

Eating and Drinking
in the Ancient Near East

Proceedings of the 67th Rencontre Assyriologique
Internationale, Turin, July 12–16, 2021

Edited by Stefano de Martino,
Elena Devecchi and Maurizio Viano

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Preface

The University of Torino hosted the 67th Rencontre Assyriologique Internationale in July 2021. The chosen topic, “Eating and Drinking in the Ancient Near East”, broad and declinable under different perspectives, allowed several colleagues to participate.

Our initial plan also was to offer good wine and food to all our guests, but unfortunately the spread of the Covid pandemic prevented us from organizing the Rencontre in person. Hopefully this can be realized in the next Rencontre in Turin!

Due to pandemic restrictions, we were forced to reorganize the conference. We requested all the speakers to pre-record their papers, and we made the lectures available from June until September 2021.

On July 21st, during the plenary session, we featured the welcome addresses from Ambassador Paolo Bartorelli, representing the Italian Minister of Foreign office, Walther Sallaberger as President of the International Association for Assyriology, Christian Greco, Director of the Egyptian Museum in Torino, Gianluca Cuniberti, Director of the Department of Historical Studies of the University of Torino, and Stefano de Martino on behalf of the organizing committee, composed by Elena Devecchi, Christian Greco, Carlo Lippolis, Vito Messina, and Maurizio Viano.

We are grateful to Cécile Michel and Theo van de Hout who agreed to deliver the key lectures, thereby opening the conference. Subsequent days hosted the Q&A sessions, and we warmly thank all the colleagues, numbering more than 300 participants, for their active involvement in the discussions, which, despite being remote, proved highly fruitful.

This volume comprises many of the papers presented at the Turin RAI. The proceeding of the workshop “Material Culture and Food in (Greater Mesopotamia) from the Iron Age to the Parthian Period” have already appeared the issue 56 of the journal *Mesopotamia*. Besides, the papers from the workshop “Figures of Speech in Mesopotamia and Syro-Anatolian Iron Age Texts” can be found in the journal *News from the Land of the Hittites* 5–6 (2021–22).

We owe a debt of gratitude to the Department of Historical Studies of the University of Torino that provided administrative support. The conference was partly funded by the Research Prin Projects 2017 and 2020. We also thank Giulio Ferratini, CEO of Centro Congressi Internazionale, and his team for processing the recorded lectures and storing them on a digital platform. Finally, we thank the

publisher Zaphon for providing the publication of the proceeding of the Turin Rencontre.

Turin, February 2024

Stefano de Martino

Elena Devecchi

Maurizio Viano

1.

Opening Lectures

‘There is no one to set my table’

Gender Aspects in Food and Drink Preparation

*Cécile Michel**

*In memory of Jean Bottéro,
expert on ancient Mesopotamian food
and master in the art of cooking.*

The contributions to this volume explore the themes of food and drink from many angles, from production to consumption, including the storage methods, the transformation of raw materials, as well as the economic and social aspects linked to food. This contribution tackles the topic from a perhaps less studied angle, the gender aspects of food and drink preparation. It does not include all the phases of food preparation from the providing of the flora and fauna products up to consumption, but focuses on *la cuisine*, i.e. the transformation of raw foodstuffs into ready-to-eat food.

A gender perspective allows us to analyse how a society attributes roles to each sex. But the differences between female and male roles in food and drink preparation depend also on the social status of the people, on the milieu and context in which they work, and on other factors, and thus involves the notion of intersectionality.¹

It is generally assumed that the daily preparation of meals at home is the task of women, while *haute cuisine* is the work of skilled men.² Although in France we are slowly breaking out of this traditional pattern with some women chefs, this gendered division of food preparation has presumably influenced our reconstructions of ancient history of food. This presentation proposes an overview of the

* CNRS, ArScAn-HAROC (UMR 7041), Nanterre & CSMC, Universität Hamburg. I wish to thank Stefano de Martino and the organizers of this 67th Rencontre Assyriologique Internationale (RAI) for their kind invitation to the first RAI dedicated to the topic of food and drink. It was briefly discussed in 2004 during the 50th RAI in Skukuza as the topic was on fauna and flora (Boshoff, 2007), and earlier in 1969 during the 17th RAI in Brussels with a theme on feasts (Finet, 1970). I am grateful to Nicole Brisch who kindly polished the English of this contribution and made thoughtful comments.

¹ Zsolnay, 2018: 464 among others.

² See already Emidoro, 2015: 24.

topic based on written documentation from the middle of the third millennium to the first millennium BCE, focusing on specific corpuses found in palaces, large households, and family archives, and a few representations when it proves to be relevant for the purpose.³

Practical texts found in a domestic context give hints about the preparation of food at home, mainly done by women. They also mention occasionally the existence of shops where specialists sold their products, as butcher's shops or bakeries. Some literary and scholarly compositions confirm this reconstruction of a gendered division of food preparations at home. By contrast, the evidence from palaces and large households shows the organisation of food and drink preparation at larger scale, with many men and women involved. The archives found in these buildings also provide data about food preparation in the army and offer details on the work of some food professionals, such as millers, bakers, butchers, etc.

1. In domestic context and in the city

Daily kitchen chores, like everything else in daily life, have left very little written documentation; however, family archives and some literary texts suggest that these tasks were in the hands of women.

1.1 At home in private archives

The title of this contribution quotes a nineteenth century BCE letter sent by the Assyrian merchant Puzur-Aššur to his fiancée Nuhšatum:⁴

The day you hear my tablet, there, turn to your father (so that he agrees);
set out and come here with my servants. I am alone. There is no one to
serve me and set my table.

This man was eager to get married to have a housekeeper, who could keep him company, cook for him, and serve him. The Old Assyrian letters sent by women in Aššur to men in Kaneš illustrate the preparation of food in a domestic context. In Aššur, with the money they received from their husbands, Assyrian women bought cereals at the time of the harvest, and transformed them into food and drink. In wealthy families, flour grinding was done by female slaves.⁵ The work

³ The present survey does not include food preparation within temples as this would require a study on its own. The feeding of the gods involved very specific rituals. Moreover, prebends related to food preparation could be owned by certain people who did not necessarily perform the work related to it.

⁴ Michel, 2020: no. 3.

⁵ Michel, 2001: no. 218: "Give instructions to the female slave, she should grind for me the old barley for food". There are, however, Old Babylonian marriage contracts in which a *nadītum* is married to a man together with her sister, the latter being in charge of the grinding, see for example CT 2, 44: 17–25 cited by Barberon, 2012: 230.

was so difficult that even some of the slaves were reluctant to do it, as can be seen from this complaint of a daughter to her father:⁶

Forgive me, but you left a ‘real’ female slave behind to work for me. The female slave quarrels with me. When I tell her ‘Grind 5 litres’, she refuses. Even as little as 2 litres she refuses to grind. Over there, you have 10 female slaves at your disposal. Here, I appeal to the whole city for a (single) female miller!

The bread was baked in the tannur oven, often built in the courtyard of a house. The situation was similar at Beydar earlier, in the middle of the third millennium, where each village house had its own tannur, besides the existence of communal ovens. According to Elena Rova, baking bread in the tannur was done exclusively by women.⁷

The preparation of beer is a topic that is regularly discussed in the Old Assyrian letters, as it were the women, who prepared this beverage for the daily consumption of the household. They prepared beer bread and malt and stored them, so that they could have the beer made when necessary.⁸ A lonely woman wrote to her husband that she was missing him by stating: “The beer bread I made for you has become too old!”⁹ In some instances, when they had prepared too many beer breads, they could even sell some, earning money from their production. Thus, the preparation of beer appears as a typically feminine and daily occupation.

Women received cooking pots for their culinary activities: a man would send his wife the copper necessary for making a kettle. Inventories of goods belonging to women include various bronze and cooper bowls, measuring cups, pitchers, a great variety of vessels, as well as cauldrons of different sizes.¹⁰

More generally, all the cuneiform texts recording women’s property mention crockery, millstones and mortars, sometimes with specifications.¹¹ Babylonian dowries of the second and first millennia also include cooking-pots, several millstones used for different types of cereals and mortars.¹² A man could also make gifts to his wife, including for example “1 millstone for *isququm*-flour, 1 millstone

⁶ Text Kt c/k 266: 25–34 cited by Dercksen, 2014: 105, n. 135.

⁷ Rova, 2014: 124.

⁸ Michel, 2020: no. 132, letter from a man to his wife, “Soak 10 sacks of malt and 10 sacks of beer bread to prepare (beer)”. Also Michel, 2020: no. 166, from a woman to her husband, “Concerning the beer bread you wrote to me about – the beer bread is certainly made and ready!”.

⁹ Michel, 2020: no. 129.

¹⁰ Michel, 2020: nos. 134–135.

¹¹ See for Old Babylonian examples Charpin, 1986: 105–108 or Lafont, 2001: 308, no. 5.

¹² Dalley, 1980: 57, CT 48, 50 and text no. 9; Wilcke, 1982: 459–460, text no. 6; Westbrook, 1988: 113 (BE 6/1 84), 118–119 (CT 8 2a), concerning *nadītums*, and CT 8 34b; Barberon, 2012: 188–189.

for barley flour, 1 kettle of 20 litres.”¹³ Martha Roth, in her inventory of Neo-Babylonian dowries, mentions among other items: sieves, storage jars, pot stands, goblets, grates, oil bowls, washbowls, bowls, cooking pots, various vats, vessels, stands for vats, etc. With all such types of kitchen wares, women were well-equipped to cook.¹⁴

We must, however, stress the existence of some inventories of goods belonging to men which also included vessels, cooking pots, and millstones. According to an Ur III text, the goods belonging to Šunibasum to be divided between his sons included 3 copper cauldrons, several containers in copper, 4 knives, 1 millstone, pots of aromatic oil, as well as more than 10 000 litres of barley.¹⁵ And the very long Ur III inventory of goods belonging to the governor of Girsu contains no less than 30 bronze vessels, ten cooking pots in bronze and copper, eleven millstones, and various quantities of food products.¹⁶ However, the possession of kitchen utensils does not necessarily mean their use. Daily kitchen chores were clearly in the hand of women.

1.2 Food preparations in literary and scholarly compositions

Some literary and scholarly texts also give hints on the preparation of meals at home. For example, when Gilgameš finally met Utanapištim to learn how he gained immortality, the latter challenged the hero to stay awake for a full week, but exhausted by his long journey, Gilgameš fell asleep. Utanapištim’s wife took on her role of housewife, baked the bread every day, and placed a loaf of bread next to the sleeping man. When he woke up, the number of loaves and their state of preservation told the hero how many days he had slept.¹⁷

In the composition *Edubba A*, renamed ‘Schooldays’ by Samuel Noah Kramer, it was the mother who prepared the meals for the family.¹⁸ The boy, who was about to go to school in the morning, asked his mother for his lunch, and was so hungry that he ate the lunch at once, forcing her to provide him a second lunch.

The tasks of a good wife are depicted, albeit in an ironic manner, in the Sumerian debate of the *Two Women B*.¹⁹ The household chores that punctuated the women’s lives included pressing oil, grinding grain to make flour, baking big loafs of bread, and drawing water. Those who wanted to escape to this boring life

¹³ Westbrook, 1988: 119 (CT 8 34b: 8–13), 113–114 (BE 6/1 95).

¹⁴ Roth, 1990.

¹⁵ Ur III text published by Steinkeller / Postgate, 1992: no. 7.

¹⁶ Lafont, 2001: 308–309, no. 7. A comparative study, which is not the scope of this contribution, would presumably show that items linked to kitchen activities are overwhelmingly in the possession of women.

¹⁷ George, 2003: vol 1, 716–719, Tablet XI: 221–241.

¹⁸ *Edubba A*: 10–22, from Attinger, 2019.

¹⁹ Matuszak, 2016: 237–238, and for the complete edition of the text, Matuszak, 2021.

by buying ready-made food and beer were considered as bad behaving women. Naturally, rich families had female slaves to perform such repetitive tasks.

As noted by Jana Matuszak, grinding grain was the task of women, but unmarried men were forced to do it themselves according to a proverb of the Early Dynastic collection.²⁰ Literary texts thus suggest that food and drink preparation were performed daily by the women of the family.

1.3 Outside of the house and in the city

When going outside of their home, men and women could certainly buy meat at the butcher’s shop or bread at the baker’s shop, men could have a beer at the tavern, and travellers could eat at the inns. The female innkeeper is well documented for the late third and the early second millennium.²¹ The most famous female innkeeper is Šiduri, who is known by her name and had a job allowing her to earn her life. In the Old Babylonian version of the *Gilgameš Epic*, she not only served beer but also gave a long philosophical speech to the hero, highlighting the small pleasures of everyday life, the first one being eating well, then being cleanly dressed, having a wife and children.²² Thus, initially domestic, the preparation of beer became an independent institution during the late third and early second millennium. The social position of the female innkeeper remains poorly known, even though it is the most attested female profession in the law codes. She could be a single woman,²³ and according to the *Sumerian king list*, one of them would have become the queen Kubaba.

The Old Assyrian and Old Babylonian texts mention the existence of both *sabūm* and *sabītum*, but their respective roles would be different according to Marten Stol, innkeeper for the women and chief of the brewers for the men.²⁴

The documentation concerning other professionals is not very informative. Several debt notes mention cooks as debtors,²⁵ and there are contracts settling associations, one of them between two bakers.²⁶ There are also some employment contracts, including the hiring of millers, both female and male.²⁷

²⁰ Alster, 1992: 20, l. 43–48: “He who does not support a wife, he who does not support a child the evil state of things is double bad for him: he grinds flour, he has no rushes (...).”

²¹ Lion, 2013. See also Michel, 2009: 206–208 and Langlois, 2016. Brewing activities are placed under the patronage to two female deities, Ninkasi and Siriš.

²² George, 2003: vol. 1, 279, iii: 1–15.

²³ Stol, 2016: 363–367.

²⁴ Stol, 1971: 168, Lion, 2013 (Old Babylonian) and Michel, 2015 (Old Assyrian). Note that the tavern is more often referred to as the house of the *sabū* than its female counterpart.

²⁵ Cooks are mentioned for example in the following texts: CUSAS 8, 53; Harris, 1955: no. 10 and 33; UET 5, 535.

²⁶ Text TIM 7, 52 dated to Samsu-iluna 7.

²⁷ Richardson, 2010: no. 25 and 30.

2. Evidence from palaces and large households

Most of the cuneiform texts documenting the kitchen staff come from palaces and large households. The following survey gives a picture of what can be reconstructed from the kitchens of key sites presented in a chronological order. However, we must keep in mind that regional differences are important as well.

2.1 Some Mesopotamian palaces and their organisation

One of the earliest well-documented palaces is the one at Ebla, dated to the twenty-fourth century, in which the female population seems to have been in the majority. In addition to the women of the royal family, there were many female servants who performed a wide variety of tasks. Women working in the palace kitchens were cooks, millers, bakers, and brewers; they were also tasked with preparing vegetables, keeping the fire going, or fetching water.²⁸ However, according to Vanna Biga, the meals for the king and his court were prepared by a group of some thirteen to fourteen male cooks, who, in contrast to the women, are known by their names, and who received textiles from the administration as a remuneration for their work.²⁹

The picture is similar during the first centuries of the second millennium in Mari and Chagar Bazar, among others. Some 350 to 600 women lived in the Mari palace according to rations lists.³⁰ About 40 of them were working in the kitchen of the palace, under the supervision of female administrators (*abarakkātum*, *munus-agri g*),³¹ themselves operating under a man called *Ilu-kān*, who was responsible for stocks outside the palace.³² At Chagar Bazar, the organisation of the work in the kitchen is very similar: some 25 female administrators and bursars were belonging to the service of *Lībur-bēli*.³³

The female personnel working in the Mari palace kitchen included millers, those preparing *burrum*-cereals, bakers of bread, cooks, brewers of different types of beer, confectioners, water-carriers, and scribes: *Ama-Duga*, mother of king *Yasmah-Addu*,³⁴ was still supervising the kitchen administration during the first years of reign of *Zimrī-Līm* (up to ZL 5): she sealed tablets recording the receipt of cereals by *Ilu-kān*,³⁵ and many delivery notices of oil for the king's meal.³⁶ Three female scribes, all of whom are known by their names, worked in pairs and

²⁸ Archi, 2002 and Biga, 2016.

²⁹ Biga, 2016: 83.

³⁰ FM 3, no. 60 and Ziegler, 2016a: § 2.

³¹ Ziegler, 1999: 100–101, Sasson, 2004: 189–197, Lion / Michel, 2022: 23–25. The word *abarakkātum* corresponds to two realities: “female administrators” and “bursars”.

³² Chambon, 2018: 17–19.

³³ Lacambre / Millet Albà, 2008: 21, Lion / Michel, 2022: 24.

³⁴ Ziegler, 1999: 98–99.

³⁵ Chambon, 2018: 16, 19.

³⁶ Charpin, 1992: 67.

wrote hundreds of tablets, which recorded the daily expenditures of the store-rooms for the king’s meal.³⁷ The rations received by the women working in the palace kitchen show that the millers, those in charge of the *burrum*-cereals, which were usually girls, and the water carrier were all considered less important professions, because their rations were smaller than those of other kitchen workers.³⁸

The Mari correspondence also mentions male specialists, who are referred to by their personal names and who were sometimes sent to different palaces as skilled specialists. During the reign of Šamšī-Addu, several cooks fled the service of the great king to join the palace of his son at Mari. They sometimes even participated in the dinners of Yasmah-Addu, which seem to have been quite relaxed.³⁹ Some cooks or brewers were bought in another country and brought back to Mari.⁴⁰

In Nuzi, during the fourteenth century BCE, ration lists mention male and female slaves working for the palace kitchen. One of these lists mentions barley rations for male slaves, which included 4 bakers (*ēpū*), 1 brewer (*sēbiu*), 1 person preparing groats (*ša mundu*), 2 brewers (*sirāšū*), and one cook.⁴¹ Another text refers to male cooks, together with female brewers (*sirāsātu*) and female flour-processers (*alahhennātu*). This last activity is also attested for men in the prince’s archive (Šilwa-Teššub).⁴² Both men and women are attested in connection with the tasks linked to the processing of grain for food and beer, even though the presence of men seems predominant.

Similarly, the texts documenting Neo-Assyrian palace kitchens preparing meals for hundreds of people suggest a male-dominated world, especially concerning the cooks. Male workers are listed in great numbers in a broken administrative text including 220 cupbearers, 400 cooks, 400 confectioners.⁴³ However, female personnel also worked in the kitchen, but in lesser numbers. There, we find for example female cupbearers and female bakers. It has been suggested that they were assigned to the Queen’s service, together with male personnel.⁴⁴ Unlike the third and early second millennia Syrian palaces, such as those in Ebla or Mari,

³⁷ Ziegler, 2016a: § 4.3.

³⁸ Ziegler, 2016b: 305.

³⁹ Durand, 1997: no. 2, Sasson, 2015: 305, n. 27.

⁴⁰ ARM 26, 374, Sasson, 2015: 167.

⁴¹ HSS 14, 593: r76, see Lion, 2016: 363.

⁴² ERL 82+SMN 2963 cited by Lion, 2016: 363–364. According to Nicholas Postgate (2013: 109–110), in the Middle Assyrian texts from the Aššur temple, *tē'inu* was the miller who produced flour, while the *alahhenu* prepared ‘farinaceous products’. This term is also attested in the middle Assyrian texts of Dūr-Katlimmu, Cancik-Kirschbaum, 1996: 147–153, no. 10: 12.

⁴³ SAA 7, 21.

⁴⁴ SAA 7, 26. See Emidoro, 2015: 216, n. 84. Text SAA 7, 9 which mentions the queen mother’s cupbearer.

where kitchens were crowded with a busy female staff, sometimes supervised by men, the textual documentation from the Nuzi palace or the Neo-Assyrian palaces in the north of Iraq show more men at work in the kitchens.

2.2 A men's world: soldiers on military campaigns

Quite unsurprisingly, the military campaigns show a masculine world, including mobile kitchens and staff. In the Old Assyrian satirical Sargon legend, the king recounts a disastrous meal for his army. First, there was not enough food for all the soldiers, and then the cook burned the meat and had to kill another three hundred animals. We can only assume that he was assisted by numerous staff.⁴⁵

The organisation of military camps is well illustrated for the Neo-Assyrian period, both in textual sources and in the representations on palace reliefs.⁴⁶ The reviewing of the troops of Mazamua under Sargon II shows that 29 men were preparing food and 20 cupbearers organised drinks for the Assyrian soldiers only, which counted 630 men.⁴⁷

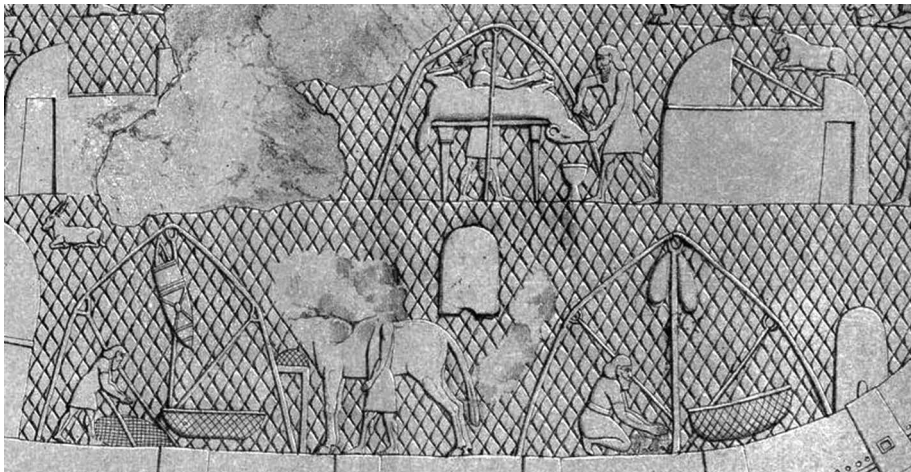


Fig. 1: On the upper register, a man bleeds out an animal lying on a table. On the lower register right, a man is grinding grain. From Layard, 1853: vol. II: pl. 36.

The representations of military camps are part of the imagery, in which the king was presented as a conqueror. The culinary activities that are depicted in the military camps offer many details regarding the preparation of foods in contrast

⁴⁵ Kt j/k 97, published by Günbatt, 1998. See the translation of the text by Foster, 2005: 72–73.

⁴⁶ Bachelot, 2013 and Fales / Rigo, 2014.

⁴⁷ SAA 5, 215 lists, among others, 20 cupbearers, 12 confectioners, 7 bakers, 10 cooks. There were also 360 Gurreans and 440 Itu'eans presumably including their own staff. The deportees had to eat the foods they brought with them.

to non-military scenes, which often only depict banquets but not the preparation of such banquets (Fig. 1). For example, scenes on the Balawat Gates of Shalmanezar are an illustration of the different steps necessary in the processing of cereals: threshing with an equid, sieving, grinding, sifting, etc.⁴⁸ Similar scenes can be found on some of the reliefs of the Palace of Sennacherib at Nineveh.⁴⁹

The butcher’s tasks, especially the cutting up of the animal, are also well-represented. On a Nineveh relief, a man bleeds out an animal, sheep or goat, which is lying on the back on a table.⁵⁰ The head of the animal protrudes from the table and a jar is placed under it on the ground to collect the blood. At the opposite end of the table, another man holds the hind legs of the animal.

Another relief, which depicts actions after the capture of a city, shows soldiers cutting of a ram with their swords and grilling the pieces directly on an open air fire; no real cooking is involved in the scene.⁵¹ The actual cooking activities, beside the baking of breads, are limited to the supervision of the cookpot placed on a brazier, and the preparation of what may be interpreted as condiments in jars.⁵²

2.3 Professions related to cooking

To better understand the tasks of men and women working in the kitchens of palaces and large households, it is necessary to take a closer look at the professions attested. The different steps involved in turning raw ingredients into meals call for a whole series of specialists, who were in charge of specific operations, such as grinding, cutting, mixing, baking, seasoning, etc.⁵³ These specialists may be referred to as professionals or not. For example, the Old Babylonian Nippur Lu lexical list includes words for male cook, brewer, oil presser, and seasoning specialists, as well as female counterparts of these professions.⁵⁴ Other professions are only attested as male ones, as for example the butcher (see below 2.3.3). Some

⁴⁸ Schachner, 2007, pl. 2, 4–5, 9, 13. See Curtis and Tallis, 2008 for the Balawat Gates of Assurnasirpal II.

