This is the authors' preprint. This article is published as Robson, E. and Stevens, K., 'Scholarly tablet collections in first-millennium Assyria and Babylonia' in G. Barjamovic and K. Ryholt (eds), *The Earliest Libraries: Library Tradition in the Ancient Near East* (OUP, 2018) and should be cited from that edition.

CHAPTER 8

Scholarly tablet collections in first-millennium Assyria and Babylonia

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1. Introduction

The half-millennium 700–200 BCE was the heyday of the cuneiform 'library': Pedersén (1998) counts nearly 40 of them from that period in his foundational *Libraries and Archives in the Ancient Near East.* Yet there have been surprisingly few studies of cuneiform libraries *per se* (e.g., Michalowski 2003; Black 2004; Clancier 2009; 2010; Robson 2013). In this chapter we first summarise, update, and evaluate Pedersén's survey, then use a selection of this impressive array of evidence to explore some questions, raised in our respective recent work, about the functions of 'libraries' in first-millennium Assyria and Babylonia. We focus on three case studies which examine the relationships between Mesopotamian 'libraries' and two other notoriously complex Mesopotamian institutions: the temple and the scribal school.

Libraries and Archives (Pedersén 1998) is an essential starting point for any discussion of libraries in first-millennium Assyria and Babylonia. Political circumstances in modern-day Syria and Iraq have, of course, meant that there has been little significant archaeological activity in either region since the book was published, so that its listing of excavated assemblages of tablets is still more or less complete (and we shall in general only cite works of secondary literature? that are not given by Pedersén). We can add a few tablet collections whose contents and original context(s) can be reconstructed to some extent from museological evidence as well as internal, paratextual evidence on the tablets themselves, such as colophons (see the Tables throughout this chapter). Yet, as will become clear, these paratexts can be unreliable witnesses to the composition and disposition of individual collections, as tablets could—and often did—travel from place to place.

Pedersén's definition of a cuneiform 'library' is a simple, archaeological one (1998: 2–3): an excavated assemblage of tablets bearing 'the texts of tradition'—essentially, not an archive—and/or a room in which such tablets were stored. Some sort of archaeological context, whether primary or secondary, is a prerequisite. The quantity of tablets actually found in the findspot is irrelevant, so that at least one of his 'libraries' was discovered as an empty room. In this way he counts 16 libraries from first-millennium Assyria and 13 from Babylonia.

Pedersén's approach is a valuable survey of the evidence, but does not begin to address how such collections came to be, how they actually functioned, and how they fell into disuse. And there is also the underlying question of whether, or to what extent, they deserve the label 'library' at all (Robson 2013). First there is the fundamental problem that the closest Akkadian equivalent for 'library', *gerginakku*, is only sporadically attested, mostly in the Neo-Assyrian period. If we were to restrict our study to self-defined *gerkinakkus* we would be dealing with just three of them, in Kalhu, Nineveh and Huzirina (Robson 2013). Second, modern terms such as 'Bibliothek' and 'library' derive from ancient Greek *bibliotheca* and Latin *librarium*, not just etymologically but also in their semantic range. They originate in ancient cultures of literacy

that were significantly different to those of first-millennium Mesopotamia (Too 2010). Third, Pedersén's definition of a library's contents as 'the texts of tradition' simply begs the question of what might constitute the 'tradition' (Robson 2011a). We shall take it to mean works of Assyrian and Babylonian scholarship, whether written on clay, writing board, parchment, papyrus or other media. We understand this to include not only manuscripts of standard compositions (whether literary narratives such as the Epic of Gilgamesh, incantations and ritual series such as *Maqlû*, or omen compendia such as *Enūma Anu Ellil*) but also ad hoc compositions such as commentaries on, or compilations of extracts from, those standard works; entirely novel creations which survive in unique exemplars; and self-declared transcriptions of the 'oral traditions' of scholarly experts. Fourth, it is imperative to maintain a fourfold distinction between buildings (temples, palaces, houses); the book-like objects housed in them (tablets, plus now long-perished writing boards, papyri, and leather rolls); the scholarly compositions written on those media; and the groups who created and used them.

But did works of cuneiform scholarship really function like (modern) library books? How do we identify such functionality in the archaeological record? How reliably can we even reconstruct assemblages of scholarly tablets? As our first case study will demonstrate, the fragility and mobility of ancient writing media create problems here. Then there is the relationship of cuneiform 'libraries' and their contents to education: should elementary educational exercises be included in our definition of 'books' in a cuneiform 'library', as Pedersén (1998) implies? We shall return to this question in our second case study, where it will become apparent that the relationship between acquiring tablets and acquiring scholarly knowledge is an interesting and complex one. A further question concerns user communities more broadly: which particular portions of society had access to cuneiform scholarship, and how and by whom was that access controlled? Our third case study will consider this issue in more detail.

But first let us briefly survey the archaeological and museological evidence for scholarly tablet collections from first-millennium Assyria and Babylonia.

2. The evidence from Assyria

We begin with Assyria, the great empire that ruled much of the Middle East from its heartland on the northern Tigris for most of the eighth and seventh centuries BCE. The Assyrian kings each occupied several residences, moving the court from one city to another in the Assyrian heartland; all these cities have been excavated to some extent, especially the royal citadels, but there has been relatively little archaeological work on the non-royal cities of the northern Iraqi heartland. Since the early 1990s excavation has necessarily focused on the provincial Assyrian towns of Syria, Turkey and Iraqi Kurdistan but—with two exceptions—the provinces have produced almost nothing by way of scholarly writings. First we shall take the capital cities in order of occupation, and then turn briefly to the provinces.

2.1. Assur, the ancestral city

The city of Assur was the ancestral home of the Assyrians, occupied from the mid-third millennium BCE and homonymous with the patron deity of the empire (though modern typographical convention usefully distinguishes between Assur the city and Aššur the god). Assur was excavated extensively by the Deutsche Orient-Gesellschaft between 1903 and 1913, and then again sporadically from the late 1980s (cf. www.assur.de). The site has also been dug, on and off, by Iraqi excavators since the 1970s. The archives and libraries of Assur were very usefully surveyed by Pedersén (1985–1986) and a (re-)publication of the scholarly tablets from Assur is the subject of a long-term project at the University of Heidelberg (Heidelberger

Akademie der Wissenschaften 2015; see also Maul and Heessel 2010; Renger 2011). However, reconstruction of the archaeological record of Assur is, like so many early excavations, badly hampered by the post-excavation loss of records, photographs and tablets through the vicissitudes of two world wars (see, e.g., Grayson 1983; Klengel-Brandt 1995).

Table 8.1. Scholarly tablet collections found in first-millennium Assur (after Pedersén 1985–6; 1998: 132–143)

Name and location	*Dating*	*Tablets*	*Central persons*
N 1/Assur 15 (Aššur's temple)	9th century	300+ total, including at least c.100 Middle Assyrian, 8 Middle Babylonian and 15 Neo-Assyrian scholarly; 1 archival (Faist 2007: no. 1); remainder unidentified or missing	Senior officials of the temple, including a high priest and a steward
N 3/Assur 19 (family dwelling in city centre)	mid-8th to late 7th century	58 scholarly/school; 12 archival (Faist 2007: nos. 20–31); 177 unidentified or missing	Family of chief musicians (*nargallu*), including brothers Aššur-šum-iškun and Nabu-šezibanni plus Aššur-šum-šuklil
N 8/Assur 23 (family dwelling in west of city)	late 8th century?	7 scholarly/school; 1 archival (Faist 2007: no. 36)	None identifiable
N 5/Assur 16 (royal palace on Tigris river bank)	early 7th century	18 scholarly/school; 2 archival (Faist 2007: nos. 32–33); c.67 unidentified or missing	No clear central persons but the palace belonged to Sennacherib's younger son Aššur-muballissu
N 2/Assur 18 (family dwelling near ziggurat)	mid-7th century	24 scholarly/school; 19 archival (Faist 2007: nos. 2–19, 113); 35 unidentified or missing	Family of scribes (*ṭupšarru*), including Nabu-ah-iddin and his son Šumma-balaṭ
N 7/Assur 22 (in west of city)	mid-7th century?	c.10 scholarly/school; 1 archival (Faist 2007: no. 35); 14 unidentified	None identifiable
N 4/Assur 20 (family dwelling in city centre)	late 7th century	575 scholarly/school; 56 archival; c.170 unidentified or missing	Family of 'exorcists' (*āšipu*), including Kiṣir-Aššur and his nephew Kiṣir-Nabu
N 6/Assur 21 (family dwelling in south of city)	late 7th century	17 scholarly/school (Köcher 1957–58); 1 archival (Faist 2007: no. 34)	None identifable

The early twentieth-century excavation included east-west trenches dug at 100-metre intervals right across the site within the confines of the city walls. This programme yielded an informative and sizeable sample of domestic dwellings and gives us a unique insight into the degree of high-level literacy in major urban centres. For as well as the remains of substantial 'libraries' in the god Aššur's temple (Pedersén 1985–1986: archive N 1) and in the so-called

Prince's Palace (N 5), no less than six domestic collections of scholarly tablets were found (N 2–4, N 6–8), from trenches all over the city (Table 8.1; Pedersén 1998: 132–136). Whether the smaller assemblages (N 6–8) were really deliberately assembled 'collections', however, is a moot point, especially N 8 which is simply a small cache of elementary school exercises. We shall return to this question in our Case Study Two.

2.2. Kalhu, Dur-Šarrukin and Nineveh, the royal capitals

In the early ninth century BCE king Assurnaṣirpal II (r. 883–859 BCE) founded a new residence complex at Kalhu (modern Nimrud) about 65 kilometres upriver from Assur. British excavations in the period 1949–1963 uncovered many large buildings on the royal citadel, including parts of the main (Northwest) palace and, several hundred metres away, a temple dedicated to Nabu, the god of writing and wisdom (see Oates and Oates 2001; Curtis et al. 2008). Some 260 scholarly tablets were discovered in a room immediately opposite Nabu's shrine (Pedersén 1998: Kalhu 14; Black 2008; oracc.org/cams/gkab/kalhu), with a few colophons dating from the late ninth, early eighth, and early seventh centuries (Black 2008: 263; Robson 2012). Pedersén (1998: 150, Kalhu 10) usefully points out that a cache of up to thirty wooden and ivory writing-boards found down a well in the Northwest Palace should also be treated as the remains of a 'library'. We shall return to both assemblages in our first case study, where it will be pertinent that the many archival tablets discovered at Kalhu date mostly to two periods: shortly before the relocation of the capital from Kalhu to Dur-Šarrukin in the late eighth century; and just before the fall of the empire in the late seventh century (Pedersén 1998: 144). Small numbers of scholarly tablets were also scattered amongst the palace's archival records (Black 2008: 261–262).

Table 8.2. Scholarly tablet collections found in Neo-Assyrian Kalhu, Dur-Šarruken and Nineveh (after Pedersén 1998: 143–178)

Name and location	*Dating*	*Tablets*	*Central persons*
Kalhu 10 (well in Room AB of North West Palace)	late 8th century	c.30 scholarly writing-boards	(none)
Kalhu 14 (room NT 4 of Ezida temple)	to late 7th century	c.255 scholarly/school	several generations of royal scholars, including chief scribe Nabu-zuqup-kena and his descendants
Dur-Šarrukin 1–2 (scattered throughout Ezida temple)	late 8th century	12 scholarly; 6 archival; 12 unidentified	(none)
Nineveh 1 (rooms XL, XLI and and adjacent areas of South West Palace)	late 8th to late 7th century	Many thousands of scholarly tablets and some archival ones (excavation largely unrecorded)	several generations of royal scholars, including chief scribe Nabu-zuqup-kena and his descendants
Nineveh 5 (southern corners of North Palace)	mid to late 7th century	Many scholarly tablets (excavation largely unrecorded)	King Assurbanipal and several generations of royal scholars, including chief scribe Nabu-zuqup-kena and his descendants
Nineveh [6] (Ezida temple)	to late 7th century	At least 41 scholarly tablets: 27 on archaeological grounds (Lambert and Millard 1966: 91–2); 14 from colophon evidence (King 1912; Lambert and Millard 1966; Hunger 1968)	Nabu-kabti-ahhešu, king Sargon's palace scribe; king Assurbanipal
Nineveh [7] (Ištar's temple)	7th century	18 on archaeological grounds (Lambert and Millard 1966: 91–2)	None

Dur-Šarrukin (modern Khorsabad) was Sargon II's (r. 721–705 BCE) splendid new foundation, some 45 km due north of Kalhu, which he started in 717 BCE and occupied a decade later. However, it was abandoned as a royal residence very soon afterward, following the king's unpropitious death in battle, and the buildings of the citadel were systematically cleared of their contents. An American archaeological expedition, which ran from 1928 to 1935, thus found very few portable objects there (Loud and Altman 1938: 95–99). However, the

excavators did discover fragments of about thirty scholarly and administrative tablets scattered throughout the temple of the god Nabu, adjacent to the royal palace (Loud and Altman 1938: 104–105). Two rooms of the temple were lined with storage niches, now empty, but which most likely originally served as tablet stores of some sort (Figure 8.1; Loud and Altman 1938: 56–64; Pedersén 1998: 155–158, Dur-Šarrukin 1–2). Almost all of the tablet fragments were in corridors or doorways, as if they had been dropped during the evacuation. Unfortunately the Dur-Šarrukin tablets, which are now being prepared for systematic publication, have long since been separated from their excavation numbers, so we may never know exactly what was found where (J.A. Brinkman, pers. comm., August 2010). We shall return to this building in Case Study One.

Sargon's son and successor, Sennacherib (r. 705–681 BCE) in turn relocated the royal court to the city of Nineveh, an ancient Assyrian city on the Tigris between Kalhu and Dur-Šarrukin. It was to remain the imperial centre until the end of empire in 612 BCE. The royal citadel, often known by its modern name Kouyunjik, was first explored by Europeans in the 1840s, long before the advent of stratigraphic archaeology. It was both a blessing and a curse that the largest ever find of tablets was made there: a blessing because these ca. 31,000 beautifully written tablets and fragments kick-started the discipline of Assyriology; and a curse because the exact contextual disposition of the objects on their discovery has been lost forever, despite the best efforts of recent generations of British Museum curators to reconstruct possible findspots.

Irving Finkel in the following chapter deals with Nineveh in more detail than we can here, but suffice it to say that the famous King Aššurbanipal's Library in fact comprises several discrete tablet assemblages from the seventh century BCE. These derive mostly from the late eighth-century Southwest Palace, but also from the later North Palace and the nearby temples of Nabu and Ištar (Reade 1986a; Table 8.2, Nineveh 1, 5 and [6]), which were all destroyed by fire (and the tablets serendipitously baked) when the Medes and Babylonians sacked Nineveh in 612 BCE. About 4500 tablets of the 'Library' are in fact archival, and are now published in the State Archives of Assyria series. Taking joins between fragments into account, Reade (1998–2001: 421) estimates that around 15,000–20,000 scholarly tablets have survived in some form or another. They have all been digitised and catalogued, and high-quality images are publicly available on the British Museum's online research database (www.britishmuseum.org/research/search_the_collection_database.aspx).

