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## **Introduction: Scholars, Scholarly Archives and the Practice of Scholarship in Late Babylonian Uruk**

Christine Proust and John Steele

### **1 Introduction**

The city of Uruk in southern Babylonian is one of two sites to have provided us with a significant number of scholarly cuneiform tablets from the second half of the first millennium BCE. The Late Babylonian period, a somewhat flexible term but which for the purposes of this book we take to refer to the time of Achaemenid, Hellenistic and Parthian rule in Mesopotamia, represents the last flourishing of cuneiform scholarship. It was a period both of preserving and commenting upon the texts and knowledge of traditional Babylonian learning from earlier periods and of significant innovations in almost all aspects of scholarship. These innovations led to the creation of new scholarly knowledge, to the composition of new texts and the creation of new text genres, and to the blurring of boundaries between genres of scholarship as seen most clearly in the interaction between new forms of zodiacal and calendrical astrology with medicine, ritual, and liver divination.

Although the number of scholarly tablets from Uruk is dwarfed by the number of tablets from Babylon dating to the same period, the material from Uruk is uniquely suited to investigating the activity of individual and small groups of scholars in this period for three reasons. First, whereas the vast majority of cuneiform tablets from Babylon dating the Late Babylonian period were the results of early unscientific excavations or were purchased on the antiquities market in the 1870s and 1880s with the result that we know very little about where the tablets were found, a sizeable proportion of the Late Babylonian scholarly tablets from Uruk were carefully excavated during the second half of the twentieth century and so it is possible to study the archival context of the scholarly tablets. Furthermore, the tablets come from two different scholarly contexts: a private residence inhabited during successive phases by two families of *āšīpus* (priests expert in ritual and medicine) and the Rēš temple, the most important temple in Uruk during the late Achaemenid and Hellenistic periods (figure 1). Secondly, the scribes at Uruk during the Late Babylonian period more frequently included colophons on their tablets than their counterparts in Babylon; even when the scribes at Babylon did include a colophon on a tablet they tend to be less detailed than the colophons from Uruk. The presence of these colophons allows tablets to be assigned to individual scribes which provides a means to study both the interactions between scribes and the range of genres of scholarship about which scribes wrote. Finally, the smaller number of scholarly tablets from Uruk has meant that a significantly higher proportion of them have been published and studied by modern scholars than is the case at Babylon.

The aim of this volume is to exploit these features of the scholarly cuneiform sources from Uruk to investigate the ways in which different genres of scholarship were practiced, interacted with one-another, and resulted in the production of a written record in two different scholarly contexts, one private and one temple. This exercise in micro-history provides a case study for attempting to understand the relationship between scholars, scholarly writing, and

scholarly practice in ancient Mesopotamia.<sup>1</sup> The contributions to this volume combine the close analysis of texts and inquiries into the collections of tablets the texts belong to. For this reason, this introduction offers a general presentation of different kind of collections of tablets on which the different chapters rely, for example the archives of tablets found by archaeologists *in situ*, the collections in museums, the coherent groups which emerge from the analysis of colophons, or the set of texts published in various editions.

It is important here to define what we mean by the terms ‘scholar’ and ‘scholarship’. By scholarship we refer collectively to a range of modern genres including astronomy, astrology, ritual, medicine, divination, mathematics, lexicography, and literature. These genre classifications are modern, however, and only imperfectly map onto the division of scholarship into genres by the ancient scholars themselves, although collectively they correspond to the composition of ancient scholarly archives. A scholar is someone who contributes to the practice of one of more genres of scholarship, whatever that level of contribution or practice may be.

## 2 Historical Context

Uruk was an important second-ranking city throughout the Late Babylonian period. After a long period of decline during the second millennium BCE, Uruk returned to prominence in the early first millennium when it became a provincial capital of the Neo-Assyrian empire. From then on, Uruk assumed the role of the most important city in southern Babylonia, its temples holding authority over those of neighbouring cities such as Larsa.

Two, almost certainly linked, events early in the Achaemenid period are of particular significance for Uruk’s subsequent history, including the history of scholarship in the city. First, the Eanna temple, sanctuary of the goddess Ištar which had been the centre of the city’s civil and cultic life for hundreds of years experienced a quick and dramatic decline.<sup>2</sup> This coincided with the rise of the god Anu to the head of Uruk’s pantheon and the replacement of the Eanna as the city’s central force with the Rēš temple dedicated to Anu.<sup>3</sup> In the Neo-Babylonian period, the Eanna provided the locus for significant scholarly activity but this ceased abruptly in the early fifth century BC.<sup>4</sup> Secondly, Babylonian revolts against the Achaemenid king Xerxes in 484 BCE led to Persian reprisals against the old Babylonian urban elite families who had supported the rebellions. However, unlike Babylon and its northern neighbours, Uruk and many of the cities of southern Babylonia remained loyal to Xerxes during the rebellion. As a result, members of powerful families from Babylon were removed from positions of power in Uruk and replaced by members of families from Uruk. Over time this seems to have led to a growing sense of an Urukean, rather than a generic Babylonian, identity among scholars at Uruk, which is reflected, for example, in the adoption of markedly (but not confusingly) different terminology for describing astronomical phenomena in Uruk during the Hellenistic period than had been used earlier and which continued to be used in Babylon.<sup>5</sup> Despite this political and ideological

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<sup>1</sup> For previous attempts to study these questions, see Clancier (2009) and the important works by Robson (2011, 2013) and her forthcoming book *Ancient Knowledge Networks: A Social Geography of Cuneiform Scholarship*.

<sup>2</sup> Beaulieu (2003: 2), Kessler (2004).

<sup>3</sup> Beaulieu (1992).

<sup>4</sup> Pedersén (1998: 205–209).

<sup>5</sup> Steele (2016).

divergence of Babylon and Uruk, however, scholars and scholarship continued to circulate between the two cities.<sup>6</sup> As Gabbay and Jimenez discuss in their chapter, circulation of knowledge, scholars, and even of cuneiform tablets themselves, also took place between Nippur and Uruk.