⁴⁹ Layard, 1853: vol. II, pl. 36: on the left a man brings a large basket, presumably filled with cereals, while on the right a man is kneeling in front of a millstone.

⁵⁰ Layard, 1853: vol. II, pl 36 and Barnett / Bleibtreu / Turner, 1998: pl. 138.

⁵¹ Barnett / Bleibtreu / Turner, 1998: pl. 252 (XXVII).

⁵² For example Barnett / Bleibtreu / Turner, 1998: pl. 138.

⁵³ Some literary texts allude to such professionals. For example, in the later version of the myth of Nergal and Ereškigal, when Ea gives instructions to Nergal on how to behave in the Netherworld, he specifies: “When you arrive there (...) when the baker brings you bread, do not proceed to eat. When the butcher brings you meat, do not proceed to eat. When the brewer brings beer, do not proceed to drink.” Foster, 2005: 515. Baker, butcher and brewer are among the various professionals to be found in the kitchens of big institutions, both the baker and the brewer using cereals as basic ingredients.

⁵⁴ <http://oracc.museum.upenn.edu/dcclt/corpus> (accessed on 20 March 2022), Old Babylonian Nippur Lu₂ (Proto-lu₂, Q000047): lines 95–104, 118–127, 708, 789–790.

of the terms attested in the lexical lists are absent or rarely mentioned in the administrative documents. Moreover, this list covers only part of the activities of both men and women in the preparation of food and drink.

2.3.1 Millers

The miller was in charge of transforming cereals into flour. Palaces consumed enormous quantities of flour and the personnel assigned to the grinding of cereals was the most numerous, along with weavers. Grinding cereals does not require specific skills and people assigned to this task were usually of low status. Grinding was carried out mainly by women from the Neolithic times. The analysis of some skeletons of women and girls shows compression injuries to some dorsal vertebra resulting from the rocking movement of grinding, and also articular changes of the toe bones linked to kneeling.⁵⁵

However, Ur III texts mention the existence of a few male millers working alongside female millers. A text from Girsu dated the 48th year of the reign of Šulgi lists the semi-free staff working for the great millhouse: the first group consists of 490 millers (*kikken₂-me*), including 364 female, 69 children, 56 men, and 1 elder female, then 11 oil pressers (4 women 7 children), weavers and a great variety of other personnel including overseer of millers, maltsters (4 men, 1 woman), cook, etc.⁵⁶ Most of the supervising staff of this great mill were males. At Garšana, there were also a few male millers working alongside female millers: “12 female millers, 3 male millers, 4 female sesame pressers.”⁵⁷ By contrast, the work of sesame oil presser seems to have been a task that was performed by women and children at Garšana and Irisagrig.⁵⁸

The situation of millers is rather the same in the early second millennium Syrian palaces: grinding was regularly done on a large scale in the *nēpārātum* outside of the palace; however, some female millers (*tē'ittum*) were also employed in the palace kitchen. Ration lists mention 14 millers at Mari and 16 at Chagar Bazar.⁵⁹ This corresponds to the number of millstone stations unearthed in the Old Syrian

⁵⁵ Molleson, 2014: 15.

⁵⁶ CT 3, 9–10, see Lafont, 2016: 160. According to Englund, 1991: 398, a woman could grind 10 litres of grain per day.

⁵⁷ Kleinerman / Owen, 2009: 312 cite texts 291:1–5//292:1–5. Note that Garšana texts distinguish two types of millers, *ar₃-ra* and *kikken₂*, even though the tasks of both seems to be quite similar. Lafont, 2016: 156 notes that weavers, millers and oil pressers were associated in the ration lists, as in the Ur tablet UET 3, 1504.

⁵⁸ This is not the case in the Old Babylonian sources, when men are regularly attested as oil pressers.

⁵⁹ ARM 19, 248 and 248*. See also ARM 33, 35, an inventory of the Yahdun-Lîm fortress staff receiving rations: in all, there were 173 persons, including 10 female millers. At Mari, women could also be specialised in the preparation of *burrum* cereals (*lāqitāt burri*), a task for which no men are attested, Lion / Michel, 2022: 25, n. 35.

palace Q of Ebla in a room of the north-west wing (L. 3135).⁶⁰ We should note, however, that there were also male millers, though in smaller numbers, at Mari.⁶¹ At Qaṭṭarā, 300 litres of barley were given to three men with the requirement to grind the barley in three days.⁶²

In another geographical area and a few centuries later, at Nuzi, there were both female (*tē'intu*) and male millers (*kaššiddaššu*).⁶³ In first millennium Sippar, male prisoners were assigned to grinding flour.⁶⁴ Thus, the task of grinding cereals, usually performed by women, could also be done by men, some of them being prisoners.

2.3.2 Bakers

The flour was then given to bakers. Female bakers were working for the palace at Ebla in order to bake breads, and they received rations as a remuneration.⁶⁵ In the Mari palace, eight female bakers (*ēpītū*) were producing a great variety of breads for the king's meal at the beginning of Zimrī-Līm's reign. At Tuttul, they were three. At Chagar Bazar male bakers are attested in connection with millers.⁶⁶

A text from Nuzi mentions four men belonging to the palace bakers, presumably working for them.⁶⁷ Neo-Assyrian texts mention mainly male bakers, together with other male professionals, such as cooks, cupbearers and confectioners.⁶⁸

Thus, though the bakers in the early Syrian palaces were predominantly female, male bakers do exist and are the majority in the Mesopotamian palaces from the second half of the second millennium on.

2.3.3 Butchers and cooks

The case of the butchers is different: it is always a masculine task that was performed in different places, using different methods, depending on the size of the

⁶⁰ Matthiae, 1989: 170, pl. 88.

⁶¹ ARM 21, 381: delivery of textiles to the palace staff including 8 male millers; ARM 23, 610: delivery of wool to various people including male bakers (*ēpū*) and millers (*kaššid-akū*), using here another term to refer to these professionals.

⁶² OBTR 187:1–5. See also for Old Babylonian male millers OECT 15, 41 from Larsa, in which two men received grain to produce flour.

⁶³ HSS 14, 97: 12 and 98: 13 cited by Lion, 2016: 363–365.

⁶⁴ Kim, 2013.

⁶⁵ Milano, 1990: 44, 57.

⁶⁶ For Tuttul and Chagar Bazar references see Lion / Michel, 2022: 24–26.

⁶⁷ HSS 14, 593:26. From the same period, there are female bakers at Alalakh (JCS 8: 11, no. 159: 7).

⁶⁸ SAA 4, 144: 8 et SAA 4, 139: 8. However, SAA 7, 24 quotes 1 female spice-bread baker and her 2 maids.

animal.⁶⁹ In Old Babylonian and Middle Babylonian texts, the butcher could receive complete animals or meat pieces to be prepared.⁷⁰

Long before the Neo-Assyrian reliefs already mentioned above (§2.2), which show butchers working in military camps, the butchering of animals is already depicted on cylinder seals of the female cook of queen Uqnitum at the court of Urkeš.⁷¹

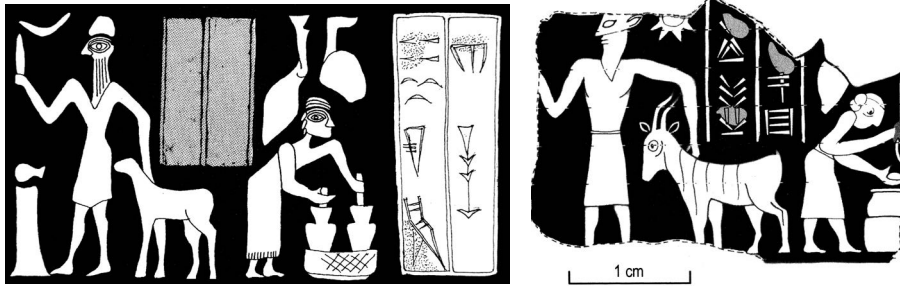


Fig. 2: The two seals of Tuli, female cook of queen Uqnitum at Urkeš (Kelly-Buccellati, 2019: 121, figs. 11 and 16).

On this seal, a butcher holds a knife and is ready to kill a sheep, while a woman, is churning butter or cheese in two jars simultaneously. The scene presents the preparation of food in the palace kitchen, supervised by the female cook whose name is mentioned in a later seal as Tuli. The later seal also shows a woman, who is inserting a loaf of bread in a tannur oven, next to the butcher (fig. 2).

It is striking that the Mari corpus which gives so many details concerning the food sector of the palace, and especially meat, does not mention butchers. For this reason, Jack Sasson proposed to translate *nuhattimum*, commonly translated as ‘cook, with ‘butcher’ instead: these butchers would have been in charge of the preparation and the conservation of the meat.⁷² In a letter to the king, a high official writes: “Let my lord send me a cook so that he can slaughter(?) that ox and so its meat can go to the palace.”⁷³ Here the cook is clearly performing the task of

⁶⁹ The Sumerian term *gir₂-la₂* is mainly attested in literary and lexical texts and a few other royal or administrative tablets from scattered periods, as in Nisaba 15, 90: ii4. The Akkadian word *ṭābihu*, besides religious, ritual, literary and lexical texts, occurs in a few administrative texts from the Old Babylonian period on (CAD T: 6–8).

⁷⁰ UET 5, 404. Butchers are also attested in Old Babylonian and Neo Assyrian texts as witnesses in transactions (CT 48, 39: 18, MDP 22, 21: r7; SAA 6, 6: r9; 6, 6:r10), and they are also found Neo-Assyrian administrative texts listing professionals (SAA 7, 21: 10//22, r1; 5ii: 46).

⁷¹ Kelly-Buccellati, 2019: 416, fig. 11 and 16.

⁷² Sasson, 2004: 192–194.

⁷³ Durand, 2000: no. 972. In ARM 25, 137, a *muhaldim* named Mutu-ekallim received a bronze knife.

the butcher. It is not impossible that the cook at Mari was acting both as a butcher and a cook, also supervising the preparation of the king’s meal.⁷⁴ Indeed, to prepare dishes, the cook received various ingredients including vinegar for maceration, and flour, butter, and animal fat for cooking.⁷⁵

Both male and female cooks worked in the kitchen palaces at Ebla and Mari, but they are mentioned in different contexts. It is possible that this was due to a difference in status of male and female cooks, or that male and female cooks were involved in different activities: male cooks are better identified, they could travel, and even be exchanged between courts, they also could even receive fields for their services.⁷⁶ Only three female cooks are attested at Mari, which seems quite few, they could have been supervising the kitchen work, just like Tuli at Urkeš.⁷⁷

During the Neo-Assyrian period, a letter addressed to the king mentions cooks and other specialists working in the kitchen, who came from Til-Barsip, and all of them were eunuchs.⁷⁸ Several cooks at the king’s service are known by their personal names, just as in the Ebla and Mari.

2.3.4 Others specialists preparing food

Several other specialists were working in palace kitchens, such as the *lurakkum* in Mari and Šubat-Enlil, who was in charge of preparing specific types of seasonings, among others a kind of *garum* (*šiqqum*) made of locusts, shrimps and fish.⁷⁹ This profession is also attested for women, as we learn from a letter from Inbatum, who asked her father Zimrī-Lîm for some servants including a *lurakkîtum* or a female cook.⁸⁰

At Mari, eight women were in charge of preparing the *mersum*, a kind of sweet cake, porridge or simply a filling made of flour, oil, dates, terebinth, figs and other fruits, garlic, cumin, and coriander.⁸¹ Other corporuses mention various kind of con-

⁷⁴ In the debate between the date palm and the tamarisk, the latter specifies: “the cook kneads dough in my trough.” Foster, 2005: 928.

⁷⁵ Cooks received low-quality wine at Mari (FM 11, 34, 50, 99, 103, 160), beer at Chagar Bazar (Lacambre / Millet-Albà 2008: no. 171), flour at Ur (UET 5, 447) or butter at Larsa (JCS 24, 3).

⁷⁶ Cooks known by their names at Ebla (Biga, 2016: 83) and at Mari (M.6799, ARM 30: 228–229; M.6824, ARM 30: 470; M.6907, ARM 30: 333; M.7484, ARM 30: 468). For cooks travelling, see Sasson, 2004: 214–215 and Sasson, 2015: 221, n. 12 and 14, or bought abroad ARM 26, 374. At Mari they could receive textiles (ARM 21, 381), in other Old Babylonian texts, even fields (OECT 3, 10: 4).

⁷⁷ Ziegler, 1999: 102.

⁷⁸ SAA 1, 184: 4–19.

⁷⁹ Lion / Michel, 1997: 718–719.

⁸⁰ Durand, 2000: no. 1234.

⁸¹ Sasson, 2004: 190–191; Durand, 2000: no. 959.

fectioners, all males.⁸² There were many other people working in the large household kitchen, but without professional qualification.

2.3.5 Brewer

As already noted above (§1.3), brewing activities were mainly performed by women during the third and early second millennia. The Sumerian hymn of Ninkasi details the operations to prepare beer. Akkadian seals show women brewing beer in various types of jars.⁸³ However, in the early second millennium large households, these activities were supervised by men.⁸⁴ In the Mari palace, female brewers were preparing different types of beer.⁸⁵ At Qaṭṭarā, there was a female beer brewer at the service of Iltani.⁸⁶

In Nuzi, both male *sēbiū* and *sirāšū* and a few female brewers (*sirāšātu*) are attested.⁸⁷ In Middle Assyrian sources, male brewers are the great majority.⁸⁸ First millennium Assyrian texts only refer to male brewers.

2.3.6 Cupbearers

The cupbearer, whose task it was to serve beverages to the king, was a high-status professional. He was sometimes represented just behind the king, for example, on the relief of Ur-Nanše, king of Lagaš.⁸⁹ At Ebla, there was a cupbearer for beer and another one for wine, both were male and are known by their personal names.⁹⁰

Cupbearers were probably not involved in the preparation of drinks, but servicing the drinks would have implied some preparation, such as portioning and pouring. Mari cupbearers (*dumu šāqī*) were sent to Terqa to collect ice, presumably to present fresh drinks to the king.⁹¹ In Neo-Assyrian texts, this profession could also be held by women, whose title was *šāqītu*, presumably she was in the service of the queen.⁹²

⁸² See *sum-ninda*, *karkadinnu*, and the first millennium *epišānu* confectioning the sweet meat called *muttāqu*.

⁸³ Otto, 2016: 135–136.

⁸⁴ Breniquet, 2009: 187; Michel, 2009: 206–207. This was for example the case for the beer office at Chagar Bazar, but these officials are not necessarily referred to as brewers (*lu₂-bappir*), Lacambre, 2008: 193–203. Texts from the beer bureau do not specify the gender of the staff producing the drink.

⁸⁵ Michel, 2009: 206–207.

⁸⁶ OBTR 207: i22, Langlois, 2017: vol. 2, 192.

⁸⁷ Lion, 2016: 364.

⁸⁸ Jakob, 2003: 401–407.

⁸⁹ See <https://collections.louvre.fr/ark:/53355/cl010121762> accessed on 10 January 2022.

⁹⁰ Biga, 2016: 85.

⁹¹ ARM 26, 400.

⁹² Emidoro, 2015: 219.

*

This brief overview of tasks linked to the preparation of foods and drinks in cuneiform sources from a gender perspective does not provide a clear-cut picture. If in general, the slaughtering of animals seems to be clearly a male task, all other kitchen activities were performed by both men and women, but in very different proportions. The gender distribution of kitchen activities depends on many factors, including context, social status, geographical area, and time period.

In domestic contexts, women were generally preparing food and beer for the family and they possessed all the necessary utensils for these activities. Single men and travellers, when they were not eating at the inn, had to cook for themselves. Wealthy families had slaves to prepare the meals. The preparation of beer seems to be a typically female activity in the third and early second millennia, but later on, more and more men are involved in this occupation.

The picture is quite different when looking at large household and palaces, on the one hand, the Syrian palaces of the third and early second millennia, such as Ebla and Mari, and on the other hand, the late second and first millennia palaces of northern Iraq. In the first instances, the administrative texts highlight the female palace personnel, including the kitchen staff mentioned in long ration lists, while letters describe male staff travelling between courts. For example, the cooks mentioned in ration lists were female, while the cooks mentioned in letters were male. However, we know that in some instances, women could have some responsibilities at the head of the kitchen personnel.

In the Nuzi archives and Neo-Assyrian texts, by contrast, many kitchen activities seem to have been performed by men. Neo-Assyrian reliefs depict the organisation of military camps and the male kitchen personnel accompanying the king on his campaigns.

Regarding activities of daily life, the textual documentation offers only a partial picture, and the uneven distribution of sources does not always allow for comparisons between different time periods and geographical areas. The conclusion that can be drawn from this survey is that the traditional view, in which the daily preparation of meals at home is interpreted as the task of women while haute cuisine is the work of skilled men, should be more nuanced; the queen of Urkeš, for example, had a female chief at the head of her kitchen, and the situation might have been the same at Mari, where women had responsibilities in the preparation of the king’s meal.

Abbreviations

ARM	Archives Royales de Mari. Paris.
BE	The Babylonian Expedition of the University of Pennsylvania. Philadelphia.
CT	Cuneiform Texts from Babylonian Tablets in the British Museum. London.

CUSAS	Cornell University Studies in Assyriology and Sumerology. Bethesda.
FM	Florilegium marianum. Paris.
Kt x/k	Tablets from Kültepe.
HSS	Harvard Semitic Series. Cambridge.
MDP	Mémoires de la Délégation en Perse. Paris.
Nisaba	Nisaba. Studi assiriologici Messinesi. Messina.
OBTR	Dalley, S. / Walker, C. B. F. / Hawkins, J. D., 1976: <i>The Old Babylonian tablets from Tell al Rimah</i> . Hertford: The British School of Archaeology in Iraq.
OECT	Oxford Editions of Cuneiform Texts. Oxford.
SAA	State Archives of Assyria. Helsinki.
TIM	Texts in the Iraq Museum. Baghdad / Wiesbaden.
UET	Ur Excavations. Publications of the Joint Expedition of the British Museum and of the University Museum of the University of Pennsylvania. Philadelphia.

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Hittite Foodways

The King as the Provider of his People

Theo van den Hout

1. Introduction

The field of Hittite and Anatolian studies has been well served when it comes to eating and drinking. First of all, there is Harry Hoffner's seminal *Alimenta Hethaeorum. Food Production in Hittite Asia Minor* of 1974, a thorough lexical study of agricultural terms, of cereals and other foodstuffs.¹ He returned to the topic in 1999 at the Hittite Congress in Würzburg, published in 2001.² In the following year, Albertine Hagenbuchner published a detailed study on *Massangaben bei hethitischen Backwaren*.³ The Hittite verbs for eating and drinking have been treated by our colleagues of the *Hethitisches Wörterbuch* in München. On the archaeological side, the finds of grain silos in Boğazköy both on Büyükkaya and north of the so-called *Poternenmauer* published mostly during the 1990's accompanied by the in-depth analyses of Jürgen Seeher, and at other Anatolian sites have contributed enormously to our knowledge of cereal species, their production, storage, and consumption.⁴ These, in turn, have resulted in a recent host of paleobotanical publications.⁵ Likewise, since the fundamental publication of Angela von den Driesch and Joachim Boessneck's book on *Reste von Haus- und Jagdtieren aus der Unterstadt von Boğazköy-Ḫattuša*⁶ other paleo-zoological data from many sites have been added. They were followed by Ahmet Ünal scouring the texts for meat consumption in Hittite society.⁷ On the drinking side, the presence of many water sources at Boğazköy and the Hittite skills in water management, as elucidated by both Andreas Schachner and Hartmut Wittenberg, have answered some fundamental questions.⁸ In recent years Carlo Corti has published

¹ Hoffner, 1974.

² Hoffner, 2001.

³ Hagenbuchner, 2002.

⁴ For an overview and analysis see Seeher, 2000.

⁵ See, for instance, most recently Diffey *et al.*, 2017, and Pasternak / Kroll, 2017.

⁶ Von den Driesch / Boessneck, 1981.

⁷ Ünal, 1985.

⁸ Schachner / Wittenberg, 2012; Wittenberg, 2017.

several articles on wine.⁹ And finally, in the most recent issue of *Anatolica*, Giacomo Casucci analyzed the evidence for hearths and ovens of the Late Bronze Age at the Anatolian plateau, found both in “simple houses and in public buildings.”¹⁰

If, using all this information, – and this is just a selection – we try to reconstruct what was on the Hittite menu, cereals, dairy, and meat are what we see most. Wheat, barley, spelt, rye, oats and the like were used in what we usually refer to as “breads” of many shapes and even colors. Besides beef and mutton, goat and pork were consumed. Since hunting was important, as we will see, we may assume that game was also on the menu, although in all likelihood not on a daily basis. Practically all parts of animals were either eaten or at least used. Organs such as liver, heart, and kidneys were usually consumed first since they could not be preserved long but most other parts could be dried and kept more indefinitely. Heads, ears, legs, tails, shoulders, sirloin, breast, and ribs are all mentioned, consumed in broths, soups, and stews. In terms of dairy, we encounter milk, butter, cheeses in various shapes and forms. According to the texts milk seems to have come mainly from goats and sheep.

Vegetables and legumes provided the necessary fiber and vitamins: lentils, chickpeas, broadbeans, etc. Our texts also mention onions, garlic, leak, cucumber, cress and there are lots of other vegetable names that we cannot identify. We encounter grapes, figs, olives, apples, pomegranates, nuts, and berries. To spice it all up one could add cumin or coriander, and of course salt. Sugar, obviously, was unknown but as a sweetener honey was used (compare the Roman *ova mellita* or “honeyed eggs” that became our “omelet”). Fish seems to have been relatively rare in Central Anatolia. Paleo-zoologists have identified carp and even oyster shells have been found in the capital Hattusa, several hundreds of miles from the coast!

Somewhat surprisingly perhaps, the social aspects around eating and drinking have received less attention. We may suppose that feasting was a major element in the Hittite cult even though it is rarely described in any real detail. A “great (or: royal) banquet” was a daily part of the royal funerary ritual but we lack any real descriptions. That same social side of eating and drinking is responsible for what may be the saddest sentence in all of Hittite literature. Appu, or Mr. Rich as the Hittites understood him (compare Engl. *op-ulent*),¹¹ for all his wealth, was unable to father any children. The text describes how the parents in his town, perhaps at some feast during a communal meal, each give their children to eat and to drink, a true picture of a family idyll, “but Appu gives bread to no one.”¹² Depressed and

⁹ Corti, 2017; 2018; 2019.

¹⁰ Casucci, 2020: 190.

¹¹ Van den Hout, 2020: 115–116.

¹² KUB 24.8 i 21, ed. Siegelová, 1971: 4–5.

despairing he leaves the party, heads home and crashes on his bed, without even bothering to take his shoes off.

Finally, another social aspect of eating and drinking brings us closer to what I would like to focus on here. In Old Hittite literature we find several examples of social engagement and compassion that is expected of the ruling elite. In a kind of *speculum principum*, future monarchs while preparing themselves for the duties of kingship learn that food and shelter are the most basic human needs that they need to provide to their people:

Look after the sick. Give him bread and water. If heat bothers h[im], you should move him to a cool place. If cold bothers him, move him to a warm place. (KBo 3.23 obv. 5–8)

This “mirror for princes” has given rise to a certain reputation of humaneness among the Hittites but how far this extended in real life remains to be seen. We do see it practiced when royal family members became *personae non gratae*. Killing them, even if they were no longer counted among your loved ones, was a real taboo and might haunt you for the rest of your life or that of your children. As a result, such ingrates were therefore usually exiled to some faraway place but with the basics of life provided. Here is the fate of a royal stepmother who the reigning king accused of bewitching and ultimately killing his wife:

Even then I didn’t kill her. ... I gave her a house, she has everything she desires. She has *bread and water*, it is all there, she lacks nothing. She’s alive! She sees the Sun God of Heaven with her eyes. She eats the *bread of life*. (KBo 4.8+ ii 8–9, 11–16)¹³

This brief overview of several aspects of eating and drinking in Hittite society will have to suffice as an appetizer to what I have chosen to concentrate on here. The entrée consists of a more political-organizational as well as ideological approach of the Hittite food economy, and I would also like to add some remarks on iconography.