2.3. Huzirina and Kullania, western provincial towns

Table 8.3. Scholarly tablet collections found in western provincial towns of the Assyrian empire (after Pedersén 1998: 178–81; Robson et al. 2007-; Harrison 2012)

Name and location	*Dating*	*Tablets*	*Central persons*
Huzirina 1 (cache hidden outside house on citadel)	7th century	c.360 scholarly; 4 archival; 28 unidentified	Qurdi-Nergal, *šangû*-priest of Zababa and Bau, and his associates and descendants
Kulliana (inner chamber of Temple XVI)	7th century	9 scholarly; 1 legal; 1 administrative	(unknown)

The residential areas of Nineveh, Kalhu and Dur-Šarrukin have never been excavated but it is reasonable to suppose that, as at Assur, at least some of their inhabitants kept collections of scholarly writings. The fact that such a collection has been excavated from Huzirina, a small town near the provincial capital Harran, suggests that such intellectual interests were widespread. Huzirina (modern Sultantepe), located some 400 km west of Nineveh on the modern Syrian-Turkish border, was excavated for two short seasons by an Anglo-Turkish team in the early 1950s (Lloyd and Gökçe 1953). Near the central cultic precinct the archaeologists discovered a cache of about 400 scholarly tablets that had been carefully buried just outside the main door of a substantial house, which probably belonged to a multi-generational family of priests (Pedersén 1998: 187–181; Robson 2012; oracc.org/cams/gkab/huzirina/).

Even further west, in the coastal provincial capital of Kullania, Kunulua or Kinaliya (modern Tell Tayinat), in 2009 a Canadian team unearthed a small cache of tablets in the inner cella of the main temple, including nine fragments of the calendar of ominouse days, *Iqqur Īpuš* in tabular format, one Sumerian-Akkadian lexical text, and a large loyalty treaty to the Assyrian king Esarhaddon and his heir Aššurbanipal. At least some of these tablets were pierced in order to be displayed on the wall rather than closely read in the hand; the meaning of their presence in the temple remains an enigma (Harrison 2011; 2012; Lauinger 2011; 2016).

3. The evidence from Babylonia

Babylonia had been a troubled and troublesome part of the Neo-Assyrian state, with the city of Babylon as a particular focus of political and cultural resistance (Frame 2008). In the late seventh century a Babylonian-Median alliance brought down the Assyrian empire and Babylon claimed its independence. But just a few decades later, in 539 BCE, Babylonia became a satrapy of the Persian Empire—and once more a centre of rebellion. In 410 BCE, in response to local revolts, the Persian king Xerxes purged northern Babylonia of its most prominent and politically active families, thereby dramatically curtailing cuneiform literacy in the region (Waerzeggers 2003/04; Robson 2017). This rupture is often referred to as ‘the end of archives’, as several—but not all—major institutions such as the Ebabbar temple in Sippar and the Eanna in Uruk disappear from the historical record at about this point, as well as a number of prominent families (Kessler 2004; Baker 2008). The ‘end of archives’ thus serves as a useful chronological dividing line between the so-called Neo-Babylonian period (namely, the seventh–fifth centuries BCE) and the subsequent Late Babylonian period. In 331 BCE Babylonia was conquered once again, by Alexander the Great, inaugurating nearly two centuries of Greco-Macedonian rule and settlement in the region. After Alexander’s death (in Babylon) in 323, his successors fought for control over his vast conquests, carving out territories and founding dynasties; Babylonia eventually fell under the control of Alexander’s former general Seleucus and became a political

centre of the Seleucid Empire. Cuneiform scholarship hung on in some cities, including Babylon itself, through yet another invasion—of the Arsacid Parthians from Iran—in 141 BCE, before it finally petered out definitively in the mid-first century BCE (Westenholz 2007; Brown 2008).

Many of the great cities of first-millennium Babylonia have been formally excavated: Babylon itself of course, as well as Kish, Nippur, Sippar, Ur and Uruk. All of these sites, as well as others, such as Borsippa, have also been subject to more informal diggings, whether to directly furnish Victorian museum collections with tablets or to supply the antiquities market in the nineteenth century and beyond. In this survey we focus first on Babylon, then in turn the other cities of northern and southern Babylonia.

3.1. Babylon

Babylon has been excavated on and off since the early nineteenth century but was subject to particularly intensive investigation in 1899–1917, by a team led by Robert Koldewey for the Deutsche Orient-Gesellschaft. Here, as at Assur, many 'libraries' in Pedersén's sense—that is, assemblages of scholarly tablets—were unearthed across the city during large-scale excavations of sacred precincts and residential quarters. And again as at Assur, much vital data and material was lost in twentieth-century conflicts, meaning that full reconstruction of those assemblages is now often impossible (Pedersén 2005: 2–8). A detailed survey of the German work is given by Pedersén (2005) with a more recent study, based on it, by Clancier (2009: 105–214, 409–470). Iraqi restoration and excavation projects since the 1970s have also yielded relevant finds.

In our view, there are just five excavated assemblages of scholarly tablets from Babylon of meaningful size and archaeological coherence, all of which comprise only a few dozen pieces, plus two collections that are reconstructible from museum records on the circumstances of their discovery and/or acquisition (Table 8.4). Of the five excavated assemblages, two (Babylon 17/N 10 and Babylon 11/N 14) are pre-Achaemenid, one found in a private house in the Merkes area of the city and associated with an archive belonging to the Šigua family, the other in Ehursagtila, the temple of Ninurta, in Išin-Aswad. A third, found in Ištar's temple Emašdari in Merkes (N 8), runs into the early Achaemenid period, and thus is also Neo-Babylonian by the definition given above.

Table 8.4. Scholarly tablet collections found in Neo- and Late Babylonian Babylon (after Pedersén 1998: 183–191; 2005: 188–283 *passim*)

Name and location	*Dating*	*Tablets*	*Central persons*
Babylon 17/N 10: House VI (Merkes area)	Early 7th–early 6th cent.	14 archival; 8 scholarly; 13 unidentified	Silim-Bel and his son Marduk-šum-iṣur of the Šigua family (archive)
Babylon 11/N 14: Ninurta's temple (Išin-Aswad area)	Late 7th–mid 6th cent.	15 scholarly; 17 school; 330+ archival; 19 unidentified	Ṭabiya (archive)
N 8, in and beside Ištar's temple (Merkes area)	Late 6th cent.	22 scholarly; 27 archival; 5 unidentified	(none identified)
Babylon 20/N 19: west of Išhara's temple (Amran area)	mid-6th–mid 2nd cent.	29 scholarly; 14 administrative; 16 unidentified	None identified
Tanittu-Bel's tablets, reconstructed museologically (Finkel 1991)	Late 4th cent.	14 scholarly	Tanittu-Bel
Nanna-utu family's tablets, reconstructed museologically (Reisner 1896; Maul forthcoming 2)	Late 2nd–early 1st cent.	90 scholarly	5 generations of the Nanna-utu family
Trench 31, lower levels of Babylon 18/N 15: 40m northeast of Ninurta's temple (Išin-Aswad area)	Unknown	49 scholarly and school 13 archival c.18 unidentified	unknown

By contrast, just one assemblage, found in a house some 70m west of Išhara's temple (Babylon 20/N 19), survived the 'end of archives' and functioned well into the Seleucid period, as witnessed not only by the dates on the tablets but also by the inclusion in the assemblage of ten works of mathematical astronomy, a genre which began only in the late fourth century. As Clancier (2009: 180–182) usefully points out, the area now known as Amran, where Babylon 20/N 19 was located, is also likely to be the source of the British Museum's copious quantities of Late Babylonian tablets that bear colophons of scholars associated with Marduk's temple Esaggil (listed in Clancier 2009: 409–470). They were acquired by informal excavation and purchase from the 1880s onwards, presumably having been found in houses much like that of Babylon 20/N 19. Perhaps surprisingly, only one possible scholarly tablet (and half a dozen tablets of other types) was found in Esaggil itself (Pedersén 2005: N 20). However, as Pedersén (2005: 283) notes, this is because the excavation was conducted by tunnelling along the walls rather than by uncovering the floor surfaces of the rooms. Any 'library' there might have been

in Marduk's temple therefore remains to be discovered.

Two museologically reconstructed tablet collections can also be assigned to Seleucid Babylon. First, Finkel (1991) has identified fourteen tablets of incantations and associated scholarly works, written and owned by one Tanittu-Bel in the 320s BCE, as deriving from Hormuzd Rassam's excavations for the British Museum in early 1881. Second, some ninety tablets of bilingual hymns, now housed in the Vorderasiatisches Museum Berlin, were copied out *ana zamāri*, 'for singing', by five generations of the Nanna-utu family in late second and early first-century Babylon (Reisner 1896; Hunger 1968: 18–19, no. 147). A further twenty or more tablets of omen commentary, mathematical astronomy, and Akkadian literature can also be attributed to this family or their close associates from the Egibatila and Mušezib families, at least some of whom were *kalû*-lamenters of the god Marduk (Robson forthcoming 2).

Finally, two of the 'libraries' identified by Pedersén (1998: Babylon 18–19; 2005: N 15, N 18) are in fact, as he acknowledges, convenient labels for mostly very small groups of tablets found in long trenches which the excavators dug systematically across large areas of domestic dwellings in the Išin-Aswad area of the site. The N 15 finds include a large cluster of scholarly and administrative tablets excavated in and around Trench 31, which appears to have been a small street or alley. The tablets were discovered at various depths from the surface but seem to be part of a single assemblage, although it is difficult to delimit or date it precisely on the evidence available.

We should also mention here the enormous cache of some 1500 elementary school tablets buried in the foundations of Nabu *ša harê*'s temple, and the neighbouring shrine of the goddess Ašratu, during the reign of Nebuchadnezzar in the early sixth century BCE (Cavigneaux 1981). While Pedersén (1998: 186, Babylon 10) treats this find as a 'library'—in the sense of an excavated assemblage of non-archival tablets—as we shall see in our second case study, from a functional point of view it is clearly rather a votive deposit (George 1986: 12–16; Clancier 2009: 152–156).

3.2. Northern Babylonia

The vast majority of Neo- and Late Babylonian scholarly tablets from other cities in northern Babylonia are from informal and illicit excavations. In due course it may be possible to partially reconstruct some assemblages retrospectively through internal means of identification such as colophons, but such reconstructions will necessarily always fall short. Not every tablet was given a colophon in antiquity, not every colophon survives, and—as we shall see in the case studies below—the findspots of excavated tablets often belie the provenance information given on colophons. Nevertheless, some reconstructions have already been made, using the catalogues of the 'Babylon' and 'Sippar' collections of the British Museum, (now increasingly accessible online), which are particularly important sources of information about such tablets (Figulla 1961; Sigrist et al. 1996; 2006; Leichty 1986; Leichty and Grayson 1987; Leichty et al. 1988). For instance, the well-known 'archive of Bel-remanni' has been reconstructed by Michael Jursa (1999) and Irving Finkel (2000), starting with the 1881-7-1 lot of the British Museum and working outwards into other collections. It is also known as Šangu-Šamaš A, after the ancestral name of the family (Jursa 2005: 127–128). This enormous family archive from Achaemenid Sippar, which we shall briefly revisit in our second case study, includes about 90 tablets that seem to have been written by one or more medical apprentices and many dozens more that may be the outcome of on-the-job training in archival documentation (Jursa 1999: 12–31).

Table 8.5: Scholarly tablet collections found in northern Babylonian cities of the Neo- and Late Babylonian periods

Name and location	*Dating*	*Tablets*	*Publication*
Kish, Mound W	Late 8th–7th cent.	At least 62 scholarly; at least 150 school;	Robson (2004: 46–62); Gesche 2001: (781–8)
Sippar, Šamaš's temple Ebabbar	6th cent.	c.800 scholarly	Anonymous (1987: 248–9); Fahdil and Hilgert (2008: 183)
Borsippa, Nabû's temple Ezida, room C1	Mid-5th or early 4th cent.	At least 30 scholarly	Reade (1986a: 107–9); Hunger (1968: nos. 124–32); Leichty et al. (1988: 370)
Sippar, 'Šangu-Šamaš A' or 'Bel-remanni archive', reconstructed museologically	Late 6th–early 5th cent.	At least 90 scholarly; c.200 archival, including 55 apprentice pieces	Jursa (1999: 12–31; 2005: 127–8); Finkel (2000)

There are also three (partially) recorded archaeological finds of scholarly tablet assemblages from the region (Table 8.5), two of which are not listed by Pedersén (1998). First, in 1879 Hormuzd Rassam, excavating Nabu's temple Ezida in Borsippa for the British Museum, discovered an unspecified quantity of tablets in Room C1, an antechamber to a *cella* in the southeast of the building. Julian Reade (1986b: 107–108) suggests they may have included the tablets BM 93043–93064, which were 'written with a distinctive fine script [on a] smooth slipped surface' (Leichty et al. 1988: 370). One of the tablets bears a colophon of Nabu-kuṣuršu from the Huṣabu family of prebendary brewers, enabling a linkage with several other scholarly tablets of his (Hunger 1968: nos. 124–132) which likewise date to the reign of Artaxerxes I or II (454–453 or 394–393 BCE). According to Waerzeggers (2010: 169) the Huṣabu family was the only line of Nabu's prebendary brewers to survive the 'end of archives'. Many, perhaps hundreds, more scholarly tablets now in the British Museum and elsewhere may also come from this temple, perhaps from as late as the mid-second century BCE (e.g., Hunger 1968: nos. 133–140).

Second, in 1923–1924 Stephen Langdon, working for the Oxford-Field Museum Expedition to Kish, uncovered a first-millennium 'library' on Mound W in the centre of the city (Langdon 1924: 87, pls. 23, 27). Langdon's records are so scanty that the building's location, layout and contents are unknown, but Moorey (1978: 49–50) deduces from Langdon's notes that scholarly and elementary school tablets were stored within large jars in several rooms of the building, which was probably built in the seventh century and abandoned by the Achaemenid period. Robson (2004: 46–49) reconstructed the core of the scholarly collection, a total of 72 tablets, on the basis of typological and museological evidence, while Gesche (2001: 781–788) catalogued over 150 of the school tablets (see also Robson 2004: 49–62 for the mathematical and metrological exercises), though many more remain unpublished in the Ashmolean Museum, Oxford.

Third, in the mid-1980s an Iraqi team excavating the city of Sippar found about 400 scholarly tablets in the small temple E'ulmaš, which was dedicated to the goddess Annunitu (Pedersén 1998: 194–198; Hilgert 2013: 145). The tablets were discovered still in their pigeonholes in a small storage room of the temple, which was annexed to the much larger Ebabbar temple,

dedicated to the sun-god Šamaš, Annunitu's divine consort. Although only about thirty tablets have published so far, their colophons contain dates ranging from the mid-to-late sixth century BCE and feature *kalû*-lamenters, *āšipu*-healers, and a trainee *bārû*-diviner from several different families (provisionally, see Anonymous 1987: 248–249 and pl. XLVII; Fahdil and Hilgert 2008: 183 with full bibliography; Hilgert 2013). Ebabbar ceased to function in the early fifth century, wound down by Persian king Darius about a decade before Xerxes' 'end of archives' suppression (Waerzeggers 2003/04; Robson 2017: 465).

