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Information Flows in Rural Babylonia c. 1500 BC

Eleanor Robson

Cuneiform clay tablets are uniquely durable ancient writing media.[1] Unlike organic materials such as papyrus, leather or wood, they remain as they were written unless deliberately destroyed or recycled. Since the 1840s they have been discovered in their hundreds of thousands at archaeological sites across the Middle East, first by Victorian explorers looking for ancient treasure and, more recently, through systematic, recorded excavation.[2] The Middle Eastern conflicts of the past three decades have severely constrained archaeological fieldwork, especially in Iraq, so that ancient historians of the region now mostly work with museum collections rather than artefacts straight from the ground.

However, in 2013 the Ur Regional Archaeology Project, a collaboration between the University of Manchester, the British Institute for the Study of Iraq and the Iraq State Board of Antiquities and Heritage, began excavation of a small site called Tell Khaiber in the Dhi Qar province of southern Iraq.[3] The project directors chose it in part because the area is safe and secure and the local archaeological service welcoming and in part because it was already clear from aerial imagery that there was a large building close to the surface on the top of the mound. Within the first two weeks of work the excavation team discovered cuneiform tablets in this building. In three subsequent excavation seasons, each lasting 8–12 weeks early in each year, over 150 further tablets were

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1 □For more on the materiality of cuneiform tablets and the cultures of literacy surrounding them, see Radner and Robson (2011); Finkel and Taylor (2015); Robson (forthcoming). The first published version of this last article was commissioned by Simon Eliot over a decade ago now and constituted my first introduction to him and to his vision of the history of the book and the history of communication. He made me feel a valued member of his intellectual community, despite being an interloper from a world long before the printed page.

2 □For two very different approaches to the history of Middle Eastern archaeological excavation and discovery see Lloyd (1980); Liverani (2016).

3 □I am very grateful to the URAP team directors, Professor Stuart Campbell, Dr Robert Killick and Dr Jane Moon, for my participation in this project. Other team members who have made essential contributions to the excavation, conservation and interpretation of the tablets are Giulia Barella (conservator), Daniel Calderbank (clay analysis), Adrian Murphy (photographer and finds manager) and Dr Mary Shepperson and Fay Slater (archaeologists). However, all responsibility for errors of analysis rests with me. More information on the project can be found in an interim excavation report written after the 2015 season (Campbell et al. 2017), a short piece in *The Guardian* newspaper (Shepperson 2017) and at http://www.urarchaeology.org and http://www.facebook.com/tellkhaiber. Preliminary, ongoing editions of the tablets are at http://oracc.org/urap, where all the texts discussed here can be found. The tablets themselves are in the safekeeping of the Iraq Museum, Baghdad.

recovered from the same and adjacent rooms. The building was completely excavated and the project completed in 2017 so we are confident that all written remains have been recovered. One of the major goals of the project has thus become to understand the relationship between the tablets and the building: when and why were they written? By and for whom? Why where they abandoned in the building? By framing these questions in terms of information flows we can begin to formulate some provisional answers.

The site of Tell Khaiber, who ancient name is still unknown, is roughly equidistant from the ancient cities of Larsa and Ur, some 20–25km away from each and was probably directly connected to them by a waterway in antiquity (Figure 1).[4] The large building, on current thinking, was a highly secure administrative complex, probably used to store and manage barley harvests brought in from the surrounding countryside of Babylonia in the mid-second millennium BC. It had been built on top of an abandoned settlement of much earlier date. In turn it too was abandoned and repurposed as a tenement. The exterior of the building is dominated by a unique sequence of large tower-like structures which appear to have been more a conspicuous statement of power than a functional defensive system. The project has also excavated a few nearby houses on the same mound, which appear to be contemporary with the latest phase of the building; but even if it were surrounded by smaller structures, this imposing edifice must have dominated the flat landscape for miles around, much as large storage silos are highly visible in the English fenlands today.

The building covers c.4,400m^2 and, at the time that the tablets were produced, was divided into two sectors (Figure 2).[5] The northern two-thirds of the building may originally have been an open-plan storage area while the south wing contained the offices, including a long archive room (Areas 300/305) with a round clay-recycling bin at the northern end.[6] By the close of the 2016 excavation season this room had yielded some eighty cuneiform tablets or fragments, many found in discrete clusters along the walls and around the recycling bin. The adjacent room (Areas 309/311) produced a further sixty-five inscribed finds, plus a few in other locations. Although my work to decipher and interpret these artefacts is not yet finished, it is clear that they constitute a coherent assemblage, from which much can already be deduced about the information they contain and how this information flowed within the building and beyond. In what follows I shall refer to them collectively as 'the archive'.