2. The Hittite Royal Funerary Ritual and the Anatolian food pyramid

In order to do so, let’s turn to the Hittite Royal Funerary Ritual.¹⁴ This text ensemble is one of the longer and genuinely Anatolian rituals. Performed under the title *mān Hattusi sallis wastais kisari nassuz hassus nasma hassusaras siunis kisari* – which means something like “when in Hattusa a royal loss occurs, when either the king or queen becomes a god,” that is, dies – it meant to bridge the period between the death of a Hittite king or queen and their successor without interrupting the wellbeing of the land. As opposed to many of the therapeutic rit-

¹³ Hoffner, 1983.

¹⁴ For a full edition see Kassian *et al.*, 2002.

uals of foreign, that is, for instance, Hurrian or west Anatolian extraction, this one was actually performed and probably kept updated over time according to changes in cultic practice and ideology. The ritual lasted for two weeks. The king and queen's death was denied at first. After the cremation of the body at the end of the first day,¹⁵ a statue of the deceased was made. A king was portrayed as seated and holding the typical male attributes of bow and arrows, a queen's effigy held spindle and distaff. Around the statue the ritual then played out, it was given to eat and drink, and it was put to bed every night, as if the person were still alive.

The first six days were used to appease the gods and perhaps to prevent the Netherworld deities from claiming the body. From day seven onwards, each day was devoted to a specific theme. According to the Hittite text itself, the themes or topics of this second part are as follows:

- day 7 "the day of burning chaff(?)" (harvest(?))
- day 8 "the pig funnels water and they cut out a piece of meadow" (animal husbandry)
- day 9 "they churn milk" (secondary products of animal husbandry)
- day 10 "day of the plough and they drag(?) the sledge across the threshing floor"
- day 11 "day of hunting, and if it's a [woma]n(?) they bring her flowers"
- day 12 "they cut the vine" (viticulture)
- day 13 "day of the *lahanzana*-birds"

The script for the final, fourteenth day has been lost to us (or we haven't recognized it yet). It may have been the day, on which the king finally assumed his divine fate and "became a god", as the Hittite expression goes. It was only then that his death may have been acknowledged and his successor could step into the spotlight. Together, these themes represented the vital elements, the population's sustenance that a ruler, the body politic, as the steward of the land on behalf of the gods, embodied and guaranteed.¹⁶ It is interesting to observe how all themes of days 7 through 13, even though not always entirely clear in their symbolism, deal with parts of the food chain for the Anatolian population. For that reason, I intend to have a closer look at this body of texts through the lens of humans' basic sustenance, of "eating and drinking."

The areas mentioned are those the king was considered to be responsible for and that, consequently, are the essential elements of royal ideology. Together they also provide a kind of Food Pyramid with the basic food groups in LBA Anatolian society. Translated into more modern terms they represent the following food groups:

¹⁵ See van den Hout, 2015.

¹⁶ See already Gurney, 1958.

days 7 and 10:	grains, vegetables, oils? (carbohydrates, vitamins, fibres, fats)
day 8:	meat (proteins)
day 9:	dairy (vitamins, fats)
day 11:	meat (proteins) and animal life
day 12:	wine (liquids)
day 13:	meat(?), seasons(?)

A regime that cannot feed its people is bound to fail. As Katheryn Twiss in her book *The Archaeology of Food. Identity, Politics, and Ideology in the Prehistoric and Historic Past* states, “Food production is fundamental to political success: regimes have risen and fallen on the basis of their ability to ensure that their people can eat.”¹⁷ This was true of Hittite society as well. The ruling elite did its best to create an infrastructure to guarantee an ideally problem-free food supply without exercising a monopoly, as in a staple economy. The reasons for this are mainly ecological and political. In addition to likely food storage by individual households, as has been shown at Kaman Kalehöyük,¹⁸ a system of state-organized storehouses may primarily have been meant as provisioning for the elites, for (local) festivals, as well as a last resort for emergencies. The surpluses generated by this system sustained those who did not play an active part in the food production itself, that is, the elite. As described by Walter Dörfler *et al.*, “there was a well-established and organized system of agrarian production yielding sufficient surpluses to supply the nobility, priests, civil servants, craftsmen, merchants and soldiers.”¹⁹ What all this does show is that the Hittite state clearly cared about and invested in the organization of staples, especially but not exclusively cereals. Agriculture was not without its challenges without irrigation projects, and the cyclical droughts forced the ruling elite to keep a watchful eye on local situations in order to maintain a stable political climate.

3. The Hittite food infrastructure

The first attested attempt at organizing a food infrastructure can be dated to the second half of the 16th c. BC, a transformational period in many respects.²⁰ In the second part of his Proclamation king Telipinu established a network of over ninety storehouses throughout Central Anatolia.²¹ These were managed by the so-called AGRIG-officials and were probably mostly meant for the storage of grain.²² The silos excavated in Boğazköy contained mostly barley, which could be “used to

¹⁷ Twiss, 2019: 116.

¹⁸ Diffey *et al.*, 2017: 197.

¹⁹ Dörfler *et al.*, 2011: 105.

²⁰ Van den Hout, 2020: 101–103.

²¹ For a map see Singer, 1984b: 123.

²² On the AGRIG system see Singer, 1984b.

make a type of flat bread as well as groats” but also to brew beer and to serve as fodder for livestock.²³ As is more often mentioned, barley is not the ideal bread ingredient. Its main purpose may have been to serve as animal fodder and to be consumed by people mostly in times of need, that is, in times of famine and poor harvests, and/or for seed corn that was to be sown the following year.²⁴ The second list of 34 settlements in Telipinu’s Proclamation (iii 34–42) explicitly refers to the storehouses as *imiul[as̄]* “for animal fodder.”²⁵

The somewhat later texts (ca. 1375 BC) from the provincial site of Maşat Höyük attest to the high anxiety in ruling circles concerning a stable food supply. Starving Kaskaean had started plundering the nearby fields and vineyards. The crisis is such that the Great King himself takes on a coordinating role and demands constant updates from his commanders in the area on the condition of grain, vines, and livestock.²⁶ On the archaeological side, the silos in Hattusa and several provincial centers like Kuşaklı, Alaca Höyük, or Kaman Kalehöyük, are an eloquent testament to the Hittite state seeking to guarantee a regular and steady flow of foodstuffs. With the recurrent droughts in Anatolia as a potential source of vulnerability, unrest, and upheaval among the population, the state invested in mobilizing and organizing the staples at a local level and thus tried to provide for the inevitable lean years. The settlements with storage facilities mentioned in the Telipinu text cover the core of Hatti-land as well as the Upper and Lower Land and bespeak a fine-grained and therefore also a small-scale system of local networks that together formed the core of the Old Hittite kingdom.²⁷

4. Anatolian food groups

Next to cereals and produce, animal husbandry and its products, meat and dairy were of great importance. First of all, the so-called AGRIG ceremony in the KILAM festival already suggests that these institutions were in charge of more than just grain. During the ceremony, officials from various settlements presented the royal couple with what may have been token samples of their contributions to the overall food supply. Compare, for instance, the delegation from the town of Ankuwa:

The king and queen move along, and the couple arrives at the lower side of the gate of Halki. There, under the awning, stand, from Ankuwa, a pile (of grain?) and a pitcher of beer; ball-shaped breads are displayed; one ox and sheep are standing ready. The herald goes and pours out the ball-

²³ Diffey *et al.*, 2017: 197.

²⁴ Diffey *et al.*, 2017: 187.

²⁵ Hoffmann, 1984: 44–45.

²⁶ Van den Hout, 2007: 395; Hoffner, 2009: 66; Corti, 2017.

²⁷ See Schachner, 2017: 230.

shaped breads next to the king. The AGRIG bows to the king and the herald calls out: “From Ankuwa!” (KBo 10.24 iv 19–30 w. dupls.)²⁸

These products were, no doubt, symbolic only. As we will see shortly, the Ankuwa community was able to come up with lots more.

Secondly, if it is true that the tons of barley that were stored in the silos were in large part destined in a normal (that is, non-emergency) situation to serve as animal feed, that, too, points to an organized infrastructure for animal husbandry. The Hittite texts attest to impressive numbers of animals, mostly cattle, sheep, and goats for cultic purposes. For a fall festival in the temple of the Sungoddess of Arinna in Ankuwa “eleven hundred sheep of the king” are mentioned; for an annual festival for the god Telipinu in Hanhana and Kasha, one thousand are mentioned and another thousand plus two hundred cows were to be delivered every year to the gods of the city of Tarhuntassa:

Also, since Hattusa has assumed responsibility for all the gods of Tarhuntassa, those tributes for the cult provisions for the gods of Tarhuntassa will not be taken out of what my father had given to Kuruntiya, King of Tarhuntassa nor out of what I, My Majesty, have given him. Instead, if now I, My Majesty, designate some place for cattle and sheep, whoever might be responsible for the provisions for the gods, they will start giving to the gods of Tarhuntassa annually two hundred cows and one thousand sheep. But if I do not give him a place, then annually Hattusa shall give from (their own) revenue two hundred cows and one thousand sheep to the gods of Tarhuntassa. (Br. ii 21–30)²⁹

This passage from the famous Bronze Tablet treaty of Tuthaliya IV with Kuruntiya details a substantial exemption. In spite of what the province had already received in the past, it didn’t need to use that for the local cult. The Hittite king would either order some other community to come up with the necessary provisions or the capital itself would assume responsibility. Having such numbers at its disposal implies an organization that is able to or at least claims to be able to react in a flexible manner to local circumstances when and where needed. We see this exemplified and, in a way, confirmed in the ‘fourth tablet of rations’ of the KI.LAM cult ritual, one of the smaller festivals, referred to earlier. It lists the provisions that individual groups are expected to deliver, and the preserved part of the tablet mentions a minimum of 21 oxen and 155 sheep. In addition, small numbers of pigs, hares, birds, fish, and goats are listed.

Returning to the funerary ritual, in order for these provisions to continue uninterrupted at this moment of great vulnerability, the ritual included days devoted

²⁸ Singer, 1984a: 20.

²⁹ Otten, 1988: 16–17.

to agriculture, animal husbandry, and its secondary products. These are the organized parts of the food economy.

5. Hunting as part of the Anatolian food economy

But what was the role of hunting in the Hittite food economy? There seems to be a consensus that hunting did not contribute much to the daily Hittite menu. Given the unpredictable outcome of any hunt as opposed to the guaranteed source of meat from domesticated animals in a pen or a meadow, this is not surprising. But it seems safe to assume that whatever was hunted was also eaten and formed a welcome addition to the menu.³⁰ Certainly, larger game like deer, bears, or lions will have been a relatively rare catch and hunting them may have been largely an elite pastime, but smaller animals like wolves, rabbits and hares will have been easier prey at all levels of society. Stefano de Martino has written about the enacted scenes of people killing bears and wolves to protect their flocks.³¹ The god that we usually call the “Tutelary Deity of the Field/Countryside” (^dLAMMA.LÍL) was regularly depicted as holding a dead hare.

Tutelary Deity of the Countr[yside, image:] one statue of gold, male, [sta]nding, with a horned helmet, in his right hand he holds a bow of gold, [in] his left [hand] he holds a hawk of gold and a hare of gold. A sword of gold with gold fruit attached. He stands on a stag of gold, standing on all fours (KUB 38.1 ii 1–6)³²

But the more limited impact of hunting on the food economy should not be mistaken for a lesser importance of hunting in the role of the king and especially his ideological role in the general food economy. Hunting held a large symbolic power. For hunting as a sport of kings the Anitta Text is often quoted:

I said a prayer and [I went] hunting. On that same day I brought to Nesa, to my city, 2 lions, 70 boars, 60 boars ‘of the canebreak’, 120 wild animals, whether leopards, lions, deer, or [...] (KBo 3.22 rev. 59–63 w. dupls.)³³

The only other text ensemble that comes close to it stems from the other end of recorded Hittite history. This is the festival for all Tutelary or Protective deities. It lists the mountains where Tuthaliya (IV?) goes hunting:

To all the mountains and lands of Hatti-Land where His Majesty Tuthaliya travels, to all the mountains of Hatti-Land where His Majesty Tuthaliya

³⁰ Genz, 2007: 51.

³¹ De Martino, 2001.

³² Cammarosano, 2018: 310–311.

³³ Neu, 1974: 14–15.

goes hunting, to(?) all the mountains of the Upper Land where Tuthaliya goes hunting ... (KUB 2.1 vi 1–8)³⁴

Another text, KBo 11.40,³⁵ from the same festival provides more detail and describes the entire kingdom as his hunting grounds: they reach from the Euphrates (^{1D}Māla) to western Anatolia with Arzauwa, Masa, Lukka and the Pontic Gassgaean lands in the middle. Strangely enough, these attestations virtually exhaust our lexical material for hunting. The word translated in the festival texts concerning Tuthaliya as ‘hunting’ is *šiyatalleške-*, lit. ‘working with a *šiyattal*’, a spear.³⁶ This brings us to Hittite iconography.

While hunting may be rarely mentioned in the texts, it is a common theme in Hittite visual culture as has long been recognized. It is most explicitly expressed in the reliefs at Alaca Höyük where we find scenes of hunting deer, boars, (blocks 14 and 15) and lions. The deer and boar are hunted with bow and arrow, the lion with a spear.



Fig. 1: Line drawing of the left side of the gate reliefs at Alaca Höyük (from Schachner, 2012: 138).

Similarly, the Kınık bowl shows scenes with deer (hunted with bow and arrow) and a boar (hunted with a spear), while lions are also present although the latter not directly in connection with a hunter.

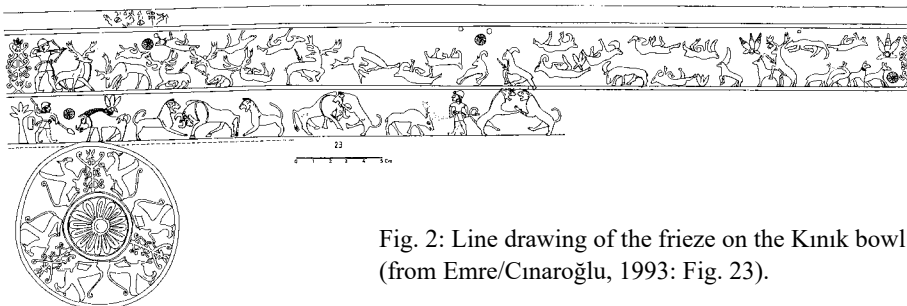


Fig. 2: Line drawing of the frieze on the Kınık bowl (from Emre/Cınaroğlu, 1993: Fig. 23).

³⁴ McMahon, 1991: 114–115.

³⁵ McMahon, 1991: 130.

³⁶ CHD Š s.vv.

Likewise, the old Hittite seal published by Güterbock as SBo 2.220 shows scenes from a deer and lion hunt.³⁷



Fig. 3: Old Hittite seal from Boğazköy (from Güterbock, 1942: nr. 220).



Fig. 4: Spear head with boar protomes (from Bittel, 1978).

An actual spear head with boar protomes was described by Kurt Bittel as coming from the same archaeological context as the Sarkışla ceremonial axe. As Bittel states, it was “undoubtedly” meant for hunting, not for human combat. Likewise clear is the connection on the silver stag vessel from the Metropolitan Museum in New York.³⁸ With Hans Güterbock, the goddess is identified as a kind of Artemis or Diana by the attributes behind her, the tree, the deer at its foot, the hunting bag, the quiver with arrows, and the two spears, a motif that can be found on several seals as well. Also, perching on her left hand we see a falcon or hawk, as described by Jean Vorys-Canby.³⁹ The deity standing on the deer is the well-known Tutelary Deity of the Countryside, as he is usually called, here shown with a throwing stick in his right hand, again as per Vorys-Canby, and a falcon or hawk ready to take off on his left.

³⁷ Güterbock, 1942.

³⁸ See van den Hout, 2018 w. lit.

³⁹ Canby, 2002.

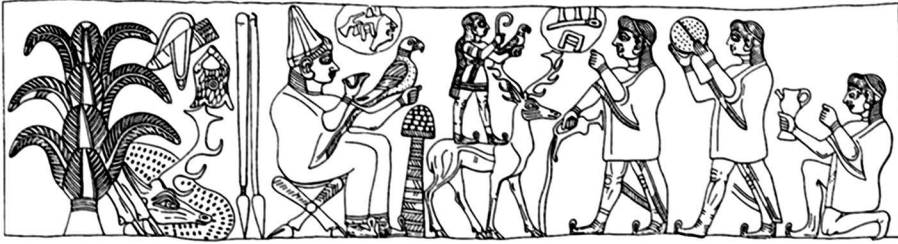


Fig. 5: Hand drawing of the frieze on the Silver Stag vessel at the Metropolitan Museum in New York (from Güterbock, 1989).

Finally, hunting also seems to be the context of the so-called Boston Fist (Fig. 6). The hunting theme is more subtle here, at least for us, but perhaps not for the ancient viewer. If Vorys-Canby is correct in interpreting the pattern on the hand not as musculature but as a falconer's glove, the link is again rather obvious. Also, the bird sitting on the ground behind the Great King Tuthaliya looks very much like a hawk or falcon while the hybrid creature at the far right might signify a mountain god referring to the mountains where we saw another(?) Tuthaliya hunting. Because of the tendency to date the Alaca Höyük reliefs⁴⁰ and the Silver Stag vessel to Tuthaliya IV and because of the dating of the text about Tuthaliya traveling and hunting to the same king, David Hawkins has stressed the importance of hunting for this king, and Piotr Taracha described this king as “appear[ing] ... in a new heroic role as the hunter.”⁴¹

But does all this really only apply to Tuthaliya IV? As is well known, there are two basic depictions of a Hittite king. One represents the Hittite king as ^dUTU-ŠI “My Sun,” as he is referred to in the texts. In these cases, he wears a long robe over a short kilt, and sometimes the hilt of a sword is visible in his belt underneath the robe. He has a tight-fitting cap on his head and holds the *lituus*. The only difference with the Sun God is that the latter has the winged sun disk hovering over his head. The other depiction is usually described as the king “in military garb” or as the “warrior king.” Typical for this portrayal is a standing figure with a bow across the right or left shoulder, depending on the direction of the figure, the sword in his belt, the short kilt, and often a spear in the other hand. Compare the reliefs of a Suppiluliuma in the Südburg, Hattusili III at Fraktın, Kuruntiya at Hatip, and the Tuthaliya of Temple 5 in Boğazköy. Furthermore, we have the unidentified figures on the orthostat D in Sapinuwa, and on the Altınyayla stela. And, finally, there's Tarkasnawa, king of Mira, on Anatolia's west coast. In two of these we see the king, while ‘dressed to kill,’ in the company of a god: the figure on the Altınyayla stela pours a libation to the Tutelary deity of the Coun-

⁴⁰ See, however, Schachner, 2012: 139, who advocates a dating to the early 15th or even the 16th c. BC.

⁴¹ Hawkins, 2006; Taracha, 2011: 141.

tryside, the “protector of wildlife” (Güterbock, FsKantor 114), and I would identify the god at Fraktin as the same one. He is holding the throwing stick in his right hand⁴² and might have a hawk or falcon perched on his left. Both are direct references to hunting.

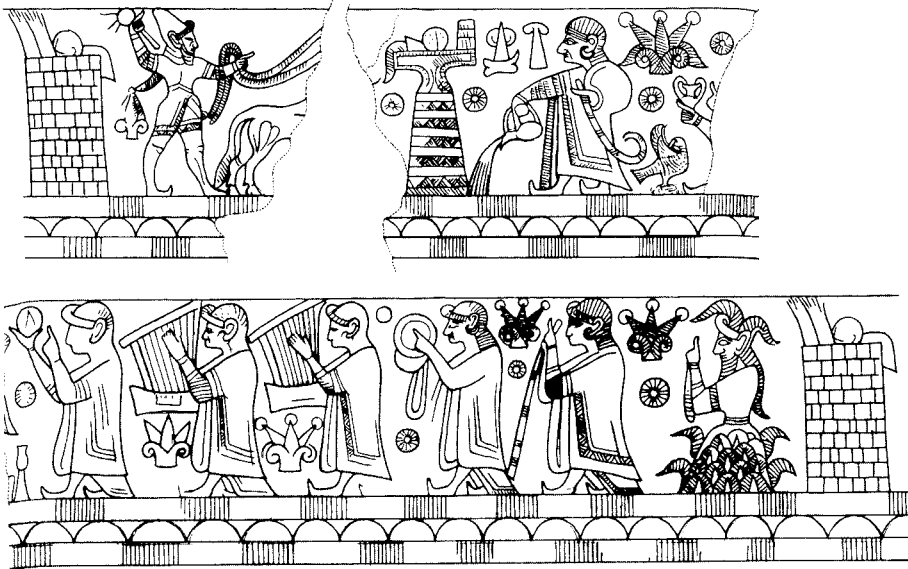


Fig. 6: Frieze from the Silver Fist at the Boston Museum of Fine Arts (from Güterbock/Kendall, 1995).

If we look at the hunters in the ‘action scene’ on the Kınık bowl, they wear the short kilt and are armed with bow and arrows or spears while having a sword in their belt. These are exactly the weapons that Hittite kings are portrayed with in the reliefs just mentioned. But none of these depictions refer to battle scenes: there are no chariots, no shields, no enemies are in sight. Battle scenes are extremely rare anyhow. We have the two(?) Old Hittite reliefs and there is a small plaque with what seems to be a warrior(?) holding a spear as well as a shield.⁴³ As to the latter, shields were also used in hunting, and, moreover, it is unclear whether deities or kings are portrayed on these few reliefs.

⁴² It is important not to confuse (*contra* Aro, 2022: 517) the throwing stick (as seen, for instance, on the silver stag vessel in the hand of the tutelary deity) as a hunting instrument with the *kalmuš* (possibly a shepherd’s crook) that the king depicted as Sungod and the Sungod himself hold in their hand with the broad curve downward; also, they carry it in their left or right hand depending on whether they are depicted facing to the left (left hand, cf., for instance, the king in YAZILIKAYA no. 64) or the right (right hand, cf., for instance, Alaca Block 7 or YAZILIKAYA no. 34). The same is true for the hand holding a spear or the shoulder with the bow.

⁴³ Schachner, 2009: 26–27 w. Abb. 7.



Fig. 7. Small terra cotta plaque with a warrior or hunter from Boğazköy (from Schachner, 2009: 27).

The rarity of war scenes in Hittite visual culture matches the generally understated role of battle and war in Hittite texts. Reading the royal *res gestae*, one gets the impression that kings went on military campaigns practically every spring and summer, but their accounts mostly deal with logistics and tactics. As soon as the fighting starts, Mursili simply says, he enjoyed the support of the gods and briefly states the resulting conquest. Here's no king single-handedly slaying throngs of enemies, as we encounter them in Mesopotamia and Egypt. Rather, the closest *comparanda* to the reliefs with kings mentioned earlier (Altınyayla, Fraktın, Hatip, Sapinuwa, Südburg, Temple 5) are the hunting scenes on the Kınık bowl and the Alaca reliefs. In all cases he carries the hunting weapons par excellence, the spear and bow and arrows, as they are depicted also behind the goddess on the silver stag vessel where they serve to identify her as the goddess of hunting.⁴⁴ In light of the absence of battle scenes and the direct association of Hattusili and the unidentified king with the Tutelary Deity of the Countryside on the Altınyayla and Fraktın reliefs, it seems worth considering whether we are perhaps dealing with an iconographic *topos* here showing the king in his role of outdoors man, steward of nature and animals and hunter-in-chief, rather than the king as the military commander-in-chief and warrior king.⁴⁵ Following Billie Jean Collins and as stated by her, “The bow and arrow carried by the god (i.e., the tutelary deity, tvdh) are a symbol of mastery. The king holding the weapons of the hunt ... invites symbolic equivalence with the divine Master of Animals. Like the Tutelary Deity of the Countryside, the king is both predator and protector, leader and provider.”⁴⁶

⁴⁴ Van den Hout, 2018: 118 w. lit.

⁴⁵ On the interpretation of royal images as the “warrior” king see Aro, 2022: 518.

⁴⁶ Collins, 2010: 71.

