several contenders, even as he was actually supporting one of them at a given time), and that the seizure of power by one of the contenders appears not to have entailed formal accession to the throne. Thus, the Mutakkil-Nusku Letter indicates that both Ninurta-tukulti-Aššur and Mutakkil-Nusku wielded power as *de facto* rulers of Assyria while someone else – evidently their father, Aššur-dān I – held the nominal royal title.
- f) Historiographical works including: the Babylonian King List A, specifying the lengths of the reigns of the kings of the late Kassite dynasty; the Babylonian King List C, specifying the lengths of the reigns of the early kings of the Second Dynasty of Isin; and the Middle Assyrian chronicle fragment indicating that the death of Marduk-nādin-aḥḥē (the sixth king of the Second Dynasty of Isin) took place not later than the last regnal year of Tiglath-pileser I, i.e., 1076/5 B.C.E. (Glassner 2004, no. 15). Based on these sources, and on the synchronism between the end of the

reign of Kaštiliaš IV of Babylonia and the 18th regnal year of Tukultī-Ninurta I, mentioned above, we will calculate the minimal possible duration of the period from the capture of Kaštiliaš IV to the death of Marduk-nādin-aḫḫē in the terms of Babylonian chronology, and the maximal possible duration of the same period in the terms of Assyrian chronology. We will demonstrate that the results of these two calculations can match each other only on the assumption that Aššur-dān I reigned 46 years, but not on the assumption that he reigned 36 years.

The discussion of the nature of the Middle Assyrian calendar will be based on the following sources:

- a) Documents from the reign of Tiglath-pileser I, which point out parallels between the Assyrian and the Babylonian months in some specific eponym years belonging to his reign. It will be shown that, despite occasional scribal errors (whose classification as such will be supported by specific argumentation), the documents belonging to the reign of Tiglath-pileser I attest clearly to the movement of the Middle Assyrian calendar months through the solar year cycle. The discussion of the documents from the reign of Tiglath-pileser I will be based on their study by Freydank 1991: 82-86.
- b) The letter DeZ 3320 (Cancik-Kirschbaum 1996, no. 6) from Tell Šeḫ Ḥamad. This letter expresses some urgent concerns of its sender (located probably in the general area between the Upper Balīḫ and the Ḥabūr triangle) relating to the processing of newly-harvested flax. Given the information on the processing of flax in pre-modern Near East as provided by Aḥmad ibn ʿAlī al-Maqrīzī, an Egyptian author of the early 15th century C.E. (summarized recently by Gil 2004: 82-83), one can determine that the letter was written in late summer. The letter Cancik-Kirschbaum 1996, no. 6, is dated to day 27 of the month Allānātu, the eponym year of Ina-Aššur-

šumī-ašbat (to be equated with the 18th regnal year of Tukultī-Ninurta I). Hence, in the 18th regnal year of Tukultī-Ninurta I the month Allānātu must have belonged to late summer, whereas in the first regnal year of Tiglath-pileser I the same month must have belonged to late winter (as can be established based on the documents listed in section (a) above). This indicates that the movement of Middle Assyrian months through the solar year cycle took place for at least a whole century before the reign of Tiglath-pileser I, and is not a mirage created by the recording procedures of the scribes of Tiglath-pileser I (*contra* Koch 1989: 140-141).

- c) The document MARV II 19, indicating the month Šippu as the first month of the Assyrian calendar year in the 27th and 28th regnal years of Shalmaneser I,⁴⁰ and the document MARV II 17, indicating the month Šippu as the beginning point of the 22nd regnal year of Tukultī-Ninurta I.⁴¹ We will demonstrate that the beginning points of these calendar years belonged to different seasons of the solar year cycle.
- d) The document MARV V 8, indicating the month Šippu as the first month of the eponym year of Marduk-aḥa-ēriš, which will be argued to have been the penultimate (12th) regnal year of Ninurta-apil-Ekur. We will demonstrate that the first day of the month Šippu in the 12th regnal year of Ninurta-apil-Ekur belonged to a different season of the solar year cycle compared to the first day of the month Šippu in the 22nd regnal year of Tukultī-Ninurta I. This conclusion, and the conclusions to be reached through the discussion of the documents mentioned in sections (a)-(c), above will indicate that no mechanism of intercalation was used to

⁴⁰ I.e., the eponym years of Usāt-Marduk and Ellil-ašarēd, which the present study will argue should be equated with the 27th and 28th regnal years of Shalmaneser I.