PRODUCTION

The tablets found inside the Tell Khaiber building were made with carefully prepared clay, of a

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4   ⬜This paragraph and the following are based on Campbell *et al.* (2017).

5   ⬜The details of the complex history of construction, occupation and abandonment of the building do not need to concern us here (Campbell *et al.* 2017).

6   These receptacles were used as preparation and storage receptacles for tablet clay, and for soaking old tablets so that they could be reshaped into new documents (Faivre 1995). The discovery in 2016 of tablets underneath the walls between Areas 300 and 305, and between Areas 309 and 311, shown in Figure 2 here, confirm that the walls postdate the period in which the archive was in active use.

quality otherwise found only in the highest-quality pottery wares from the site.[7] It is likely that the clay was dug and prepared locally. The excavators found several uninscribed lumps of tablet clay in the archive, while the presence of the recycling bin shows that tablets were intended be soaked and re-used once they were no longer required.[8] Even though the bin itself was found to be empty, a scatter of tiny tablets around it appear to have been dropped accidentally and then trodden into the ground, too small to be worth clearing up.[9] It is unlikely that the tablets were inscribed indoors, however, as there would not have been sufficient light. Most were probably written in the nearby courtyard (Area 315) but, as we shall see, it is likely that around a fifth of them entered the building from elsewhere.

The large majority of the tablets in the archive, about 85% of them, concern the administration of personnel. Formally they can be divided into five different types: letters and letter orders, probably produced externally; and memoranda, numerical lists and tabular accounts, which were almost certainly made in the building and never left it.

The memoranda are short notes written on tiny clay tablets just a few centimetres long. They contain ephemeral pieces of information, such as numbers or names, which were presumably later incorporated into more formal documentation.[10] TK1 3080.3 for instance, reads in its entirety (Figure 3):

> [… litres] of grain by the royal measure: Sin-ma-ilum
>
> [… litres] of grain by the royal measure: Mayašu
>
> Abu (month V), day 24.

In other words, the memo lists quantities of grain (now missing) in relation to two men, Sin-ma-ilu and Mayašu, on the 24th day of the fifth month of the year. As new year was at the spring equinox, this date equates to late August. Harvest was in the spring, after the cool winter growing period, so this record must relate to stored grain, either given out or received, not a new season's crop. The memo does not say whether the grain was incoming, delivered by these men, or outgoing. The time of the year suggests the latter, but this is only inference. Once the memo was no longer needed it was thrown into the recycling bin—or, in this case, dropped just outside it and forgotten about.

The names Sin-ma-ilum and Mayašu appear on several other documents in the archive. Sin-ma-ilum is otherwise attested as a member of a ten-man labour team, headed by Ili-eriš and working for Nuratum (whom we will meet again shortly), receiving or delivering *hargallû*-grain.[11] Mayašu

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7   □Personal communication Daniel Calderbank, 14 April 2016.

8   □On tablet recycling facilities see Faivre (1995); Tanret (2002: 4–8); on the working lifespans of tablets Civil (1980). Tablets were almost never baked in antiquity.

9   □Namely tablets TK1 3064.18, 101 and TK1 3080.1–5. TK1 3080.3 is discussed further below.

10   □Tablets TK1 1096.53, 55; TK1 1114.14–15, 26, 47; TK1 3006.17; TK1 3064.73, 76, 94, 122, 129; TK1 3080.1–3, 5.