The Greek conquest of Babylonia brought changes in the way that Babylonian cities, including Uruk, functioned on a governmental level,<sup>7</sup> but these changes do not seem to have intruded into the cultic and scholarly life of the city. Traditional cuneiform scholarship flourished during the Hellenistic period, especially in the astral sciences with the development of new methods of astronomical calculation and new techniques of astrological interpretation, and the creation of new genres of astronomical texts. The Greek presence in Babylonia led to a flow of scholarly knowledge from Babylonia to the wider Greek world, especially in the astral sciences. It is impossible to tell whether this knowledge came from Babylon, Uruk, other cities, or a combination of all three. Nevertheless, the city of Uruk was known to Greek scholars living in the Mediterranean, and associated with scholarly activity.<sup>8</sup> Babylonians and Greeks mixed and certain Babylonians in Uruk adopted Greek names, often alongside a traditional Akkadian name. The intermingling of Babylonian and Greek individuals and culture may also have led to the incorporation of Greek ideas within cuneiform scholarship.<sup>9</sup>

The Late Babylonian period, therefore, was a period both of change and continuity in Uruk: political events led to changes in cultic practice and a shifting of power between the city's temples, and an influx of Greek citizens into the city, even of only a relatively small number, provided an easy route for the circulation of scholarly knowledge between Babylonian and Greek societies; on the other hand, traditional Babylonian scholarship continued to be practiced and further developed along traditional Babylonian lines, and continued to be written in cuneiform by the same types of scholars as in earlier times.

### 3 Scholars and Scholarly Archives

The chapters of this book focus upon groups of tablets that we as modern scholars associate as forming meaningful groups on various grounds including archaeological findspot, colophons mentioning individual scholars, and similarity of content and/or form. Based upon one or more of these criteria, we can build a profile of an individual scholar or a scholarly archive. The term 'scholar' has already been discussed in section 1, but 'scholarly archive' requires some further comment. Assyriologists have frequently used the word 'library' to refer to a collection of scholarly cuneiform tablets in opposition to the term 'archive' which has been used to refer to collections of non-scholarly tablets (particularly economic texts and letters).<sup>10</sup> As pointed out by Robson, however, 'modern definitions of libraries, deriving ultimately from ancient Greek ideas, typically entails statements such as 'A place set apart to contain books for reading, study, or reference'', a definition that may not be appropriate for what are usually termed libraries by

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<sup>6</sup> See Steele (2016) for a discussion of the circulation of astronomical and astrological knowledge between Babylon and Uruk.

<sup>7</sup> van der Spek (1987).

<sup>8</sup> See the chapter by Jones.

<sup>9</sup> See the chapter by Beaulieu.

<sup>10</sup> Pedersén (1998: 3).

Assyriologists.<sup>11</sup> For Assyriologists, libraries are usually defined simply by the presence of a large group of scholarly tablets found within a particular archaeological context. Thus, for Assyriologists, a ‘library’ is an observer’s category, rather than a native one. Robson further notes, however, that ‘there was certainly a native concept of a library, albeit more restricted than in other ancient cultures: sporadically attested from the seventh to the second centuries BC, the word *gerkinakku* described a room – usually in a temple – in which scholarly tablets were deposited, and the context of that collection’.<sup>12</sup> This native definition, used as a basis for Robson’s work, is certainly a better criteria for defining a library in Mesopotamia than the one commonly used by Assyriologists. Nevertheless, the term library is still problematical when applied to the material discussed in this book. For the modern reader, library tends to imply a static place, where works are deposited with the intention of being kept and used for reference. The collections of scholarly tablets we are dealing with, however, attest to both the preservation of texts with the potential to be used as reference works and the production of texts as the result of ongoing practice. Thus, it may be better to define these collections not as libraries *per se*, but rather to use a broader definition which reflects all of these activities. We therefore prefer to talk of ‘scholarly archives’, implying that these collections are the result of scholarly activity by an individual or a group of individuals, activity that can include either or both the copying and preservation of reference texts and the production of new texts.

Ideally, the identification and reconstruction of an ancient scholarly archive would be a simple matter of analysing all of the cuneiform tablets that were excavated from a given locus. In practice, however, only some of the cuneiform tablets from Late Babylonian Uruk were recovered through careful excavations, and even those that were, for example the tablets from the house of the *āšīpu*, were often found in contexts disturbed by the digging of graves etc. on the site. The majority of tablets from the Rēš temple, however, were either excavated without attention to keeping track of the specific locus within the temple where they were found, or were the result of illicit excavation and purchased by museums in Europe and North America from the antiquities marked in the early part of the twentieth century. Thus, reconstructing the scholarly archives of the Rēš temple requires combing the study of the modern history of museum collections and the antiquities trade, evidence from colophons on the tablets themselves, and internal evidence from the content of the texts themselves.

Many scholarly texts of the first millennium bear colophons containing extensive information, for example on the individuals involved in the production of a tablet, their profession and genealogy (most often, the name of the father and the name of a claimed ancestor), the place and date of production of the tables, the sources of the text, and tutelary divinities. More precisely, the colophon provides usually the personal name (PN) of the ‘owner’ of the tablet (‘tablet of PN<sub>1</sub>’), or of the scribe who wrote it (‘hand of PN<sub>2</sub>’), or both. One can quote for example the colophon of SpTU 3, 104:

Tablet of Iqīša, son of Ištar-šuma-ēreš, descendent of Ekur-zakir, incantation priest (*āšīpu*). (Hand of) Ištar-šuma-ēreš, his son. He who reveres Anu, Enlil and Ea shall not take it away.

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<sup>11</sup> Robson (2013: 40–41).

<sup>12</sup> Robson (2013: 41).

This colophon indicates that the tablet is owned by Iqīša (sometimes transcribed as Iqīšāya). We learn that Iqīša belongs to the Ekur-zakir family, which is known to have been active in Uruk in the late Achaemenid and Seleucid periods. It is specified that Iqīša was an *āšīpu*, that is a priest specialized in exorcism and medicine. We learn also that the tablet was written by Ištar-šuma-ēreš, his son.

Many tablets name two individuals: a person who the tablet is associated with using the word *ša* ('tablet of'), who has traditionally been taken by Assyriologists to be the owner of the tablet, and a second individual who is said to have actually written the tablet. The relationship between the 'owner' and 'scribe' of a tablet is never explained in a colophon itself. From a study of texts dated to the very end of the Achaemenid period and the Hellenistic period, Ossendrijver has shown that the roles of 'owner' and 'scribe' reflect two successive phases of the career of a scholar, the early phase of training, and the phase of supervising, this latter corresponding probably to a position in the hierarchy of the temple. He argues that 'it rather appears that 'ownership' of a scholarly tablet reflects a responsibility for the correctness of its content, i.e. an aspect of supervision'.<sup>13</sup>

The written documents that came down to us are clay tablets. However, clay was not the unique support of writing used in Late Babylonian periods. Other supports, such as wood, are sometimes mentioned in colophons:

- IM 75985, a mathematics text belonging to the Šangu-Ninurta archive of the 'house of the *āšīpus*' (see Proust's chapter, text 5), was copied from a wooden board as indicated in its colophon: 'Copy of a wooden board (<sup>giš</sup>da), identical to its original, written and checked'.
- SpTU 1, 90, a commentary on astrology belonging to the Ekur-Zakir archive of the 'house of the *āšīpus*' (see Hunger, Steele and Gabbay-Jimenez chapters) was also copied from a wooden board: 'Written and copied (according to its original) from a wooden board (<sup>giš</sup>da)'.