6. Back to the Hittite Royal Funerary Ritual

By way of dessert, it's time to return to the Hittite royal funerary ritual. The ritual sought to secure at a moment of supreme vulnerability the continued well-being of the country in terms of growth and fertility, guaranteeing sustenance of the population. The Hittite king, as the avatar of the land's wellbeing, played a central and essential role in this. Since the life of the king was the life of the state, his death posed the ultimate danger to the wellbeing of the population. Behind the ritual lies a primal fear that finds its mythological expression in the so-called Disappearing Deity myths. Compare the following passage from the story, in which the god Telipinu, in anger, turns his back on the world:

Telipinu took off. Grain, *immarni*, growth, thriving, and sustenance he carried off to the wild, to the meadow, to the marshes. Telipinu thereupon slipped into the marshes, and duckweed ran over him. (KUB 17.10 i 10–13)⁴⁷

The immediately following lines describe what happened as a consequence of his disappearance:

Barley and wheat no longer grow, cattle, sheep, and people no longer become pregnant, and those who are pregnant then don't give birth. § The mountains have gone dry, the trees have gone dry so that buds don't appear. Meadows have gone dry, springs have gone dry, so that famine has spread in the land. People and gods are dying of hunger. The great Sun God has thrown a party and invited the thousand gods. They ate and didn't get satisfied, they drank and didn't quench their thirst. (KUB 17.10 i 13–20)⁴⁸

By abandoning the land, angry Telipinu has thrown off the delicate balance between god-given fertility and the people's offerings to them from what that fertility had given them. Telipinu broke this cycle, this food chain, the continuous feedback loop, and now both people and gods go hungry. In his Plague Prayers Mursili II uses this contract between gods and men to blackmail the gods that if they continue to let people die, in the end they will suffer as well:

Since Hatti-Land has been oppressed by the plague, it has become [l]ittle. As to the people who prepared bread and libations for you, o gods, my lords, they have been terribly oppressed by the plague, and the land has [die]d from the plague. It's still there and the plague doesn't get any less, and the dying continues! If even the few makers of bread and libations who

⁴⁷ Rieken *et al.*, 2012.

⁴⁸ Rieken *et al.*, 2012.

are still there, will die, then nobody will any longer prepare bread and libations for you! (KUB 14.14 ++ rev. 22–27)⁴⁹

The disruption of this cycle is what the population feared might happen, now that their king, by dying, had forsaken them. In the description of the 13th day of the funerary ritual, the last one preserved, the text says that the people thought the king might have acted in anger, too, and might go to the meadow, just as Telipinu did:

“See, on your lap we have placed(!) the soldier breads, [s]o don’t be angry anymore! § Be good to your children! Your kingship will be eternal for generations to come, and then your temple will be revered and offerings will be ready for you.” ... § When (the matter of placing food on) the lap is over, they bring a r[o]pe, he/she smears it with fine oil and throws it into the hearth, and th[ey] pour flour on [it]. The wailing women start crying as follows: “If you go to the meadow, do not pull the rop[e]! Your will come true!” (KUB 30.19++ iv 1–6, 9–14 w. dupls.)⁵⁰

Was the rope the last link between the king, his people, and their sustenance? Was the royal funerary ritual a variation on the theme of the Disappearing Deity myths? Whatever it was, it seems clear to me, that what they tried to avoid when performing the ritual was an interruption in the cycle of fertility, a break in their food chain. The Disappearing Deity myths and the funerary ritual reflect the same basic anxieties and seek to safeguard the population’s lives, that they have *bread to eat and water to drink*, that all will be there, and they will lack nothing. And for that they looked to the king as the embodiment of fertility, of what the land gives. After the king’s body has been cremated in the night of the first day after his death and women have collected the bone remains, an image of the king is outlined on the smoking and smoldering remains of the pyre and filled up with figs, raisin, olives, fruit, “*parḫuena* and *galaktar* of the gods,” a right thigh bone and a flock of sheep’s wool. Already at the very beginning of the funeral rites, therefore, the king is literally and graphically portrayed as the embodiment of the country’s sustenance, the provider of his people.

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⁴⁹ Rieken *et al.*, 2016.

⁵⁰ Kassian *et al.*, 2002: 514–517.

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2.

Food Production

Viticulture in 1st Millennium BCE Anatolia

New Archaeobotanical Evidence from Southern Cappadocia and a Regional Overview

Lorenzo Castellano

1. Introduction: searching for the vines of Tarhunza

The relief of Ivriz is likely one of the most iconic monuments from post-Hittite Anatolia. In this rock outcrop – located about 16 km to the southeast of Ereğli, in modern Turkey – Warpalawas, a late 8th century BCE ruler of the kingdom of Tuwana, stands in front of the imposing figure of the Storm-God Tarhunza, who is depicted holding bundles of cereals with one hand and bunches of grapes with the other.¹ Representations of this deity bearing similar attributes are known from other reliefs located in the same region and dated via hieroglyphic inscriptions to the late 8th – early 7th century BCE (Fig. 1).² The post-Hittite polity of Tuwana appears, thus, to have represented the center of a cult of the Storm-God which emphasized agricultural production, and more specifically viticulture.³

Grapes, alongside other features of the agricultural imaginary, are well-known to have represented symbols of wealth and abundance, in post-Hittite Anatolia⁴ and in the broader western Asian milieu.⁵ Nevertheless, the concentration of epigraphic and iconographic references to viticulture in the region of Tuwana – the classic Tyanitis, in southern Cappadocia – may suggest that winegrowing had an actual prominence in the local economic landscape. Viticulture is still to date the cornerstone of Cappadocian agriculture, continuing a tradition which survived the emigration of the local Greek-speaking population.⁶ This centrality is most likely to be traced into the long-durée of local economies. For instance, Anatolian hieroglyphic sources clearly indicates that vineyards were a component of post-Hittite

¹ Hawkins, 2000: 516–518.

² IVRIZ 1, Hawkins, 2000: pl. 292–295; NIĞDE 2, Hawkins, 2000: pl. 30; KEŞLİK YAYLA, Hawkins, 2000: pl. 305; GÖKBEZ, Faydalı, 1974; and BOR 2, Ünal, 2015. For chronology see Hawkins, 2000.

³ Weeden, 2018.

⁴ Weeden, 2018.

⁵ Masetti-Rouault, 2004.

⁶ Pfeifer, 1957; Balta, 2017.

southern Cappadocia agriculture,⁷ possibly in continuity with the Hittite period.⁸ Yet, the scale of the production, its organization, and its diachronic history are all aspects that remain to date largely unknown. By means of new archaeobotanical evidence, this contribution aims to partially fill this gap, providing insights on the development of viticulture in southern Cappadocia, from the late 2nd to the end of the 1st millennium BCE.

Macroscopic botanical remains, such as wood charcoal and seeds/fruits, are a ubiquitous component of archaeological deposits, reflecting the range of daily activities involving the use of plant resources. If adequately sampled and studied, these materials ultimately provide a stratified ‘archive’, which directly informs on past agricultural practices, foodways, and environments.⁹

Since 2015, I had the opportunity to conduct archaeobotanical research at the site of Kınık Höyük – located in southern Cappadocia, ca. 22 km to the northwest of Tuwana-Kemerhisar. The evidence from Kınık Höyük provides the first archaeobotanical record covering protohistoric and historic periods in southern Cappadocia, and more broadly southcentral Anatolia. Leaving to recent and forthcoming publications an overview of the entire assemblage, in this contribution I will discuss the evidence related to viticulture. In short, is the importance of grapevine cultivation in this region corroborated by archaeobotanical data?

2. Viticulture in southern Cappadocia: new evidence from Kınık Höyük

Southern Cappadocia is situated on the southernmost portion of the Anatolian Plateau, stretching over the Bor-Ereğli Plain and the foothills of the surrounding mountains (Fig. 1). The Graeco-Roman regional toponym, Tyanitis, originates from the most important urban center therein present: the classical city of Tyana, identified as Iron Age Tuwana, Bronze Age Tuwanuwa, modern Kemerhisar.¹⁰ The current capital of the province, Niğde, likely represented a second center of regional importance – reasonably to be identified with Late Bronze Age Nahita and Iron Age Nahitiya.¹¹

⁷ E.g., wine is mentioned in the BOR1 inscription (Hawkins, 2000: 518–521).

⁸ An Hittite oracle text (IBoT 2.129: 12; Taggar-Cohen, 2006: 285–289) mentions wine from Nahita, likely modern Niğde. See also Gorny, 1995: 157.

⁹ A review of archaeobotanical research in Anatolia is provided by Marston / Castellano, 2021.

¹⁰ Mora, 2010: 18–19, Bergens / Nollé, 2000.

¹¹ Meriggi, 1963. See also Mora, 2010: 18–19.

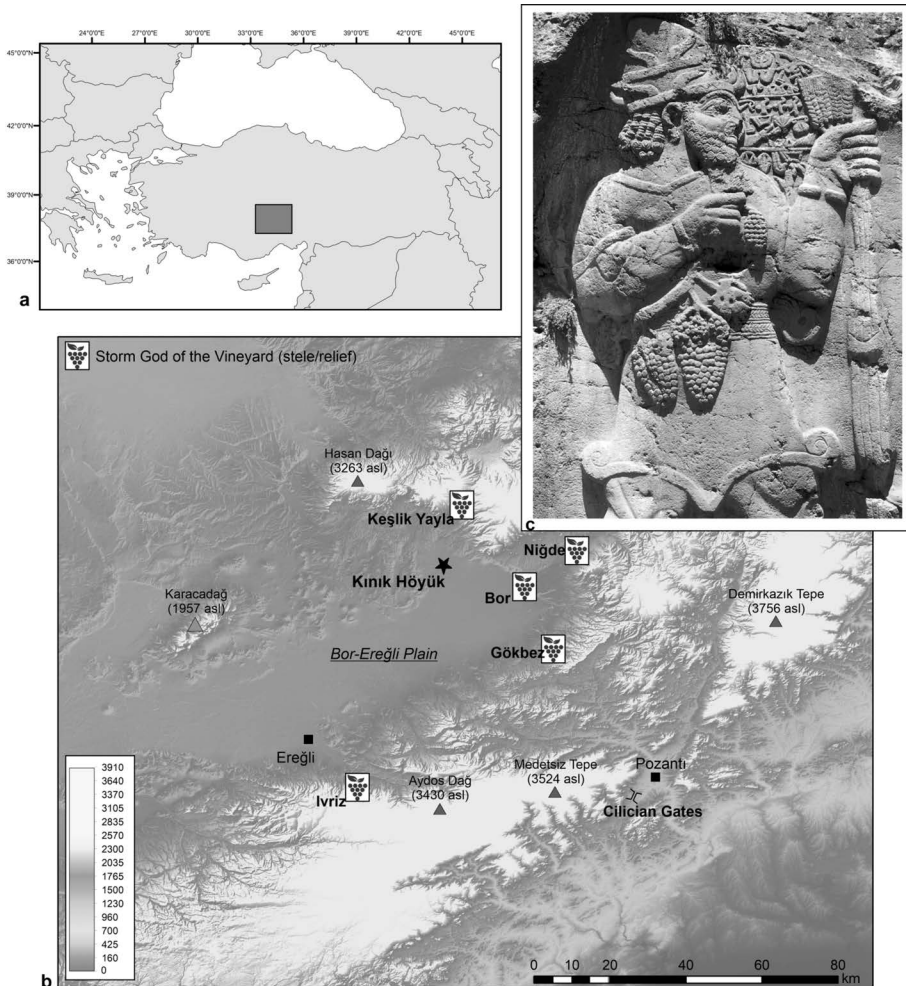


Fig. 1: Map of southern Cappadocia, with iconographic attestations of the Storm-God (Tarhunza) of the Vineyard (b); detail of the Storm-God on the IVRIZ 1 relief (c).

The northern fringes of the Bor Plain have been investigated by an archaeological survey conducted by University of Pavia from 2006 to 2009. The survey resulted in a long-term excavation project at the site of Kınık Höyük – a first-tier settlement, untouched by previous excavations, and undisturbed by modern constructions. Kınık Höyük is composed by an elliptic (180×120m), 20m-high mound, surrounded by a large lower town, encompassing a maximum extension of ca. 24ha.¹² The site was occupied from the Early Bronze Age to the Seljuk/Ottoman period, with a possible occupation hiatus in the Late Antiquity (Fig. 2c). Research on the Bronze Age levels is to date limited, due to a thick later deposit.

¹² D'Alfonso / Castellano 2018.

More substantial is the evidence dating to the Iron Age (KH-P VA, KH-P VB, KH-P IV), Achaemenid/Early Hellenistic (KH-P III), and Late Hellenistic (KH-P IIB) periods – which are the focus of this contribution.

The long occupation sequence from Kınık Höyük provided the opportunity to develop an archaeobotanical project aimed at reconstructing the diachronic history of the agricultural landscape surrounding the site. In this framework, following standard practice, during excavation we collected large volumes of sediment (ca. 10 to 15L), which were subsequently processed through flotation in order to extract the charred plant parts therein present. A total of 174 samples have been currently analyzed (Fig. 2c), which included the study of both wood charcoal and seed/fruit remains.¹³

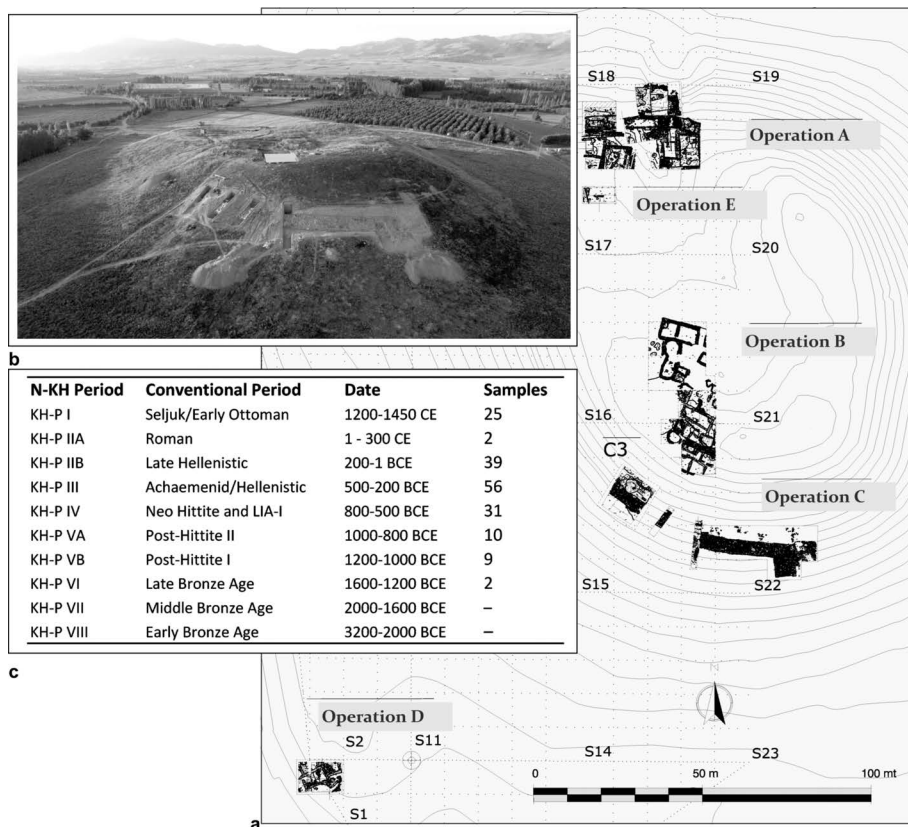


Fig. 2: Plan of the site of Kınık Höyük (a); drone photo (year 2015, from south to north) (b); periodization and number of archaeobotanical samples (c).

¹³ Wood charcoal data are published in Castellano, 2021, which includes sampling and processing protocols. The carpological data are, at the time of writing, unpublished.

The remarkably rich archaeobotanical assemblage from Kınık Höyük stands out for the ubiquitous and abundant attestation of grape/grapevine (*Vitis vinifera*) botanical macro-remains – including wood charcoal, seeds, pedicels, pressed skin fragments, entire berries, and possibly tendrils (Fig. 3).

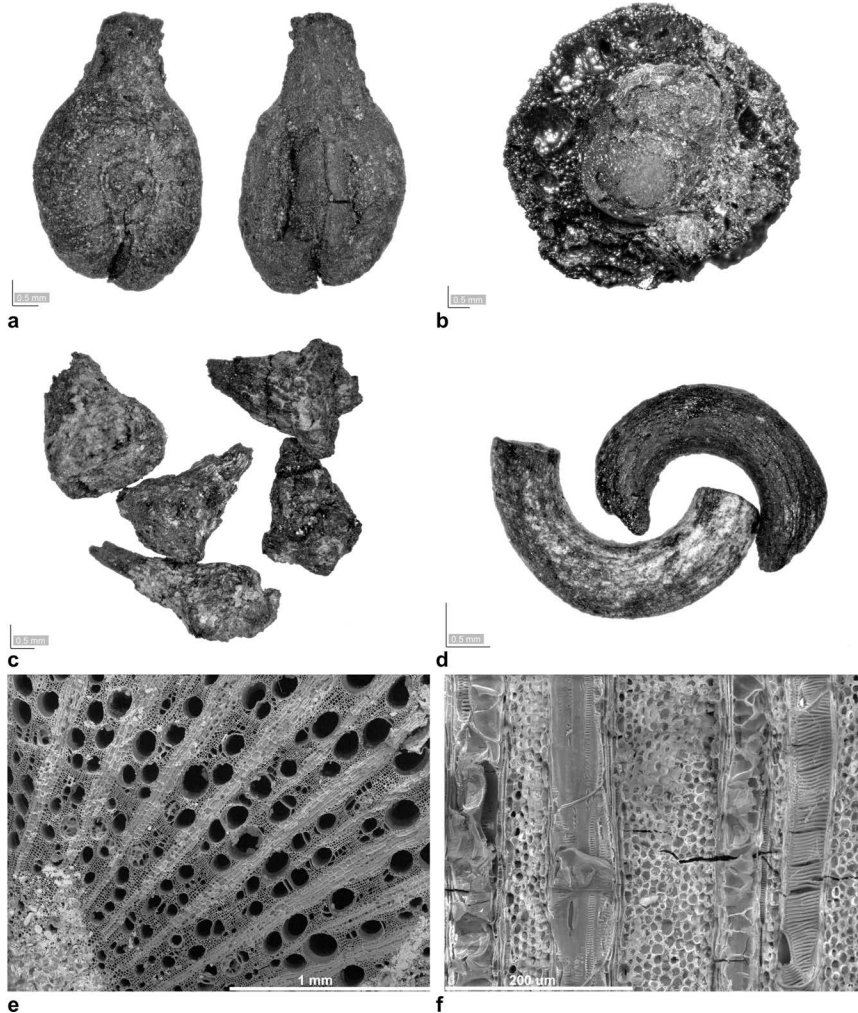


Fig. 3: Selection of grape/grapevine archaeobotanical remains: seed (a); berry (b); pedicels (c); possible tendrils (d), wood charcoal (e–f).

In the sampled sequence, the earliest occurrence of both grape charcoal and seeds dates to period KH-P VA (1000–800 BCE). We cannot rule out that the lack of *Vitis* finds from period KH-P VB (1200–1000 BCE) could be due to limited sampling (Fig. 2c). Following its first appearance, grape is thereafter attested in remarkably abundant values. A first increase is recorded during period KH-P IV (800–500 BCE), with grape seeds representing the 8% of the identified economic seeds/fruits and grapevine charcoal the 2% of the anthracological assemblage. A

further sharp rise is documented during period KH-P III (500–200 BCE) and KH-P IIB (200–1 BCE), with grape seeds accounting respectively for the 14% and 16% of the economic plant record, and grapevine charcoal for the 16% and 26% of the anthracological assemblage (Fig. 4).

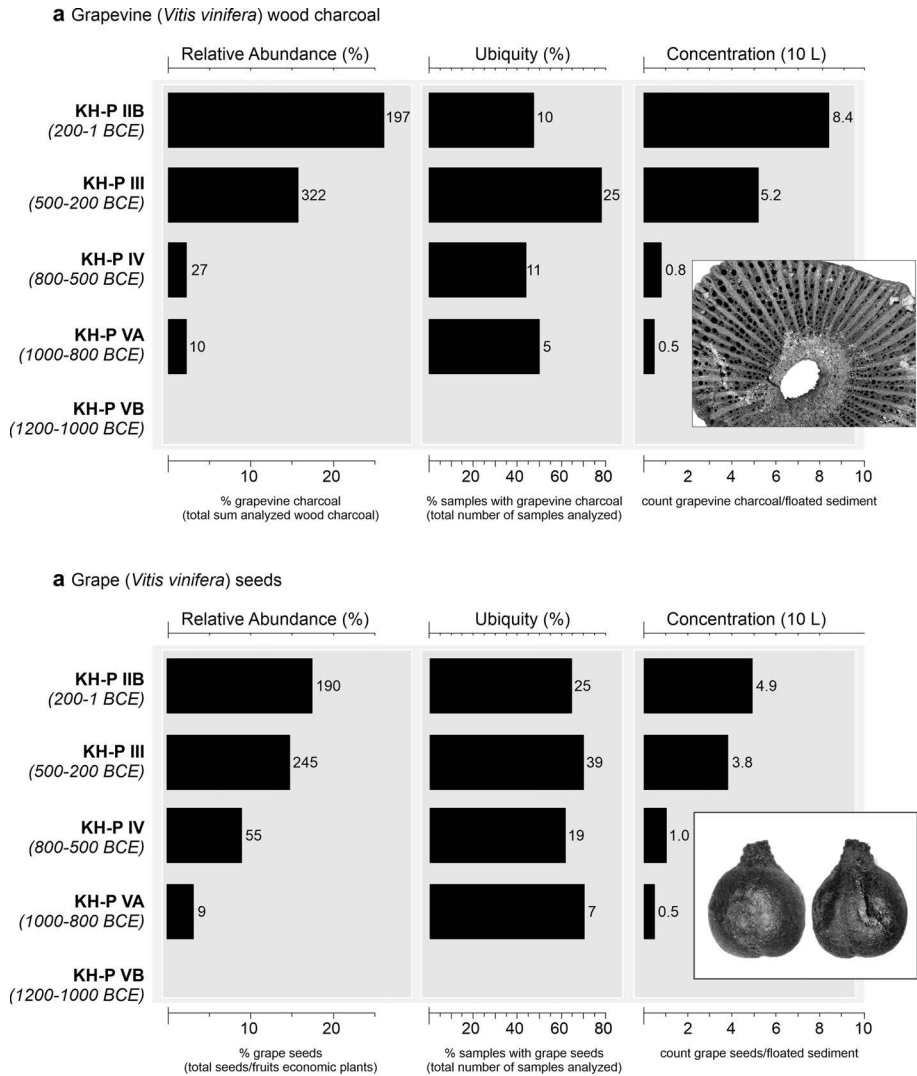


Fig. 4: Grapevine charcoal (a) and grape seeds (b) from Kınık Höyük. In wood charcoal only samples from long-term deposits are considered.¹⁴ Absolute values are reported on top of the bars (count of grape/grapevine remains, number of samples in which the taxon is found, and 10L concentrations).

¹⁴ See Castellano, 2021 for details on wood charcoal analysis.

This evidence unequivocally points to a central role of grape farming at Kınık Höyük, starting from the Early Iron Age and progressively increasing in importance throughout the 1st millennium BCE. A question that follows concerns the type of activities that drove the establishment and subsequent expansion of viticulture. It could be reasonably assumed that in traditional economies different modalities of grape consumption coexisted – fresh fruits, raisins, fermented and non-fermented derivatives. Given this premise, the archaeobotanical record could provide insights on whether emphasis was given to specific products rather than others. In the sampled sequence, grape seeds/pedicels are found in 109 samples (63%); in 41 of these samples, these two plant parts co-occur. Based on ethnographic models, the presence of numerous seeds associated to pedicels is consistent with by-products of wine-making activities.¹⁵ This hypothesis is currently under scrutiny by residue analysis of storage and drinking vessels.

Besides documenting the presence of extensive vineyards in the environs of Kınık Höyük, the abundant occurrence of grapevine wood charcoal suggests that pruning residues were systematically exploited as fuel resource. In addition to being somehow expected in poorly forested environments, the use of vine trimmings as firewood in central Anatolia is supported by earlier (Hittite) textual sources.¹⁶

Thus, starting at least in the early 1st millennium BCE, viticulture represented at Kınık Höyük an activity of pivotal importance. How does the evidence compare to other central Anatolian sites?