11   □On tablets TK1 3064.33, 49, 53 and 135; in TK1 3064.76 he is assigned to the auxiliary troops. The exact identity of *hargallû*-grain has not been established; see Dalley (2009: 192); Boivin (2018: 137–8).

occurs in several different contexts.[12] TK1 3064.52, for instance, is one of about thirty-five numerical lists.[13] Complete at 70 × 58 mm, but rather damaged, it reads as follows (Figure 4):

hargallû-grain	Its name[14]
70 litres	[...], gardener
70 litres	Allatum, [son(?) of] Ištaran-dayyani
70 litres	Šaruh-mazzassu, washerman
10 litres	Iddin-Adad, son of Anzak-...
30 litres	Ubarrum, son of Nur-Ea the Elamite
10(?) litres	…-bišu, shepherd
40 litres	Ili-iqiša, son of Hutkutu(?)
100 litres	Adad-ilum, son of Šatunu
20+ litres	Iddin-Ninurta, priest(?)
[...]	Mayašu, scribe
40 litres	Qištum, herald
30 litres	Ṣilli-Amurru, servant of A...
100 litres	Atanah-ili, scribe
30 litres	Išassi-pilhašu
20 litres	Ibbi-Adad, servant of Ibiya
20 litres	Ahi-illikam, son of Dah…
20 litres	Abi-laqu-ili, carpenter
60 litres	Ahi-illikam, carpenter

Nisannu (month I), day 7(?).

The list has a clearly demarcated heading at the top, which uses standard administrative terminology. It is ruled vertically into two columns which separate the quantitative information—amounts of grain — from the qualitative — the name of each man receiving or delivering. Some men are identified by their professions, others by their patronyms, apparently to disambiguate them. At the end of the list, for instance, two Ahi-illikams are distinguished in this way. Note that Mayašu is a scribe, as is another man, Atanah-ili. Unusually for cuneiform documentation, the entries are not listed in descending order of size or, apparently, in descending order of seniority.[15] The document is dated — to the 7th day of the first month of the year, so late March — but there are no signs of any administrative hierarchy. In most cuneiform archives it was normal practice to name the person responsible for drawing up the record, perhaps also the overseer to whom he

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12 □On tablets TK1 1096.53–53, TK1 1114.40, TK1 1124.3, TK1 3064.33, 48, 52 and 53 and TK1 3080.6.

13 □The other numerical lists identified so far are TK1 1096.25, 50, 51 and 59; TK1 1114.3, 5, 12, 17, 36 and 40; TK1 1124.1, 2 and 5; TK1 3006.2; TK1 3064.13, 48, 49, 53, 57, 65, 67, 72, 74, 87, 101, 118, 119, 123, 135 and 136; TK1 3080.4 and 6; and TK1 3111.1.

14□ This phrase was the standard heading for the descriptive column of a tabular account in cuneiform culture from the early nineteenth century BC onwards (Robson 2004: 128).

15 □See Robson (2003; 2004) for discussion of the development of tabular accounting conventions in cuneiform culture.

reported, or the manager who authorised the transaction. But there is no such apparatus of accountability here, as in the whole of this archive: records needed to be kept, but apparently it was self-evident to all concerned who was in charge.

The third type of internally produced records comprises tabular accounts, which document incoming grain expected, amounts delivered and balances owed. (In this light, it seems reasonable to assume that the numerical lists just described record either outgoing payments that do not have to be reconciled in the way that income does, or deliveries that fully meet expectations.) In the seventeen tabular accounts identified so far, the individual deliverers are rarely in arrears: the entries are almost all noted as 'correct', as TK1 1114.48 shows (Figure 5):[16]

hargallû-flour: deliveries of the farmers and palace slave-women

Head of the account	Brought in	Deficit	Grain delivery	Its name
20 litres	20 litres	[correct]	[…]	Uṣi-ana-nurišu
20 litres	20 litres	[correct]	[…]	Karamu
20 litres	20 litres	[correct]	[…]	Ahi-illikam
30 litres	30 litres	correct	[…]	Ali-tillati
20 litres	10 litres	[10 litres]	[…]	Sin-išmanni
30 litres	30 litres	[correct]	[…]	Ilanutum
20 litres	10 litres	10 litres	[…]	Gadnu
20 litres	10 litres	10 litres		…
20 litres	10 litres	10 litres		…
20 litres	20 litres	correct		Sin-leqe-unnenni
20 litres	20 litres	correct		Inṣabtum
20 litres	20 litres	correct		Šittum
20 litres	20 litres	correct		Sibsibbi
10 litres				Nisannitum

Arahsamnu (Month VIII), day 7

Like the lists, the accounts are headed and tend to be dated to the month and day; this one was written in mid-October. Similarly, there are no grand totals and no statements of administrative accountability. Most of the men and women documented in the archive, perhaps as many as three hundred of them, were not engaged full-time in grain production and delivery but had separate primary professions and identities, as we saw in TK1 3064.52 above. Then, alongside the leatherworkers and reedworkers, the carpenters and cooks, the washermen and oil-pressers and so on, are a group of men who stand apart: the professional 'farmers' who occupy the first ten entries in TK1 1114.48.[17] These men are always listed together and often on a separate part of the tablet, even when they appear on the same tablets as non-farmers. In addition, a few lists and accounts

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16 The other identified tabular accounts are TK1 1096.26, 40, 43 and 47; TK1 3064.12, 15, 18, 26, 33, 51, 89 and 121; and TK 3080.27.