3.3. Southern Babylonia

Then there are seven excavated assemblages of scholarly tablets from the cities of southern Babylonia, where cuneiform culture survived the 'end of archives' much better than in the north (Table 8.6). Once again though, known scholarly tablets from this area are preponderantly from informal and/or illicit excavations rather than formal, recorded expeditions.

Table 8.6: Scholarly tablet collections found in southern Babylonian cities of the Neo- and Late Babylonian periods (after Pedersén 1998: 206–12).

Name and location	*Dating*	*Tablets*	*Central persons*
Nippur 'Absummu archive' or 'Ninurta-ahhe-bulliṭ archive', reconstructed museologically	Late 5th–early 4th cent.	c.35 archival; c.40 scholarly	The Absummu family of prebendary brewers (Joannès 1992)
Ur 6: 'House 1' in the south of the city	Uncertain	Uncertain	unknown
Uruk 1: Ištar's temple Eanna, rooms to the north of court A2	Late 7th-late 6th cent.	c.10,000 archival; c.250 scholarly	Various (Falkenstein 1934; Hunger 1968: nos. 74–86)
Uruk 9: level 4 of house in area Ue XVIII	Early 5th cent.	At least 145 scholarly; 3 school; 23 archival; 10 unidentified	The Šangi-Ninurta family of *āšipu*-healers
Uruk 10: levels 2–3 of house in area Ue XVIII	Early 4th cent.	At least 210 scholarly; 3 school; 10 archival; 13 unidentified	The Ekur-zakir family of *āšipu*-healers
Uruk 4: Anu's temple Reš, room by east entrance	Early 3rd–mid 2nd cent.	61 scholarly; 28 archival; 52 unidentified; plus earlier illicit excavations	Anu-belšunu the elder, of the Sin-leqi-unninni family of *kalû*-lamenters
Uruk 2: Ištar's temple Irigal (or Ešgal), room near west entrance	Mid 2nd cent.	55, including 'a few' scholarly; plus earlier illicit excavations	None known
Uruk 11: house in area Oa/b XV3/4 in northwest of city	7th century or later	18 scholarly; 2 archival	none

One assemblage is the so-called Absummu archive from late Achaemenid Nippur, which shows scholarly activity around Enlil's temple Ekur until at least the early fourth century BCE (Hunger 1968: nos. 119–123; Joannès 1992; Jursa 2005: 111–112; Robson forthcoming 2).

At Ur, Pedersén (1998: 204) notes a Neo- or Late Babylonian house in the south of the city, known as House 1, excavated by Leonard Woolley in 1933–1934. Here an unrecorded number of school and/or scholarly tablets were found, 'an overflow from the little cupboard chamber 22, where the floor was covered with such; they were very largely school tablets, syllabaries, etc.' (Woolley 1962: 47). It is now impossible to identify these tablets with any certainty, as they do not appear to have been given excavation numbers, but candidates include the 27 elementary school tablets published in *UET* 7 (Gurney 1974) and catalogued by Gesche (2001:

788–790) and/or some of the little medical and lexical tablets of *UET* 4 (Figulla 1949: nos. 146–157, 208).

At Uruk, the evidential situation is both clearer and richer, thanks—once again—to long-term German excavations at the site. Pedersén (1998: 205–210, 212), amplified by Clancier (2009: 25–103, 387–409), identifies six Neo- and Late Babylonian scholarly assemblages: three stemming from the great temples Eanna, Irigal and Reš, and three from private houses. The earliest and largest is that found in the goddess Ištar's temple Eanna (Uruk 1), forcibly shut down by Darius (Kessler 2004). Some 250-odd Neo-Babylonian scholarly tablets, comprising the most legible half of the finds, were published by Falkenstein (1934) but have never been subject to historical analysis. Next in chronological sequence (and size) are two collections which were found in different levels of the same house and owned by two families of *āšipu*-healers (Uruk 9, Uruk 10). On stratigraphic and internal grounds about 160 tablets can be assigned to the late fifth-century Šangu-Ninurta family—the main focus of our second case study—and around 240 to members of the Ekur-zakir family who occupied the house in the late fourth century; around 75 tablets could belong to either group (oracc.org/cams/gkab/aszipus).

The two surviving Seleucid assemblages are much smaller, but both are from temple store-rooms in Anu's temple Reš and Ištar's temple Irigal (or Ešgal) which had been subject to earlier looting (Uruk 2, Uruk 4). Many market-acquired tablets from Late Babylonian Uruk are also likely to have come from , these same locations, meaning that the two temple's scholarly holdings were probably far larger than the 50–60 pieces each that were discovered in situ by archaeologists. We shall return to these (re)constructed collections in our third case study. Finally, a small private house very close to the temple precincts, and only partially published, yielded about twenty scholarly tablets of known Neo- or Late Babylonian date (Uruk 11).

4. Case Study One: Tablet collections in Neo-Assyrian royal temples

As outlined in the introduction to this chapter, archaeologists and Assyriologists, even recently, have tended to treat excavated cuneiform tablet collections as though they were an immovable part of a building's fixtures, implicitly analogous to the 'chained libraries' of medieval and early modern Europe in which books were fixed to the shelves (Blades 1892; Clark 1901; Streeter 1931; Crawford 2003). But the aim of that arrangement was to provide maximum accessibility to an increasingly public readership (Summit 2008: 235–239), a concern that would have undoubtedly been alien, if not anathema, to the cuneiform-literate scholars of Assyria and Babylonia. A more useful model might be the modern academic's relationship with books, which circulate quite freely between university library, office, and home, and which are often more informally lent to students and colleagues. Some may be borrowed from much further afield on interlibrary loan. Amongst the scholarly tablets from the *āšipus*' house in Late Babylonian Uruk are two which according to their colophons were written in Der, in northeastern Babylonia, or by men from that city, and even one tablet which stems from Assurbanipal's long-perished collection in Nineveh (SpTU 4: 125, 185; SpTU 2: 46). In other words, both books and tablets are inherently mobile, and we do well to remember that fact in examining the archaeological record. In this section, we explore the relationship between building, community and collection in the case of Neo-Assyrian court scholarship.

4.1. Royal temples of scholarship

There were temples dedicated to Nabu, god of wisdom, in all Assyrian royal cities in the first millennium BCE (Menzel 1981; Pomponio 1998–2001: 19–20; Seidl 1998–2001: 28). The first was founded at Kalhu under Assurnaṣirpal II (r. 883–859). Just a few decades later, Adad-nerari III (r. 810–783) built a second in Nineveh, while carrying out major renovations to the

original—or allowing the governor of Kalhu to do so. Then in the late eighth century Sargon commissioned a third, on the short-lived royal citadel of Dur-Šarrukin, and also carried out repairs to those at Kalhu and Nineveh. Although Sargon's son and successor Sennacherib was not a devotee of Nabu, his own descendants Esarhaddon and Assurbanipal revived and maintained the temples at both Kalhu and Nineveh. Even the weaker kings of the later seventh century, Aššur-etel-ilani and Sin-šar-iškun, invested in building work at the Kalhu temple, while the latter also restored the shrine at Nineveh and founded a brand new temple to Nabu at Assur, inventing an ancient genealogy for it (Robson forthcoming 1: chapter 2).

The Kalhu and Nineveh temples were named Ezida, Sumerian 'true house', after the original Ezida in Borsippa, which had been founded in the second millennium BCE (George 1993: 160). No distinctive name is attested for the others—they are referred to simply as *bēt Nabû*, 'Nabu's house'—but it seems reasonable to suppose that they too occasionally bore the epithet Ezida.

The ground plans of the Nineveh temples do not survive, but the three that remain, at Kalhu, Dur-Šarrukin, and Assur, are all very similar. Their unique core feature is a pair of east-facing shrines, for the statues of Nabu and his consort Tašmetu (Akkadian, 'the listening, attentive one'), accessed via antechambers from an inner courtyard (Heinrich 1982: II Abb. 349, 354–356, 371). When the doors were open, the deities' statues could be seen directly from the courtyard—and, at Kalhu, from the tablet storeroom immediately opposite (Figure 8.2). At Dur-Šarrukin the inner tablet room was also in the same courtyard as the shrines; at Assur no such room has been identified. Postgate (1974) points out that both the Kalhu and Dur-Šarrukin versions also have a secondary pair of shrines built into them, accessed from a separate courtyard, off which there is also a throne room. He argues convincingly that the deities' statues moved here whenever the king came to visit. And in Kalhu, it was in the Ezida's throne room that the famous 'succession treaties' of Esarhaddon were found, smashed on the floor amongst the debris of the sumptuous ivory fittings with which the room had been furnished (Oates and Oates 2001: 199). They had clearly been a particular target of the invaders' rage when Kalhu fell in 614 BCE.

At Kalhu—and presumably also at Dur-Šarrukin—the secondary shrines next to the throne room were known as the *bēt akiāte*, the *akītu*-room(s).[1] Letters, administrative records and literary texts show that it was here that Nabu and Tašmetu performed an annual marriage ceremony, lasting eight days in the second month of the year (in late spring). Offerings made to the divine couple during this time were designed to prolong the life of the king and all of his descendants (Postgate 1974; Matsushima 1987). Even if the king were unable to attend, the *hazannu* (literally, 'mayor') of Ezida was present throughout, to make offerings on the king's behalf.

In short, Nabu and his temple played a central role in Neo-Assyrian royal life, especially from the late eighth century BCE. As the buildings in which his statues were housed all served essentially the same function, they were constructed in essentially similar configurations.

4.2. Tablets and scholars in Nabu's temples

Scholarly personnel and scholarly tablet collections were central to the identity and function of Nabu's royal temples, at least in Kalhu, Dur-Šarrukin and Nineveh; no evidence survives for

[1] Note that this was a rather different event to the famous Babylonian *akītu*-festival, which took place a month earlier in Babylon and focused on the god Marduk's renewal of the king's right to rule at the start of the new year. Confusingly, perhaps, Nabu also participated in this rite. We distinguish here between the Assyrian *akītu*-ceremony and the Babylonian *akītu*-festival (which was temporarily transferred to Assur by Sennacherib in the 680s, after his conquest of Babylon: see most recently Fincke 2010: 59–61).

Assur.

Although a comprehensive survey of the scholarly tablets from Nineveh is lacking, and while it is mostly impossible to determine those tablets' findspots, it is nevertheless possible to make a provisional comparison with those from Kalhu (Robson 2013). In the Kalhu Ezida , the genres best represented are hymns, incantations and rituals; omens; followed by lexical lists; and medical recipes. Likewise, the most preponderant genres amongst the forty or so tablets that are identifiably from the Nineveh Ezida are incantations and rituals; omens; lexical lists; and hymns. Together they reflect the overarching functions of the collections, and of the scholars themselves: to protect and enhance the king's relationship with the gods, to decipher their messages to help guide his decision-making, and to ensure his physical and emotional well-being (Radner 2011).

But the tablets in Kalhu and Nineveh did not simply serve similar purposes: they were used by the same community and probably moved quite freely between the two cities. It has long been known that there are several tablets bearing Kalhu colophons amongst the British Museum's 'Kouyunjik' collection. Most prominent amongst them are the eighty or so tablets written by Sargon's scholar Nabu-zuqup-kenu, about half of which explicitly state that they were written in Kalhu (Hunger 1968: nos. 293A–S, 294A–U, 297A–D, 205; Baker 2001; Frahm 2011: 265–267). Hunger (1972: 101) suggests that Nabu-zuqup-kenu worked exclusively at Kalhu, and the tablets were moved to Nineveh only after his death, perhaps by his son Adad-šumu-uṣur, for he himself is never mentioned in the Nineveh courtly correspondence.

However, with the publication of the scholarly tablets from the Kalhu Ezida and the systematic reading of their colophons (Robson 2012; see already Hunger 1972; Black 2008), it is now clear that Nabu-zuqup-kenu's offspring remained active in Kalhu as well as in Nineveh, at least until the mid-seventh century. It was therefore not simply a matter of a single, wholesale move from the old capital to the new:

Nabu-zuqup-kena's son Adad-šumu-uṣur, chief *āšipu* of king Esarhaddon, owned a tablet from the terrestrial omen series *Šumma Ālu* found in the Kalhu Ezida. Adad-šumu-uṣur is also documented in action there, performing a ritual against two types of fungi that had infested the temple (CTN 4: 45; SAA 13: 71). But he appears much more frequently in the royal correspondence of Nineveh—alone; with brother Nabu-zeru-lešir, Esarhaddon's chief scribe; and in collaboration with Esarhaddon's chief lamenter Urad-Ea and other colleagues (Luppert-Bernard 1998).

A son (whose name is now missing) of Nabu-zuqup-kenu's other son Nabu-zeru-lešir—who inherited his father's role as chief scribe—was copyist of an calendar of ominous days 'for the prolongation of his (own) life' (CTN 4: 59). His identity is not certain, but he is likely to have been Šumaya rather than his brother, the next chief scribe Issar-šumu-ereš (on whom see Pearce 2000). Šumaya is attested as an *āšipu* at Nineveh late in Esarhaddon's reign (SAA 10: 257, 291; Luukko 2011). Some time in 671–669 BCE he petitioned the then crown prince Assurbanipal to let him take over his dead father's scholarly work at Kalhu, having established himself in a similar role in Tarbiṣu (SAA 16: 34). He and his uncle Adad-šumu-uṣur witnessed a legal document together in the northern Assyrian town of Išpallure in 666 BCE: they were in close contact (SAA 6: 314). Lastly, the previously unattested Nabu-le'i—son of Adad-šumu-uṣur's close associate Urad-Ea, mentioned above—was scribe of a hitherto unidentified ritual at Kalhu, which he 'copied like its original for him (i.e., a colleague or teacher) to see' (CTN 4: 187).

All this adds up to strong evidence for the Assyrian royal scholars' movement between, and continued scholarly activity within, the Ezidas of both Kalhu and Nineveh at least until the reign of Assurbanipal. In particular, it looks as though the descendants of Nabu-zuqup-kenu who also inherited his post of chief scribe—namely Nabu-zeru-lešir and then his son Issar-šumu-ereš—tended to work mostly in Nineveh. Other family members who became royal *āšipus*, however—

Adad-šumu-uṣur and his nephew Šumaya—moved more freely between the new capital and the old. They thus continued a tradition of Kalhu *āšipūtu* attested from the first days of the Ezida there, when Assurnaṣirpal's chief *āšipu* wrote tablets for the temple in the early ninth century (CTN 4: 58).

4.3. Mobile libraries?

In this light we can now better understand the lack of tablets in Nabu's abandoned temple at Dur-Šarrukin. Sargon had endowed the temple with 4000 homers of land, regular offerings of sheep, and daily provisions of bread and beer for an *āšipu* as well as a *lahhinu* ('temple steward'), so it is clear that he intended scholarly activity to take place there (SAA 1: 106, 128–129). At least one set of new writing boards was commissioned for the palace, containing sixteen leaves bearing the celestial omen series *Enūma Anu Ellil*. It was later abandoned down a well in Kalhu's Northwest Palace along with a few dozen others, perhaps because it bore the ill-fated name of deceased king Sargon and his city on the cover (Wiseman 1955; Oates and Oates 2001: 97–99, 104 fig. 62). Some scholarly tablets were moved to Dur-Šarrukin from Kurbaʾil (Gelb 1954: 222; Hunger 1968: no. 350) and maybe also from Kalhu and/or Nineveh. Yet Nabu-zuqup-kenu's colophons show us that Kalhu remained a scholarly centre—Wiseman (1955: 9) even hints that Nabu-zuqup-kenu may have been responsible for the discarded *Enūma Anu Ellil* writing board. However that may be, when Dur-Šarrukin was summarily abandoned by the court on Sargon's inauspicious death, the temple was hurriedly emptied, and tablets dropped at doorways and thresholds in the rush to leave. Of the thirty tablets the excavators discovered in Nabu's temple, twelve were found in corridors and staircases, ten in gateways and doorways, five in courtyards and only three inside rooms (Loud and Altman 1938: 104–105).[2] The surviving tablets were presumably taken back to the Ezidas of Kalhu and/or Nineveh (see already Loud and Altman 1938: 103), where scholarly business resumed or continued, more or less as before.