3. The archaeobotany of grapes in post-Hittite central Anatolia

The archaeobotanical sampling of 1st millennium BCE central Anatolia is far from satisfactory. In addition to the evidence from Kınık Höyük, carpological records published with quantitative data are available from Gordion, Kuşaklı, and Kerkenes.¹⁷ In glaring contrast with Kınık Höyük, at these sites grape seeds are either unattested (Kuşaklı and Kerkenes) or only sporadically encountered (Gordion) (Fig. 5). Particularly meaningful is the comparison between Kınık Höyük and Gordion, the latter a site that has been equally intensively sampled for the entire chronological period here considered. Thus, while viticulture represented a central component of the agricultural landscape orbiting around Kınık Höyük, conversely at Gordion it played a very minor role (if any). The current unique status of Kınık Höyük in the regional archaeobotanical dataset is further corroborated by wood charcoal data. Grapevine charcoal – which is abundantly found at Kınık Höyük – is, in fact, to date completely unreported in other anthracological

¹⁵ Margaritis / Jones, 2006. At Kınık Höyük grape skins are found sporadically, perhaps due to taphonomic processes or the impact of flotation on their preservation.

¹⁶ IBoT 2.131; see Corti, 2018: 289–292.

¹⁷ Miller, 2010; Marston, 2017; Müller-Karpe *et al.*, 1998; Smith / Branting, 2014; Marston / Branting, 2016.

sequences from the Plateau.¹⁸

To conclude this section, in light of the extremely rich attestation of grape seeds and grapevine charcoal, Kınık Höyük clearly diverges from the pattern at today known for the Anatolian Plateau. How could we explain such singularity?

4. Viticulture on the Anatolian Plateau

Archaeobotanical data from Kınık Höyük indicates that throughout the 1st millennium BCE viticulture represented a central component in local agriculture. Available evidence suggests that vineyards were present in the environs of the site starting at least from the early 1st millennium BCE (KH-P VA). An expansion in grapevine cultivation might have occurred during period KH-P IV (800–500 BCE). This phase matches the rich local iconographic and epigraphic record of the cult of the Storm-God of the Vineyard (Fig. 1). It might be tempting, thus, to trace the importance of viticulture in southern Cappadocia to the Middle Iron Age, hinting to an enduring centrality of grape farming in both the cultural and economic life of the communities therein settled. During the second half of the 1st millennium (KH-P III and IIB), it is recorded a further, sharp, increase in grape remains: viticulture in this phase likely represented at Kınık Höyük an activity of regional importance. Archaeological evidence indicates that in the Achaemenid and Hellenistic periods the site was the seat of a sanctuary.¹⁹ It is, accordingly, particularly intriguing to associate the flourishing of viticulture at Kınık Höyük to the presence of a cultic institution, which speculatively could have resembled the large Cappadocian religious estates described by Strabo.²⁰

As noted, the record of grape macro-remains from Kınık Höyük is to date without comparanda in the coeval published archaeobotanical dataset from central Anatolia. This singularity is first and foremost to be evaluated against the far from satisfactory sampling of central Anatolia.²¹ Despite sharing a semi-arid climate (280–400 mm/year), differences in geomorphology and hydrology underlie an ecological fragmentation of the Anatolian Plateau. The supraregional phase of agricultural expansion occurring in the 1st millennium BCE might have, thus, promoted the emergence of different specializations in agropastoral economies within central Anatolia, rooted into local ecological and cultural settings. The economic importance of viticulture might have been limited to specific regions of the Plateau, likely where grape farming was favored by higher water availability. Grapevines have, in fact, a comparatively low drought tolerance, requiring in rain-fed regimes between 500 and 1200 mm of precipitation in the growing season.²²

¹⁸ Castellano, 2021: 23, with references.

¹⁹ Trameri / d'Alfonso, 2020.

²⁰ Strabo, *Geography*, XII.2.

²¹ Marston / Castellano, 2021.

²² Riehl, 2009: 106–107.

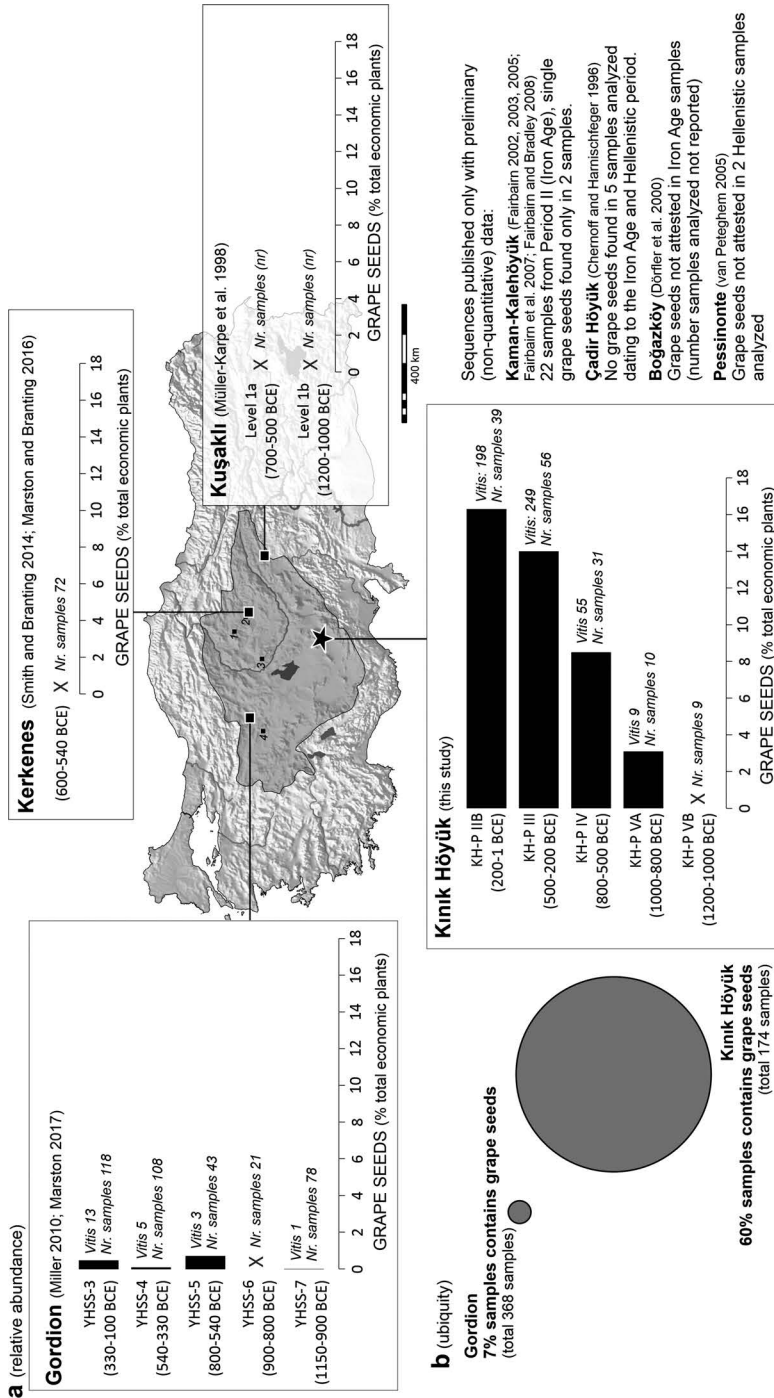


Fig. 5: (a) relative abundance (calculated on the sum of economic seeds) of grape seeds in Central Anatolian sequences published with quantitative data; sites with non-quantitative data are listed; (b) comparison of grape seeds ubiquity at Gordion and Kınık Höyük.

Southern Cappadocia was surely one of these viticultural regions. Despite the semi-arid climate, in several phases of the Holocene, the Bor- Ereğli Plain hosted a variety of humid ecosystems, which presence was promoted by the local (endorheic) hydrographic setting.²³ This comparatively higher water availability likely sustained the presence of a rich agricultural landscape, which included extensive vineyards. In these terms, to conclude, it is hardly a coincidence that the relief from Ivriz discussed at the beginning of this paper is located in proximity to one of the several springs present in the piedmont of the mountains fringing the plain – directly associating, via royal rhetoric and religious intermediation, water availability to agricultural abundance.

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²³ Castellano *et al.*, forthcoming.

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Cooking Practices in a Central Anatolian Site between the 2nd and the 1st Millennium BC

Fires and Pots at Uşaklı Höyük

*Giacomo Casucci**

Since 2008 the investigations at Uşaklı Höyük have aimed at reconstructing in detail the history and settlement development of this multi-phase site of the central Anatolian plateau. This paper presents the evidence related to cooking methods spread in central Anatolia during the Late Bronze Age and the Early/Middle Iron Age, with particular emphasis on fire installations and cooking tools found in the recent excavations of Uşaklı Höyük. Archaeology supplies a great number of materials and information on cooking and the related pottery and firing equipment: ovens, hearths, andirons, cooking pots and baking plates are a constant presence within the various settlements of the Anatolian plateau. An attempt will be made to identify the functions of the various devices within the different food processing techniques with the aim to reconstruct ancient culinary practices. The morphological analysis of the kitchen utensils and their archaeological context, together with the recent multi-disciplinary approaches (archaeobotanical, zooarchaeological, ethnographic studies, and experimental archaeology), will be able to provide data and information on food preparation and cooking daily life. Therefore, their analysis may also contribute to identifying some general social and economic dynamics, such as processes of crisis and resilience, changes, and continuity in this critical historical period of the Anatolian Plateau and Ancient Near East.

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1. Introduction

Over the past 40 years, it has been emphasized how food and commensality take center stage in everyday social practices, representing a fertile field of research for developing a better knowledge of ancient societies (Dietler, 2007; Dietler / Hayden, 2001; Twiss, 2007; Bonnetterre, 2021: 1–3).

Foodways – expressly or tacitly accepted within a community – can be considered the result of various cultural, social, and economic processes which characterize the history of dynamic regions (Villing / Spataro, 2015; Graff, 2018), such as the Anatolian plateau between the 2nd and 1st millennium BC. This region, in fact, experienced the formation and rise of a supra-regional state – the Hittite kingdom (Late Bronze Age – ca. 1650–1200 BC) – and its fall with the transition to the Early Iron Age (ca. 1200–900 BC), a phase of transformation and political and economic reorganization which later led to the formation of the so-called neo-Hittite kingdoms in the Middle Iron Age (900–700 BC) (De Martino, 2022; Seher, 2010; 2011; Summers, 2017).

Unfortunately, for what concerns culinary practices widespread in central Anatolia during the Late Bronze and the Early and Middle Iron Ages, the textual sources are absent or quite reticent and do not allow us to reconstruct a complete picture. Only for the Hittite period, we have a good number of cuneiform texts, where numerous foods are mentioned – as already discussed by Hoffner¹ (1974; 2003) – however, without direct references to cooking methods.

Four main Hittite verbs were used to indicate actions related to the preparation of dishes using heat: *zanu-*, *zeya-*, *ša(n)hu-* and *pahhur-*. These express the act of cooking in the broadest sense of the term and, only based on the object of the sentence, can be translated with various shades of meaning in modern languages, such as “boiling, stewing, roasting, toasting,” *etc.* Despite this limitation, the study of archaeological findings, such as kitchenware and fire installations, residue analysis, and zooarchaeological and archaeobotanical studies can provide further potential information.

At present, studies that specifically examine the cooking tools and culinary practices widespread in central Anatolian between the Late Bronze Age and the Iron Age have not been published. Only T. Mühlenbruch (2012) focused on the formal and dimensional analysis of a group of cooking pots coming from three key sites, and other information about these tools can be only obtained from the reading of the preliminary reports and general publications of the main archaeological sites of the region.

¹ Greater interest in Hittite commensality is increasingly widespread among scholars in recent years. Therefore, some information on the Hittite cuisine can be obtained from the studies carried out by B. J. Collins (1995), S. De Martino (2012), A. Mouton (2017), M. Cammarosano (2018), and A. M. Polvani (2012).

This paper aims to present a preliminary overview of the culinary practices widespread in central Anatolia during the 2nd and 1st millennium BC through a reconstruction of the continuity/discontinuity of the cooking tools and fire installations found during the works at the site of Uşaklı Höyük,² an important Hittite center, probably to be identified with the holy city of Zippalanda (Gurney, 1995: 69–71; Pecchioli *et al.*, 2014: 671–681; Torri, 2015: 365–367; Mazzoni *et al.*, 2019).

2. Archaeological data

Uşaklı Höyük is a multi-period site located on the upper course of a small river valley within the heart of the Anatolian Plateau, inside the bend of Kızılırmak and between the modern cities of Yogazt and Sorgun (Fig. 1). It consists of a high mound (around 2 hectares) and a large extended terrace with a low, slightly sloping base (10 hectares). Architectural remains from the Late Bronze Age and the Iron Age have been documented in the three main excavation areas – A, C, and D – investigated between 2013 and 2020³ (Fig. 2).

Specifically, Area A, located on the eastern and south-eastern sectors of the terrace, is characterized by the presence of a Hittite monumental building (*Building II*), of which a course of large stone foundations is preserved immediately below the surface. Area D, on the southern slope of the mound, has returned a long and significant Iron Age sequence above the destruction levels of a large Late Bronze Age building (*Building III*). Finally, on the eastern side of the mound, a 25 m long trench (Area C) produced evidence of an extensive and complex structure which was probably part of a huge rampart, designed to reinforce the slope and probably part of a defensive wall of the citadel during the Late Iron Age.

During the excavations, a total of nine fire installations were found, most of them badly preserved. They can be divided into two general categories: a simple and open one, called hearth/fireplace; and a closed one, characterized by the presence of a superstructure and called oven.

² The preliminary data that will be presented in this paper are part of a Ph.D. research carried out by the author at the University of Pavia.

³ For a more detailed analysis of the excavation results and a reference bibliography see D'Agostino *et al.*, 2021. The 2020 excavation season was possible thanks to financial support granted by the Ministry of Foreign Affairs and International Cooperation of the Italian Republic (MAECI), Foundation “OrMe – Oriente Mediterraneo”, University of Pisa (Department of Civilizations and Forms of Knowledge; Progetto di Ricerca di Ateneo 2020–2021 ‘Lost Cities’) and University of Florence.

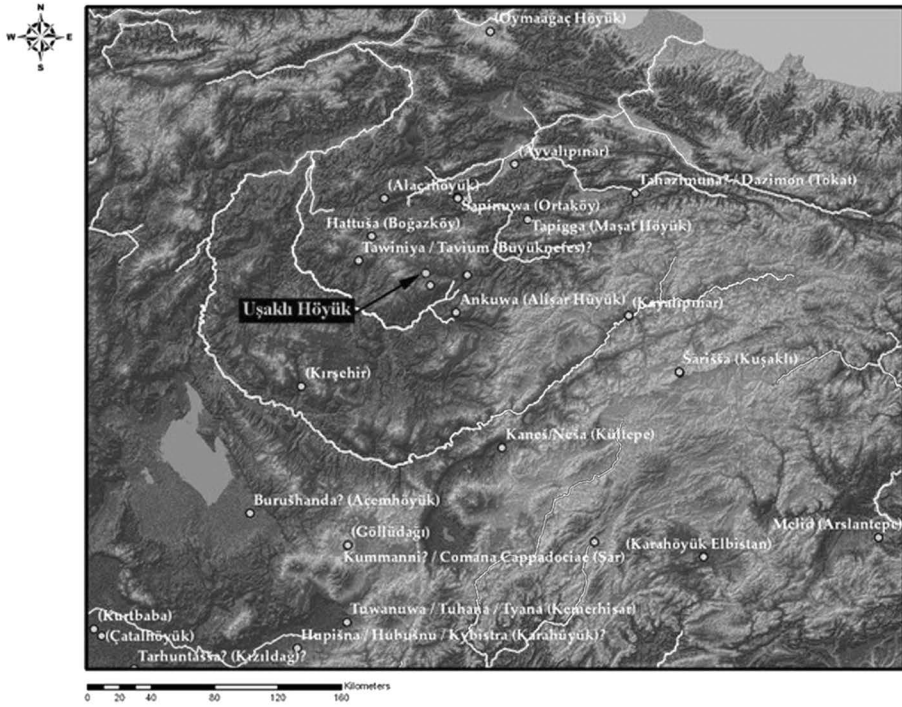


Fig. 1: Map of the Central Anatolian Plateau showing the location of Uşaklı Höyük (Akar, 2009).

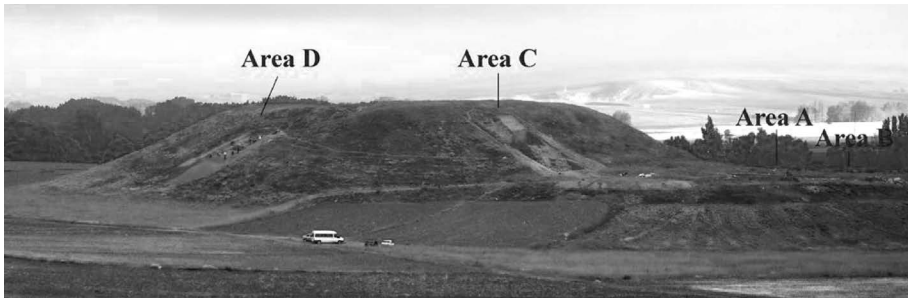


Fig. 2: The southern view of Uşaklı Höyük with the investigated areas (© Uşaklı Höyük Archaeological project).

Only the portion of a possible hearth (SU 173) is assigned to the Late Bronze Age. This was found inside one of the rooms that compose *Building III*. It is indicated by a roughly circular patch of burnt, darker color – brownish black – than the light brown color of the hardened clay floor. The reason for the low number of installations datable to this period could be due to two factors: on the one hand, only monumental structures have been investigated at the moment; on the other hand, the state of preservations of archaeological contexts is not usually optimal

and installations are ephemeral in nature and are unlikely to leave archaeological traces.

If there are no examples of the Early Iron Age,⁴ instead, for the following phase – the Middle Iron Age – a total of eight fire installations have been identified, of which one possible oven and seven hearths. For what concerns the oven (SU 300), the base and a small portion of the bell-shaped clay superstructure were still preserved *in situ* close to a stone wall at the time of excavation (Fig. 3). A further fragment of the combustion chamber was found in front of the remains of the installation, above a concentration of black-reddish burnt clay. This fire installation is about 50 cm in diameter at the base and its walls, about 3–4 cm thick, are both internally and externally finished roughly and slightly darkened and hardened by fire. It was made with a yellowish-brown clay fabric, moderately coarse due to the presence of vegetable and mineral inclusions with medium-fine granulometry. The bell-shaped superstructure and the possible presence of an opening at the base facing south lead to interpret it as a *tandır*, a type of oven still widespread throughout the Near East today for baking unleavened bread.



Fig. 3: The lower portion of the clay oven-tandır US 300 (© Uşaklı Höyük Archaeological project).

⁴ The presence of a settlement dating back to the Early Iron Age at Uşaklı Höyük, for the moment, is only attested by the discovery and identification of a handmade pottery assemblage, coming from some pits and soil deposits above Late Bronze Age *Building III*. These manufactures, in fact, show close similarities with Early Iron Age North Central Anatolian ceramic assemblages found in other sites (Orsi, 2020; Genz, 2001; 2003; 2004).

The remaining fire installations (SU 270, 293, 545, 546, 568, 570, 574) look like simple fireplaces without boundaries and superstructures. They are identifiable by the presence of ash spots and patches of burnt, a fair amount of crushed stone, and coal in fragments and corpuscles. Their shape is rather irregular, although they seem to have a rounded profile. The dimensions are between 38–85 cm in diameter. They are all placed directly on the floor and near a wall or at the corner of a room. These locations seem to confirm their primary use for cooking practices rather than a place to gather around.⁵ The frequent discovery of baking plates associated with these installations is a further feature and another possible clue to their use for cooking activities. These clay artifacts, characterized by a typical coarse fabric rich in mineral and vegetable inclusions, seem to increase in number within the Iron Age ceramic assemblages and become a characteristic element of the Middle Iron pottery repertoire at Uşaklı Höyük.⁶

Finally, a single example of a portable hearth was found out of context (U14.188) within SU 23a, one of the filling soils of the rampart in Area C. According to the associated material, it can probably be dated to the Iron Age. It was handmade and characterized by a coarse fabric, rich in vegetable (chaff) and mineral inclusions with a fairly fine grain size. Its walls are finished through burinishing. Although in a fragmentary state, most likely it had a semicircular-horseshoe shape.

At Uşaklı Höyük the reference kitchenware for the 2nd millennium BC, specifically for the Late Bronze Age, was isolated within the material coming from the deep sounding carried out in 2013 inside room 126 of *Building II* (Area A) and from the foundations of *Building III* (Area D) (Orsi, 2018; 2020; Mazzoni *et al.*, 2019; D'Agostino *et al.*, 2021). It is divided into two main morphological groups: the so-called Hittite baking plates and cooking pots.

The so-called Hittite baking plates (Fig. 4), as attested in other Late Bronze Age sites of central Anatolia (Mielke, 2006a; 2017; Schoop, 2006; 2009), are large vessels (ca. 30–100 cm. in diameter) characterized by a usually coarse fabric, rich in mineral and vegetable inclusions, and by a usually thickened and everted rim bearing in some cases rope impressions. Although still in progress, the statistical analysis of the data collected from the description of the samples found during the excavation (e.g. incidence of rope impressions, traces of secondary burns, dimensions of the rim), the residual analysis, and the attempts to reproduce and use these instruments in the laboratory,⁷ suggest their use for cooking different types of bread or for toasting – drying some foods.

⁵ It is likely that fire installations, especially hearths used mainly as a gathering space for individuals to warm up and consume food, occupied a central position within the room.

⁶ An analysis and a detailed study of the samples collected during the excavations are still in progress.

⁷ The experimental archaeology activities are conducted with the collaboration of *LArS*,



Fig. 4: Hittite baking plates (© Uşaklı Höyük Archaeological project).

As for the cooking pots (Fig. 5), the totality of the examined sample has matte reddish-brown surfaces – where the lines of the wheel are visible both internally and externally – medium-coarse fabric, including mineral inclusions of medium and large sizes of various quality and shape. From a morphological point of view, although no intact vase has yet been found, they are characterized by a typically rounded shape, the absence of the neck, and the presence of two vertical handles with a circular or rounded and more rarely a rectangular section.⁸ The rim, in most cases, has an external thickening, whereas the remaining is simple. All these features provide the product with good resistance to thermal shocks and a good yield on fire (Rice, 1987: 105–106, 229–231, 367–368). In particular, the rounded shape allowed a greater exposure and distribution of heat over the entire surfaces of the vase and its contents. The moderate constriction of the opening played a very important role in preventing overflow and reducing the evaporation of liquids. The good depth of the body allowed good heat preservation but, at the same time resulted in a low to medium access factor, which somewhat limited the manipulation of the contents.

Therefore, manipulating and removing the dry or semi-dry contents required an instrument. This seems to be confirmed by one of the representations on the Inandiktepe relief vase (Özgüç, 1988: figs. 64–65), where two figures use ladles, probably made of wood, to mix the contents inside some pots. Finally, all these containers have a high portion of the surface with a slope between 60° and 90°. This element indicates the suitability for heating in suspension above the hot coals in order to carry out high-temperature cooking, appropriate for stewing and boiling. Proof of the latter hypothesis comes from the excavations of some Hittite sites, where various fire installations have been identified and interpreted as

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⁸ For comparisons see F. Fischer, 1963, A. Müller-Karpe, 1988, H. Parzinger and R. Sanz, 1992, D.-P. Mielke, 2006a, and T. Mühlenbruch, 2012, 2014.



Fig. 5: Kitchen Ware, Late Bronze Age (D’Agostino *et al.*, 2020: fig.19).

“cooking-pot support” (Casucci, 2020). Particularly exhaustive is the case of the installation, found inside the North–West Gate of the Hittite city of Kuşaklı-Şarişša (Mielke, 2004a; 2004b; 2004c; 2006b). The upper opening of its bell-shaped body, in fact, is characterized by three bulges that probably facilitated the placement of pots. All this also seems to agree with the picture that emerges from the Hittite cuneiform sources, where the preparation of porridge (BA.BA.ZA), soups, and stews of vegetables and meats (TU₇) is strongly documented (Hoffner, 2003: 99–102; Mouton, 2007; 2017; Şahingöz *et al.*, 2015), and from the archaeobotanical analysis carried out on the grain stock of the Kuşaklı-Şarişša North-West Gate (Pasternak, 1999a; 1999b). Here grain had been boiled and ground to produce *bulgur*, a dish still widespread throughout the Near East (Mielke, 2006b: 30–31).