17 The 'farmers' also appear on TK1 1096.40, 47 and 50; TK 1114.4 and 47ʃTK1 1134.5; TK1 3064.33, 48, 49, 53, 57, 67, 83 and 123.

record grain deliveries and receipts from, or to, the four 'palace slave-women' who occupy the remaining places in TK1 1114.48.[18] Despite the term 'slave-woman' these individuals appear to have a similar high status to the ten male farmers.

However, this tablet and others show that even the farmers were not the top of the hierarchy. The headings on ten different tablets—from tiny memos to large accounts, all frustratingly fragmentary—each state that they record deliveries 'to the palace'.[19] The memo TK1 3080.3, translated above, also refers to grain measured 'by the royal measure'. The palace, then, was the ultimate authority. Whether it meant a particular building or a person representing the royal court we do not know, but in some ways it does not matter. It almost certainly does not mean the administrative building at Tell Khaiber, as there is nothing about its structure or contents to suggest that anyone even remotely wealthy or high status ever lived there. It does mean, however, that we need to understand the Tell Khaiber archive not as a closed system but as a rural node in a much larger network of palatial information flow.

DISSEMINATION

Indeed, the very fact that the Tell Khaiber tablets were written in the first place, in standardised formats and then organised and kept together, entails that there was some sort of reporting mechanism and accountability for all this activity, despite the informality of much of the documentation. Who produced it and who were they answerable to, locally and at 'the palace'?

The numerical list TK1 3064.52, translated above, shows that amongst the various practical professions were at least two scribes, Mayašu and Atanah-ili, who are also frequently attested elsewhere in the archive. In fact four of the five surviving letters in the archive are addressed to one or other of these two men, all in large, careful but error-riddled script as if the senders were not used to writing very often.[20] The messages they contain are terse to the point of abruptness. For instance, TK1 3064.93 reads (Figure 6):

> Speak to Atanah-ili, thus says Mar-ešre, your brother: concerning what was released and what is available of the (grain) received: let the grain move on.

So Mar-ešre could give instructions to Atanah-ili and declare himself a social equal—a 'brother'—but was probably not himself a scribe. There are at least two different men named Mar-ešre in the archive, who often co-occur in the same documents: one the son of Iluni and one a date-palm gardener.[21] More often the name Mar-ešre appears without further explanation, in opposition to one or other of the first two; is this a third individual, or either or both of the first two?[22] It is

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18 □The 'palace slave-women' also appear together on TK1 1096.50, TK1 1114.35, TK1 1124.4 and 5. Two useful recent discussions on slavery at this period are Snell (2011); van Koppen (2004).

19 □Namely tablets TK 1096.26; TK1 1114.4 and 48; TK1 1124.1 and 4; TK1 3064.63, 76, 89 and 107; and TK1 3080.2.

20 □The other letters are TK1 1096.52; TK1 1114.1, 6 and 45.

21 □Mar-ešre, son of Iluni: TK1 1114.40; TK1 1096.24; TK 1 3064.33, 48, 49 and 123; and TK1 3080.06. Mar-ešre the date-palm gardener: TK1 1114.05; TK1 3064.33, 53 and 57.

22 □Mar-ešre without further qualification on the same tablets as either of the first two: TK1 1114.05 and 40;

impossible to decide which was the author of this letter. Similarly, other letter-writers giving orders to the scribes include an Ahi-illikam, who may be a carpenter, a tailor, a date-palm gardener, the servant of Nuratum, or the son of men named La-wedu and Dah...; and an Adad-ilum, who is only attested otherwise on the list TK1 3064.52 above.[23] Even if we cannot identify these men exactly, the range of professions suggests that they were not, in the grand scheme of things, particularly high status individuals.