⁴¹ I.e., the eponym year of Salmānu-šuma-ušur, which the present study will argue should be equated with the 22nd regnal year of Tukultī-Ninurta I.

keep the beginning point or the months of the Middle Assyrian calendar year in a relatively fixed position within the solar year cycle.

The fixing of the lengths of the reigns of the kings of Assyria in the 13th-12th centuries B.C.E. and the conclusion that intercalation of years was not practiced in the Middle Assyrian calendar (which is tantamount to the conclusion that the Middle Assyrian calendar years consisted uniformly of 12 lunar months) will enable us to reconstruct a precise chronology of the Middle Assyrian period. This reconstruction will establish the 18th regnal year of Tukultī-Ninurta I as 1223/2 B.C.E., and will utilize once more the letter Cancik-Kirschbaum 1996, no. 6, in order to figure out, which of the lunar months in the year 1223/2 B.C.E. is most likely to have been the month Allānātu of the 18th regnal year of Tukultī-Ninurta I (the same letter will provide also an additional line of evidence fixing the duration of the reign of Aššur-dān I to 46 years). Consequently, it will be possible to establish the chronology of the Middle Assyrian period with the margin of error not greater than a couple of days, similarly to the way in which the chronology of Babylonia from the late 7th century B.C.E. to the early 1st century C.E. was established by Parker and Dubberstein 1946.

Our reconstruction will also establish the absolute dates of the reign of Shalmaneser I as 1269-1241 B.C.E., and the eighth regnal year of Shalmaneser I (the year of his conquest of Ḫanigalbat) as 1262/1 B.C.E. That, in turn, will allow us to draw several connections between the chronologies of Assyria, the Hittite empire, Egypt and Babylonia in the 13th century B.C.E., which will result in the conclusion that the enthronement of Ramesses II of Egypt is to be placed in 1290/89 B.C.E. The connections to be drawn will be based on the following sources:

- a) The letter KUB 23.99 (published most lately by Mora and Giorgieri 2004, no. 18), sent by Tudḫaliya IV to Shalmaneser I, which indicates that the death of Ḫattušili III and

the accession of Tudḫaliya IV to the throne of the Hittite empire took place during the reign of Shalmaneser I.

- b) The letters KUB 3.66-68 (published most lately by Edel 1994, nos. 71-73), sent by Ramesses II not earlier than his 42nd regnal year to the Hittite queen Puduḫepa and to her husband Ḫattušili III (as argued most recently by Nemirovsky 2003: 4-7). These letters indicate that Ḫattušili III died not earlier than the 42nd regnal year of Ramesses II.
- c) The letters KBo 7.11 and 28.80 (published most lately by Edel 1994, nos. 37-38), which indicate that between the conclusion of the peace treaty between Ḫattušili III and Ramesses II (21st regnal year of Ramesses II) and the first marriage between Ramesses II and a daughter of Ḫattušili III (34th regnal year of Ramesses II), Ḫanigalbat still existed as an independent kingdom conducting international diplomatic contacts. Analysis of these letters, as well as of the sources listed in sections (a)-(b) above, will necessitate the conclusion that the enthronement of Ramesses II must have taken place several years before 1279 B.C.E.
- d) The Babylonian King List A and economic documents shedding light on the length of the reigns of the kings of Babylonia from Kadašman-Turgu to Kaštiliaš IV. Having established, as described above, the precise synchronism between the end of the reign of Kaštiliaš IV and the 18th regnal year of Tukulti-Ninurta I (1223/2 B.C.E.), we will use the data of the abovementioned documents to establish the precise absolute dates of the reign of Kadašman-Turgu (1279-1262 B.C.E.). The use of the sources for the Babylonian chronology of the 13th century B.C.E. in the present study will be based on their presentation by Brinkman 1976.