Early and Middle Iron age cooking pots coming from Uşaklı Höyük can be analyzed together since they seem to share some features and methods of use.

The reference archaeological contexts are mainly those highlighted in Area D, where two macro-levels datable to the Middle Iron Age have been preliminarily identified: one documented by several pits dug into the accumulation levels, above those of destruction of Hittite building, and probably at least used for the waste of Early and Middle Iron Age materials (old phase); and one characterized by the presence of small rooms (recent phase) possibly belonging to domestic structures (Orsi, 2020: 282–283; D’Agostino *et al.*, 2021: 59–61).



Fig. 6: Selection of Early Iron Age Kitchen, Handmade Ware from Area D (Orsi, 2020: fig. 8).



Fig. 7: Middle Iron Age kitchen pot from Area D (D’Agostino / Orsi, 2020: fig. 5).

The cooking pots of both periods are characterized by a usually coarse fabric, rich in mineral inclusions of various shapes and sizes, and by dark brown or gray surface. The main distinction is that the Early Iron Age ones (Fig. 6) were probably a household production and usually they have a glossy surface due to the presence of burnishing (Orsi, 2020); instead, the Middle Iron Age ones (Fig. 7) return to be mainly manufactured on a wheel, testifying a production on a different scale. This process of “standardization” is also observed from the morphological point of view: they pass from a variety of globular bowls or pots and small jars with

flared rims and different types of handles during the Early Iron Age to a product more homogeneous in the Middle Iron Age when the variant VI B2⁹ becomes very evident. Despite these differences, the rounded shape and the narrow opening compared to the body guaranteed good heat distribution on the surfaces, preventing the overflow and evaporation of liquids. In particular, the flat base allows the vases to stand steadily and may suggest their positioning next to the heat source for slow cooking.

3. Conclusions

In conclusion, although for the moment the 13th and 11th centuries BC constitute an obscure point in the archaeological sequence accentuating the possible signs of changes,¹⁰ what emerges from the preliminary observations on the kitchenware and fire installations of Uşaklı Höyük is that this site, after abandoning its role as a holy Hittite city, during the Early and Middle Iron Age, first resurfaced as a small village and then as a residential center with some new culinary practices. Most likely, the diet of the population of the central Anatolian plateau between the 2nd and 1st millennium BC remained essentially unchanged, based on agriculture and livestock.¹¹ People continued mainly to eat stewed, boiled, and roasted vegetable-based dishes¹² (wheat, barley, emmer, and legumes) and occasionally roasted and blanched meat, but the cooking tools seem to have undergone some changes. This is evidenced at Uşaklı Höyük by the disappearance of the so-called Hittite baking plates in the Iron Age pottery assemblages, by the presence in the Middle Iron levels of a *tandır* – a traditional Mesopotamian oven which seems to be absent in all central Anatolian sites during the Late Bronze Age¹³ – and by the

⁹ Jars with medium size collared and triangular rims. The employed reference morphological codification is the one underway in the Uşaklı Höyük Archaeological Project. For further detail see D'Agostino and Orsi, 2015: 98–165.

¹⁰ For further discussion on the archaeological sequence at Uşaklı Höyük see D'Agostino, 2020, and D'Agostino *et al.*, 2021: 59–61.

¹¹ The possible socio-economic readjustment and reorganization within the settlements of the central Anatolian plateau during the Late Bronze-Early Iron Age transition have been proposed in two recent papers for the Çadır Höyük site (Ross *et al.*, 2019a; 2019b).

¹² For a more detailed picture see d'Alfonso and Matessi, 2021, and the results coming from the archaeobotanical analyses conducted in the main archaeological sites inside the central Anatolia region: Boğazköy (Pasternak, 2012; Diffey *et al.*, 2017, 2020; Dörfler *et al.*, 2011), Çadır Höyük (Smith 2007; Ross *et al.*, 2019b), Gordion-Yassihöyük (Miller *et al.*, 2009; Miller, 2010), Kaman-Kale Höyük (Fairbairn / Omura, 2005) Kuşaklı-Sarissa (Pasternak, 1999a; 1999b).

¹³ For more details see Casucci, 2020. Although developing theses based on negative evidence is not a theoretically correct procedure, the absence of this type of oven in Late Bronze Age contexts in central Anatolia could be evidence of a difference in foodways and bread preferences between the two periods under consideration.

spread of new pottery forms for cooking the foods, such as baking plates, portable horseshoe-shaped hearths, and new cooking pots.

Specifically, the cooking pots seem to indicate two different ways of using and preparing food. The late Bronze Age globular cooking pots, with a rounded base and two handles, appear perfect for cooking on high heat suspending them above the flame, at a certain distance, employing the cooking pot supports. Afterward – during the Iron Age – these tools, usually characterized by a flat base and probably by a single handle, suggest a different cooking mode – perhaps at lower temperatures – by positioning them near the heat source, possibly on a cooktop. The observation of the burning marks on these instruments coming from Uşaklı Höyük seems to confirm this hypothesis. Although carried out only on samples in a fragmentary state – especially on the upper portions of the vase – these are attested only on 25% of the Late Bronze Age fragments and, vice versa, they sharply increase in number (65%) on both surfaces during the two following phases.

These data seem to support the theory of social change within the settlement between the Late Bronze and Iron Ages. At the current state of research, it is not possible to establish whether this occurred due to elements coming from outside or from local contexts that remained marginal compared to the central institution during the Hittite period. However, since everyday objects, such as cooking tools, are usually reluctant to change, and at least during the first part of the Iron Age, these had been produced at the household level – probably by the same people who used them – it is possible to hypothesize that those who moved and/or remained to occupy the void left by the abandonment of Hittite public institutions reorganized their foodways to the new socio-economic reality.

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Dairy Production in SW Iran from the Middle Elamite to the Neo-Elamite Period*

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The research presented here tries to understand whether it is possible to identify, in archaeological contexts of SW Iran during the Iron Age, objects that could be related to the dairy production. Indeed, although the type of milk derivatives may change according to the period of time and culture, the principles for dairying are usually similar, in particular when production methods that use traditional and non-automated techniques are considered.¹

1. The archaeological contexts

The archaeological inquiry has been conducted on four sites located in southwestern Iran and dating from the Middle Elamite to the Achaemenid period, that is Tal-e Malyan,² Haft Tappeh,³ Baba Jan Tepe,⁴ and Tepe Guran.⁵

The considered archaeological sites are characterized as small villages or medium sized settlements.⁶ The level of village economy suggests that the animals

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¹ F.A.O., 1990: 47–81, 147–278; Salvadori del Prato, 2001; Assolatte, 2006.

² Sumner, 1988; Nicholas, 1990; Carter, 1996; Abdi, 2001; Sumner, 2003; Alden *et al.*, 2005; Potts, 2016: 72–77, 143–144, 182, 24–243, 280, 310.

³ Negahban, 1991; Mofidi-Nasrabadi, 2010; 2012; 2013; 2014; 2015; 2016; Potts, 2016: 184–197.

⁴ Goff Meade, 1968; Goff, 1969; 1970; 1976; 1977; 1978; 1985.

⁵ Thrane, 2001; Mortensen, 2014.

⁶ Haft Tepe, Phase IV, Area II, Area III and Area IV: Mofidi-Nasrabadi, 2010: 10, 17–18, 23–26; 2012: 60–61, 81, 83–84, 97–99; 2013: 168, 171; 2014: 72–79, 88–93, 105–106; 2015: 27–33, Tab. 11. Tal-e Malyan, Phase IIIA, Area EDD, Sectors EE 39, FF 41 e DD 39 e 41; Carter, 1996: 39–42, 45–46, 51, fig. 39. Tepe Guran, Layer B (area GI) and layers

were raised near the settlements and that the inhabitants exploited at least part of the secondary products. The analysis of the animal bones from Haft Tepe,⁷ Baba Jan Tepe⁸ and Tepe Guran⁹ attest a preponderance of sheep and goats as well as numerous remains of cattle and, at Baba Jan Tepe and Tepe Guran, of domestic pigs.¹⁰ The presence of structures related to cattle herding, such as an animal enclosure,¹¹ mangers¹² and stables,¹³ indicates that some of the domestic animals were kept near the habitation areas. Tools related to spinning and weaving,¹⁴ as well as lithic blades, which could be possibly related to activities such as butchery, leather processing or shearing,¹⁵ testify to the use of at least part of the animal fibers by the local inhabitants.

The majority of the vessels considered in this paper come from archaeological contexts devoted to the production and consumption of food (i.e. courtyards and rooms with hearths, grindstones and pestles), and are related to storage and food production; few others vessels were instead found in disturbed contexts or their precise finding context is unknown.

R-N, layers H-J-L, layer D, layer C, layer B (area GII): Thrane, 2001: 11–27, 69–92, 119–122. Baba Jan Tepe, Phase III: Goff Meade, 1968: 112–114; Goff, 1969: 115–122 (Central Mound), 126–128; 1970: 144–151, 155; 1977: 104–118, 121–127 (East Mound). Baba Jan Tepe, Phase II, East Mound: Goff, 1970: 151; 1977: 118, 127–133. Baba Jan Tepe, Phase I, East Mound and Central Mound: Goff, 1970: 151; 1985: 1–2, 5. For the dating of the phases at Baba Jan Tepe: Goff, 1970: fig. 1; Levine, 1987: 134–135, fig. 68; Overlaet, 2003: 41; Boucharlat, 2005: 248–249.

⁷ Mohaseb / Mashkour, 2012. The report of the zooarchaeological study do not distinguish clearly the archaeological contexts of provenance of the studied animal bones, but it seems that the studied findings come mainly from the prior monumental phases of the site (Phase II and Phase III).

⁸ Karega-Munene, 1991.

⁹ Clutton-Brock, 2001.

¹⁰ For Tal-e Malyan a zooarchaeological study was conducted only on findings from Phase IV: Zeder, 1991.

¹¹ At Haft Tepe: Area III, Trenches 37–38, 298 (Mofidi-Nasrabadi, 2014: 74).

¹² At Tal-e Malyan, Area EDD, courtyard 117, Phase IIIA: Carter, 1996: 40. At Baba Jan Tepe, East Mound, Phase IIb (Goff, 1977: fig. 8, pl. IXb).

¹³ At Baba Jan Tepe, East Mound, Phase IIB: Goff, 1977: 129, 132, fig. 8, pls. XXa–d.

¹⁴ At Haft Tepe: Area III, Trenches 37–38, 298 (Mofidi-Nasrabadi, 2014: 83–84). At Tal-e Malyan: Phase IIIA, Area EDD, Sectors EE 39, FF 41 e DD 39 e 41 (Carter, 1996: 45). At Tepe Guran: Area GII, settlement layers R, P (phase 5) and D (room T2, phase 7) (Thrane, 2001: 69, 73, 82, 87, pls. 26.18, 32.6, 47.6).

¹⁵ At Haft Tepe: Area III, Trenches 37–38, 298 (Mofidi-Nasrabadi, 2014: 83–84, fig. 7). At Tepe Guran: Area GII, Settlement Layer D (Thrane, 2001: 86, Pl. 47.7). In the latter case the excavators hypothesize that the flint blades were possibly related to fire-making.

2. Functional analysis of pottery in relation to dairying

2.1 Strainer bowl

A bowl¹⁶ with several holes at the base and at the walls was found at Haft Tepe in an archaeological context related to the Phase IV, thus when the site was occupied at a village level. Unfortunately, the pottery has been found in a very disturbed context.¹⁷

Generally, these vessels are interpreted in archaeological contexts as functional to separate the curd from the whey during the production of cheese,¹⁸ and the example from Haft Tepe has been interpreted according to such process.¹⁹



Fig. 1: Production of goat cheese at the dairy “La Capanna” (photo by the Author).

Indeed, to obtain the cheese, rennet²⁰ is added, which speeds up the thickening process. Then the curdled milk (or “curd”) is cut into pieces and left to drain for about 24 hours to eliminate the remaining whey, i.e. the liquid part of the milk.²¹ In order to separate the curd from the whey, plastic baskets are currently used²² (Fig. 1), but ethnographic comparisons document also perforated containers in

¹⁶ Area II, Trench 81, layer 5: Mofidi-Nasrabadi, 2012: Taf. 7.10, 32.1, n. H.T. 09–81–37.

¹⁷ Mofidi-Nasrabadi, 2012: 60–61, 66, 92–93.

¹⁸ Whitehouse, 1970: 54–55; Yon, 1981: “Faisselle”; Bogucki, 1984; Ellison, 1984: 64, fig. 1.3; Gouin, 1990: 46, 48, figs. 6, 7.d-e; Gouin, 1994: 153, fig. 1; 1997: 167–168, fig. 6.1; Alcock, 2000: 36; Curtis, 2001: 401, pl. 38; Duistermaat, 2008: 440, fig. VI.17: b–c. On the matter see also: Bozzetti, 1993: 15; Salvadori del Prato, 2001: 3, fig. 1.1; Bozzetti, 2011: 8–9, fig. 1.7.

¹⁹ Mofidi-Nasrabadi, 2016: 100.

²⁰ On rennet see Bozzetti, 1993: 23–31.

²¹ Assolatte, 2006: 87–98.

²² As it was possible to see during the visit carried out by the author at two Italian dairies.

wood,²³ ceramic²⁴ or metal²⁵ materials; tissues can also be used as substituted or alongside the vessel for the operation of straining.²⁶ The vessels are generally characterized by a large diameter of the mouth and more or less deep walls. Chemical analyses carried out on some ceramic examples from archaeological contexts of European protohistory testify that similar vessels were actually used for the processing of milk.²⁷

However, we do not know if in the ancient Near East cheese was actually produced through the adding of the rennet. The term “rennet” possibly appears, according to some scholars, in Hittite texts, but the evidence is not definitive; if confirmed, it would suggest that in Anatolia at least some type of cheese were produced separating the curd from the whey.²⁸ Several types of cheeses appear in Mesopotamian written texts from different periods, such as large, small, honey- or herb-flavoured cheeses.²⁹ The texts, however, do not appear to contain any description of the cheese-making process.³⁰ According to some scholars, the cheese mentioned in the written texts would be obtained from the natural coagulation of milk, that is without using the rennet; indeed, the apparent absence in the Mesopotamian documentation of a term that can be identified as rennet leaves this possibility open.³¹

The production of cheese, butter and yogurt employing only the fermented milk is largely documented in several countries in Near East and Africa in traditional manufacturing. This kind of procedure allow to obtain only few typologies of cheese, but spices, salt and herbs could be added. Such type of cheese has a small size, as the absence of the rennet does not permit the milk protein to form strong links. It must be consumed fresh, but can be conserved for

²³ For example, in Italy, XIX sec.: Ryder, 1983: 721; see also the objects exposed at the museum of pastoralism “Ecomuseo della pastorizia di Ponteb Bernardo” (Valle Stura, Cuneo, Italy).

²⁴ For example, in France, 19th–20th c. (Gouin, 1997: 166, fig. 6.2) and in Italy, 19th–20th c. (Canobbio, Telmon, 2007: 259, Figs. 1713–1714).

²⁵ For example, in Italy, XX sec.: Canobbio, Telmon, 2007: 244, fig. 6124; Canobbio, Telmon, 2008: 252, fig. 2166.

²⁶ For example, in Iran, 20th c. (Watson, 1979: 110), in Mexico, 20th c. (Gorrell, Alexander, 1972: 179) and in Romania, 20th c. (Ryder, 1983: 721).

²⁷ Salque *et al.*, 2012: 56, 58–59; Salque *et al.*, 2013. More problematic are the results from the analysis carried on pottery of the Indo civilization: Gouin, 1997: 182, note 61; Salque *et al.*, 2013: 523.

²⁸ On the issue see Fritzsche, 2011 with bibliography. For a synthesis on the production of cheese in the ancient Near East through fermentation or through the addition of rennet see Rosenstock, Ebert, Scheibner, 2021.

²⁹ Ellison, 1978: 186–187; Stol, 1993: 100, 105–108.

³⁰ Stol, 1993: 108; Curtis, 2001: 237.

³¹ Ellison, 1978: 186; Stol, 1993: 101–102, 104–108; Biga, 1994: 342, note 31; Curtis, 2001: 237–238.

longer periods when dried in the sun.³² A type of such cheese is, for example, the Iranian *kashk*, which is obtained from the surfacing part of the milk left to rest and to ferment, then composed into balls and left to dry in the sun.³³ According to scholars, a cheese similar to *kashk* could be spotted in Mesopotamian written texts³⁴ and in Proto-Elamite tablets from Susa.³⁵ Cheese and butter, the latter possibly obtained from the fermented milk, were produced by professional shepherds that tended the royal flocks during the Achaemenid empire.³⁶ The written sources concerning the table of the Achaemenid king mention fresh milk, sweet sour milk or sweet whey, and an oil apparently obtained from milk (buttermilk?).³⁷

Nevertheless, the use of filters or strainers would still be necessary for other operations during the preparation of dairy products. These include the first cleaning of fresh milk or the separation, in the production of butter, of the cream from the buttermilk. Low metal basins with a perforated bottom were used, for example, in Australian dairies during the XIX sec. during the working process of butter (Fig. 2).³⁸

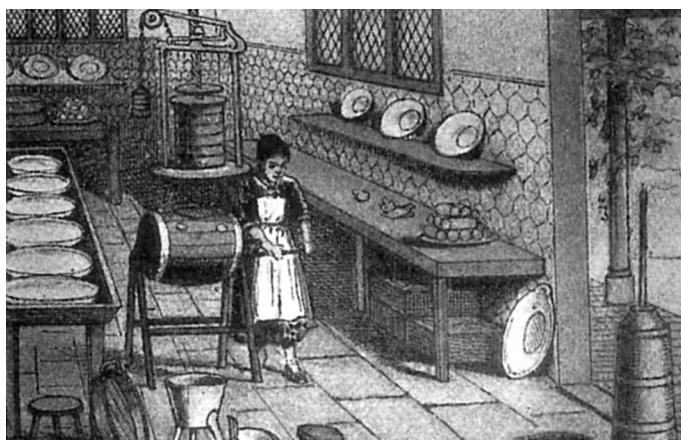


Fig. 2: Production of butter in 1800 in Australia (from Casey, 1999: fig. 4).

However, it should be noted that a function exclusively related to dairy production cannot be envisaged for the bowls with several holes; indeed, the latter vessels could be employed for any operation that required a preparation to be fil-

³² F.A.O., 1990: 47–80, 147–278, figs. 7, 18.

³³ On *kashk* production see Digard, 1981: 198, fig. 156.

³⁴ Ellison, 1978: 185–186; Stol, 1993: 104–105; Curtis, 2001: 237.

³⁵ Dahl, 2005: 113–115.

³⁶ Briant, 1979: 155. For the Arshama's estate: Kuhrt, 2007: 823, n. 69.

³⁷ Briant, 1996: 298–304; Kuhrt, 2007: 605, n. 39.

³⁸ Casey, 1999: fig. 4.

tered. For example, the use of filters, such as pieces of gauze or sieves, is documented in the ancient Near East and Greece for the production of perfumed waters and oils.³⁹ In the so-called ‘culinary tablets’ dating back to the Old Babylonian period, various ‘recipes’ attest the filtering of food products in the preparation processes.⁴⁰ Furthermore, it is not excluded that the strainer bowls were also used during the consumption of beer,⁴¹ which required to be filtered before drinking,⁴² or during the consumption of wine.⁴³

2.2 Vessels with bottom hole

Large bowls having a hole at the bottom are documented at the sites of Tepe Guran⁴⁴ and Haft Tepe⁴⁵ in domestic contexts related to food production and storage. At Baba Jan Tepe, instead, fragments of jars with a perforated base were discovered;⁴⁶ they are related to a building phase of the site (Phase III) where domestic production contexts are attested,⁴⁷ but the finding context of these specific sherds is unclear. If they are to be related to the same shape of a large jar⁴⁸ found out of context on the East Mound, the fragments would thus pertain to medium-large vessels characterized by a very small diameter of the mouth and by a second hole at the shoulder.

³⁹ Levey, 1954: 373; Faure, 1987: 65–66; Dayagi-Mendels, 1989: 100–101; Diamandopoulos, 1996: 754; D’Agata, 1997: 88–89.

⁴⁰ Bottéro, 1987: 14, 16.

⁴¹ Duistermaat, 2008: 451.

⁴² Dayagi-Mendels, 1999: 113–125; Homan, 2004.

⁴³ Moorey, 1980; Stronach, 1995: 180–187; Dayagi-Mendels, 1999: 55–60; Bucci, Giusto, 2016: 74, 79–80 with bibliography.

⁴⁴ Area GII, Settlement layer J: Thrane, 2001: 75, pl. 34.4. Layer J has been interpreted as the floor level of the domestic context documented in Layer L: Thrane, 2001: 75, 78, figs. 64–67.

⁴⁵ Area III, Trench 37, layer 6: Mofidi-Nasrabadi, 2014: taf. 28.3, n. H.T. 10–37–507b. In Area III, Trenches 37–38 and 298, traces of a reoccupation during Phase IV of a monumental building were found: Mofidi-Nasrabadi, 2012: 67–71, 81, 85, abb. 5–6, 10, Schema 3, faf. 39.5–6; 2014: 72–84, abb. 3–5, 7–8, Schema 1. A fragment of a similar vessel was found in the same disturbed context of the bowl with several holes: Area II, Trench 81, layer 5: Mofidi-Nasrabadi, 2012: taf. 22.5, n. H.T. 09–81–49.

⁴⁶ Goff, 1978: 33, figs. 3.37–40. The sherds come from the Central Mound, Phase III, levels 1–3, but there is no further information on their context.

⁴⁷ Central Mound, Phase III, level 2, “Fortified manor” and “West Long Room”: Goff, 1969: 117, fig. 2. On pottery and metal objects from the Phase III, Central Mound: Goff Meade, 1968: 115–118, fig. 6; Goff, 1970: 151–152, 155, fig. 7; 1978: 29–34, 38–40, figs. 1–4.

⁴⁸ Goff, 1978: 33, fig. 12.17. The jar is 44,6 cm high.

A function as storage vessels for cheese or other foodstuff that need to dry off has been proposed for the jars from Baba Jan Tepe.⁴⁹ The vessels found at Haft Tepe, instead, have been interpreted in association with beer production,⁵⁰ while the fragment from Tepe Guran has been related to wine consumption.⁵¹

However, a function related to milk processing can be hypothesized for these vessels too. The use of cups or funnels with only one hole at the base for milk processing is documented, for example, in Europe in the modern age (Fig. 3).⁵² Bowls with a bottom hole found in archaeological contexts outside the Near East have been interpreted in relation to dairying.⁵³ In the Mesopotamian pottery repertoire, small jars with one or more holes at the base have been related to the production of cheese.⁵⁴

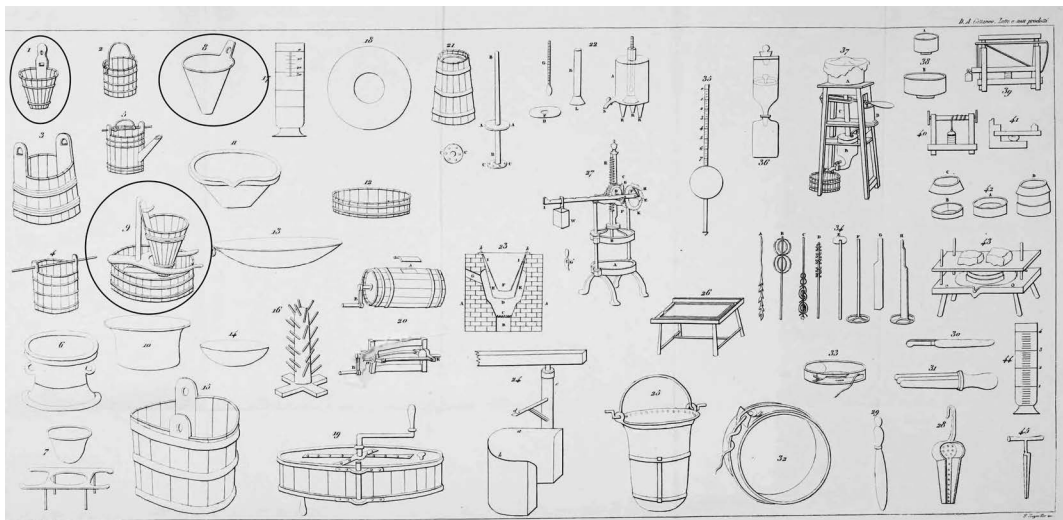


Fig. 3: Tools for dairying in Italy in 1800: vessels with bottom hole are indicated by a circle (from Cattaneo, 1839).