The final genre of incoming documents is the payment order, containing standardised instructions to pay a named individual in grain and sometimes also silver. These very small tablets were presumably issued to the payee, who brought them to the building in exchange for the amounts noted on them. All twenty-five examples are unsigned but a few hint at who the usual author was.[24] TK1 1114.11, for instance, reads (Figure 7):

> 100 litres of grain, ½ shekel of silver: check and give to Šimanni-Šamaš.
> Authorisation of Atanah-ili.
> Duʾuzu (Month IV), day 22.

This suggests that the scribe Atanah-ili was the usual issuer; but whoever stood in for him in this particular case was probably not his fellow-scribe Mayašu, as the document is riddled with handwriting and spelling errors. It is a further indication that individuals who were not professionally literate were involved in the administration of Tell Khaiber.

The surviving payment orders cover a span of two and a half months in the late spring and early summer, spaced at 1-10 day intervals. At least six payees are named (some records are damaged), the most frequently occurring of whom are Ahi-illikam again and two men called Nuratum and Reʾi-Ninurta. Reʾi-Ninurta has not yet been identified elsewhere in the archive but Nuratum pops up frequently.[25] Once again, the laconic nature of the documentation thwarts our attempts to interpret the underlying institutional network but confirms its essential informality.

In short, some tablets—memos, lists, accounts—were produced in the archive and never left it; others—letters, payment orders—came into the building from other places institutionally connected to it. But so far we have no evidence of correspondence from 'the palace' or, necessarily, any documentation that travelled with the grain to be delivered. Nevertheless, the archive reveals important new information about the identity of the dynasty that 'the palace' represented.

Until about 1500 BC, Babylonian years were not counted but named: named after the ruling

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TK1 3064.48, 53 and 57; and TK1 3080.06.

23 Ahi-illikam the carpenter: TK1 1096.47, 48 and 51; TK1 1114.35; TK1 1124.3; TK1 3064.49, 52, 53, 57 and 83; the tailor: TK1 1114.5; the date-palm gardener: TK1 3064.33 and 135; the servant of Nuratum: TK1 3064.33, 49 and 53; TK1 3111.1; the son of Dah...: TK1 1124.3; TK1 3064.4, 52, 57 and 123; TK1 3080.4; the son of La-wedu: TK1 3064.53.

24 They were all found together: TK1 1114.7, 10, 13, 16, 18, 21, 22, 25, 27, 29–34, 38, 39, 41, 43, 44, 49, 51 and 52.

25 Nuratum is named in letter TK1 1096.52; payment orders TK 1114.18, 21, 22, 39, 41 and 43; and administrative records TK1 3064.33, 49, 53 and 135.

king and an important military or religious event from the year before.[26] Year names survive on just four tablets in the Tell Khaiber archive, all from the reign of Aya-dara-galama, the eighth king of the Sealand Dynasty, according later Babylonian tradition.[27] As the name suggests, this dynasty ruled the marshes of southern Iraq. They came to power in about 1720 BC, having captured territory from Samsu-iluna king of Babylon, son of the more famous and successful Hammurabi and were driven out again by the Kassite leader Ulam-buriash in c. 1475 BC. Until the URAP project began its work, the Sealand period was known only from very scanty references in later tradition and from a group of about 500 illicitly excavated, archaeologically unprovenanced tablets published in 2009.[28] The Tell Khaiber archive constitutes the first archaeologically contextualised documentation from this mysterious 'dark age' and must date from the period c.1600–1500 BC. While it is admittedly frustrating that the archive is not more immediately revealing of the workings of Sealand power, it does suggest that cuneiform literacy was far more widespread at the time than previously thought and holds out the hope of further revelations as archaeological excavation becomes renormalised in southern Iraq.

SCHOOLING

As I have already hinted above, the Tell Khaiber archive challenges assumptions about cuneiform literacy in several interesting ways. Not only does it reveal professionally literate scribes active in the Babylonian countryside in a period long thought to be without writing; others could interact with them through reading and writing too. The phenomenon of non-professional cuneiform literacy is well documented for wealthy urbanites of the early second millennium BC; it is somewhat unexpected to find it at Tell Khaiber.[29]

For the scribes, 'the palace' meant a central authority in several ways. Comparing the Tell Khaiber tablets with the illicitly excavated Sealand archive, it becomes apparent that both sets of scribes were trained in the same administrative conventions.[30] Some of their common features of formatting and terminology, in particular the habit of marking the empty cells in a table, are unknown elsewhere. The unprovenanced tablets come in many more formats, however, and attest to a much wider range of activities: animal husbandry, beer brewing, textile production, offerings to the gods. The letters and orders are longer and less idiomatically formulated. Some even make references to courtiers and to members of the royal family.[31] Wherever these tablets are from, they document a much more central node in the palatial information network than Tell Khaiber, maybe even 'the palace' itself.