e) The letter KBo 1.10+KUB 3.72 (published most lately by Hagenbuchner 1989, no. 204), sent by Ḫattušili III to Kadašman-Ellil II/III,⁴² the son and successor of Kadašman-Turgu on the throne of Babylonia. The disparate reconstructions of the chronology of Egypt and of the entire Near East, existing in current scholarship, are based to a large extent on different interpretations of the main chronological question posed by this letter: whether the enthronement of Kadašman-Ellil II/III and the subsequent restoration of diplomatic relations between the courts of Babylonia and Egypt – restoration to which Ḫattušili III acquiesced *ex post facto* – took place before or after the conclusion of the peace treaty between Ḫattušili III and Ramesses II in the 21st regnal year of the latter. While it appears that the extant text of the letter allows no certain conclusion in this regard,⁴³ the letter makes it clear that the father of Kadašman-Ellil II/III, Kadašman-Turgu, was an ally of Ḫattušili III and offered him military assistance, should Ḫattušili III set out on a campaign against Egypt (KBo 1.10+KUB 3.72, obv., 59-65). This implies that at least a part of Kadašman-Turgu's reign had passed before the conclusion of the peace treaty between Ḫattušili III and Ramesses II. The present study will utilize this conclusion and the sources on the chronology of Babylonia in the 13th century B.C.E. mentioned in section (d) above in order to demonstrate that the enthronement of Ramesses II must have taken place several years after 1304 B.C.E. Thus will leave 1290 B.C.E. as the only possible date for the enthronement of Ramesses II.

⁴² For the numeration Kadašman-Ellil II/III, cf. Sassmanshausen 2006: 167; and see also Boese 2009: 85-88.

⁴³ Compare, e.g., the arguments of von Beckerath 1994: 26-27, who holds that the restoration of diplomatic connections between Babylonia and Egypt in the reign of Kadašman-Ellil II/III took place before the conclusion of the peace treaty between Ḫattušili III and Ramesses II, with the arguments of Nemirovsky 2007, who holds that this restoration occurred after the conclusion of the Hittite-Egyptian peace treaty.

IV. Outline of the Structure of the Present Study

As pointed out above, the present study will be presented in the form of a series of articles to be published in peer-reviewed journals. The topics of the planned articles have been detailed above (at the end of the section “The Main Problems to Be Explored”), and at this point it is sufficient to re-capitulate them:

- 1) Article offering a reconstruction of the chronological order of the Assyrian eponyms in the reign of Shalmaneser I (Bloch 2008).
- 2) Article offering a reconstruction of the chronological order of 26 eponyms in the reign of Tukultī-Ninurta I, of which the initial 22 eponyms, starting with the first regnal year of Tukultī-Ninurta I, are to be considered a complete sequence (Bloch forthcoming).
- 3) Article dealing with the lengths of the reigns of the kings of Assyria in the 13th-12th centuries B.C.E., for whom the different manuscripts of the AKL present diverging data, or data whose chronological meaning is not immediately clear. This article will establish the precise length of reign for each of the relevant kings.
- 4) Article demonstrating that both the Middle Assyrian calendar months and the beginning point of the Middle Assyrian calendar year moved between different seasons of the solar year cycle – i.e., that the Middle Assyrian calendar was purely lunar, without the intercalation of years.
- 5) Article that will establish a precise chronology for the Near East in the 13th century B.C.E. by connecting the Assyrian chronology with the chronologies of Babylonia, the Hittite empire and Egypt, and will demonstrate the relevance of chronological precision for the analysis of historical events by considering the question of Ḫattušili III's motivation in concluding the peace treaty with Ramesses II, in relation to the final Assyrian conquest of northeastern Syria (the conquest, which, we will

argue, took place eight years after the conclusion of the Hittite-Egyptian peace treaty and thus could not have been one of the factors motivating the rapprochement between Hattušili III and Ramesses II).

In the final form of our study, the articles will be accompanied by an introduction and a conclusion. The introduction will present the current state of research on the chronology of Assyria and the Ancient Near East in the second half of the 2nd millennium B.C.E.