#### 4 The House of the *āšīpus*

The German team of the *Deutschen Archäologischen Instituts* excavated in 1969-1972 under the direction of Jürgen Schmidt an archaeological square numbered Ue XVIII, located in the eastern part of Uruk. In one of the houses found in this square the excavators found hundreds of tablets, most of them of scholarly content. Where available, the colophons of the tablets indicate that the texts were owned or copied by members of families of *āšīpus*, priests expert in ritual and medicine, hence the name 'house of the *āšīpus*' commonly used in modern publications to designate this findspot.

Stratigraphic level IV of Ue XVII contained mainly Achaemenid material, level III a mixture of Achaemenid and Hellenistic material, and level II mainly Hellenistic material. However, dating the tablets according to the sole criteria of the stratigraphic level of discovery is not always possible, especially for level III, due to perturbations of the archaeological layers provoked by the digging of tombs in later periods. Furthermore, two of the tablets found in Room 4 of level IV, W 23300 (SpTU 4, 162) and W 23313/3 (SpTU 5, 265), seem to be dated from the second phase of occupation of the house according to their colophon (see the chapters

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<sup>13</sup> Ossendrijver (2011b: 214–215).

by Hunger and Steele). This contradiction between archaeological and textual evidence might be explained by further perturbations of archeological levels or by errors in the excavation reports.

Lists of tablets found in the levels I-IV of the square Ue XVIII during the 27<sup>th</sup> campaign (1969), the 29<sup>th</sup> campaign (1970/71), and the 30<sup>th</sup> campaign (1971/72) were compiled respectively by Hermann Hunger and by Egbert von Weiher in the excavation reports.<sup>14</sup> The first copies and transliterations of these tablets were published by Hunger and von Weiher in the series *Spätbabylonische Texte aus Uruk* (SpTU). It seems that the square Ue XVIII was not too much affected by looting, at least as far as the deep layers are concerned. Thus, the excavations reports offer us a fairly complete view of the epigraphic material found in the house of the *āšipus*.

The house of the *āšipus* was occupied during at least two distinct periods. Clancier estimated that the earliest occupation lasted at least during the professional life of descendants of Šangî-Ninurta (Šamaš-iddin, his sons Anu-ikšur and Rīmūt-Anu and grand-son Anu-ušallim), that is, during the second part of the 5th century and early 4th century (approximately 445 to 385 BCE). After an interruption, the house was occupied again in the late Achaemenid and early Hellenistic periods by descendants of Ekur-zākir, among them Iqīša, during a period covering approximately 350 to 229 BCE.<sup>15</sup> Both phases of occupation produced scholarly texts. The tablets discussed in this book are summarized in Table 1. Astronomical and astrological texts from both phases of occupation are presented in Steele's and Hunger's chapters, commentaries are presented in Gabbay and Jimenez' chapter, and mathematical texts are presented in Proust's chapter.

Among the scholarly tablets found in the house of the *āšipus*, a group of about sixty tablets deserves special attention as they come from the same findspot located in the Achaemenid level (corresponding to the first phase of occupation), and as such, reflect the intellectual interests of the milieu of *āšipus* of the time. During the 30th campaign, the excavators discovered a small room located in the level IV of the square Ue XVIII 1 (room 4), where more than one hundred tablets were stored in jars. Some of the jars and the tablets they contained were found in good condition, others completely crushed along. According to the excavation report, about half of the tablets excavated during the 30<sup>th</sup> campaign come from this small room:

Finally, a small room (about  $2 \times 1.6 \text{ m}^2$ ) was uncovered in level IV, in which, on a thin layer of cinder, several jars, only partly preserved, containing clay tablets were discovered: about 32 complete or nearly complete tablets of literary content; alongside with at least 23 largely preserved debt notes and contracts. The remaining tablets were in completely destroyed jars so that only fragments and tiny pieces of the tablets exist.<sup>16</sup>

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<sup>14</sup> Hunger (1972: 79–86) and von Weiher (1979: 96–111).

<sup>15</sup> Clancier (2009: 61).

<sup>16</sup> 'Schliesslich wurde in Schicht IV ein kleiner Raum (etwa  $2 \times 1,6 \text{ qm}$ ) freigelegt, in welchem auf einer dünnen Brandschicht mehrere, nur zum Teil erhaltene Tonkrüge entdeckt wurden, in denen sich Tontafeln befanden: etwa 32 vollständige oder fast vollständige Tafeln literarischen Inhalts; daneben mindestens 23 weitgehend erhaltene Urkunden und Verpflichtungsscheine. Die übrigen Tafeln befanden sich in gänzlich zerstörten Krügen, so dass auch von den Tafeln nur Fragmente und kleine Splitter vorhanden sind' (von Weiher 1979: 95). See also Clancier (2009: 32) and Kose (1998: 382).

The texts found in room 4 include mainly documents directly linked to the profession of the *āšīpu* and their duties toward the temple (about thirty tablets containing incantations, rituals or omens, a few tablets containing medical texts and commentaries on them).<sup>17</sup> This professional literature was part of a broader scholarly production which reflects the engagement of *āšīpu* in training novices and maintaining libraries. The lots of scholarly tablets found in room 4 include lexical lists (about sixteen documents), literary texts (four documents), astrology (four documents), mathematics (four documents, plus one tablet which did not come from the official excavations but almost certainly came from there),<sup>18</sup> and one astronomical text. Among the scholarly tablets found in room 4, a dozen are discussed in detail or quoted in the present volume (Table 2).