A possible iconographic testimony for the interpretation of these ceramic forms is represented by the famous relief of el-‘Obeid, where a man is depicted pouring a liquid from a jar into a deep cup with a perforated base, in its turn placed

⁴⁹ Goff, 1978: 33.

⁵⁰ Mofidi-Nasrabadi, 2010: 36; 2016: 99. In several cases such vessels were re-used at Haft Tepe for burials (Mofidi-Nasrabadi, 2010: 36, taf. 37.4, 38.1, 39.1, 40.1–2).

⁵¹ Thrane, 2001: 75.

⁵² Bozzetti, 1993: 29.

⁵³ Gouin, 1990: 48, fig. 6.a.1–2; Juhl, 1995: 93–94, fig. 10.8, nn. F570, F169, F045, “Group H”.

⁵⁴ Ellison, 1984: 64, fig. I:2–3.

on top of another container (Fig. 4).⁵⁵ It is possible that here the phase of separation of the curd from the whey is represented, with the latter collected in the container below. In this case, the picture would involve the preparation of cheese for which rennet has been added to the milk; it is also possible that the action concerns the production of butter, with the separation of the cream from the buttermilk. On this regard, the production of butter is widely attested in Mesopotamian texts, particularly those dating back to the third millennium BCE, where the butter, the clarified butter (ghee) and the butter cream (buttermilk) were mentioned.⁵⁶ A Sumerian composition about Dumuzi briefly describes the production of butter: the milk is stirred manually inside a container in order to obtain a creamy part (the butter), while on the bottom remains the liquid portion (whey or buttermilk).⁵⁷ In Iran, signs representing clarified butter have been tentatively identified in the Proto-Elamite documentation from Susa,⁵⁸ while butter or buttermilk (literally “oil from milk”) is cited among the food consumed by the Achaemenid king.⁵⁹ It is also possible that the initial phase of cleaning the fresh milk is represented in the aforesaid bas-relief; in this case, the ethnographic documentation testifies that a tissue is usually inserted inside a funnel; this operation, carried out immediately after milking, is functional to remove leaves, insects or other foreign elements from the milk.⁶⁰

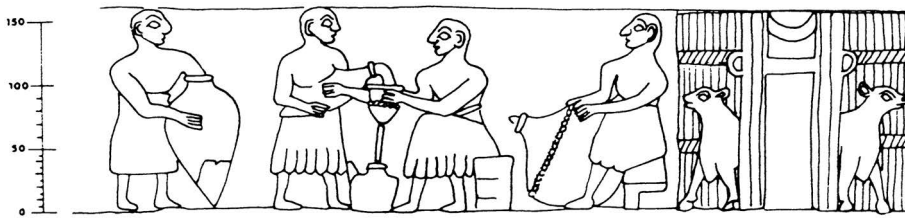


Fig. 4: Relief from the Ninhursag Temple of Tell al'Ubaid (from Gouin, 1993: fig. 1).

⁵⁵ British Museum, BM 116754 (http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=368451&partId=1&searchText=ubaid+relief&images=true&page=1); on the interpretation of the artwork in relation to dairying see: Ellison, 1978: 184; Gouin, 1993: 142–143, fig. 2c; 1994: fig. 3.3; Curtis, 2001: 235–236; Salvadori del Prato, 2001: 3–4; Bozzetti, 2011: 7–8, fig. 1.5.

⁵⁶ Ellison, 1978: 185; Stol, 1993: 99–103.

⁵⁷ Jacobsen, 1983. On literary texts and dairy products: Biga, 1994: 336–339 with bibliography.

⁵⁸ Dahl, 2005: 113–115.

⁵⁹ Kuhrt, 2007: 605, n. 39.

⁶⁰ Personal communication by Prof. Guido Tallone (Istituto Lattiero Caseario e delle Tecnologie Alimentari di Moretta). See also, for Italy, 20th c.: Canobbio, Telmon, 2008: 218, fig. 1209.

However, it must be remembered that both bowls and jars having a single hole at the bottom have been also related by scholars to the production of beer⁶¹ or wine.⁶² A. Sollee highlights how it is not possible to establish a single use for this type of vessels, since they are suitable for receiving and processing a plurality of contents in which it is necessary to separate the liquid part from a more dense or semi-solid part.⁶³

2.3 Basins

A fragment of a basin or a large bowl was found at Haft Tepe⁶⁴ in the same context related to domestic production where also the aforesaid bowl with bottom hole was found. Similar vessels were found at Tepe Guran,⁶⁵ and Tal-e Malyan⁶⁶ in domestic contexts related to food production and consumption. At Baba Jan Tepe, similar vessels were recovered from the re-occupation levels of Phase II⁶⁷ as well as among the remains of the Achaemenid village of Phase I.⁶⁸

The use of similar vessels for milk processing is testified by chemical analyses carried out on some containers in Central Europe in contexts dating back to the

⁶¹ Ellison, 1978: 147–148; Homan, 2004: 88–89; Duistermaat, 2008: 435, 439, 451, 459–460, fig. VI.12, fig. VI.17.3: g, l, fig. VI.18: 18.91 l., 64.47 l., 102.29 l.; Ebeling, 2009: 388–389; Sollee, 2012: 625–627, 636–637.

⁶² Badler, 1995: 51–52, fig. 4.3: c; Sollee, 2012: 627, 636.

⁶³ Sollee, 2012: 625, 627, 636.

⁶⁴ Trench 298, layer 5: Mofidi-Nasrabadi, 2014: taf. 27.4, n. H.T. 12–298–531. Diameter: 26 cm.

⁶⁵ Area GII, Layer P (phase 5): Thrane, 2001: pl. 32.8; Area GII, Layer B (phase 10): Thrane, 2001: 121, pl. 62.17. On Layer P: Thrane, 2001: 70–74, figs. 60, 62. The settlement layer B is probably to be related to a similar domestic context, but in this case no floor was detected: Thrane, 2001: 119–122, figs. 97–98.

⁶⁶ Phase IIIA, Area EDD, Sector EE39: Carter, 1996: fig. 41.5. On Phase IIIA, Area EDD, sectors EE 39, FF 41, DD 39 and DD 41: Carter, 1996: 39–42, 44–46, fig. 39.

⁶⁷ East Mound, Phase II, Room 4: Goff, 1978: Fig. 9.17; East Mound, “Fort”, Phase II: Goff, 1970: 151–152, fig. 7.2. Three contexts of food production and consumption are attested on the site during Phase II on the East Mound: the “White Room”, Room 9 (Phase IIB) (Goff, 1977: 118, fig. 8, pls. VIIe-f), the “Groom kitchen” (Phase IIB) (Goff, 1977: 127, 132, fig. 8, pls. XVb, d), and the “Stone House” (Phase IIA) (Goff, 1977: 132–133, fig. 7, pls. XIVA-b, XVc). On pottery and metal objects from Phase II, East Mound: Goff Meade, 1968: 119, 121, fig. 10; Goff, 1970, 151–152, 155, fig. 7; Goff, 1978, 29–34, 38–40, figs. 9–12, 14–15.

⁶⁸ Goff, 1985: 3, fig. 2.26, fig. 3.17, fig. 4.16, 39, 9.16. Even if the findings from Phase I at Baba Jan Tepe point to the existence on the site of a little village during the Achaemenid period, almost any floor levels were found that could be associated with Phase I, due to the fact that on a later period the area was used for burials (Goff, 1985: 1–2, fig. 1). On pottery from the Phase I: Goff, 1970: 152, fig. 8; Goff, 1985: 2–11, figs. 2–9.

Chalcolithic period.⁶⁹ Ethnographic comparisons attest to the use of large and low vessels to let the milk rest during the production of yogurt, butter or cheese.⁷⁰ This allows the formation, on the surface, of the creamy part of the milk due to a spontaneous raising process; the wide diameter of the mouth means that a larger surface of the product is in contact with the air, thus allowing a faster proliferation of enzymes (Fig. 5).⁷¹

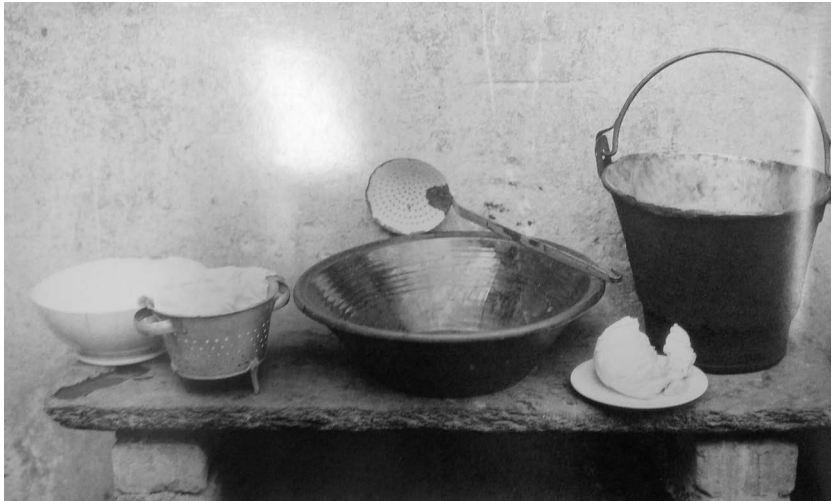


Fig. 5. Tools for dairying in 1900 in Piemonte, Italy: at the centre there is the basin for resting the milk (from Canobbio, Telmon, 2008: fig. 2166).

The basins for resting milk, within an archaeological context, couldn't be particularly diagnostic.⁷² However, these containers can possibly be distinguished from the bowls used for serving or consuming food due to their larger dimensions.⁷³ The presence of decoration can constitute a further criterion of distinc-

⁶⁹ Craig *et al.*, 2003: 260–261, fig. 2.

⁷⁰ For example, in modern Pakistan (Gouin, 1990: 51, Fig. 7.i; Gouin, 1997: 167, fig. 5.5–6), in Australia, XIX–XX sec. (Casey, 1999: 4, Pl. 1), in Italy, 20th c. (Canobbio, Telmon, 2007: 244, Fig. 6124; Canobbio, Telmon, 2008: 252, Fig. 2166), in the Swiss Alps, XVII sec. (Bozzetti, 1993: 29; Bozzetti, 2011: 22, Fig. 1.16). The use of this specific type of container for the resting phase of the milk in the butter and cheese production process is confirmed by Prof. Guido Tallone (Istituto Lattiero Caseario e delle Tecnologie Alimentari di Moretta) (personal communication).

⁷¹ Gouin, 1990: 51.

⁷² Gouin, 1997: 167.

⁷³ On the matter see: Henrickson, McDonald, 1983: 632; Hally, 1986: 288–290; Juhl, 1995: 34–35; Wilson, Rodning, 2002: 32–33. In the present research, only vessels having at least a diameter of 26 cm were taken into consideration.

tion.⁷⁴ On the other hand, the application of a slip or a polished surface would make the container more suitable for containing liquids.⁷⁵

3. Conclusion

The attribution of a specific function to a pottery shape on the basis of its morphological characteristics is usually a complex task; moreover, a vessel could be used in different ways and for more than one type of contents; conversely, different types of containers may well serve the same function.⁷⁶ Bearing in mind these difficulties, an interpretation of vessels in relation with milk processing could not be considered as definitive. Nevertheless, considering the specific archaeological contexts as well as the evidence of herding and exploitation of sheep, goats and cattle at the sites, it seems plausible that some vessels were used for the production of milk derivatives. The study presented here has thus tried to propose some possible identifications.

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⁷⁴ Hally, 1986: 275–276; Rice, 1987: 240; Juhl, 1995: 35; Wilson, Rodning, 2002: 33; Duistermaat, 2008: 432.

⁷⁵ Henrickson, McDonald, 1983: 633; Rice, 1987: 231–232; Orton, Tyers, Vince, 1993: 221; Karageorghis, 2001 and following discussion; Duistermaat, 2008: 433–434.

⁷⁶ Ellison, 1984: 63; Rice, 1987: 207–212, 224–233, 236–243; Juhl, 1995; Duistermaat, 2008: 423–424, 431–437.

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“Ferment to Be”

Butter and Cheese Production in the Third Millennium BCE Babylonia*

Paola Paoletti

“Humans did not invent or create fermentation; it would be more accurate to state that fermentation created us.”¹

* This title was first used in the article “Ferment to be: Yotam Ottolenghi’s kashk recipes” by “The Guardian”, last accessed August, 24th 2022, at <https://www.theguardian.com/lifeandstyle/2013/jul/19/kashk-kishk-recipes-yotam-ottolenghi>. The research on dairy processing in the third millennium BCE has been carried out within the project *is3samnum*: Vegetable oils and animal fats in early urban societies of Syro-Mesopotamia – production, distribution and usage funded by the Deutsche Forschungsgemeinschaft (DFG), and the Agence Nationale de la Recherche (ANR) led by Walther Sallaberger (LMU Munich) and Grégory Chambon (EHESS). I am grateful to the team of the *is.MesopOil* project, namely Walther Sallaberger, Grégory Chambon, Anne-Isabelle Langlois, Manon Ramez and Veronika Gacia for allowing me to use part of the results of our research in this paper. The research results presented in this article could not have been reached without the invaluable help of electronic databases of Mesopotamian texts, namely the Data Base of Neo-Sumerian Texts (BDTNS: <http://bdts.filol.csic.es/>), the *Writing Sumerian* corpus (<http://corpus.writing-sumerian.assyriologie.uni-muenchen.de/>) that also published the transliterations of the DFG-project “Sumerian Glossary”, the “Münchener Sumerischer Zettelkasten” (<https://www.zettelkasten.assyriologie.uni-muenchen.de/>) and the Cuneiform Digital Library Initiative (CDLI: <https://cdli.ucla.edu/>). I would also like to thank Walther Sallaberger and Angela Greco for their precious comments and suggestions during the conduction of this research and the drafting of this paper. Moreover, I am indebted to Jonathan Taylor, Curator in the Department of the Middle East at the British Museum, for providing pictures of the tablet BPOA 1 1659. This article also profited greatly from the stimulating papers and the fruitful discussions held during the workshop “Animal Fats in the Ancient Near East and Beyond. An Interdisciplinary Colloquium” in Paris on June 16th–17th, 2022. I also would like to thank the anonymous reviewer of the article for valuable suggestions and corrections in view of its publication in this volume. Notwithstanding all this, I bear the responsibility for whatever mistake, inconsistency, or imprecision this article might include. Abbreviations mostly follow BDTNS.

¹ Sandor Katz in “The Food Programme” of July 24th, 2022 (<https://www.bbc.co.uk/programmes/m0019jv6>).

1. Introductory remarks

Natural fermentation played in antiquity – and still plays today – a highly significant role in food conservation and preparation as “fermentation produces products that are good to eat – and store”,² from bread to beer, from fish to dairies and much more, already from the Neolithic onward.³ This is particularly true for geographical areas where climatic conditions constantly threaten food conservation and for ancient societies that did not dispose of modern techniques or materials to preserve or process specific products. Yet, due to the various limits of the archaeological techniques and their application, finding archaeological evidence of something that is a transformative process has been challenging (Hendy *et al.*, 2021: 199). In the past 20 years, numerous studies increasingly developed archaeological approaches to identify dairy practices, like, e.g., the investigation of zooarchaeological material for detecting herding strategies, the analysis of oxygen stable isotope values to determine the milking season of specific breeds or also lipid analysis on ceramic vessels to determine the consumption and process of various types of fats. Nevertheless, they can only provide insight into a specific aspect of the matter (Hendy *et al.*, 2021: 199; Rosenstock *et al.*, 2021: 261–263). Instead, despite not explicitly documenting manufacturing processes in detail, the textual sources from south Mesopotamia provide a window into the technical and cultural aspects of dairy manufacturing in the second half of the third millennium BCE that other data sets can rarely offer.

Since the early 80ies of the past century, ground-breaking studies by Gomi (1980), Stol (1993–1997; 1993) and Englund (1991; 1995a; 1994b) paved the way for the understanding of the numerous Sumerian administrative documents about butter and cheese. They mapped out the essential terminology regarding dairy products, disclosing the dairy management system in the Ur III and earlier periods and revealing yielding rates, delivery quotas and dairy productivity. However, without absolutely diminishing the invaluable contribution provided by these studies, further elucidation and a new assessment of these sources have recently proved necessary, mainly regarding the nature of cheese and butter and their manufacturing processes. In this respect, the written or the archaeological⁴ evidence does not document the use of starters and/or rennet. Nevertheless, they neither can be excluded beyond any doubt in the reconstruction of the operational sequence of butter and cheese manufacturing in Babylonia during the third millennium BCE. Instead, we should reconsider the significant role natural fermentation might have played in all this.

² Rutherford, 2021: 193.

³ Dunn *et al.*, 2021: 220.

⁴ Rosenstock *et al.*, 2021: 262, 269.

In this regard, this paper will offer a quick overlook of the available sources on butter and cheese and their management in Babylonia at the end of the third millennium BCE. It will then investigate the successive steps of the operational sequence (“*chaîne opératoire*”) involving the production, storage and consumption of butter and cheese. In doing this, the following questions will require special attention: Can we trace the type of cheese and butter produced and their manufacturing processes? Do we know who produced them and which tools they used? And, which energy did they exploit, if we can trace any? How high were yields? Can we estimate how much butter and cheese were produced?

To approach these topics, I will mostly rely on Sumerian administrative documents of the second half of the third millennium BCE from Mesopotamia, south Iraq. Especially relevant in this regard are, on the one hand, the provincial archives of Umma and Ur of the Ur III period in the 21st century BCE. On the other hand, the Presargonic archive of the Emunus in Ĝirsu,⁵ together with individual sources from Umma, Zabalam and Adab,⁶ as well as scattered Sargonic administrative documents from Adab, Ĝirsu, and Umma,⁷ add essential information from earlier periods, i.e., from the 25th to the 23rd century BCE. The cuneiform sources, both administrative and literary, rarely entirely document manufacturing processes, though they sometimes offer detailed glimpses of the various procedures. In particular, the administrative texts of the Presargonic to Ur III period allow a quantification of the data, rarely possible with the written sources of other periods or genres. Moreover, their richness in technical vocabulary makes it possible to reconstruct the *chaîne opératoire* of butter and cheese production. Nevertheless, I will also consider literary and lexical sources of the early Old Babylonian period when necessary.

According to the available evidence, dairy products in the second half of the third millennium BCE were essentially manufactured from cow’s (ab₂) or goat’s (ud₅) milk, while sheep provided wool and were slaughtered to obtain animal fat (Englund, 1995b: 399 fn. 45). Dairy management in the Ur III period centred on two main dairy products: “butter” (i₃-nun) and “sour milk cheese” (ga-ara₃/murub₄).⁸ I will discuss the identification of these two products in more detail later

⁵ E.g., Genava 26 5; DP 272; DP 270; VS 14 131; DP 273.

⁶ E.g., CUSAS 33 244, CUSAS 33 117 and CUSAS 23 11 from Umma; e.g., CUSAS 35 229 from Adab and CUSAS 33 241 from Zabalam.

⁷ In Adab, a group of named cow herders and their deliveries of dairies are particularly well known from various administrative sources, e. g., CUSAS 26 104, CUSAS 20 22, CUSAS 13 187 and see also the commentary by Pomponio / Visicato, 2015: 107–108. From Sargonic Umma, e. g., MCS 9 251; from Sargonic Ĝirsu, e.g., ITT 1 01474, see also the commentary on the expression i₃ ... de₂-a/si₃-ga by Deimel, 1926: 10. From the so-called archive of Šu-ilīšu in Umm el-Hafriyat, e.g., CUSAS 27 21. See also the recent treatment by Paoletti, 2022h.

⁸ Englund, 1995b: 415.

(§ 5). For now, keep in mind that these two products are, beyond any doubt, dairies. In particular:

- a. i_3 -nun must be regarded as a fat because the administrative documents and the thematic lexical list $\text{ĦAR-ra} = \text{hubullu}$ tablet XXIV as well as its old Babylonian forerunners, list it, together with other oils and fats.⁹
- b. The element ga “milk” unquestionably makes ga-ara₃/ga-murub₄ a dairy product.
- c. According to the administrative sources from Umma and Ur of the Ur III period, a constant ratio of 2:3 persists between the quantities of these two main dairy products, butter (i_3 -nun) and “sour milk cheese” (ga-ara₃/ga-murub₄), when listed, e.g., as herdsman’s delivery quotas. In contrast, contemporary sources from Ġirsu mainly document a ratio of 1:1.

In this respect, the herders’ delivery records and the records of the provincial management of dairy products represent by far the most extensive and central documentation and sometimes the only sources about butter and cheese in the third millennium BCE. But how did this management of dairies function? To illustrate it, I will now mostly use sources from the provincial archive of Umma, as they play a paradigmatic role within the Ur III documentation on dairy products in the Ur III period, if compared to contemporary archives such as those from Ur or Ġirsu. I will describe the management of dairy products from the (obvious) point of view of the provincial administration, discussing the obligations of the herders toward the government and its bookkeeping system.

2. The documentation on dairy products and the bookkeeping system in the province of Umma¹⁰

The provincial administration in Umma (as well as in Ur and Ġirsu) entrusted cows and goats to various herders. In particular, cow herders (unu₃), goatherders (sipa ud₅) and herders (na-gada) of Umma were accountable for the province-controlled livestock towards flock overseer (šuš₃) (Stępień, 1996: 40, 52–53, 61, 114, 122–124, 138–139, 150, 173–175). In doing so, the herders assumed a series of obligations towards the provincial administration that they fulfilled, among others, with fixed quotas of dairy products (Englund, 1995b: 394). The provincial

⁹ Nippur Forerunner to ĦAR-ra XXIV, Section no. 8 (partiture from sources B, V, W and D1) in Reiner / Civil, 1974: 122; Old Babylonian Forerunner to ĦAR-ra XXIV, Forerunner no. 15 (OECT 4 154 + 159 and collations of Gurney, O.R. plates I–II), ll. 335–351 in Reiner / Civil, 1974: 157; Old Babylonian Forerunner to ĦAR-ra XXIV, Forerunner no. 17 (= A 7895B), col. vi’ 13–22 in Reiner / Civil, 1974: 161; Old Babylonian Forerunner to ĦAR-ra XXIV, Forerunner no. 21 (= Copenhagen 10086 source V b: photo, collations and copy by Westenholz, Aage plate IV), ll. 10–20 Reiner / Civil, 1974: 165; $\text{ĦAR-ra} = \text{hubullu}$ Tablet XXIV (partiture from sources G, R, F), ll. 90–123 in Reiner / Civil, 1974: 81.

¹⁰ The data presented in this paragraph were first discussed by Paoletti, 2022f: §1.

administration monitored these transactions by writing various administrative documents, keeping track of the animals entrusted to the herders and each dairy delivery from the herders to their final destination on behalf of the administration. In this respect, balanced accounts,¹¹ receipts¹² and inspections¹³ by flock overseers (šuš₃) played a significant role in documenting the management of herds and their dairy products from the provincial point of view. Cattle and goat herders could also account for managing animals and dairy products directly to Uree,¹⁴ who was responsible for collecting animals and related goods in Umma (Stępień, 1996: 50).

After collecting the receipts, the (balanced) accounts determined the variance between the expenditures, i.e., the animals entrusted to the herdsman, and the deliveries, i.e., the dairy products provided by the herdsman to their final addressee on behalf of the provincial administration, in terms of litres of butter (i₃-nun) and of litres of “sour milk cheese” (ga-murub₄). If the herders fulfilled their obligations with other products, like sour milk (ga-se₁₂-a/ga-še-a) or silver, the accounts would indicate the correspondent value in either butter or cheese. Thus, butter and cheese functioned as a benchmark for bookkeeping (Englund, 1995b: 415).