The conclusion will summarize the results of the present study and outline their importance for the study of the history of the Ancient Near East in the 13th century B.C.E. The conclusion will also address two questions, pertaining to the study of the history and culture of Mesopotamia in the 2nd millennium B.C.E., which are not of direct relevance to the main objectives of the present study and thus cannot be discussed in detail in the articles that will form the main component of this study. First, we will inquire into the timing of the Assyrian cultic festivals, in relation to the seasons of the solar year cycle, in the Middle Assyrian period. Second, we will address the question of dating the end of the First Dynasty of Babylon, which came to an end five generations after Hammurabi, with the dethronement of the king Samsu-Ditāna in a Hittite invasion of Babylonia. The question of the date of the end of the First Dynasty of Babylon has occasioned much discussion in recent scholarship.⁴⁴ While it will not be possible, in the framework of the

⁴⁴ This discussion was stimulated by the study of Gasche et al. 1998, which placed the end of the First Dynasty of Babylon as late as 1499 B.C.E. (compared to the earlier datings that ranged from the early 17th to the late 16th centuries B.C.E.). A comprehensive and relatively up-to-date list of studies dedicated to the date of the end of the First Dynasty of Babylon has been assembled by Pruzsinszky 2005. A balanced evaluation of the current state of the question has been offered by Sassmannshausen 2006; however, the present study will necessitate revision of some of the conclusions reached by Sassmannshausen.

present study, to attempt a definite solution to this question, the implications of a precise reconstruction of the Middle Assyrian chronology for the question of dating the end of the First Dynasty of Babylon will be briefly outlined, in hope that they stimulate a better informed discussion of this question in the future.

In addition, the present study will include, as an appendix, a table of Assyrian calendar years in the 13th-12th centuries B.C.E. expressed in the terms of the Julian calendar, and a chronologically ordered list of Assyrian eponyms for the part of the abovementioned period, for which such a list can be reconstructed.

V. The Expected Contribution of the Present

Study to Future Scholarship

“Historians provide dates, preferably precise ones” (Van De Mieroop 2007: 13). With this rule in mind, the importance of the present study, which will provide a precise chronology for the Middle Assyrian period (precise both in expressing the periods of reign of the Assyrian kings in the Common Era frame of reference and in attributing some key events in Assyrian history, such as Shalmaneser I’s conquest of Ḫanigalbat and Tukultī-Ninurta I conquest of Babylonia, to specific regnal years of those kings), and which will substantiate a precise reconstruction of the chronology of the Near East in the 13th century B.C.E., is self-evident.

Beside attaining the maximum possible precision, given the available sources, in reconstructing the Middle Assyrian chronology and the chronology of the Near East in the 13th century B.C.E., the present study will also demonstrate the relevance of chronological reconstructions for the understanding of wider historical issues. The question of the reasons that brought Ḫattušili III to conclude the peace treaty with Ramesses II, and the lack of connection, in the terms of cause and effect, between the

conquest of northeastern Syria by Shalmaneser I and the conclusion of the Hittite-Egyptian peace treaty, is only one example of such relevance. The present author intends to explore further historical conclusions, which can be drawn from his chronological reconstruction, in later studies.⁴⁵ For the time being, it should be mentioned, for instance, that our chronological reconstruction will allow to figure out the precise date of the first known mention of Israel, as a distinct population, in historical sources – viz., in the victory stele of Merneptah, the son and successor of Ramesses II, dated to Merneptah's fifth regnal year, which is to be equated, in the wake of the present study, with 1219/8 B.C.E.⁴⁶

⁴⁵ The implications of the chronological reconstruction, which will be carried out in the present study, for understanding the history of the political relations between Assyria and Babylonia in the 12th century B.C.E. have been explored by the author in a lecture delivered at the conference "The Ancient Near East in the 12th-10th centuries B.C.E.: Culture and History," held at the Haifa University on May 2-5, 2010.

⁴⁶ As opposed, e.g., to Kitchen 1998: 100-101, who, accepting 1279 B.C.E. as the year of the enthronement of Ramesses II, dates the victory stele of Merneptah to 1208 B.C.E.

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