Interestingly, beside the scholarly texts, the ancient scribes stored also in this room administrative documents, mainly debt notes and contracts concerning the Gimil-Nanāya family (about twenty documents).<sup>19</sup> The archives of the Gimil-Nanāya family found in room 4 cover the long period 595 to 416 BCE, but document mainly the activity of Erība, a descendant of Gimil-Nanāya, active during the beginning of the reign of Darius I (522-486), that is, one generation before the estimated beginning of the first phase of occupation of the house of the *āšīpu*.<sup>20</sup> These archives provide some details on the social and economic activities of the *āšīpu*. The sources of income of the Gimil-Nanāya family were partly secured by prebends on gardens (*rab banūtu*), mainly orchards of dates that dominated the landscape around Uruk.<sup>21</sup> The prebends held by the families of *āšīpu* imply heavy charges towards the temple. In addition to their professional obligations, certain *āšīpu* were involved in business activities independent to the temple, such as real estate, which was probably more profitable.<sup>22</sup>

The scholarly and administrative archives found in room 4 sheds light on the social life and networks of the *āšīpu*. In their chapter, Gabbay and Jimenez investigate the relationships between the families of scholars resident in Uruk and Nippur. One piece of the evidence for these relations is the colophon of a commentary on a magical text found in room 4 (W 23277) which indicates that the text was owned by an *āšīpu* of the Gimil-Nanāya family from Uruk, and written by an apprentice *āšīpu* of the Gimil-Sîn family from Nippur.<sup>23</sup> The mathematical texts found in room 4 reflect a strong interest for all the facets of calculation of surfaces with ancient and new methods. Proust argues that this interest may be linked to economic activities of *āšīpu*, for example real estate or prebend on orchards such as those documented by the archives of the Gimil-Nanāya family. Steele's chapter shows that the astronomical practices during the first phase of occupation seem to have focused on collecting accounts of astronomical observations.

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<sup>17</sup> Two medical texts mentioned by Clancier (2009: 401), SpTU 4, 152, and SpTU 5, 254, a commentary on a therapeutic text, come from room 4 according to von Weiher catalogue.

<sup>18</sup> See the chapter by Proust, text 5.

<sup>19</sup> Gimil-Nanāya family archives includes not only tablets found in room 4 (W 23293/1-3, 6-12, 15-18, 20-22, 26-28, see details in Kessler 2004: 236), but also some tablets found in other findspots of the 'house of the *āšīpu*', and many tablets excavated elsewhere by illegal diggers (the whole Uruk Egibi archive is estimated at 200 tablets, see Jursa 2010: 157).

<sup>20</sup> See the chapter by Gabbay and Jimenez, and Kessler (2003: 235).

<sup>21</sup> Kessler (2003: 237), Jursa (2010: 157, 159, note 885), Jankovic in Jursa (2010).

<sup>22</sup> Jursa (2010: 168, 181).

<sup>23</sup> See the chapter by Gabbay and Jimenez, text 5.

Most of the scholarly texts found in the house of the *āšipus* bear colophons, a notable exception being the astronomical texts (see Steele's chapter). The colophons provide in particular information on individuals involved in the production of the tablets. The proper names and the filiations indicated in the colophons allowed to reconstruct the genealogy of *āšipus* active during the two phases of occupation, and to shed some light on the activity of each individuals.<sup>24</sup> The owners and scribes mentioned in the colophons of the tablets dated to the first phase of occupation of the house of the *āšipus* are almost always presented as descendants of Šangî-Ninurta, and those of the tablets dated to the second phase of occupation are mostly presented as descendants of Ekur-zakir. The genealogy of both families is outlined in Hunger's chapter.<sup>25</sup>

The Ekur-zakir family resided in the house during its second phase of occupation. Hunger's chapter underlines the diversity and eclecticism of textual production preserved by the Ekur-zākir family. For example, he describes a compilation which contains a section on the growth of an unborn baby inside his mother womb (SpTU 2, 43). This section is a duplicate of a section found in a mathematical text from the room 4 of the level IV, dated to the earlier phase of occupation of the house (SpTU 4, 173, see Proust's chapter, text 2). This duplicate shows the continuity of the transmission of knowledge during the two phases of occupation of the house. The fact that this duplicate appears first in a compilation of mathematical texts, and later in a compilation of texts from diverse origins, mainly linked to the astral sciences, is an illustration of the versatile character of the *āšipus*' knowledge.

Clancier compared the collections of scholarly tablets found in the layers corresponding to the first and the second phases of occupation, and concluded that they are quite similar.<sup>26</sup> The scholarly archives of the members of the Šangî-Ninurta and Ekur-zakir families contain tablets owned or written by *āšipus*, on subjects mainly attached to their profession (omens, ritual and medical texts). Both archives contain in addition scholarly texts linked to the training of students and novices, and more broadly to the transmission of the scholarly traditions. Clancier notes also that both archives reflect personal interests of the owners. For example, Šamaš-iddin and his son Rīmūt-Ani of the Šangî-Ninurta family exhibit a strong interest in mathematics.<sup>27</sup> Anu-ikšur, the other son of Rīmūt-Ani, seems to have focused his efforts on commentaries. Steele's chapter shows the few astronomical tablets firmly dated to the first phase (only three are known) contain observations which show that the *āšipus* of the time were interested in the compilation and treatment of astronomical data. By contrast, the astronomical activities during the second phase of occupation of the house seem to have included the instruction of novices in the practice of astronomy. The collections of scholarly tablets found in the house of *āšipus* seem to have been gathered without any particular project of systematic preservation, but rather in connection with day to day duties of *āšipus*, service to the temple, medicine and teaching.<sup>28</sup>

Tablets found in the house of the *āšipus* exhibit important features of the common intellectual culture shared by scholars of southern and central Babylonia, active in Ur, Nippur and Uruk, especially during the first phase of occupation of the house. Gabbay and Jimenez highlight the intense intellectual exchanges between scholars from Nippur and Uruk, in

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<sup>24</sup> For extensive studies of Late Babylonian colophons, in particular those borne by Uruk tablets, see Hunger (1968), Clancier (2009) and the bibliography indicated in these works.

<sup>25</sup> Clancier (2009: 52–53).

<sup>26</sup> Clancier (2009: 81–99). See also Robson (2008: 227–240).

<sup>27</sup> Robson (2008: 227–237), Clancier (2009: 96), and the chapter by Proust in this volume.