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26   See van Koppen (2010); Boivin (2018: 72–85) for more detailed discussions of the dating issues touched on in this paragraph.

27   Tablets with year names: TK1 3006.17; TK1 3064.67, 129 and 135.

28   Dalley (2009); also studied by Boivin (2018).

29   See, e.g., Charpin (2010); Jacquet (2013); Michalowski (2012); chapters by Tanret, Tinney, van Koppen and Veldhuis in Radner and Robson (2011).

30   See Dalley (2009; 2010).

31   Dalley (2009: 13).

Despite being on the administrative periphery, the rural scribes of Tell Khaiber also belonged to, or at least aspired to, a more intellectual level of cuneiform culture. As mentioned above, some 85% of the tablets in the archive were administrative documents. The rest are scraps and fragments of learners' vocabulary lists, ripped up into tiny pieces and abandoned in the corner of the central archive room (locus 300) after their contents had been committed to memory.[32] They do not teach the vocabulary of Babylonian administration, however, or any other practical aspect of cuneiform literacy. Instead they draw upon a centuries-old tradition of urban learning in Sumerian, the ancient scholarly language which the Sealand dynasty particularly favoured. (The throne name Aya-dara-galama is Sumerian, for instance.) Given that almost all archaeological evidence to date situates formal schooling in city houses in the early second millennium BC, it is a huge surprise to find clear evidence for it in a rural administrative centre.[33]

Although the traditional repertoire of Sumerian vocabulary begins with the familiar material world—wooden objects and reed ones, leather and clay—the surviving exercises from Tell Khaiber focus on exotic materials that its student-copyists may never have seen. TKA1 3080.15, for example, reads (Figure 8):[34]

> *antasura*-stone
> Utensil
> …
> Glass
> White glass
> Black glass
> White stone
> Black stone
> *sudaŋ*-stone
> *sudaŋ*-stone
> Tin
> Tin
> Tin spoon
> Kohl
> Kohl
> [Elamite(?)] kohl
> [Yellow(?)] kohl

32 □Namely TK1 1114.9; TK1 3064.14, 7, 82, 84, 88, 97 and 106; TK1 3080.7 and 9-21.

33 □The most convenient list of archaeologically attested Old Babylonian school houses is still in Robson (2002); and for contemporary evidence in northern Mesopotamia see Yamada and Shibata (2016).

34 □Words which are repeated have more than one Akkadian translation, which the student was expected to speak aloud. See Veldhuis (2014: 149–57, 228–9, 250–2) on the history of this long sequence of Sumerian vocabulary, which is now known as Ur5-ra 'Interest-free loan', the first line of its first-millennium BC version. A few fragments of coloured glass and poor-quality semi-precious stone beads have been found at Tell Khaiber (Campbell *et al.* 2017: 16–18).

Gold

Other exercises laboriously reproduce the Sumerian words for chlorite and lapis lazuli, carnelian and flint. They clumsily conjure the words for elephant, bison and wolf. None of this learning would have been of any practical use, for none of the day-to-day documentation is in Sumerian, but it enabled the Tell Khaiber scribes to aspire to and feel a connection with, to the greater world of cuneiform learning and scribal professional identity.

CONCLUSIONS

What, in sum, can these tantalising scraps tell us about the production and dissemination of information in rural southern Iraq some 3500 years ago?[35]

First, as was usual in cuneiform culture, scribes made their own tablets to suit their immediate needs, drawn from pre-prepared clay kept in a dedicated receptacle in their archive room. Freshly made tablets left the shadowy archive room for the nearby sunlit courtyard in order to be inscribed; but if left for too long they became unworkable.[36] Most tablets probably never left the building and were destined to be read by just a handful of specialist archive keepers. Others, conveying information or instructions to the scribes, were written by non-professionals involved in the business of the building and delivered to them by hand. Administrative records, letters and orders were stored systematically for future reference, whether by an external inspector or for local purposes. Scribal exercises, on the other hand, were merely ephemera, written out in order to commit to memory. At the end of their useful lives most tablets were recycled by soaking in the recycling bin, whether after an hour or a year; what the Tell Khaiber archaeologists have uncovered is only a snapshot of the tablets still 'active' (or lost) when the archive fell out of use.