However, it was not quite as before. While—as we have seen—Nabu's temple in Kalhu remained an intellectual centre until at least the reign of Assurbanipal, and continued its cultic functions until the very end of empire (SAA 12: 92–96), Nineveh now became the primary locus of scholarly activity (Robson and Radner 2007–2011). Before he became king, Assurbanipal dedicated tablets to Nabu in the Ezida there, apparently in his own hand (Lieberman 1990; Livingstone 2007). To our knowledge he is not only the sole first-millennium prince who contributed directly to the production of scholarly tablets, but also amongst the earliest known writers of dedicatory colophons to Nabu (on which see Case Study Two). Letters from this period give the impression of a great influx of newcomers to courtly circles: introductory petitions suggest that as many as twenty scholars at a time may have been considered for appointment (e.g., SAA 10: 160), although there is no reason to suppose that all of these petitions were successful. There were certainly a few dozen royal scholars in attendance at any one time, some of whom were from beyond the empire's borders, as well as a correspondence network of astrologers across the heartland of Assyria and Babylonia (Koch-Westenholz 1995: 59–73). But Nabu-zuqup-kenu's family and their close associates retained their monopoly on the highest-status scholarly posts at court, and their foothold in the Kalhu Ezida, at least until the documentation for courtly scholarship peters out in the 640s BCE, during Assurbanipal's reign.

[2] Compare 'Ur-Utu's house' in sixteenth-century Sippar, where a basket of important archival tablets was dropped on the threshold of a courtyard during a rescue attempt, while the house was being evacuated during a major fire (Gasche 1989: 42).

4.4. Conclusions

It appears that the 'library' found by British archaeologists in Nabu's temple at Kalhu in the 1950s was in not in any sense 'complete'. This was not necessarily because its contents had been removed wholesale in antiquity—whether to stock a collection in Nineveh, or perhaps to rescue them before the city's sack—and neither was it entirely due to the long-term decay of tablets and writing boards in the millennia between abandonment and excavation. Rather, it was primarily because those contents were always in a state of flux. Their creators and owners moved them, and themselves, from temple to temple (and presumably also palace to palace and house to house) within the network of royal cities, following their kingly and divine patrons. As the Dur-Šarrukin writing board suggests, some works were even written in one place expressly for use in another. But however far afield the constituent parts of the collection travelled, they remained within the purview of just a few elite scholars, whose roles were primarily hereditary, and who thus saw little distinction between family, profession and courtly status. In other words, the tablets found in the Kalhu Ezida do not constitute its 'library' in a fixed sense, but rather represent the remains of whichever scholarly works happened to be in situ when the building was destroyed in 614. Some of the rest of the collection was certainly in the Nineveh Ezida at that point, and other parts perhaps in the homes of some of Nabu-zuqup-kena's descendants, wherever they may have lived. A different destruction date would have given us a different set of scholarly finds.

To our knowledge it was Maul (2010), in a wide-ranging study of the *āšipus* of seventh-century Assur, who first clearly articulated the notion of a community collection of scholarly works, stored in several different locations. In this section we aim to have shown that this phenomenon, which we propose to call the distributed library, is not limited to domestic settings but also pertains to institutional contexts. Further, in the following case studies it will, we hope, become clear that the distributed library was not a peculiarity of the Neo-Assyrian period but a widespread feature of first-millennium Babylonian scholarship too.

5. Case Study Two: Schooling and scholarship in Babylonian tablet collections

The relationship between schooling and scholarship is at first sight rather confusing. In the tablet collection from Neo-Assyrian Huzirina, for instance, some twenty-five *šamallû* 'apprentices' are attested, while from contemporaneous Kalhu there is just one. Yet in neither place are there more than a handful of elementary school tablets, as defined by Gesche (2001; explained further below). By contrast, the *āšipus*' house in Late Babylonian Uruk has yielded nearly sixty such exercises, although no scribe known from that findspot uses the title *šamallû.* Five men with the title *mašmaššu ṣehru* 'junior incantation-priest' wrote out compositions in the Uruk house—but none of them put their names to those elementary school exercises, which are all unsigned. The 'library' tablets from both Kish and Ur appear to have been mixed with elementary exercises (though in both cases the finds were recorded so vaguely that it is impossible to say for sure), while the huge deposit at the temple of Nabu *ša harê* in Babylon consists exclusively of school tablets. At what point did schooling end and scholarship begin? Why were school tablets 'collected'—if indeed they were? What functions did tablet collections play in first-millennium scholarly pedagogy? In this section we explore these questions further, especially through the writings of the Šangu-Ninurta family of *āšipus* in Achaemenid Uruk.

5.1. Elementary scribal schooling in the Neo-Babylonian period

As Gesche (2001) showed in her monumental study of Neo-Babylonian scribal exercise tablets from the cities of northern Babylonia, plus Uruk and Ur in the south, in the mid-first

millennium BCE elementary training in cuneiform typically took place in two phases. During the first phase students concentrated on learning how to write the basic wedges that comprise cuneiform script, plus several long core texts in their entirety (Gesche 2001: 44–48):

- The signs DIŠ+BAD (i.e., a vertical, horizontal, and diagonal wedge) repeated;
- The sign A repeated;
- Two lists of Akkadian syllables and words now called Syllabary A (S^a) and Vocabulary B (S^b);
- A list of deities, now known as the Weidner God List;
- Tablets I–III of the bilingual thematic noun list called $UR_5.RA$ = *hubullu* 'interest-bearing loan', after its first line.

In Babylon in particular, the large, square multi-column tablets on which these exercises were written could first be dedicated to Nabu (sometimes as Nabu *ša harê* 'of the sanctuary(?)', or Nabu *ša nikkassī* 'of accounts'), by means of colophons on the reverse, pre-prepared for beginners by the teacher or a more advanced trainee (Figure 8.3; Gesche 2001: 153–157). The student then wrote out short or long extracts from these elementary works, often combining them with brief passages from *ad hoc* and 'non-canonical' lists—for instance metrology, personal names, place names, professional designations—and/or lexical lists, literary works, proverbs, and administrative formulae.

In the second phase long single-column tablets were preferred, with the month and day of writing replacing the votive colophon. Students continued to copy S^a and S^b, plus short excerpts from incantations, hymns, literary works, and more complex lexical lists, with up to four different compositions on a single tablet (Gesche 2001: 48–52).

In Babylon over 1500 first-phase tablets were offered as votives to Nabu *ša harê* in special *gunnu*-receptacles in his temple, perhaps at an appropriate point in the new year's *akītu*-festival or the winter *kislīmu*-festival (Maul 1998: xvi). There are no clues as to where they were written, except that the clay for some of them came from a particular 'holy place' (*ašru ellu*) in Marduk's sanctuary Esaggil (Maul 1998: xv). They were, then, no ordinary school tablets. Further, whereas almost all cuneiform tablets turn top-to-bottom—that is, the text on the reverse is upside down in relation to the obverse—many of these were written so that they turned left-to-right like a book. Gesche (2001: 157) suggests that this enabled them to be displayed and read on both sides. When Nabu *ša harê*'s temple was reconstructed during the reign of Nebuchadnezzar (r. 605–562), the tablets, as sacred objects (which must have been accumulating over a long period of time), could not be thrown away so were re-used as fill for the foundations (Cavigneaux 1980; George 1986: 12–16). Thus although the tablets were collected, and some at least may have been read—or perhaps, rather, admired by proud family members—in a relatively public place, on special occasions, they were kept not for the knowledge or ideas they contained, but as evidence of personal piety and reminders to Nabu of the prayers he must answer.

In other, more mundane contexts, elementary exercise tablets were routinely thrown away or recycled, as well-conducted excavations reveal (e.g., Faivre 1995; Tanret 2002: 143–153). That certainly seems have been the case for the sixty-odd elementary tablets from the *āšipus*' house in Late Babylonian Uruk, which was rebuilt at least twice in the fifth and fourth centuries BCE. The stratigraphy was badly disturbed by Parthian-period graves dug down into the house, but nevertheless coherent find contexts can be reconstructed in many cases. When the house was renovated after the Šangu-Ninurta family moved out in the late fifth century, around eighty tablets were left in large storage jars in a small room in the north wing of the house. Most of these were scholarly works written out by members of the Šangu-Ninurta family, plus a few out-of-date legal documents; only five elementary exercises can be identified amongst them.

Conversely, elementary scribal exercises (along with expired legal contracts) comprise the majority of the tablets found in the next level up. They had been dumped during late fourth-century building works, along with unused tablet clay and bone writing styluses, in two areas on the periphery of the house whose floors had been waterproofed with bitumen to provide facilities for making and re-using tablets. The Ekur-zakir family's scholarly writings were found in the succeeding level, as well as (in entirely separate areas) a much smaller number of school exercises. The latter were discovered in two discrete locations, one of which was apparently a rubbish pit of some sort.[3] Allowing for problematic post-occupation disturbances, it seems that, in this house at least, the by-products of elementary scribal education were in general stored and disposed of quite separately from more learned works.

5.2. Specialist scholarly training

There is, of course, a large intellectual gap between being able to copy and recall snippets of the 'great works' of Babylonian scholarship—as typified in phase two of scribal education—and the mastery of a wide-ranging and sophisticated body of work typically found in the larger tablet collections. Specialised training, Gesche's *Fachausbildung* (2001: 213–218), has often been hard to identify in the written record. Perhaps the best known evidence is from the so-called Bel-remanni archive from Achaemenid Sippar, reconstructed museologically by Jursa (1999: 12–31) and Finkel (2000). The majority of the medical texts in that collection—mostly recipes and incantations—are error-prone short extracts, written in rough handwriting and for the most part without colophons. Significantly too, several are attested in multiple copies, the ephemeral by-products of the pedagogical process:

> No doubt [...] individual recipes were copied and recopied many times, until they were learned by heart and their orthography mastered. Individual, high-quality manuscripts would be removed from the premises by students for safe-keeping. The examples that have come down to us therefore will probably represent tablets that were kept for recycling after use or were simply lying about the building, rather than a part of a carefully preserved personal reference archive in themselves. (Finkel 2000: 143)

One set of three manuscripts in that collection, for a recipe to cure rashes, is marked *ina pî šaṭir,* literally 'written from the mouth', i.e., by dictation. Another three manuscripts in more competent hands, containing an incantation against witchcraft-induced phlegm, are *ina pî lē'î gabari Babili šaṭir,* 'written according to (lit. from the mouth of) a wooden writing board, a copy from Babylon' (Finkel 2000: nos. 1A–C, 48A–C). As might be expected, then, works could be learned from both oral and textual sources.

We can see this pattern in much more detail amongst the tablet collection of the Šangu-Ninurta family of *āšipus* who lived in Achaemenid Uruk.[4] Almost all of the Šangu-Ninurtas' scholarly tablets originally bore colophons of some sort. Only around a third of them now

[3] This analysis is based on excavation data in Schmidt et al. (1979), combined with the descriptions of tablets in SpTU 1–5 and the authors' own identification of compositions from this house. For a preliminary analysis, focusing on mathematical production in the house, see Robson (2008a: 227–40); a more detailed discussion will be given in Robson (forthcoming). Cf. also Clancier (2009: 387–400), whose statistics differ from ours.

[4] Although they are conventionally referred to as *āšipus*, the Šangu-Ninurta men preferred to describe themselves with the (apparent) synonym *mašmaššu*; we use the first word in general descriptive contexts and the latter when reflecting their own usage.

survive, but they provide crucial information about the circumstances of textual production. Roughly 30% of those colophons feature the words and phrases 'word-commentary' (*ṣâtu*), 'oral tradition' (*šūt pî*), 'reading' or 'lesson' (*malsûtu*), and '(questioning) of an expert('s speech)' ((*maš'altu*) *ša* (*pî*) *ummâni*) in various combinations (Frahm 2010; 2011: 41–57), phrases which are often taken as indicators of a pedagogical context (e.g., Gesche 2001: 214). For instance:

> Word-commentary and oral tradition of an expert's speech of '(If) a patient's tongue is red'. Lesson of Anu-ikṣur, son of Šamaš-iddin, descendant of Šangu-Ninurta, junior *mašmaššu*, Urukean. (SpTU 1: 33)

> Word-commentary, oral tradition, and questioning of an expert of '(If) a chameleon's head is located'. Lesson of Anu-ikṣur, son of Šamaš-iddin, descendant of Šangu-Ninurta. (SpTU 1: 83)

As the colophons suggest, these tablets contain detailed line-by-line analyses of scholarly works, most often omen series, giving explanations of difficult logograms and obscure words, and interpreting the relationships between different parts of the text. Two-thirds are attributed to Anu-ikṣur. The other commentaries in the Šangu-Ninurta collection may also have been by him, but without legible colophons their author's identity is uncertain.

As Frahm (2011: 292) notes, 'the commentaries from Anu-ikṣur's library, especially those written by Anu-ikṣur himself, stand out through their particularly sophisticated explanations, which are frequently based on etymology or etymography'.[5] Independently, Geller (2010: 137–140) deduces that Anu-ikṣur himself is the 'expert' the colophons refer to, and that the commentaries are the work of his students, 'transcribing and recording [his] lecture notes'. In the absence of any other evidence this might seem a plausible interpretation. However, Anu-ikṣur must in fact be the student, albeit a highly gifted one—or with a particularly demanding mentor (see also Hunger 1976: 13; Gesche 2001: 214; Frahm 2010: 168; Stevens 2013: 220 n.51). For when Anu-ikṣur uses the title *mašmaššu* in commentary colophons he almost always adds *ṣehru*, 'junior'. Further, if the tablets had been written by someone else, such as a putative student, we might expect the phrase *qāt PN* 'hand of PN', as we see so often on tablets produced by young scholars for their elders (e.g., SpTU 4: 151). It is also striking that all of these commentaries appear to be fresh compositions: their colophons never state that they have been copied from earlier originals, and they have no known precursors—so far—amongst their predecessors (Frahm 2011: 290–296).

It seems to us, then, that the Šangu-Ninurta family used commentary as a means of gaining a personal understanding of often complex, sophisticated and obscure scholarly compositions and the oral traditions that surrounded them. Most of this work was done by younger men but, at least in Anu-ikṣur's case, good habits continued even once he had lost his 'junior' status. That is not to say that *no* commentaries were ever copied. For instance, there are four copied commentaries from the Ekur-zakirs' scholarly collection, which was put together in the house formerly occupied by the Šangu-Ninurtas about a hundred years afterwards in the late fourth century BCE (SpTU 1: 90; SpTU 2: 38; SpTU 3: 101; SpTU 4: 162). Clearly different families and individuals used commentaries in different ways.