<sup>28</sup> Clancier (2009: 97).

particular, as mentioned above, through the ties between two families of *āšīpus*, the Gimil-Sîn based in Nippur and the Gimil- Nanāya in Uruk. Proust highlights the similarities between mathematical texts from Uruk dated to the Achaemenid period, and older or contemporaneous Nippur texts, especially in the way in which their authors deal with metrology. Hunger documents the circulation of knowledge on a wider scale, noting the presence in the house of the *āšīpus* of texts inherited from Assyrian traditions, conveyed by scholars who fled Nineveh after its destruction. He underlines the diversity of textual production, especially during the second phase of occupation of the house, and show that this diversity reflects the circulations of texts, knowledge and scholars between the cities of late Babylonia, especially between Uruk and Babylon, despite their political antagonisms.<sup>29</sup>

## 5 The Rēš temple

Several hundred scholarly tablets have been recovered from the site of the Rēš temple. The majority of tablets date to the late third and early second century BCE and can be associated through their colophons with a relatively small network of scholars associated with the temple, almost all of whom were members of four families who traced their lineage back to Sin-lēqi-unninni, Ekur-zakir (the same family who resided in the house of the *āšīpus* in its second phase of occupation), Aḫūtu, and Ḫunzū.<sup>30</sup> The tablets cover a wide range of scholarly genres including divination, ritual, literature, lexicography, lamentation, medicine, mathematics, astronomy, and astrology. By far the largest group of tablets contain astronomical or astrological texts, in particular texts of mathematical astronomy. Editions of many of these tablets have been published by Weidner (1915, 1941–44a, 1941–44b, 1954–56, 1967), Neugebauer (1955), Schaumberger (1955), Hunger (1976, 1988, 2014), Rochberg (1998) and Steele (2000, 2017) (additional astronomical, astrological, and related tablets in Istanbul are currently being prepared for publication by the present authors). The astronomical tablets have been the subject of detailed studies elsewhere and so are not discussed in depth in this volume.<sup>31</sup> The astrological tablets include copies of traditional works such as the celestial omen series *Enūma Anu Enlil*, commentaries on that work, and texts reflecting late Babylonian astrological developments including horoscopic astrology and astral medicine. In his chapter, Hunger discusses several of these tablets noting connections between the tablets from the Rēš temple, those from the house of the *āšīpus*, and tablets from Babylon. The mathematical texts, of which there are surprisingly few, have been published by Neugebauer (1935), Thureau-Dangin (1938), Aaboe (1968–69), and George (1992), and are the subject of Ossendrijver’s chapter. The ritual texts have been published most recently by Linssen (2004). Some of these ritual texts are discussed in the chapter by Krul, who notes the influence of contemporary interest in astronomy within these rituals. Copies of 58 tablets in the Louvre and the Musée du Cinquantenaire were published by Thureau-Dangin (1922), and 112 from the 1959–60 excavations were published by van Dijk and Mayer (1980). A few other tablets from the Rēš temple have also been published; nevertheless, many tablets from this site remain unpublished.

<sup>29</sup> On the circulation of knowledge in the astral sciences between Babylon and Uruk, see also Steele (2016).

<sup>30</sup> See Neugebauer (1955: 14), Beaulieu (2000), Pearce and Doty (2000), Steele (2000), Robson (2008: 240–260), Ossendrijver (2011a) and (2011b).

<sup>31</sup> For discussions of these tablets, see, for example, Neugebauer (1955) and Steele (2016).

Unlike the tablets from the house of the *āšipus*, which were on the whole well excavated with clear records of the exact loci of where individual tablets usually available, only about one-quarter of the scholarly tablets from the Rēš temple were similarly carefully excavated and a significant proportion were purchased on the antiquities market during the early twentieth century. Furthermore, whereas almost all of the tablets from the house of the *āšipus* have been published in modern scholarly editions, many tablets from the Rēš temple remain unpublished and some others have been published only as hand-copies. These add further challenges to reconstructing the scholarly archives of the Rēš temple, and allow only a preliminary assessment of scholarly activity at the temple to be made. Before attempting such an assessment, we briefly outline the excavations and modern collections of cuneiform tablets from the Rēš and their relationship to one another.

### *5.1 Excavations at the site of the Rēš temple*

The site of the Rēš temple has been excavated twice as part of the Deutsche Orient-Gesellschaft's work at Uruk. Between 14 November 1912 and 12 May 1913 a team led by Julius Jordan began excavations at Uruk. In this first season, Jordan focused his excavations on the two main temple complexes, the Eanna and the Rēš, as well as parts of the city walls and the third millennium BCE palace of Sīnkāšid.<sup>32</sup> Jordan's excavation established the basic layout of the Rēš (figure 2) as well as the adjoining Irigal temple of Ištar. In two small rooms (29c and 29d) near the northeast gate of the Rēš, Jordan found many fragments of tablets, piled on top of one another, along with numerous clay bullae which were on top of some of the tablet fragments.<sup>33</sup> He apparently also found smaller collections of tablets in other rooms of the Rēš,<sup>34</sup> including one tablet in the eastern corner of court VII, near room 82 in the western part of the Rēš.<sup>35</sup> Jordan also noted that parts of the temple, in particular rooms 30–32, near rooms 29c and 29d, and the area immediately north and southeast of room 79b, had already been plundered when he arrived, and wrote that the Arab workers claimed that the tablets which had appeared on the European antiquities market before the beginning of his excavations came from this area.<sup>36</sup>

The tablets excavated by Jordan, like all his finds, were divided and are now in the Ancient Orient Museum in Istanbul and the Vorderasiatisches Museum in Berlin. According to Kraus almost six hundred tablets from the excavation are in Istanbul.<sup>37</sup> Of these, eleven are to be dated to the Old Babylonian period and so did not come from the Rēš temple. The remainder include ninety contracts and more than two hundred scholarly tablets, most of which clearly post-date the Eanna and so must have come from the Rēš. This conclusion is supported by evidence from colophons preserved on some of the tablets. We do not know how many tablets from the excavations were taken to Berlin, but to our knowledge only one scholarly tablet seems to have ended up there (see section 5.2.2 below).

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<sup>32</sup> Jordan's excavations are reported in Jordan (1928).

<sup>33</sup> Jordan (1928: 25). See also Lindström (2003: 65–75) and Pedersén (1998: 209) who labels the archive 'Uruk 3'.

<sup>34</sup> Pedersén (1998: 209).

<sup>35</sup> VAT 9154 + U 109 + U 114; see Lindström (2003: 217).

<sup>36</sup> Lindström (2003: 66).

<sup>37</sup> Kraus (1947: 118–119).

The 18th season of work at Uruk, directed by Heinrich Lenzen over the winter of 1959–60 returned to many of the same sites that had been excavated by Jordan in 1912–13 including the Eanna and Rēš temples and the palace of Sīnkāšid.<sup>38</sup> In area Le XVI 3 of the Rēš temple the excavators found 158 fragments of tablets in a small brick-paved room (room 79b) in the southeast gate building. Most of the tablets were found scattered (only eight tablets were apparently found *in situ* in a niche) and there was clear evidence that the area had been looted,<sup>39</sup> as already noted by Jordan from his earlier excavation. Copies of the majority of the tablets were published by J. van Dijk in 1980, where it was also noted that there is a similarity between the content of these tablets and those published in Thureau-Dangin’s *Tablettes d’Uruk*.<sup>40</sup> Of the 158 tablets slightly more than 110 are scholarly tablets, the remainder being contracts and letters.