Some tablets may have left Tell Khaiber along with the grain they documented, so that the amounts arriving at their destination could be tallied with the shipment. We might expect them to be more formally executed summaries of the documentation left behind. But if that ever happened we may never know. Conversely, so far there is no evidence for tablets coming *into* the administrative building from outside the immediate community: all the evidence points to a relatively closed ecosystem with a shallow, informal hierarchy in which everyone knew everyone else. Yet a letter referring to a court case and another tablet naming a handful of 'workers who have behaved dishonestly', show that there was discipline within the system.[37] What had these

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35 There is not yet sufficient evidence to determine the type of community which produced the Tell Khaiber archive. The URAP project directors have tentatively posited a military post (Campbell *et al.* 2017); the archive certainly attests to 'auxiliary troops' stationed there (TK1 1096.48; TK1 1114.17 and 40; TK1 1124.3; TK1 3064.33, 49, 53, 76, 123 and 135; TK1 3111.01) but they may have been brought in to guard the grain. Historian Gábor Kalla (pers. comm., 30 March 2016) has suggested a fortified farmstead of a type widely attested in the second millennium BC (cf. Kalla 2014) but the question is still wide open. I have made some preliminary comparisons with other second-millennium archives in Campbell *et al.* (2017).

36 E.g., TK1 3080.6, the writing on the reverse of which is illegibly faint due to the hardness of the clay into which it was inscribed.

37 Namely TK1 1114.1 and TK1 1096.25.

men done and what was their punishment? We shall probably never know that either.

The Tell Khaiber agricultural workers, whether casual or professional, were tied into a much larger palatial economy. At least some of them presumably travelled with the spring harvest, the 20–25km to Ur or Larsa or beyond, where palace officials presumably inspected them and reconciled them with any accompanying written records. Equally, the good order and textual conformity in the archive room suggests that it was liable to external audit too. But the local scribes were not merely tied into an extended bureaucratic network; they were also self-consciously connected to their wider professional community. They taught their apprentices how to replicate very particular local administrative styles but also inducted them into the rudiments of elite cuneiform culture that united the learned across the ancient Middle East for over three millennia.

Finally, a few words about the modern information flows behind this paper. The Tell Khaiber tablets become legible again, after three and a half millennia, only through the intense efforts of an expert team of excavators, conservator, photographer, finds manager and so on. The tablets themselves, once they have been documented and studied in the field, are accessioned by the Iraq Museum in Baghdad, where they remain in safekeeping. Meanwhile, I continue to work with their virtual representations, reading highly magnified digital photographs and encoding what I read into an online edition for Oracc. There is certainly more information to flow out of the archive, not only as I decipher more signs and think more deeply about the way the tablets relate to each other, textually, materially and spatially and to other evidence from the period. We know too that there are many thousands more tablets in the ground — if not in the Tell Khaiber building, which has now been fully excavated, then in other archaeological sites like it — so this little corner of the Babylonian world will keep producing and disseminating information for many years to come.

FIGURE CAPTIONS

Figure 1: The geographical location of Tell Khaiber, with modern towns marked as squares and and ancient settlements as circles (courtesy of the URAP project)

Figure 2: Plan of the archive building at Tell Khaiber, showing the state of excavation at the end of March 2015 (courtesy of the URAP project)

Figure 3: The memorandum TK1 3080.3, obverse and reverse (drawing by the author)

Figure 4: The numerical list TK1 3064.52, obverse and reverse (drawing by the author)

Figure 5: The tabular account TK1 1114.48, obverse and reverse (drawing by the author)

Figure 6: The letter TK1 3064.93, obverse and lower edge (reverse blank; drawing by the author)

Figure 7: The payment order TK1 1114.11, obverse and reverse (drawing by the author)

Figure 8: The Sumerian vocabulary exercise TK1 3080.15, obverse (reverse blank; drawing by the author)

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