5.3. Copying tablets

Together the pedagogical commentaries comprise some 20% of the Šangu-Ninurta family's

[5] The graphemic analogue to etymology: see Frahm (2011: 70–76).

scholarly tablets, and a further 5% is accounted for by nine discarded elementary exercises. What was in the remaining three-quarters of their collection? Recall that about 30% of the Šangu-Ninurta family's tablets have surviving colophons. Over half of these explicitly state that they record copies of an earlier manuscript and over a quarter definitely do not state that they are copies. Most of these tablets without copying-statements are amongst those with clear pedagogical functionality discussed above, while the remaining two seem to be *ad hoc* compilations of medical recipes. Allowing for the problems of small-sample statistics, it seems reasonable to estimate that about two-thirds of the colophons originally mentioned copying and one-third did not. Almost all of the non-copied tablets carry explicitly pedagogical labels; but does that mean that copied tablets, which comprise the majority of the Šangu-Ninurta family's collection, were not related to teaching?

The thirty 'copied' tablets, plus a further four which must also have been copied, include seven extracts from well-known series of incantations and rituals, such as *Lamaštu, Bīt Rimki*, and *Bīt Mēseri*, and seven chapters from the big omen series like *Sakikkû*, *Šumma Ālu* and *Šumma Izbu,* while the remaining twenty are all medical, lexical, mathematical, and astrological. These trends are also broadly reflective of the eighty or so tablets without surviving colophons. These, in other words, are the core works which trainee scholars such as Anu-ikṣur learned to comment on. It would thus be wrong to argue that they were not part of the educational process too. Indeed, just as Anu-ikṣur primarily refers to himself as a 'junior incantation priest' (*mašmaššu ṣehru*) on his 'pedagogical' tablets, on the 'copied' tablets he does so about as frequently as using *mašmaššu* alone.

Likewise we find the terms *mašmaššu* and *mašmaššu ṣehru* (and no others) used with equal frequency amongst the professional designations of the other men who copied or owned tablets in the Šangu-Ninurta family's collection. Who were those men, and what was their relationship to Anu-ikṣur?

Most obviously, there is his immediate family: his father Šamaš-iddin, *mašmaššu (ṣehru)*, writer of nine scholarly tablets (seven copied works and two commentaries) and owner of four more, copied for him by Anu-ikṣur; his brother Rimut-Anu, also a *mašmaššu* and copyist of three standard works; and Anu-ikṣur's son Anu-ušallim, who copied two omen series tablets for him. So far so good: we have sons producing texts for their fathers, perhaps as part of their familial education.[6] But we also find Belu-kaṣir, son of Balaṭu, and one Nadin, copying tablets for Rimut-Anu, and their relationship to him is unclear (SpTU 1: 43; SpTU 4: 174). Were they his apprentices, learning to write tablets as part of their training; or his colleagues, generously making copies of works for him that he needed? On present evidence we cannot tell.[7]

A further five tablets, which are probably to be associated with this tablet collection on stratigraphic grounds, bear colophons of men who cannot be directly linked to members of the Šangu-Ninurta family, but at least two of whom also go by the title *mašmaššu (ṣehru)*. Three of these tablets are copied works (SpTU 3: 47A, 67, 80), and two are commentaries (SpTU 1: 39, 84). Whether these tablets were produced in the Šangu-Ninurta family's house or elsewhere, it is clear from their contents, and from the professions of their producers, that they were kept or acquired because they were all directly relevant to the family's core intellectual interests (and presumably livelihood), namely healing and purification.

Where did the sources for their copies come from? The colophons tell us that nine of the Šangu-Ninurtas' originals were writing-boards and that a further three were tablets, but in most

[6] Maul (2010: 208–10) has likewise traced four generations of a family of *āšipus* in seventh-century Assur, each gaining increasingly senior titles as they are taught by their fathers and uncles.

[7] Both types of relationship are attested amongst the *āšipus* of seventh-century Assur (Maul 2010: 212, 216).

cases the medium is not mentioned. Does this mean that writing-boards outnumbered tablets three to one in late Achaemenid Uruk, or rather that clay originals were otherwise unremarkable? This second alternative seems more likely, as one of the three tablet originals specified in the colophons is further marked as special, being from Meslam, the god Nergal's temple at Cutha. In either case, it is clear that substantial quantities of scholarly writings were on perishable media that are lost to us forever.

Looking in more detail at the original sources, we see that they include two writing-boards belonging to the defunct Eanna temple in Uruk; a 'Babylonian copy' of a writing-board; the 'tablet from among the old tablets of Meslam'; and three 'Urukean copies'. At least 10% of the originals thus come from outside Uruk, but we do not know how they moved: did scholars travel with their tablets and writing-boards? Were collections dispersed—sold, even?—on a scholar's death or penury? Were tablets commercially valuable? Was copying a time-consuming business or relatively speedy? Did apprentice scholars travel in order to copy? Or were these tablets copied from manuscripts that were themselves made in Uruk, with an original from somewhere else far back in the train of transmission? It is noteworthy too that three of the originals—again about 10%—come from temple collections, reminding us once again of the fluidity of the boundaries between institutions and the families that comprised them.

5.4. Conclusions

It seems that the products of Neo-Babylonian elementary education were mostly ephemera, as they had also been in earlier times (Delnero §5): generally thrown away or recycled, with perhaps only the best copies kept as reference works or proof of prowess. Large archaeological finds of school tablets should not therefore be generally labelled as 'libraries'. In later stages of scholarly training, however, it is difficult and perhaps even inappropriate to draw a clear distinction between pedagogy and collection. Budding scholars accrued knowledge of texts through copying and written commentary, under the guidance of a mentor, as much as they did through reading and discussion. Textual production, both copying and commentary, must also have continued throughout individual scholars' lives, as they came into contact with new works and new ideas.[8] Thus collections accrued over several generations of a family. Much must have been learned by heart, but tablets (and writing boards) were retained as back-up when memory failed, as status symbols of the family's professional identity, and—as has already been hinted at—a shared resource on which other members of their scholarly community could draw.[9] We explore this idea further now in our final Case Study.

6. Case Study Three: Secret libraries? Protected tablet collections in Seleucid Uruk

Cuneiform scholarship had always been the preserve of a small intellectual elite, but by the Seleucid period this was more the case than ever. Akkadian was no longer anyone's mother tongue, and administration under the foreign powers who now controlled Babylonia was carried out largely in Aramaic, under the Persians, and later in Greek, after the Macedonian conquest. Scholarly activity, and scholarly tablet collections, were increasingly restricted to the temples and the intellectual communities they supported (e.g., Rochberg 1993: 33), which were often dominated by a few families (Beaulieu 2006: 19; Robson 2007a; 2017). One way in which these

[8] The Assyrian scholar Nabu-zuqup-kenu's intellectual development over his career has been traced particularly closely by Lieberman (1987); for a brief update see Frahm (2011: 265–7).

[9] Maul (2010) comes to very similar conclusions for the *āšipu* Kiṣir-Aššur and his family in seventh-century Assur.

families maintained their monopoly on scholarly positions was by controlling the educational route towards them. The scribal craft, like other types of expert knowledge in Mesopotamia, was typically passed on from father to son, and scholarly specialisms were no exception. As we have seen in Case Study Two, advanced professional training in *āšipūtu* in Achaemenid Uruk functioned largely through apprenticeships within a familial environment, with only a few outsiders penetrating an effectively closed network. The same pattern of training is visible at Uruk in the Seleucid period for both *āšipu*s (now represented by the Ekur-zakir family) and *kalûs*—lamentation priests from the Sin-leqi-unninni family. Scholarly families, then, could exercise considerable control over the selection and training of future generations of scholars. But what about textual resources? How did 'libraries' function within these tight-knit and competitive intellectual circles? Who had access to scholarly tablets, and what did such access entail? How, and within what limits, was scholarly knowledge disseminated within the community? Were all tablets treated the same way, or is there evidence that some types of knowledge were more restricted, and hence more highly valued, than others? In this section we explore these questions using the tablets of the Ekur-zakir and Sin-leqi-unninni families from Seleucid Uruk.

The scholarly tablets belonging to these men comprise a mixture of provenanced and unprovenanced material. Although it is likely that most of the illicitly excavated tablets are from the Reš temple (Figure 8.4), only one group of Sin-leqi-unninni tablets came from an archaeologically excavated assemblage there (Uruk 4; see Table 8.6). However, similarities in the content and structure of the tablets belonging to each familial and professional group, as well as the fact that they are owned and written by the same individuals within the same date range, make it justifiable to treat them as two coherent scholarly collections. These are 'libraries' in the broadest sense, without any implication that the surviving tablets ever constituted two discrete formal collections in antiquity.

The lack of contextual information means that we can say very little about where most of the tablets were originally kept and how they were arranged. We can say more, however, about how they were used and conceptualised, thanks to their colophons, which provide insights into how the scholars organised, and protected, their intellectual activity.

6.1. Borrowing rules

The colophons of some of the two families' scholarly tablets include protective formulae which warn against destruction, theft or unauthorised viewing of the tablet, invoking divine agents to promote adherence to these instructions and punish those who transgress them. A typical example, from an astronomical tablet owned by the *kalû* Anu-aba-uter, runs as follows:

> Whoever fears (the gods) Anu and Antu, he shall not take it (the tablet) away by theft. Whoever steals it, may Adad and Šala steal him away. (TCL 6: 25)

Sometimes the protective formulae are more elaborate. The colophon of another astronomical tablet, written by Anu-aba-uter for his father Anu-belšunu, not only prohibits removal of the tablet, but goes on to specify that the contents of the tablet are 'secret', *pirištu*, and that only someone with an appropriate level of knowledge may be given access to it:

> Whoever reveres (the gods) Anu, Ellil and Ea shall not [take it away] by theft. Ephemeris, wisdom of the god Anu, secret of the [great go]ds, wisdom of the scholars. The one who knows may show [the one who knows]; the one who does not know may not [see. Restriction] of Anu, Ellil and [Ea, the great gods]. (TCL 6: 24+)

Although only the second colophon explicitly mentions secrecy and restricted access to the knowledge contained in the tablet, we regard both the secrecy formulae and the apparently more practical injunctions against theft or damage, which occur far more frequently, as part of a range of protective measures which all share the same objective: to protect the contents of the tablet and prevent them from being disseminated beyond the proper circles.[10] In fact, further clauses in some of the protective colophons may explain why the Uruk scholars seem to be so concerned about the material wellbeing of their tablets. Here is the colophon of one of the *āšipus*' tablets, which contained various omens from the series called *Šumma Izbu*, about ominous births (Figure 8.5):

> […Uruke]an. Hand of Nidinti-Anu, son of Anu-bēl[šunu, descendant of Ekur-zā]kir, incantation priest of Anu and Antu, Urukean. […Whoever reveres Anu] and Antu shall guard and preserve it; he shall not [take it away] by theft, shall not deliberately let it be dropped. He shall [return it] on the second day to the house of its owner. [Whoever takes it away,] may Adad and Šala take him away. U[ruk, month x, day] 7(?), year 90, Anti[ochus the king.] (TCL 6: 10)

Here, as well as the prohibition against theft and breakage, we find a time restriction which indicates that tablets *were* in fact taken out of collections temporarily—borrowed by other scholars. Similar phrases in tablets belonging to other collections indicate comparable lending arrangements going back to at least the Achaemenid period (e.g., SpTU 2: 6; SpTU 3: 97). Nidinti-Anu's tablet is unusually generous in allowing the borrower two days; many surviving instructions are to return the tablet by the same evening. This was exclusively a 'short loan' system, at least in theory. We may even see its results in various tablets which state in the colophon that they were *hanṭiš nasih*, 'excerpted in a hurry', as Maul (2010: 213) has argued in the case of the Assur *āšipus*. At all events, these 'borrowing rules' show us that scholarly tablets did move, for copying or consultation, between various private houses. They also seem to have travelled, more permanently, from private houses to the temple: the colophons of several unprovenanced Uruk tablets which are probably from the Reš state that the tablet should be returned to the owner's house, suggesting that they originated in a private collection but had ended up in the temple (RA 12: 75; TCL 6: 1, 10). The opposite direction of travel occurred in the case of an Ekur-zakir tablet which contains a chronicle about the treatment of Uruk by the ancient kings of Ur (SpTU 1: 2): its colophon states that the tablet was dedicated in the Reš for the owner's good health and success, but it was found together with other Ekur-zakir tablets at the *āšipu*s' house.

However, the various nodes in this intellectual network were not necessarily equal, and tablets may not have circulated freely between them all. To our knowledge, no tablet from Seleucid Uruk contains a borrowing formula in the colophon which requests that the tablet be returned to the temple. Nor does any tablet which states that it was deposited in the Reš temple contain a borrowing formula of any type; if a protective formula appears on these tablets it is usually a clause forbidding theft. It is possible, then, that at least some of the tablets (and works on other media, such as writing boards) kept in the temple could be consulted and copied only within its walls—perhaps because they were votive objects (as explicitly stated in some of the

[10] On 'secret knowledge' in Mesopotamia and the so-called *Geheimwissen* colophons see Borger (1968); Lenzi (2008); Stevens (2013); Robson forthcoming 2. In including protective formulae concerned with theft and destruction in our study of protected knowledge we take a broader definition of intellectual protection than Borger and Lenzi, who focus only on formulae explicitly connected with 'secrecy'.

colophons), which would lose their consecrated status if removed from the sanctuary.

In short, we can see in Seleucid Uruk one or more local versions of the 'distributed library' we have reconstructed for the Neo-Assyrian royal court and temples, with tablets moving between institutional and private contexts. Within an intellectual environment characterised by mobility, however restricted, it is not surprising that theft and damage were frequently uppermost in the minds of tablet owners and scribes—though their ultimate concern was always the *intellectual* loss entailed by the disappearance or destruction of the tablet. But were they equally concerned to protect all their intellectual property? We do not believe so. A closer look at the tablets to which the Uruk *āšipu*s and *kalû*s chose to add protective colophons, and those they left unprotected, sheds further light not only on the nature of the Uruk libraries but also on the intellectual world within and for which they were constructed and maintained.

6.2. 'Special collections': protected knowledge and professional identity

Collectively, the Ekur-zakirs and the Sin-leqi-unninnis each owned about thirty surviving tablets with colophons sufficiently well preserved to deduce whether or not they originally included protective formulae; protected tablets constitute between a quarter and a third of each group. At first, it seems as if the two families applied protective formulae rather inconsistently. Protected and unprotected manuscripts appear in all the major genres—rituals, omen series, astronomy and astrology—with no immediately discernible logic. However, a closer look at the protected compositions in each group's tablet collection reveals a coherent pattern.[11]

This pattern can be seen clearly if we examine the distribution of protective formulae on tablets connected with ritual practice—rituals, hymns, prayers and lamentations. Among the protected ritual tablets belonging to the Ekur-zakir *āšipus* are one manuscript of New Year rituals for the Uruk *akītu* festival, and a hymn to Anu, while another set of New Year rituals and a hymn to the moon-god Sin were left without protective formulae (BRM 4: 7, 8; TCL 6: 39; UVB 15: 37). What the protected tablets have in common, and the unprotected tablets do not share, is a close link with the specialised professional activities of the owner, as *āšipu*. Although both the Ekur-zakirs' ritual tablets relate to the New Year festival, the one which contains a protective formula in the colophon describes a part of the proceedings in which the *āšipus* feature very prominently, whereas in the rituals described on the unprotected tablet they appear only occasionally, with other cultic personnel playing a more significant role. Similarly, the hymn to Anu was obviously of greater relevance to the Ekur-zakirs' role as priests of his temple than the hymn to Sin.