## 5.2 Modern collections of cuneiform tablets from the Rēš temple

Several institutions hold collections of cuneiform tablets that are known or presumed to be from the Reš temple. These collections include material found during the two German excavations directed by Jordan and Lenzen as well as tablets purchased from the antiquities market during the early decades of the twentieth century. The presumption that these latter tablets were found at the Rēš is based upon several factors including the occurrence of joins with tablets found during the official excavations, colophons which refer to the same individuals named on tablets found on the excavated tablets, the content of the tablets, and the study of similarities among the groups of tablets purchased from the same dealer.

### 5.2.1 The Ancient Orient Museum, Istanbul

Approximately six hundred cuneiform tablets from Jordan’s 1912–13 excavations are in Istanbul. These tablets, which are numbered with the prefix U, were catalogued by F. R. Kraus in the early 1940s, although the catalogue has not been published and is difficult to access. Kraus briefly described the contents of the U collection in an article summarizing the different groups of tablets in Istanbul.<sup>41</sup> According to Kraus, most of the U tablets date to the Hellenistic period except for a few (U 285–295) which are Old Babylonian.<sup>42</sup> Among the Hellenistic tablets, Kraus identified ninety tablets (U 1–90) which contain contracts and the remainder as scholarly tablets, including a large number of astronomical and astrological texts, omen texts, literary texts, and lexical texts. Kraus sent photographs of those tablets he identified as astronomical to Otto Neugebauer (figure 3). These photographs, along with Kraus’s letter, are now held by John Steele at Brown University. Neugebauer identified the majority of these tablets as containing texts of mathematical astronomy and published them in his *Astronomical Cuneiform Texts*.<sup>43</sup> A few additional astronomical and astrological texts have been published by Sachs, Schaumberger,

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<sup>38</sup> Lenzen (1962).

<sup>39</sup> van Dijk (1962: 43–44).

<sup>40</sup> van Dijk and Mayer (1980: 13).

<sup>41</sup> Kraus (1947).

<sup>42</sup> Lafont (1982: 182) refers to some tablets from the “*époque sumérienne*” or possibly older.

<sup>43</sup> Neugebauer (1955).

and Hunger.<sup>44</sup> Other than one mathematical text published by Aaboe,<sup>45</sup> to our knowledge none of the other tablets from Uruk in Istanbul have been published.

### 5.2.2 The Vorderasiatisches Museum, Berlin

Finds from Jordan's 1912–13 excavations were divided between Istanbul and Berlin. However, relatively few cuneiform tablets from the Rēš seem to have found their way to Berlin, and only one example known to us is a scholarly tablet.<sup>46</sup> However, several scholarly tablets are found in the group of tablets numbered VAT 7808–7852, including eighteen containing astronomical or astrological texts, a mathematical text,<sup>47</sup> a ritual text,<sup>48</sup> and an Eršema to Inana.<sup>49</sup> These tablets were purchased as a group from the dealer Georges Khayat (sometimes written Chajjat) and can be associated with the Rēš temple through joins and colophons. The exact date of the purchase of this group of tablets is not known but the tablets were already in the museum by 1912 when at least two of them were photographed.<sup>50</sup> Thus these tablets must be the result of illicit excavation which took place before Jordan's excavations at the site of the Rēš.

### 5.2.3 The Louvre, Paris

Over the course of 1913, some 49 scholarly tablets from Uruk were purchased by the Louvre. The tablets were purchased in three groups: AO 6448 in January 1913, AO 6449–6496 in one group sometime between January and April 1913, and AO 6555 in April 1913.<sup>51</sup> Many of the tablets are large and well preserved. The assignment of these tablets to the Rēš is made on the basis of colophons, joins with tablets excavated by Jordan, and the content of the texts. That the tablets were already in Paris by early 1913, when Jordan's excavations were still in progress, indicates that these tablets, like those in Berlin, came from illicit excavations which took place before Jordan's excavation. Copies of these tablets were published by Thureau-Dangin in his 1922 book *Tablettes d'Uruk*, along with three tablets purchased by the museum in 1920, and five tablets in Brussels which were part of the same original sale lot as AO 6449–6496 (see section 3.4). The tablets cover the range of Babylonian scholarship including astronomy and astrology, divination, mathematics, ritual, lexicography, literature (including bilingual texts). A few other scholarly tablets from Uruk were purchased by the Louvre between 1920 and 1923 from dealers

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<sup>44</sup> U 197 published by Sachs (1952: 74–75); U 181a+b+c+d and U 196 by Schaumberger (1955), see also Steele (2017); and U 180(3)+193a+193b and U 194 published by Hunger (2014: nos. 64 and 65).

<sup>45</sup> U 91 published by Aaboe (1968–69).

<sup>46</sup> VAT 9154, which joins U 109 + U 114, published by Neugebauer (1955: no. 171). Copies of several tablets containing contacts from Jordan's excavation and now in Berlin were published by Schroeder (1916); an additional tablet of this type was published by Sarkisian (1974).

<sup>47</sup> VAT 7848 discussed in the chapter by Ossendrijver in this volume.

<sup>48</sup> VAT 7849 published by Linsen (2004).

<sup>49</sup> VAT 7826 published by Gabbay (2017).

<sup>50</sup> Weidner (1967: 5 note 2).

<sup>51</sup> Thureau-Dangin (1922: i). AO 6449–6496 were purchased from the Dumani brothers; the seller of the other tablets is not known to us.

including Elias Gejou. These tablets include an astronomical text,<sup>52</sup> three fragments of a text describing a festival for Ištar,<sup>53</sup> and two lexical texts.<sup>54</sup>

#### 5.2.4 Musée du Cinquantenaire, Brussels

Five tablets (O 171, O 172, O 174, O 175, and O 176) from the same batch of tablets offered for sale to the Louvre in early 1913 were purchased by the Musée du Cinquantenaire in that same year. These tablets were included by Thureau-Dangin in his 1922 book *Tablettes d'Uruk* and include astrological and ritual texts.

#### 5.2.5 The Oriental Institute, Chicago

Several scholarly tablets from Seleucid Uruk are found among a group of objects purchased by James Henry Breasted from the dealer Khayat in 'western Asia' (probably Baghdad) during the winter of 1919–20.<sup>55</sup> These objects were assigned the accession number 261 and comprise 805 cuneiform tablets, 349 sealings, and 6 miscellaneous objects. The cuneiform tablets include a large number of Ur III administrative tablets from Drehem, around one hundred first millennium tablets including many Seleucid period tablets from Uruk, some Old Babylonian tablets, and various other tablets. The tablets from Uruk are roughly evenly divided between contracts and scholarly tablets;<sup>56</sup> the scholarly tablets mostly cluster in the range A 3405–3456. These tablets include around thirty astronomical and astrological texts, as well as literary, legal and (probably) medical texts.<sup>57</sup>

#### 5.2.6 The Yale Babylonia Collection, New Haven

A significant number of cuneiform tablets from Seleucid Uruk are found in the Morgan Library Collection (MLC) at Yale. This collection was formerly the private collection of J. Pierpont Morgan and has been housed at Yale since 1926, being formally acquired by the university in 1966.<sup>58</sup> The tablets were acquired by purchase at latest in 1912.<sup>59</sup> The collection contains more

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<sup>52</sup> AO 8530 published by Hunger (2014: no. 69).

<sup>53</sup> AO 7439 (purchased in January 1920) + AO 8648 + AO 8649 (both purchased from Gejou in 1923), published by Lackenbacher (1977).

<sup>54</sup> AO 7661 and AO 7662 purchased in December 1920 and published in Thureau-Dangin (1922: nos. 36 and 37).

<sup>55</sup> We wish to express our thanks to Andrew Wilentz for providing this and the following information about the tablets in Chicago. On this purchase, see Hilgert (1998: 2).

<sup>56</sup> The contracts and a few other tablets are published by Weisberg (1991).

<sup>57</sup> Most of the astronomical tablets contain texts of mathematical astronomy and are published by Neugebauer (1955); other astronomical tablets are published by Hunger (1988), Hunger (2001: no. 74), and Schaumberger (1955) (see also Steele 2017). The medical texts, which may or may not be from Uruk, are published by George (1991). For the literary text, a copy of tablet 2 of Gilgameš, see George (2003: 396).

<sup>58</sup> Hallo in Beaulieu (1994: viii).

<sup>59</sup> The first volume of Clay's four-volume *Babylonian Records in the Library of J. Pierpont Morgan* series containing copies of 101 tablets from this collection was published in 1912.

than one hundred contracts from Seleucid Uruk as well as a handful of scholarly tablets including several astronomical texts.<sup>60</sup> A small number of tablets from Seleucid Uruk were also purchased by Yale at a later date, including one astronomical tablet in the Newell Collection of Babylonian Texts (NCBT), a collection which was formed by purchases made between 1929 and 1938,<sup>61</sup> and one in the Nies Babylonian Collection (NBC), another collection formed by purchases made after 1922.<sup>62</sup>

### 5.2.7 Iraq Museum, Baghdad

The tablets found during Lenzen's 1959–60 excavations at the Rēš temple are now held by the Iraq Museum in Baghdad. Copies of most of these tablets were published by van Dijk and Mayer.<sup>63</sup> In addition, a few tablets from Seleucid Uruk, including an astronomical tablet,<sup>64</sup> have been acquired by the museum through various different means.

### 5.3 *A Reconstruction of the Scholarly Archives of the Rēš Temple*

In total, somewhat more than four hundred scholarly tablets can be attributed to the Rēš temple. Unfortunately, only for the tablets excavated by Lenzen in 1959–60 do we know their exact findspot: room 79b, a small room in the southeast gate building. Jordan apparently did not usually record the findspots for the individual tablets he excavated in 1912–13, merely remarking that some came from rooms 29c and 29d, and the tablets in Berlin, Paris, Brussels, Chicago, and Yale were purchased on the antiquities market and therefore nothing is known about where they were found. This raises the very basic question of whether all of the scholarly tablets originate from the same location, namely room 79b where Lenzen found a substantial number in his 1959–60 excavation, or whether they were found in two or more locations, perhaps including either room 29c or room 29d. In the latter case, we can raise a secondary question of whether we should then speak of one scholarly archive at the Rēš temple or of several archives. Tentative answers to these questions can be offered by considering the connections between the various modern collections, in particular physical joins between tablets in different collections, and the content of the scholarly tablets in these collections.

Table 3 lists all of the joins that are known to us between fragments of scholarly tablets from the Rēš temple found in different modern collections. It is immediately apparent from consulting this table that there are clear links between the collections in Istanbul, Berlin (both the purchased group VAT 7808–7852 and the tablets from Jordan's excavations), Paris (the AO

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Although no scholarly tablets from Seleucid Uruk were included in this volume, one tablet with a higher registration number than the known scholarly tablets does appear, implying that the scholarly tablets were already part of the collection by this date.

<sup>60</sup> The contracts and related texts are published in Clay (1913) and Doty (2012). The scholarly tablets are published in Clay (1923), Neugebauer (1955: nos. 190 and 205), Beaulieu (1992, 1995), Rochberg (1998: nos. 5 and 10), Hunger (2014: nos. 24, 57, and 160), and Beaulieu, Frahm, Horowitz, and Steele (2018).

<sup>61</sup> NCBT 1231 published by Rochberg (1998: no. 9).

<sup>62</sup> NBC 7831 published by Beaulieu, Frahm, Horowitz, and Steele (2018).

<sup>63</sup> van Dijk and Mayer (1980).

<sup>64</sup> IM 44152 published by Al-Rawi and Roughton (2003–04).

6448–6496 group), and Chicago. Interestingly, however, there are no joins between tablets in any of these collections and those at Yale or those excavated from room 79b in 1959–60. It would seem, therefore, that scholarly tablets were found—and therefore originally stored—in at least two locations within the Rēš temple: one site which yielded the tablets now in Istanbul, Berlin, Paris, and Chicago, and the other, room 79b, which was excavated in 1959–60. We will henceforth refer to the two groups of tablets found in these locations as ‘group A’ and ‘group B’. It is unclear which location the tablets at Yale came from. The MLC tablets at Yale were probably purchased a year or more before the Berlin and Paris tablets, but this need not imply that they were found at a different time. Tablets sometimes either remained on or were delayed in entering the market for several years, as seems to have been the case of the tablets in Chicago which were perhaps the leftovers from earlier sales and which were bundled together with other tablets for sale in a larger lot seven or eight years after the tablets which are now in Berlin and Paris came on the market.