Turning to the ritual tablets of the Sin-leqi-unninni *kalû*s', we find again that the compositions of the greatest relevance to the family's professional specialism attract the protective formulae. Here too a hymn to Anu was protected, but not one to Ellil— the tablet with the closer link to the *kalû*s' cultic context is safeguarded (TCL 6: 48, 54). The Sîn-leqi-unninnis also protected two tablets of rituals for the making of a kettledrum, which would be used during lunar eclipse rituals (TCL 6: 44; BagM Beih 2: 5). These relate to a core part of their specialist cultic activity: performing ritual laments to ward off the inauspicious omens portended by eclipses was an important part of *kalûtu*.

The other unprotected ritual tablets owned by the *kalû*s, seem at first as if they might contradict the link between protected knowledge and professional activity, since they too contain material highly relevant to *kalûtu*: three manuscripts of temple-building rituals performed by the *kalû*s. However, it is likely that these tablets were all written by junior scribes in the early stages of their specialist professional training (Gesche's *Fachausbildung* , above).

[11] A fuller version of the argument in this section, with additional examples from the other scholarly families in Uruk, can be found in Stevens 2013.

One (TCL 6: 46) is the earliest scholarly tablet attributable to Anu-belšunu, who identifies himself as 'junior *kalû*' in the colophon, while the second (BagM Beih 2: 12), a partial duplicate of the first, is the earliest datable scholarly tablet written by his son, Anu-aba-uter, some thirty years later. Both state in the colophon that they were written for the scribes' fathers and thus fit within the context of apprenticeship. The third tablet (TCL 6: 45) is undated, and has been placed with Anu-belšunu's latest writings (Pearce and Doty 2000: 332), but his lack of a professional title suggests that it could equally be early within his scholarly career. None of the three tablets contains a copying statement, which, as we have seen in Case Study Two, is often indicative of a pedagogical context. If this is the case, they were probably never intended to be permanently retained, or used for further copying; they were to be proof of the competence of trainees rather than resources for cultic practice, and thus did not require protective injunctions. However, as Case Study Two has shown, the line between pedagogy and professional activity was often blurred, and so perhaps these tablets were ultimately judged sufficiently well executed to be added to the temple collection after all.

Looking at other categories of tablets in the collections of the Ekur-zakir *āšipu*s and Sin-leqi-unninni *kalû*s further strengthens the hypothesis that protective formulae were only applied to texts within a collection that had a strong connection with the owner and/or scribe's professional practice.[12] The *āšipus* protected two tablets from traditional omen series associated with their discipline: omens from *Šumma Izbu*, and a catalogue of the celestial omen series *Enūma Anu Ellil* (TCL 6: 10; 15+). Meanwhile, all but one of their unprotected omen tablets contain material from the extispicy series *Bārûtu.* This series seems to have long been obsolete for practical purposes, but still attracted scholarly interest during the Hellenistic period. Nevertheless, it had never been, and never became, central to *āšipūtu*, which explains the Ekur-zakirs' failure to apply protective formulae to their copies and commentaries. Both *āšipus*' and *kalûs'* collections also contain unprotected mathematical, literary and lexical tablets; these genres were peripheral to both groups' specialised professional activities, and in any case some of these tablets may be pedagogical.

Within Seleucid Uruk, then, each scholarly group had 'special collections' of tablets containing knowledge key to the performance of their particular professional duties, which they sought to protect more closely than the rest of their scholarly tablets. Those allowed to borrow or consult such protected tablets, we may imagine, were a very restricted group—we are a long way from the user profile and lending policies of the modern library. There is undoubtedly further progress to be made in understanding the nature and purposes of the protective formulae used by cuneiform scholars. For example, although specialist ritual or therapeutic compositions could certainly be restricted to one professional group or another, it is less clear to what extent the major divination series such as *Šumma Ālu* could ever be monopolised by one set of disciplinary specialists; what, then, was the point in 'protecting' them, and from whom? There is also the question of how far the prohibitions were ever intended to be enforced; perhaps in some cases the 'protective' formulae are as much a claim to intellectual status as a 'practical' mechanism. Differences in the use of protective formulae over time and between different intellectual communities in Assyria and Babylonia also invite us to consider how the wider political and intellectual contexts affected cuneiform scholars' attitudes to the transmission or control of knowledge and their motivations for and means of safeguarding it (Robson forthcoming 2). Nonetheless, it is clear that, alongside careful selection to apprenticeships, restricting or forbidding the circulation of tablets containing key disciplinary knowledge was another way for the *āšipus* and *kalû*s to maintain disciplinary boundaries, and in turn for the Ekur-zakir and Sin-leqi-unninni families to maintain the monopoly they had on their respective

[12] On the question of whether the owner or scribe's specialism was the relevant factor in the application of protective formulae, see Stevens 2013: 224-6.

scholarly professions and their associated social and intellectual prestige.

6.3. A boundary-crossing genre

It is not quite the case, however, that specialist knowledge and the tablets which carried it never crossed professional or familial boundaries. A small sub-group of scholars whose main scholarly affiliation was *āšipu* or *kalû* developed a secondary specialism that also served their primary professional interests: expertise in the new celestial sciences, mathematical astronomy and zodiacal astrology. These men bore the title of *ṭupšar Enūma Anu Ellil*, 'scribe of (the series) *Enūma Anu Ellil*', in reference to the astrological omen series which had traditionally formed the cornerstone of celestial scholarship. By the Seleucid period, however, celestial *ṭupšarrūtu* increasingly entailed mastery of complex mathematics and new theoretical systems (Rochberg 2000: 367; Beaulieu 2006: 17–18)—highly specialised knowledge which a few Ekur-zakirs and Sin-leqi-unninnis collaborated across familial and professional lines to pass on to each new generation, with older members of one family teaching junior scribes from the other (Robson 2008a: 221–227; 2008b; Ossendrijver 2011a; 2011b).

Mathematical astronomy, and to a lesser extent zodiacal astrology, formed a significant part of both the *kalû*s' and *āšipus*' tablet collections. The vast majority of such tablets so far known from Hellenistic Uruk were owned and/or written by just three men from successive generations of the two families, who were all 'scribes of *Enūma Anu Ellil*': Anu-aha-ušabši and Šamaš-eṭir from the Ekur-zakir family, and Anu-aba-uter from the Sin-leqi-unninnis. These celestial specialists are also the only ones who applied protective formulae to tablets with astronomical or astrological content (Stevens 2013: 226-230), showing once again the close and specific link between the type of tablets which are protected and the professional identity of the owner and/or scribe.

But that is not all. The scribes of *Enūma Anu Ellil* did not append colophons with protective formulae to all their tablets relating to celestial scholarship, but rather to those most relevant to their primary occupation. Thus, Anu-aha-ušabši protected copies of an astrological calendar text which contained ritual instructions relevant to his role as *āšipu* and high priest of the Reš temple (K. 3753), and (if his name is correctly restored), a catalogue of *Enūma Anu Ellil* which was written for another *āšipu* (TCL 6, 15+), but left unprotected tablets containing astrological weather forecasts and a lunar ephemeris, where any connection with *āšipūtu* is less obvious (TCL 6, 19; ACT 101). Similarly, all the protected tablets Anu-aba-uter owned himself or wrote for other *kalûs* share a focus on the moon, and particularly on lunar eclipses—perhaps the key celestial phenomenon with which lamentation priests had to contend (Stevens 2013: 229-231). Beaulieu (2000; 7–8, 12; see also Robson 2008a: 260) has persuasively argued that the *kalûs*' interest in mathematical astronomy arose from their cultic duties—that they sought to refine their predictive models for celestial phenomena so as to be able to time rituals more correctly. Their protected astronomical tablets confirm and extend this insight, enabling us to see a hierarchy or at least differentiation of knowledge within the secondary area of interest which correlates precisely with its relevance to the primary discipline.

6.4. Conclusions

The colophons of the Uruk scholars' tablets enable us to reconstruct something of the way in which their 'libraries' were used and conceptualised. The scholarly collections created and used by these Seleucid *āšipus* and *kalûs*, like those of their Neo-Assyrian predecessors, were a distributed and somewhat mobile resource. Tablets were lent and borrowed among specialists, and the collections kept in the temple and in the scholars' homes were complementary and to some extent transferable; a sharp distinction between 'private' and 'institutional' libraries is not

appropriate here. Nor is a stark divide between scholarly training and professional practice. Just as library tablets functioned as base texts for pedagogical commentary, so high-quality copies made by skilled apprentices might ultimately be retained to renew permanent collections. But the scholars themselves made other distinctions between their tablets. *āšipus* and *kalûs* used protective formulae to mark and safeguard tablets containing texts closely connected with their respective professional specialisms, and hence to articulate and protect their control over those professions and their own intellectual status. This shows us both that cuneiform libraries could contain special collections of material considered particularly precious by their users and therefore marked as restricted, and also that this restricted or 'secret' knowledge was not a fixed corpus but varied according to the professional identity of the libraries' owners and users.

The celestial sciences reveal a more collaborative side to Hellenistic scholarship in Uruk—a sub-discipline, and associated tablet collection, in which both *āšipus* and *kalû*s invested in order to facilitate, and perhaps improve, their respective professional performance. However, this was collaboration within a strictly demarcated in-group and involved only a few individuals—in a way the ultimate in intellectual exclusivity. The protected collections of *āšipūtu, kalûtu,* and celestial scholarship highlight the fact that cuneiform libraries, or at least certain parts of them, could be as much a tool for controlling knowledge as disseminating it.

7. Summary

At the very start of this discussion we distinguished between static buildings and their mobile contents: both objects and people come and go from the spaces they are designed to inhabit. To define the cuneiform library in terms of the building where scholarly tablets were kept is therefore only partially satisfactory, as it reduces the complex motivations, needs and interests of the 'library's' users to universal concerns about storage, and leads to a one-dimensional typology of tablet collections. We should thus no longer be thinking in simplistic terms about a tripartite division between temple, palace and private libraries whose functions and contents remained essentially stable throughout the first millennium (e.g., Clancier 2010).[13] Rather, we should be studying the collections of individuals, professions and social groups on a case-by-case basis, always alert to the significance of their tablets' contents, and the means by which they acquired, stored, shared and protected them. The pattern of evidence from Neo-Assyrian Assur, for instance, is not always replicated in Seleucid Uruk, nor even between contemporary groups of scholars in the same city, and we must be careful not to over-generalise from individual case studies. However, there are some useful overarching conclusions to be drawn.

First, 'libraries' as collections of artefacts were much more mobile—within the scholarly community—than many have acknowledged. Single archaeological findspots will rarely reveal an intact collection, even assuming perfect conditions of preservation. Scholarly professions tended to run in families, and both families and professions tended to be associated with particular institutions: both sacred *and* profane in the case of the Neo-Assyrian royal *āšipus*. Scholarly tablets thus moved frequently between the buildings—homes, temples, palaces, clients' dwellings—where the scholars worked, albeit subject to a variety of safeguards. They were a shared resource; a library distributed across several sites, that community members could draw on. However, as we have seen, membership of those scholarly communities was carefully controlled, by sex (for every single one of the attested scholars is male), family membership and social status as well as by intellectual capability.

Second, the sharing of written knowledge, even within a given intellectual community, was

[13] We have not discussed palace tablet collections in any detail here because, as will be obvious from the Tables, none from this period is sufficiently well preserved or well published to analyse in this manner.

not a free-for-all. Tablets could be borrowed from domestic settings, it seems, but temple property, sometimes at least, had to be copied *in situ*.[14] Individual scholars considered some works particularly worthy of protection, depending on their own professional interests and identities. And those professions—and thus their specialist works—by and large remained firmly within family circles. Further, most prior studies have been predicated on the assumption of an economy of abundance; that is, that scholars had no difficulty in accessing the materials they needed. But in fact scholarly knowledge seems to have operated in an economy of relative scarcity—that in fact, outside the privileged community of royal scholars, it was not always possible to access texts that one wanted. Jean (2007: 165–167), for instance, has shown that over the course of the first millennium fewer and fewer of the works listed in the so-called *Aššīpus' Handbook*—which Assyriologists tend to treat as the standard compendium of *āšipūtu*—were actually available. So in seventh-century Assur, Kiṣir-Aššur owned only about half of the hundred or so compositions listed there, in fifth-century Uruk Anu-ikṣur and his family had about half that number again. The missing works are not generally attested amongst other Late Babylonian tablets either.

Third, while we do not consider elementary education to have been part of 'library' culture—basic literacy was developed by writing and rewriting exercises that were never meant to be kept—at a more advanced level pedagogy and scholarship were inextricably intertwined. Written knowledge could be accrued over a lifetime, by both copying and commentary, as Nabu-zuqup-kenu's and Anu-ikṣur's tablets show. Thus tablet collections accumulated over two, three or more generations. The ideal may have been that most expert knowledge was learned by heart, for, as Brian Stock (1990: 144) reminds us, 'literates can do without actual texts and yet remain part of the world of reading and writing. Literates do not carry libraries with them; they transform a lot of what they know into procedural memory, so that actions based ultimately on texts appear to be automatic'. However, tablet collections served a range of functions throughout and beyond the intellectually active life of the individual. As well as being the resource which supported fledgling scribes' mastery of their professional specialism, cuneiform 'libraries' provided an essential reference system for established scholars, by which large amounts of data could be accumulated (as in the case of astronomical calculations and records), and knowledge could be retrieved when memory failed or new needs or interests arose. Finally, as the intersection between the transmitted learning of countless previous scholars and the new knowledge and interpretations of the current generation, such tablet collections played a key role in the construction and maintenance of disciplinary integrity and intellectual identity.[15]

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[14] What happened to a temple's tablet collection after deconsecration or abandonment is another matter, at present unanswerable; tablets with votive colophons, suggesting that they were originally made for temple deposit, are occasionally found in private contexts (e.g., STT 1: 56; 2: 199).

[15] Eleanor Robson's work on this article was carried out as part of the AHRC-funded research project, *The Geography of Knowledge in Assyria and Babylonia, 700–200 BC* (Cambridge, 2007–12, AH/E509258/1) and much of it written in Heidelberg in late 2011, as the recipient of a Bessel Forschungspreis of the Alexander von Humboldt Foundation, generously hosted by Stefan Maul. Kathryn Stevens' work on it was supported by an AHRC-funded PhD studentship, and benefited from insightful comments and questions from the members of the Centre for Identity and Canon Formation on a paper given there in November 2011. For more detailed analyses of Case Studies One–Two and Case Study Three see Robson (forthcoming 1; forthcoming 2) and Stevens (2013) . We are grateful to Heather D. Baker for her kind help in trying to trace the tablets from Neo-Babylonian Ur and the anonymous referees for their suggestions and improvements.