Now that we have established the existence of two groups of scholarly tablets, it is possible to reconstruct the basic outline of their dispersal history into modern collections. Illicit excavations took place in various parts of the Rēš temple during or more likely shortly before 1912 yielding both scholarly and non-scholarly tablets. The tablets from these excavations entered the antiquities market by at latest early 1912, passing through the hands of at least two dealers, George Khayat in Baghdad and the Dumani brothers in Paris. The pick of the scholarly tablets, those that were the best preserved or had illustrations, were sold to the Louvre and to the Musée du Cinquantenaire in 1913. Other tablets, mostly slightly less well preserved, had been sold to the Vorderasiatisches Museum the previous year. A few scholarly tablets along with many contracts, certainly from the Rēš temple but not necessarily from the same location, were sold to the Morgan Library Collection around the same time. A further batch, mostly quite small fragments, seem to have remained unsold but were probably already in the possession of Khayat at this time, eventually being sold as part of a job lot of tablets from several sites to the Oriental Institute several years later. Following the illicit excavations, in late 1912 and early 1913, Jordan excavated the same site, recovering many fragments, mostly quite small, of tablets which had been left behind by the illicit excavators. These tablets were then divided between Istanbul and Berlin. Finally, in 1959–60 Lenzen excavated room 79b, finding the tablets which form group B.

Although the scholarly tablets were almost certainly stored in two different locations within the Rēš temple, this need not necessarily imply that there were separate archives with different roles. Many of the same scholars are named as ‘owners’ and ‘scribes’ of tablets found at both sites within the temple and dated tablets in the two groups cover roughly the same period. It is possible to imagine, for example, that one of the two locations at which scholarly tablets were stored was simply an extension of the other archive, perhaps overspill storage used when space was running out as the primary archive became full. However, there appear to be some differences between the contents of the tablets found at the two locations. Unfortunately, because many of the Istanbul tablets, and some of the Berlin and Chicago tablets, remain unpublished it is impossible to make a thorough comparison of the two groups of tablets. Nevertheless, even on the basis of what is currently available to us, it is clear that there are differences both in the type of scholarly texts in each group and their relative proportions, as we will discuss below. These facts suggest the existence of at least two distinct archives of scholarly tablets within the Rēš temple.

The most striking difference between group A and group B is in the proportion of astronomical and astrological tablets they contain. Group A contains about three hundred and

fifty scholarly tablets of which more than one hundred are twenty are astronomical and a further forty are astrological, together representing about forty percent of the total. By contrast, group B contains only a handful of astronomical and astrological texts: three or four astronomical tablets and nine astrological tablets out of a total of a little over one hundred and ten scholarly tablets. The types of astronomical text found in these two groups also differ. In particular, the majority of astronomical tablets in group A contain tabular texts of mathematical astronomy: synodic tables or auxiliary tables. Only one text of mathematical astronomy is found in group B, however, an auxiliary table for Mars.<sup>65</sup> Other texts in group A include at least four tablets concerning the rising times of the ecliptic,<sup>66</sup> and three texts containing records of observations.<sup>67</sup> No rising time texts are found in group B and whereas the observational texts in group A refer to near-contemporary observations,<sup>68</sup> the single observational text in group B refers to observations from the first year of the reign of Artaxerxes I (464–463 BCE), more than two hundred years before the period from which the other scholarly tablets in the Rēš temple date.<sup>69</sup> Finally, it is noteworthy that no horoscopes are preserved in group A whereas two horoscopes are found in group B and a further three are found in the collections at Yale which cannot be firmly associated with either group. Group B also contains two texts which duplicate tablets in the MLC collection at Yale: a horoscope for a certain Aristokrates born in SE 77 and an Almanac for SE 147.<sup>70</sup> It is hard to know exactly what to make of these facts but working with the tablets in the two groups one forms the impression that the astronomical and astrological parts of these two archives are different in significant ways. The group A archive seems more like a working archive, with many texts which are the result of ongoing astronomical practice, whereas group B seems more like a reference collection containing mostly copies standard works such as *Enūma Anu Enlil* and its commentaries and the microzodiac and *kalendertext* series rather than texts which are the result of ongoing astronomical activity.

It is less clear whether the distinction between the contents of the two groups of tablets holds outside of astronomical and astrological texts. The relative proportions of other text types, such as rituals, omens, mathematical texts, and literary texts, are more similar between the two groups than was the case with the astronomical and astrological texts, and at first sight there does not appear to be a noticeable difference between the content of particular types of text in the two groups. However, whereas almost all of the astronomical tablets from the various collections have been published, none of the non-astronomical scholarly tablets in Istanbul have been published to date, and many in Berlin and Chicago also remain unpublished, making detailed comparison between the two groups impossible.

Table 4 summarizes the texts from the Rēš temple discussed in this volume. Comparing the scholarly archives of the Rēš temple with those of the house of the *āšipus*, it is evident that while they share a general interest in all types of scholarship, astronomy played a significantly bigger role within the scholarly practice of the scribes associated with the Rēš temple, both in the number of astronomical tablets found as part of the archives but also in the influence of

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<sup>65</sup> W.20040/111 published by Steele (2005).

<sup>66</sup> A 3414 + U 181a + U 181b + U 181c + U 181d, A 3427, U 195 and U 196, see Steele (2017).

<sup>67</sup> A 3456+ (Hunger 1988), U 134 (unpublished), U 192 (unpublished).

<sup>68</sup> The source of these observations was probably Babylon, see Steele (2016).

<sup>69</sup> W 20030/142 published in Sachs and Hunger (1988: no. –463).

<sup>70</sup> Horoscopes: W 20030/143 and MLC 2190 published by Rochberg (1998: nos. 10 and 11).  
Almanacs: W 20030/109 and MLC 2195 published by Hunger (2014: nos. 159 and 160).

astronomy within other scholarly genres (something already present in the texts from the house of the *āšipus*, but to a much smaller degree). For example, as discussed by Krul in her chapter, ritual texts from the Rēš temple show considerably influence from astronomical traditions than earlier ritual texts. It is hard to know whether this reflects a broader chronological difference – the Rēš archives mainly dating to roughly a century later than the second phase of occupation at the house of the *āšipus* – or whether there was a real difference in the practice of astronomy between temple and private contexts. The latter possibility should not be dismissed given, for example, the role of the temple in managing the implementation of the calendar.

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### **Figure captions:**

Figure 1. The site of Uruk (adapted from Jordan 1928: tafel 1).

Figure 2. Excavation plan of the Rēš temple (after Joran 1928: tafel 18)

Figure 3. Part of a letter from F. R. Kraus to O. Neugebauer describing the astronomical tablets in Istanbul and listing the photographs sent with the letter. The handwritten annotation are by Neugebauer. (Image courtesy of John Steele)