Bibliography

Abbreviations:

BagM Beih 2 = van Dijk and Maier 1980; selected online editions at http://oracc.org/cams/gkab/bagm_beih_2/

BRM 4 = Clay 1923; selected online editions at http://oracc.org/cams/gkab/brm_4/

CTN 4 = Wiseman and Black 1996; selected online editions at http://oracc.org/cams/gkab/ctn_4/

RA = *Revue d'Assyriologie*; selected online editions of pertinent texts at http://oracc.org/cams/gkab/ra/

SAA = *State Archives of Assyria*, 19 volumes to date; complete editions online at http://oracc.org/saao/

SpTU 1–5 = Hunger 1976; von Weiher 1982; 1988; 1993; 1998; selected online editions at http://oracc.org/cams/gkab/sptu/

STT 1–2 = Gurney and Finkelstein 1957; Gurney and Hulin 1964; selected online editions at http://oracc.org/cams/gkab/stt/

TCL 6 = Thureau-Dangin 1922; selected online editionsat http://oracc.org/cams/gkab/tcl_6/

UVB 15 = Falkenstein 1959; selected online editions at http://oracc.org/cams/gkab/uvb_15/

Anonymous 1987. 'Excavations in Iraq, 1985–6.' *Iraq* 49, 231–52.

Baker, H. D. 2001. 'Nabu-zuqup-kēnu' in H. D. Baker (ed.), *Prosopography of the Neo-Assyrian Empire*, vol. 2/II. Helsinki: Helsinki University Press, 912–913.

Baker, H. D. 2008. 'Babylon in 484 BC: the excavated archival tablets as a source for urban history.' *Zeitschrift für Assyriologie* 98: 100–116.

Beaulieu, P.-A. 2000. 'The Descendants of Sîn-lēqi-unninni' in J. Marzahn and H. Neumann (eds.), *Assyriologica et Semitica: Festschrift für Joachim Oelsner anläßlich seines 65. Geburtstages am 18. Februar 1997*. Münster: Ugarit-Verlag, 1–16.

Beaulieu, P.-A. 2006. 'The Astronomers of the Esagil Temple in the Fourth Century BC' in A. K. Guinan et al. (eds.), *If A Man Builds A Joyful House: Assyriological Studies in Honor of Erle Verdun Leichty*, Leiden and Boston: Brill, 5–22.

Black, J. A. 2004. 'Lost Libraries of Ancient Mesopotamia' in J. Raven (ed.), *Lost Libraries: The Destruction of Great Book Collections since Antiquity*. London: Palgrave Macmillan, 41–57.

Black, J. A. 2008. 'The Libraries of Kalhu' in J. Curtis et al. (eds.), *New Light on Nimrud: Proceedings of the Nimrud Conference, 11th–13th March 2002.* London: British Institute for the Study of Iraq, 261–266.

Blades, W. 1892. *Books in Chains.* London: Gale.

Borger, R. 1964. 'Geheimwissen.' *RealLexikon der Assyriologie* 3: 188–191.

Brown, D. 2008. 'Increasingly Redundant: the Growing Obsolescence of the Cuneiform Script in Babylonia from 539 BC' in J. Baines, J. Bennet and S. Houston (eds.), *The Disappearance of Writing Systems: Perspectives on Literacy and Communication.* London: Equinox, 73–102.

Cavigneaux, A. 1980. 'Le temple de Nabû *ša harê*—rapport préliminaire sur les textes cunéiformes.' *Sumer* 37: 118–126.

Cavigneaux, A. 1981. *Textes scolaires du temple de Nabû ša harê* (Texts from Babylon, 1). Baghdad: Ministry of Culture and Information State Organization of Antiquities and Heritage.

Clancier, P. 2009. *Les bibliothèques en Babylonie dans la deuxième moitié du Ier millénaire av. J.-C.* (Alter Orient und Altes Testament 363). Münster: Ugarit-Verlag.

Clancier, P. 2010. 'Formation and Administration of the Collections of Literary and Scholarly Tablets in First Millennium Babylonia' in F. Bretelle-Establet (ed.), *Looking at It from Asia: The Processes that Shaped the Sources of History of Science* (Boston Studies in the Philosophy of Science, 265). Berlin and Boston: Springer, 3–35.

Clark, J. W. 1901. *The Care of Books: an Essay on the Development of Libraries and their Fittings, from the Earliest Times to the End of the Eighteenth Century.* Cambridge: Cambridge University Press.

Clay, A. T. 1923. *Epics, Hymns, Omens and Other Texts* (Babylonian Records in the Library of J. Pierpont Morgan, 4). New Haven: Yale University Press.

Crawford, S. 2003. 'Chain Reaction: The Practice of Chaining Books in European Libraries.' *Shaney Says* blog, http://www.shaneycrawford.com/2003/07/chain-reaction-the-practice-of-chaining-books-in-european-libraries/, accessed 5 October 2011.

Curtis, J. E., H. McCall, D. Collon and L. al-Gailani Werr (eds.) 2008. *New Light on Nimrud: Proceedings of the Nimrud Conference, 11th–13th March 2002.* London: British Institute for the Study of Iraq.

Fahdil, A. and M. Hilgert 2008. 'The Cultic Lament "a gal-gal $buru_{14}$ su-su" in a Manuscript

from the "Sippar Library".' *Zeitschrift für Orient-Archäologie* 1: 154–193.

Faist, B. 2007. *Alltagstexte aus neuassyrischen Archiven und Bibliotheken der Stadt Assur* (Studien zu den Assur-Texten 3). Wiesbaden: Harrassowitz.

Faivre, X. 1995. 'Le recyclage des tablettes cunéiformes.' *Revue d'Assyriologie* 89: 57–66.

Falkenstein, A. 1934. *Literarische Texte aus Uruk.* Berlin: Staatliche Museen Berlin, Vorderasiatisches Abteilung.

Falkenstein, A. 1959. 'Zwei Rituale aus seleukidischer Zeit' in H. J. Lenzen (ed.), *XV. vorlaufiger Bericht über die von dem Deutschen Archäologischen Institut und der Deutschen Orient-Gesellschaft aus Mitteln der Deutschen Forschungsgemeinschaft unternommenen Ausgrabungen in Uruk-Warka.* Berlin: Mann, 36–44.

Figulla, H. H. 1949. *Business Documents of the New-Babylonian Period* (Ur Excavations, Texts 4). London and Philadelphia: Publications of the Joint Expedition of the British Museum, and of the University Museum, University of Pennsylvania, Philadelphia, to Mesopotamia.

Figulla, H. H. 1961. *Catalogue of the Babylonian Tablets in the British Museum,* Vol. 1. London: British Museum Publications.

Fincke, J. C. 2010. 'Astrologische Omenreporte aus Assur: Mondfinsternisse im Monat *nisannu*' in S. M. Maul and N. P. Heeßel (eds.), *Assur-Forschungen: Arbeiten aus der Forschungsstelle »Edition literarischer Keilschrifttexte aus Assur« der Heidelberger Akademie der Wissenschaften.* Wiesbaden: Harrassowitz, 35–63.

Finkel, I. L. 1991. '*Muššuʾu*, *Qutāru* and the scribe Tanittu-Bēl.' *Aula Orientalis* 9: 91–104.

Finkel, I. L. 2000. 'On Late Babylonian Medical Training' in A. R. George and I. L. Finkel (eds.), *Wisdom, Gods and Literature: Studies in Assyriology in Honour of W.G. Lambert.* Winona Lake: Eisenbrauns, 137–223.

Frahm, E. 2010. 'The Latest Sumerian Proverbs' in S. C. Melville and A. L. Slotsky (eds.), *Opening the Tablet Box: Near Eastern Studies in Honor of Benjamin R. Foster* (Culture and History of the Ancient Near East, 42). Leiden and Boston: Brill, 155–184.

Frahm, E. 2011. *Babylonian and Assyrian Text Commentaries: Origins of Interpretation* (Guides to the Mesopotamian Textual Record, 5). Münster: Ugarit-Verlag.

Frame, G. 2008. 'Babylon: Assyria's Problem and Assyria's Prize.' *Journal of the Canadian Society for Mesopotamian Studies* 3: 21–31.

Gasche, H. 1989. *La Babylonie au 17e siècle avant notre ère: approche archéologique, problèmes et perspectives* (Mesopotamian History and Environment, Series II: Memoirs, 1).

Ghent: University of Ghent.

Gelb, I . J., 1954. 'Two Assyrian King Lists.' *Journal of Near Eastern Studies* 13: 209–230.

Geller, M. J. 1997. 'The Last Wedge.' *Zeitschrift für Assyriologie* 87: 43–95.

Geller, M. J. 2010. *Ancient Babylonian Medicine: Theory and Practice.* Oxford: Wiley-Blackwell.

Grayson, A. K. 1983. 'Antiquities from Ashur: a Brief Description of their Fate with Special Reference to the Royal Inscriptions.' *Annual Review of the Royal Inscriptions of Mesopotamia Project* 1: 15–18.

George, A. R. 1986. 'The Topography of Babylon Reconsidered.' *Sumer* 44: 7–24.

George, A. R. 1993. *House Most High: the Temples of Ancient Mesopotamia* (Mesopotamian Civilizations, 5). Winona Lake: Eisenbrauns.

Gesche, P. D. 2001. *Schulunterricht in Babylonien im ersten Jahrtausend v. Chr.* (Alter Orient und Altes Testament, 275). Münster: Ugarit-Verlag.

Gurney, O. R. 1974. *Middle Babylonian Legal Documents and Other Texts* (Ur Excavations, Texts 7). London and Philadelphia: Publications of the Joint Expedition of the British Museum, and of the University Museum, University of Pennsylvania, Philadelphia, to Mesopotamia.

Gurney, O. R. and J. J. Finkelstein 1957. *The Sultantepe Tablets*, Vol. 1. London: British Institute of Archaeology at Ankara.

Gurney, O. R. and P. Hulin 1964. *The Sultantepe Tablets*, Vol. 2. London: British Institute of Archaeology at Ankara.

Harrison, T. P. 2011. 'Temples, Tablets and the Neo-Assyrian Provincial Capital of Kinalia.' *Journal of the Canadian Society for Mesopotamian Studies* 6: 29–38.

Harrison, T. P. 2012. 'Temples and Tablets: Articulating Neo-Assyrian Imperialism at Tell Tayinat' in M. Rutz and M. Kersel (eds.), *Archaeologies of Text: Archaeology, Technology and Ethics* (Joukowsky Institute Publications, 4). Oxford: Oxbow Books.

Heidelberger Akademie der Wissenschaften 2015. 'Editionsreihe *«KAL»' HAW-Forschungsstelle Edition literarische Keilschrifttexte aus Assur*, http://www.haw.uni-heidelberg.de/forschung/forschungsstellen/keilschrift/konzeption.de.html [accessed 7 July 2017]

Heinrich, E. 1982. *Die Tempel und Heiligtümer im alten Mesopotamien: Typologie, Morphologie und Geschichte.* Berlin: de Gruyter.

Hilgert, M. 2013. '"Tempelbibliothek" oder "Tafeldepot"? Zum rezeptionspraktischen Kontext der "Sippar-Bibliothek" .' *Colloquien der Deutschen Orient-Gesellschaft* 7: 137–150.

Hunger, H. 1968. *Babylonische und Assyrische Kolophone* (Alter Orient und Altes Testament, 2). Kevelaer: Butzon & Bercker; Neukirchen-Vluyn: Neukirchener Verlag.

Hunger, H. 1972. 'Neues von Nabû-zuqup-kēna.' *Zeitschrift für Assyriologie* 62: 99–101.

Hunger, H. 1976. *Spätbabylonische Texte aus Uruk*, Vol. 1 (Ausgrabungen der Deutschen Forschungs-gemeinschaft in Uruk-Warka, Endberichte 9). Berlin: Mann.

Jean, C. 2007. *La magie néo-Assyrienne en contexte: recherches sur le métier d'exorciste et le concepte d'āšipūtu* (State Archives of Assyria Studies, 17). Helsinki: The Neo-Assyrian Text Corpus Project.

Joannès, F. 1992. 'Les archives de Ninurta-ahhe-bulliṭ' in M. deJ. Ellis (ed.), *Nippur at the Centennial: Papers Read at the 35e Rencontre Assyriologique Internationale, Philadelphia, 1988* (Occasional Publications of the Samuel Noah Kramer Fund, 14). Philadelphia: The University Museum, 87–100.

Jursa, M. 1999. *Das Archive des Bēl-rēmanni* (Publications de l'Institut historique-archéologique néerlandais de Stamboul, 86). Leiden: Nederlands Instituut voor het Nabije Oosten.

Jursa, M. 2005. *Neo-Babylonian Legal and Administrative Documents: Typology, Contents and Archives* (Guides to the Mesopotamian Textual Record, 1). Münster: Ugarit Verlag.

Kessler, K. 2004. 'Urukäische Familien versus babylonische Familien: die Namengebung in Uruk, die Degradierung der Kulte von Eanna und der Aufstieg des Gottes Anu.' *Altorientalische Forschungen* 31: 237–262.

Klengel-Brandt, E. 1995. 'The History of the Excavations at Ashur and of the Vorderasiatisches Museum' in P. O. Harper, E. Klengel-Brandt, J. Aruz, and K. Benzel, *Assyrian Origins: Discoveries at Ashur on the Tigris*, New York: Metropolitan Museum of Art, 17–20.

Koch-Westenholz, U. 1996. *Mesopotamian Astrology: an Introduction to Babylonian and Assyrian Celestial Divination* (Publications of the Carsten Niebuhr Institute, 19). Copenhagen: Carsten Niebuhr Institute of Near Eastern Studies.

Köcher, F. 1957–1958. 'Zum Assur-Fragment der Serie IGI.DUḪ.A = *tāmartu.*' *Archiv für Orientforschung* 18: 86–88.

Lambert, W. G. and A. R. Millard 1966. *Catalogue of the Cuneiform Tablets in the Kouyunjik Collection of the British Museum: Second Supplement.* London: British Museum Publications.

Langdon, S. H. 1924. *Excavations at Kish: the Herbert Weld (for the University of Oxford) and Field Museum of Natural History (Chicago) Expedition to Mesopotamia*, Vol. 1. Paris: Geuthner.

Lauinger, J. 2011. 'Some Preliminary Thoughts on the Tablet Collection in Building XVI from Tell Tayinat.' *Journal of the Canadian Society for Mesopotamian Studies* 6: 5–14.

Lauinger, J. 2016. '*Iqqur īpuš* at Tell Tayinat.' *Journal of Cuneiform Studies* 60: 229–248.

Leichty, E. 1986. *Tablets from Sippar,* Vol. 1. (Catalogue of the Babylonian Tablets in the British Museum, 6). London: British Museum Publications.

Leichty, E., J. J. Finkelstein and C. B. F. Walker 1988. *Tablets from Sippar*, Vol. 3 (Catalogue of the Babylonian Tablets in the British Museum, 8). London: British Museum Publications.

Leichty, E. and A. K. Grayson 1987. *Tablets from Sippar*, Vol. 2 (Catalogue of the Babylonian Tablets in the British Museum, 7*).* London: British Museum Publications.

Lenzi, A. 2008. *Secrecy and the Gods: Secret Knowledge in Ancient Mesopotamia and Biblical Israel* (State Archives of Assyria Studies, 19). Helsinki: The Neo-Assyrian Text Corpus Project.

Lieberman, S. J. 1987. 'A Mesopotamian Background for the So-called *aggadic* "Measures" of Biblical Jermeneutics?' *Hebrew Union College Annual* 58: 157–225.

Lieberman, S. J. 1990. 'Canonical and Official Cuneiform Texts: Towards an Understanding of Assurbanipal's Personal Tablet Collection' in T. Abusch, J. Huehnergard and P. Steinkeller (eds.), *Lingering over Words: Studies in Ancient Near Eastern Literature in Honor of William L. Moran* (Harvard Semitic Studies, 37). Atlanta, GA: Scholars Press, 305–336.

Livingstone. A. 2007. 'Ashurbanipal: Literate or Not?' *Zeitschrift für Assyriologie* 97: 98–118.

Lloyd, S. and N. Gökçe 1953. 'Sultantepe: Anglo-Turkish Joint Excavations, 1952.' *Anatolian Studies* 3: 27–47.

Loud, G. and C. B. Altman 1938. *Khorsabad, Part 2: The Citadel and the* Town (Oriental Institute Publications, 33). Chicago: The Oriental Institute of the University of Chicago.

Luppert-Bernard, S. M. 1998. 'Adad-šumu-uṣur' in K. Radner (ed.), *Prosopography of the Neo-Assyrian Empire*, vol. 1/I. Helsinki: Helsinki University Press, 37–40.

Luukko, M. 2011. 'Šumāia' in H. D. Baker (ed.), *Prosopography of the Neo-Assyrian Empire*, vol. 3/II. Helsinki: Helsinki University Press, 1281–1282.

Matsushima, E. 1987. 'Le Rituel Hierogamique de Nabu.' *Acta Sumerologica* 9: 131–175.

Maul, S. M. 1998. '*Tikip santakki mala bašmu …* Anstelle eines Vorwortes' in S. M. Maul (ed.), *Festschrift für Rykle Borger zu seinem 65. Geburtstag am 24. Mai 1994* (Cuneiform Monographs, 10). Groningen: Styx, vii–xvii.

Maul, S. M. 2010. 'Die Tontafelbibliothek aus dem sogenannten "Haus des Beschwöringspriesters' in S. M. Maul and N. P. Heeßel (eds.), *Assur-Forschungen: Arbeiten aus der Forschungsstelle »Edition literarischer Keilschrifttexte aus Assur« der Heidelberger Akademie der Wissenschaften.* Wiesbaden: Harrassowitz, 189–227.

Maul, S. M. forthcoming. 'Gaben für den Weiheisgott: Weihungen altorientalische Gelehrte' in *Weihungen und Weihgaben in antiken Heiligtümen.*

Maul, S. M. and N. P. Heeßel (eds.) 2010. *Assur-Forschungen: Arbeiten aus der Forschungsstelle »Edition literarischer Keilschrifttexte aus Assur« der Heidelberger Akademie der Wissenschaften.* Wiesbaden: Harrassowitz.

Menzel, B. 1981. *Assyrische Tempel* (Studia Pohl: Series Maior, 10). Rome: Pontifical Biblical Institute.

Michalowski, P. 2003. 'The Libraries of Babel: Text, Authority, and Tradition in Ancient Mesopotamia' in G. J. Dorleijn and H. L. J. Vanstiphout (eds.), *Cultural Repertories: Structure, Function and Dynamics.* Leuven: Peeters,105–129.

Moorey, P. R. S. 1978. *Kish Excavations 1923–1933.* Oxford: Clarendon Press.

Oates, J. and D. Oates. 2001. *Nimrud: An Assyrian Imperial City Revealed.* London: British School of Archaeology in Iraq.

Ossendrijver, M. 2011a. 'Science in Action: Networks in Babylonian Astronomy' in E. Cançik-Kirschbaum, M. van Ess and J. Marzahn (eds.), *Babylon: Wissenskultur zwischen Orient und Okzident* (Topoi, 1). Berlin: de Gruyter, 229–237.

Ossendrijver, M. 2011b. 'Exzellente Netzwerke: die Astronomen von Uruk' in G. J. Selz and K. Wagensonner (eds.), *The Empirical Dimension of Ancient Near Eastern Studies* (Wiener Offene Orientalistik, 8). Wien: LIT-Verlag, 631–644.

Pearce, L. 2000. 'Issar-šumu-ereš' in H. D. Baker (ed.), *Prosopography of the Neo-Assyrian Empire*, Vol. 2/I. Helsinki: Helsinki University Press, 577–579.

Pearce, L. and T. Doty 2000.‘The Activities of Anu-belšunu, Seleucid Scribe’ in J. Marzahn and H. Neumann (eds.), *Assyriologica et Semitica: Festschrift für Joachim Oelsner anläßlich seines 65. Geburtstages am 18. Februar 1997* (Alter Orient und Altes Testament, 252). Münster: Ugarit-Verlag, 331–342.

Pedersén, O. 1998. Archives and Libraries in the Ancient Near East, 1500–300 BC. Bethesda, MD: CDL Press.

Pedersén, O. 2005. *Archive und Bibliotheken in Babylon: die Tontafeln der Grabung Robert Koldeweys 1899–1917* (Abhandlungen der Deutschen Orient-Gesellschaft, 25). Saarbrücken: In Kommission bei SDV.

Pedersén, O. 1985–1986. *Archives and Libraries in the City of Assur: A Study of the Material from the German Excavations*, Vols. 1–2 (Acta Universitatis Upsaliensis. Studia Semitica Upsaliensia, 6). Uppsala: Almqvist & Wiksell.

Pomponio, F. 1998–2001. ‘Nabû (A). Philologisch.’ Reallexikon der Assyriologie und Vordersasiatischen Archäeologie 9: 16–24.

Postgate, J. N. 1974. ‘The *bīt akīti* in Neo-Assyrian Nabu Temples.’ *Sumer* 30: 51–74.

Radner, K. 2009. ‘The Assyrian King and his Scholars: the Syro-Anatolian and the Egyptian Schools’ in M. Luukko, S. Svärd and R. Mattila (eds.), *Of God(s), Trees, Kings, and Scholars: Neo-Assyrian and Related Studies in Honour of Simo Parpola* (Studia Orientalia, 106). Helsinki: Finnish Oriental Society, 221–238.

Radner, K. 2011. ‘Royal Decision-making: Kings, Magnates and Scholars’ in K. Radner and E. Robson (eds.), *The Oxford Handbook of Cuneiform Culture.* Oxford: Oxford University Press, 358–379.

Reade, J. E. 1986a. ‘Archaeology and the Kuyunjik archives’ in K. R. Veenhof (ed.), *Cuneiform Archives and Libraries: Papers Read at the 30e Rencontre Assyriologique Internationale.* Istanbul: Nederlands Historisch-Archaeologisch Instituut te Istanbul, 213–222.

Reade, J. E. 1986b. ‘Rassam’s Excavations at Borsippa and Kutha, 1879–82.’ *Iraq* 48: 105–116.

Reade, J. E. 1998–2001. ‘Ninive (Nineveh).’ Reallexikon der Assyriologie und Vorderasiatischen Archäologie 9: 388–433.

Reisner, G. 1896. Sumerische-Babylonische Hymnen nach Thontafeln Griechischer Zeit. Berlin: Spemann.

Renger, J. (ed.) 2011. *Assur — Gott, Stadt und Land. 5. Internationales Colloquium der Deutschen Orient-Gesellschaft 18. – 21. Februar 2004 in Berlin.* Wiesbaden: Harrassowitz.

Robson, E. 2004. ‘Mathematical Cuneiform Tablets in the Ashmolean Museum, Oxford.’ *SCIAMVS–Sources and Commentaries in Exact Sciences* 5: 3–65.

Robson, E. 2008a. *Mathematics in Ancient Iraq: a Social History*. Princeton: Princeton University Press.

Robson, E. 2008b. ‘Secrets de famille: prêtre et astronome à Uruk à l'époque hellénistique’ in C. M. Jacob (ed.), *Les lieux de savoir, I: Lieux et communautés.* Paris: Albin Michel, 440–461.

Robson, E. 2011. ‘The Production and Dissemination of Scholarly Knowledge’ in K. Radner and E. Robson (eds.), *The Oxford Handbook of Cuneiform Culture.* Oxford: Oxford University Press, 557–576.

Robson, E. 2012. ‘Tracing Networks of Cuneiform Scholarship with Oracc, GKAB and Google Earth’ in M. Rutz and M. Kersel (eds.), *Archaeologies of Text: Archaeology, Technology and Ethics* (Joukowsky Institute Publications, 4). Oxford: Oxbow Books.

Robson, E. 2013. ‘Reading the Libraries of Assyria and Babylonia’ in J. König, K. Oikonomopoulos and G. Woolf (eds.), *Ancient Libraries*. Cambridge: Cambridge University Press, 38–56.

Robson, E. 2017, ‘The Socio-economics of Cuneiform Scholarship after the “End of Archives”: Views from Borsippa and Uruk’ in Y. Heffron, A. Stone and M. Worthington (eds.), *At the Dawn of History: Ancient Near Eastern Studies in Honour of J.N. Postgate.* Winona Lake: Eisenbrauns, 455–470.

Robson, E. forthcoming 1. *Ancient Knowledge Networks: a Social Geography of Cuneiform Scholarship, 700–200 BC.* Princeton: Princeton University Press.

Robson, E. forthcoming 2. ‘Do Not Disperse the Collection!’ Motivations and Strategies for Protecting Cuneiform Scholarship in the First Millennium BC’, *Nvmen* special issue: *Acculturation and Cultural Resistance: Sharing and Hiding Religious Knowledge*.

Robson, E. and K. Radner 2007–11. *Knowledge and Power in the Neo-Assyrian Empire.* Cambridge and London: UK Higher Education Academy (http://oracc.org/saao/knpp/).

Rochberg, F. 1993. ‘The Cultural Locus of Astronomy in Late Babylonia’ in H. D. Galter (ed.), *Die Rolle der Astronomie in den Kulturen Mesopotamiens* (Grazer Morgenländische Studien, 3). Graz: rm-Druck- & Vergesellschaft, 31–45.

Rochberg, F. 2000. ‘Scribes and Scholars: the ṭupšar Enūma Anu Enlil’ in J. Marzahn and H. Neumann (eds.), *Assyriologica et Semitica: Festschrift für Joachim Oelsner anläßlich seines 65. Geburtstages am 18. Februar 1997* (Alter Orient und Altes Testament, 252). Münster:

Ugarit-Verlag, 359–376.

Schmidt, J. et al. 1979. *XXIX. und XXX. Vorläufiger Bericht über die von dem Deutsche Archäologisches Institut aus Mitteln der Deutsche Forschungsgemeinschaft unternommenen Ausgrabungen in Uruk-Warka 1970/71 und 1971/72.* Berlin: Mann.

Seidl, U. 1998–2001. 'Nabû (B). Archaeologisch.' Reallexikon der Assyriologie und Vordersasiatischen Archäeologie 9: 24–29.

Sigrist, R. M., H. H. Figulla, and C. B. F. Walker 1996. *Catalogue of the Babylonian Tablets in the British Museum,* Vol. 2. London: British Museum Publications.

Sigrist, R. M., R. Zadok and C. B. F. Walker 2006. *Catalogue of the Babylonian Tablets in the British Museum*, Vol. 3. London: British Museum Publications.

Stevens, K. R. 2013. 'Secrets in the Library: Protected Knowledge and Professional Identity in Late Babylonian Uruk.' *Iraq* 75: 211–253.

Stock, B. 1990. *Listening for the Text: On the Uses of the Past*. Philadelphia: University of Pennsylvania Press.

Streeter, B. H. 1931. *The Chained Library: A Survey of Four Centuries of Evolution of the English Library.* Cambridge: Cambridge University Press.

Summit, J. 2008. *Memory's Library: Medieval Books in Early Modern England.* Chicago: University of Chicago Press.

Tanret, M. 2002. *Per aspera ad astra: l'apprentissage du cunéiforme à Sippar-Amnanum pendant la periode paléo-babylonienne tardive* (Mesopotamian History and Environment. Series III: Texts I/2). Ghent: University of Ghent.

Thureau-Dangin, F. 1922. *Tablettes d'Uruk à l'usage des prêtres du temple d'Anu au temps des Séleucides* (Textes Cunéiformes du Louvre, 6). Paris: Geuthner.

Too, Y. L. 2010. *The Idea of the Library in the Ancient World.* Oxford: Oxford University Press.

van Dijk, J. and W. R. Mayer 1980. *Texte aus dem Rēš-Heiligtum in Uruk-Warka* (Baghdader Mitteilungen Beiheft, 2). Berlin: Mann.

von Weiher, E. 1982. *Spätbabylonische Texte aus Uruk*, Vol. 2 (Ausgrabungen der Deutschen Forschungs-gemeinschaft in Uruk-Warka, Endberichte 10). Berlin: Mann.

von Weiher, E. 1988. *Spätbabylonische Texte aus Uruk*, Vol. 3 (Ausgrabungen der Deutsche

Forschungs-gemeinschaft in Uruk-Warka, Endberichte 11). Berlin Mann.

von Weiher, E. 1993. *Spätbabylonische Texte aus dem Planquadrat U 18*, Vol. 4 (Ausgrabungen in Uruk-Warka, Endberichte 12). Mainz: von Zabern.

von Weiher, E. 1998. *Spätbabylonische Texte aus dem Planquadrat U 18*, Vol. 5 (Ausgrabungen in Uruk-Warka, Endberichte 13). Mainz: von Zabern.

Waerzeggers, C. 2003/04. 'The Babylonian Revolts against Xerxes and the "End of Archives".' *Archiv für Orientforschung* 50: 150–173.

Waerzeggers, C. 2010. *The Ezida Temple of Borsippa: Priesthood, Cult, Archives* (Achaemenid History, 15). Leiden: Nederlands Instituut voor het Nabije Oosten.

Westenholz, Å. 2007. 'The Graeco-Babyloniaca Once Again.' *Zeitschrift für Assyriologie* 97: 262–313.

Wiseman, D. J. and J. A. Black 1996. *Literary Texts from the Temple of Nabû* (Cuneiform Texts from Nimrud, 4). London: British School of Archaeology in Iraq.

Wiseman, D. J. 1955. 'Assyrian Writing Boards.' *Iraq* 17: 3–13.

Woolley, C. L. 1962. *The Neo-Babylonian and Late Periods* (Ur Excavations, 9). London and Philadelphia: Publications of the Joint Expedition.

Figures

Figure 8.1: Pigeon-holes for tablets in Room 5 of Nabu's temple in Dur-Sharukken, c.705 BC (Loud & Altman 1938: pl. 19c)

Figure 8.2: The view from the tablet room into Nabu's shrine in the Ezida temple, Kalhu (photo by Saad Eskander, April 2017)

Figure 8.3: A school tablet bearing a colophon dedicated to Nabu, northern Babylonia, c.550 BC (BM 77665 obverse and reverse)

Figure 8.4: A 3D reconstruction of the Reš temple in Seleucid Uruk by Artefacts Berlin

Figure 8.5: The cuneiform tablet TCL 6, 10, written by Nidintu-Anu in Uruk, 222 BCE (AO 6466 obverse and reverse)