As mentioned before, although all these documents mainly illustrate the administration's perspective, they represent the most important and sometimes the only sources about dairy products and their manufacture in the Ur III period.

3. The management of dairy products: the delivery quotas

3.1 Delivery quotas of the Umma cattle herders¹⁵

Cattle herders were due to deliver the equivalent of 5 litres of butter (i₃-nun) and 7.5 litres of “sour milk cheese” (ga-murub₄) per adult cow per year.¹⁶ These amounts correspond to the processing of 100 litres of fermented milk per adult cow per year (see § 4.1 Table 2 below; Englund, 1995b: 380). The herdsman probably kept the remaining “excess milk” – the milk not required for the rearing of the calf – for their own use. Unfortunately, it is not possible to estimate how much excess milk was available to the cow herders nor how much they were left

¹¹ E.g., MVN 15 108: “balanced account on fat and cheese” niĝ₂-ka₉-aka i₃-nun ga-ara₃, AS.03.00.00; Santag 6 254: “balanced account on PN, flock overseer of the governor” niĝ₂-ka₉-aka PN unu₃ ensi₂-ka, ŠS.03.03.00.

¹² E.g., SNAT 382: “Atu received it” a-tu šu ba-ti, AS.07.00.00.

¹³ E.g., MCS 8 88 BM 105375: “inspection of the cattle of the governor” g_{urum}₂ aka gud ensi₂, ŠS.01.05.00.

¹⁴ E.g., SET 130 r. vii 1–2 “balanced account on small cattle, fat, and wool (by) Uree” niĝ₂-ka₉-aka udu i₃ siki / ur-e₁₁-e, AS.04.00.00.

¹⁵ The data presented in this paragraph were first discussed by Paoletti, 2022f: §3.1.

¹⁶ E.g., see the delivery quotas documented by BPOA 7 1729 and other similar sources from Umma in Paoletti, 2022d.

with after delivering the expected quotas *pace* (Englund, 1995b: 378 fn. 4, 383–384).¹⁷

3.2 Delivery quotas of the Umma goat herders¹⁸

Umma goat herders were due to deliver either 0.3 litres of butter (*i₃-nun*) and 0.5 litres of “sour milk cheese” (*ga-murub₄*) or 0.5 litres of butter and 0.75 litres of “sour milk cheese” respectively per nanny goat per year.¹⁹ These quotas are both attested as expected delivery quotas (e.g., AUCT 2 391), and deliveries effectively carried out by the goat herders (e.g., Nisaba 24 27). However, the higher quota of 0.5 litres of butter and 0.75 litres of cheese per nanny goat per year is more often attested than the lower one. Unfortunately, the available data is insufficient to discern if these different quotas were tied to specific variables, like the lactation period or the age of the animals. Nevertheless, according to the available sources,

¹⁷ Englund (1995b: 378) assumed that “cows under rudimentary care and not selectively bred for milking have been shown to produce just 700 – 800 litres per year”, and about half of this amount – ca. 350 litres – “may be required for the rearing of the calf”. This way, according to Englund (1995b: 383–384), the due delivery quotas from Umma and Ur represented “from a third to a half of the milk production expected to remain after the suckling of the calves and so may be considered comparable to the third rental payment expected from the grain harvest of rented fields best known from the Old Babylonian period on”. Though as appealing as these figures are, they must be taken with a certain degree of caution, although they resemble production figures from the Middle Ages (Englund, 1995b: 378 fn. 4), as they stem from modern stocks in Turkey, Kurdistan and Africa. Indeed, the annual production of bovine milk depends very much on the geographical, climatological, and environmental characteristics of the region, on feeding strategies and the availability of specific pastures. Moreover, already since the antiquity, cows have undergone a very long selection process for increasing milk and/or meat production (Roffet-Salque *et al.*, 2017: 7–13). On the one hand, shorthorn cattle began to replace the original longhorn breed probably around 3000 BCE and evolved physiologically during the 3rd mill. towards higher milk production. On the other hand, cervico-thoracic-humped cattle (so-called “zeboïd” by Mason, 1984) likely came from the Makran coast into the Persian gulf towards the end of the 4th mill. and spread into Mesopotamia at least until the first half of the 3rd mill. BCE. Nevertheless, in southern Babylonia the original humpless (the shorthorn cattle), as well as the zeboïd cattle, were almost completely replaced by the thoracic-humped zebu during the middle of the 2nd mill. BCE. This encounter with the original humpless cattle formed also intermediate breeds with small humps cervical or cervico-thoracic in position that spread among others in Iran and Iraq (Mason, 1984: 6–16). These facts hence do not allow to compare modern data from the Near East on the average of milk yield per cow per year with data from the 3rd or first half of the 2nd mill. BCE (Legel, 1990a: 67–71, tab. 4/1; 144–155; Mason, 1984: 15–16; Roffet-Salque *et al.*, 2017: 7).

¹⁸ The data presented in this paragraph were first discussed by Paoletti, 2022f: §3.2.

¹⁹ The record of goat herds and their products AUCT 2 391 is a paramount source about the delivery quotas of goat herders; see the recent treatment by Paoletti, 2022e.

we can exclude any ties to specific goat breeds²⁰ or a particular period.²¹ These two quotas for goat milk products correspond to the processing of respectively 6 litres (lower quota) and 10 litres (higher quota) of fermented milk per nanny goat per year (see also § 4.1 Table 2 below).

Now, the question arises: can we estimate how much excess goat milk per nanny goat per year was available to the herders and how the expected delivery quotas weighed thereon? To do this, we must gather ethnographic data on goat milk production from modern Near Eastern regions and make clear if we can — differently from the case of the bovine milk — use them for the analysis of the data from Umma in the Ur III period (see the treatment below on § 6).

3.3 Delivery quotas of the Ĝirsu goat and cow herders in the Ur III period²²

As in Umma, also in Ĝirsu, the documents registering the deliveries of dairy products by the herdsmen represent the most important sources about butter (*i₃-nun*) and “sour milk cheese” (*ga-ara₃*). These obligations were fulfilled by defined quotas of these two leading products as butter and “sour milk cheese” functioned as a benchmark for the bookkeeping here, too, like in Umma and Ur (Englund, 1995b: 415). Specific records document the management of these products, but, unlike Umma, hardly any annual balanced accounts of dairy management are available from Ĝirsu.

Unlike Umma and Ur (see § 3.1, 3.2, 3.4, § 4.1), in Ĝirsu, there is a constant relationship of 1:1 between the two main dairy products, butter and “sour milk cheese”. Ĝirsu goat herders (*sipa ud₅, na-gada*) were due to deliver 0.3 litres or 0.5 litres of both butter and “sour milk cheese” per nanny goat per year (e.g., CDLI P210056 and PDT 2 0947; Englund, 1995b: 382 fn. 12, 398 fn. 45, 401 fn. 49, 420 fn. 78). Whereas the delivery quotas of the goat herders are well known, no sources from Ĝirsu hitherto allow to calculate the delivery quotas of the cow herders.

A few texts from Ĝirsu document transactions involving butter and “sour milk cheese” from cows’ and goats’ milk of either the whole province (e.g., CT 05 25 BM 018346, Šu.47.00.00) or of a specific individual (e.g., TCTI 1 00878, Šu.46.00.00). These sources feature following (final) subscript: “the cows’/goats’ fat (has been) settled” (*i₃ ab₂ (ba)-ĝar-ra, i₃ ud₅(-da ĝar-ra)*). According to Englund (1995b: 382 fn. 12), this subscript designated the “norm” for the annual

²⁰ The quotas of possibly different breeds are often calculated together, are the same for possibly different breeds or the texts do not distinguish possible different breeds.

²¹ Both quotas are attested in the same period (at least from Šulgi 43 to at least Ibbi-Suen 03).

²² The data presented in this paragraph are collected and discussed in more detail by Paoletti, 2022g: §1.

quotas per adult cow or nanny goat. Though they instead document the quota of butter and cheese due by each herder to the provincial administration (see the table presented by Paoletti, 2022g: §1) because they never indicate the number of cows and goats involved in the primary milk production and hence, we cannot calculate the expected quotas of dairy products per animal per year (*pace* Englund, 1995b: 382 fn. 12, 386–388, 401 fn. 49). Few clay labels for tablet baskets reveal that these documents were stored together.²³

Notwithstanding the lack of data about the number of animals involved in primary milk production and the lack of sources about the quotas from the cow herders, Englund (1995b: 382 fn. 12, 387) suggested that Ġirsu cattle herders were due to deliver to the provincial administration the equivalent of 10 litres each of butter and “sour milk cheese” per adult cow per year. These amounts “would represent the full milk production of those adult cows suckling calves, since 15 litres of butter oil can be processed from 300–400 litres of milk, dependent on fat content of the milk and water content of the butter oil” (Englund, 1995b: 388). However, as already stated for the Umma herders (§ 3.1), there is no way to estimate how much cow milk was left to the cow herders after the calf rearing, nor how much goat milk was available to the goat herders at all.

Ġirsu herders were to fulfil the required delivery quotas with butter and “sour milk cheese” or deliver the corresponding amount of silver (e.g., SNAT 208).

3.4 Delivery quotas of the Ur cattle herders in the Ur III period²⁴

The documents registering the deliveries of dairy products by the herdsmen represent – as in Umma and Ġirsu – the essential sources about “butter” (*i*₃-*nun*) and “sour milk cheese” (*ga-ara*₃). These obligations were fulfilled by defined quotas of these two main products and were monitored in balanced accounts (e.g., UET 3 1216: “balanced account on (dairy) fat and cheese of the cow herders” *niġ*₂-*ka*₉-*aka i*₃ *ga / unu*₃-*e-ne*). As in Umma, there is a constant relationship of 2:3 between the two leading dairy products, butter and “sour milk cheese” (except for UET 3 1214, see below). Thus, butter and “sour milk cheese” functioned as a benchmark for bookkeeping in Ur, too (Englund, 1995b: 415).

Ur cattle herders were due to deliver the equivalent of 5 litres of butter and 7.5 litres of “sour milk cheese” per adult cow per year (UET 3 1215; UET 3 1216; UET 9 1103; Englund, 1995b: 14), as documented for Umma (§ 3.1). Only one text documents a different quota per adult cow per year that deviates from the norm: namely, 5 litres of both dairy products butter and “sour milk cheese” (UET 3 1214, [XX.XX].00.00; Englund, 1995b: 14 fn. 17). Gomi (1980) showed that

²³ ITT 2, 03391, IS.01.00.00: “tablet basket: cows (and) goats in stock as well as settled cows’ (and) goats’ fat. It is present” *bešeġ dub-ba ab*₂ *ud*₅ *gub-ba u*₃ *i*₃ *ab*₂ *ud*₅-*da ġar-ra i*₃-*ġal*₂; MVN 11, R, Šu.48.00.00; ITT 5, 09867, 00.00.00.00).

²⁴ The data presented in this paragraph were first discussed by Paoletti, 2022m: §1.

Ur cow herders could hardly meet these quotas. Thus, he concluded that in Ur, productivity decreased significantly during the reign of Ibši-Suen compared to dairy productivity documented in Umma or Ĝirsu a few years before.

Two texts also register cream (*gara*₂) and fermented/sour milk (*ga-še/se*_{12-a}) together with butter and “sour milk cheese” as delivery quotas of dairy products from cow herders (UET 3 1220, UET 3 1067). As the intermediate product of butter manufacturing (§ 4.2 Stage 2.1), cream is rarely attested and generally in low quantities (0.3 to max. 2.3 litres, e.g., in UET 3 1220 and UET 3 1067). In the Presargonic period, cream instead constituted a delicacy often offered to the deities (e.g., DP 53).

This shows how Ur herders were to fulfil the delivery quotas not only with butter and “sour milk cheese” but also with equivalent quantities of sour milk (e.g., UET 9 0829) or cream (e.g., UET 3 1220). Likewise, they could also pay the corresponding amount in silver (e.g., UET 3 1198).

Unfortunately, no document from Ur provides data on the delivery quotas of dairy products by goat herders (Gomi, 1980: 6).

3.5 The delivery quotas of cow and goat herders from the Presargonic to the Sargonic and the Ur III period²⁵

The following table summarises the butter and “sour milk cheese” delivery quotas owed by the herders in the Presargonic, Sargonic and Ur III periods. It indicates the quantity in litres or *sila*²⁶ per animal per year.

In the Presargonic period, cattle herders had to deliver the equivalent of 10 *sila* of butter (*i*₃(-nun) *ab*₂/*ud*₅) and 18 *sila* of “sour milk cheese” (*ga’ara*(LAK-490)) per adult cow per year; 3.4² litres of butter and 4.4² litres of “sour milk cheese” per milk cow per year were due in the Sargonic period;²⁷ the herders in the Ur III period had to deliver instead 5 litres of butter and 7.5 litres of “sour milk cheese” per milk cow per year.

Goat herders had to deliver 0.6 *sila* of butter and 1 *sila* of “sour milk cheese” per nanny goat per year in the Presargonic period; 0.3 to 0.5 litres of butter and 0.5 to 0.75 litres of “sour milk cheese” per nanny goat per year were due in the Ur III period.

²⁵ The data presented in this paragraph are collected and discussed in more detail by Paoletti, 2022h; 2022i.

²⁶ In the Sargonic and Ur III periods, one *sila* corresponded to about one litre; in the Presargonic period, we cannot assume this ratio with any certainty, see Powell, 1990: 503–507. Englund (1995b: 387) assumed that 1 *sila* corresponded in the Presargonic period to 1.5 litres.

²⁷ These data stem from an account of bovines and their dairy products from Adab (SEL 19 p. 5 no. 1). Unfortunately, the relevant passage for calculating the delivery quota is damaged and does not allow a precise reconstruction.

Altogether, this table highlights the evolution of the redistributive system: from the communal organisation in the Presargonic period, characterised by the delivery of a significantly higher percentage of the total dairy production to the central organisation,²⁸ to the quota system in the Ur III period, characterised by the return of a lower share.

Table 1: Expected annual delivery quotas from cows'/goats' herder from the Presargonic to the Ur III period.

Date	Place	Goats' Milk		Cows' Milk		Ratio
		Butter	Sour milk cheese	Butter	Sour milk cheese	
Presargonic	Ĝirsu	0.6 <i>sila</i>	1 <i>sila</i>	10 <i>sila</i>	18 <i>sila</i>	5:9 <i>sila</i>
Sargonic	Adab			3.4 [?]	4.4 [?]	1:1.3
Ur III	Umma	0.3	0.5	5	7.5	2:3
		0.5	0.75			
	Ĝirsu	0.3	0.3	n.a.	n.a.	1:1
		0.5	0.5			
	Ur	n.a.	n.a.	5	7.5	2:3

3.6 Ethnographic data on goat milk production: a comparison with Ur III Umma sources²⁹

While in the case of cow's milk, the development of cattle husbandry already in antiquity does not allow the use of ethnographic data to analyse the Umma sources, this is likely possible for the productivity of goat milk. Indeed, according to Redding (1981: 12, 33, 107), the annual milk production of goats depends mainly on the output of milk per lactation and the length of the lactation period. Instead, the variability generally introduced by breed differences almost disappears with data from Middle Eastern goat breeds, as they feature a relatively low genetic variation. The same is true if we consider that animals kept under extensive husbandry will not feature differences in their nutritional state (Redding, 1981: 107). Moreover, according to Redding (1981: 12), most of the ethnographic studies on goat husbandry in the Middle East were carried out on flocks main-

²⁸ If we consider the Presargonic *sila* as amounting to ca. 1.5 litres as assumed by Englund (1995b: 387), the Presargonic herders were due to deliver at least double as much as in the Ur III period: 15 litres of butter and 27 litres of cheese per adult cow per year; 0.9 litres of butter and 1.5 litres of cheese per nanny goat per year.

²⁹ The data presented in this paragraph are discussed also by Paoletti, 2022f: §3.3.

tained under extensive conditions, i.e., kept on natural pastures with little or no supplementary feeding and absence of modern veterinary care as well as poor control of the breeding process.³⁰ This allows the establishment of comparable values combining ethnographic and biological data that we can use to analyse the data documented in the Umma texts. Therefore, we can use the data on the total milk yield per lactation period of goat breeds held in Iraq and registered in ethnographic sources. According to Redding (1981: 58, 109) and confirmed by Legel (1990b: 411–417), two breeds are mainly held in Iraq at present: the “Syrian Mountain” goat (also known as Baladi, Mamber, Iraqi or Anatolian Black) and the “Damascus or Shami goat”. Despite being also kept under extensive conditions, the “Damascus goat” yields much more milk than the “Syrian Mountain” goat, but this is dependent upon good nutrition (green fodder), and it is restricted to well-watered valleys and areas around cities and villages (Redding, 1981: 109). Indeed, the total milk yield of goats responds better to the increased nutrition quality than sheep’s milk yield (Redding, 1981: 109).

Now, according to Ur III sources, goats were, differently from sheep or bovines, not intentionally fed with barley on a large scale (Stępień, 1996: 33). We have only very few sources of the Ur III period documenting fodder (ša₃-gal) for goats together with equids (anše), pigs and sometimes birds, but this fodder is destined either to the *nakabtum* (e.g., AICAB 1/2 Ashm. 1971–259, Um) or to Ur (ša₃ uri₅^{ki}-ma: e.g., OrSP 18 24, Um; Nisaba 15/2 0924, Gi). Therefore, for a comparison between ethnographic data and data from the Ur III period, we will consider the “Syrian Mountain” goat, that under extensive husbandry, is not regularly fed. Redding (1981: 109) refers to ethnographic studies on “Syrian Mountain” goats in Israel that document an average total yield per year of ca. 77 kg (= 74.6 litres)³¹ of milk per nanny goat kept under bad management and poor feeding, i.e., typical conditions of extensive husbandry. These goats yeaned once a year; therefore, this figure corresponds also to the expected milk output per lactation. The lactation period of the “Syrian Mountain” goat lasts an average of 210 days (Redding, 1981: 109–110; Marques de Almeida / Haenlein, 2017: 23).

From the data illustrated in § 4.1 table 2 below, we know that the expected delivery quotas of goat herders attested in the Umma sources corresponded to the processing of 6 or 10 litres of fermented milk per nanny goat per year. Unfortunately, data about the excess milk of goats is scarce and, if available, only from

³⁰ The administrative documents of the Ur III period with their many details on the management of small cattle and cattle herds offer a window into the herding strategies followed in this period. See among others Heimpel, 1993; Liverani / Heimpel, 1995; Steinkeller, 1995; Wu, 1996; Englund, 2003; Brumfield, 2011; Adams, 2012; Tsouparopolou, 2013; Widell, 2020.

³¹ For the conversion of kg to litres, I follow Redding (1981: 108), who assumes the specific gravity of goat milk amounting to 1.0316 kg/m³.

breeds held under intensive husbandry (e.g., Legel, 1990b: 461). For this reason, it is eventually not possible to estimate how much the expected delivery quotas of 6 or 10 litres per nanny goat per year weighed on the quantity of excess milk available to the herders of Ur III Umma nor how much milk they were left with in the end.

The herders were to fulfil the expected delivery quotas with butter (i₃-nun) and sour milk cheese (ga-murub₄). Still, they could also deliver equivalent quantities of various other goods, like other dairy products or wool, or a correspondent amount of silver (e.g., OrSP 47–49 385; Nisaba 09 273; SAT 3 1528; MVN 15 108; Englund, 1995b: 380–384, 394).

4. The manufacture of dairy products in the Ur III period

The manufacturing process of dairy products and their by-products remains largely undocumented by the administrative texts of the Ur III period, revealing that these processes were of no relevance for the administration that produced the written sources available to us now. Unlike sesame and sesame oil produced under the direct supervision of the central administration,³² butter and cheese were hence very likely manufactured at the herders' level,³³ and the central administration was only interested in the final products.³⁴

As the manufacturing processes, also by-products like sour buttermilk (ga i₃-ti-ir-da) and whey were left largely undocumented by the administrative sources.³⁵ They occur almost only in literary compositions (e.g., VS 10 123). Hence, we assume that the provincial administration was not interested in these by-products, which were very likely left to the herders for their own benefit.

4.1 The production of butter and cheese: yield rates in the Ur III period³⁶

Despite primarily documenting the management of dairy products, the administrative records from the provincial archives of Umma and Ur reveal essential in-

³² See, e.g., the recent study on sesame oil production in the Ur III period according to the administrative sources from Irisağrı by Sallaberger, 2021.

³³ As already inferred by Jauß (2017: 31; 2018: 190) for the earlier Uruk period. In this regard, this assumption might find confirmation in the hymn Lipit-Eštar A (ETCSL c.2.5.5.1) l. 45: “I am a shepherd making butter and milk abundant in the cowpen” (sipa e₂-tur₃-re i₃ ga maḥ-me-en (// e₂-tur₃ -ra , i₃ ga x mah -me-en ; i₃ ga sag possible dans SS, mais pas dans TT). Or also the literary composition Enki and the world order (ECTSL c.1.1.3) l. 30: “the ʿcowherd⁷¹ spends the day rocking his churns.” (ʿunud⁷¹-de₃ du₉-du₉ du^gṣakir₃-ra-(ka)-na u₄ im-di-ni-ib-zal-e).

³⁴ See Paoletti, 2022f: §1.

³⁵ Only “(sour) buttermilk” (ga) i₃-ti-ir-da is twice attested in administrative texts from Ur, UET 3 1219 and UET 9 0825; see also Stol, 1993–1997: 197–198 and Jacobsen, 1983: 196–197).

³⁶ This paragraph expands the treatment by Paoletti, 2022f: §2.

formation on the yield rates of butter and cheese production from fermented milk (Englund, 1995b: 418–422).

Five annual balanced accounts from Umma (see Table 2 below) register the expected yield rate of butter (i₃-nun) and “sour milk cheese” (ga-murub₄) from fermented milk (ga-še/se₁₂-a) of both cows’ and goats’ milk. The rate amounts to 5 % of the fermented milk volume for butter and 7.5 % for “sour milk cheese” per cow or nanny goat per year. The same rates are attested unregarded of the animal type – cow or goat – and sometimes it is not possible to discern if the rate attested was tied to a specific milk type. This shows that concerning butter and cheese yielding rates, no distinction was made between goat’s or cow’s milk. Indeed, goat’s and cow’s milk are comparable in terms of major nutrient composition, flavour and appearance (Rosenstock *et al.*, 2021: 257; Park, 2017: 42, 43, 44 and passim; Redding, 1981: 111–113, Table IV-1). Only the characteristic caseins in goat (and sheep) milk produce firmer curds than cattle milk; therefore, mixing milk of different ruminants enhances coagulation (Rosenstock *et al.*, 2021: 257). The following table summarises the attestations of yield rates from fermented milk documented in the Umma sources.

Table 2: Expected yield rates of butter (i₃-nun) and “sour-milk-cheese” (ga-murub₄) from fermented/sour milk (ga-še/se₁₂-a) in Umma in the Ur III period.

Text		Type of Milk	Litres of Sour Milk (ga-se ₁₂ /še-a)	Butter (i ₃ -nun)		“Sour Milk Cheese” (ga-murub ₄)	
				litres	% _{vol}	litres	% _{vol}
MVN 15 108	r. ii 5–7	Cow’s milk	2,215	110.68	5	166.09	7.5
Nisaba 06 20	r. i 6–8	Not specified	330	16.5	5	24.68	7.47
	r. iii 1–3	Not specified	30	1.5	5	2.25	7.5
AuOr 35 107	r. iii 17’– 19’	Goat’s milk	390	19.5	5	29.25	7.5
	r. iv 7’– 9’	Goat’s milk	360	28	5	27	7.5
Nisaba 24 24	o. iv 20– 22	Goat’s milk	360	28	5	27	7.5
SET 130	r. ii 31– 33	Not specified	86	4.13	4.8	6.41	7.46
	r. iii 9– 11	Not specified	7	0.32	4.6	0.52	7.5

These yield rates are entirely consonant with those expected to result from fermented milk processing into butter and cheese (see below Stage 1). Still, more importantly, they provide significant empirical values (Englund, 1995b: 418–422

+ fn. 76, 77). Moreover, they indirectly confirm that the two main products – butter and cheese – were made from the same milk batch.

The same rates of 5 % for butter and 7.5 % for “sour milk cheese” are also attested in *Irisaḡrig*,³⁷ whereas the documentation from Ur reveals different rates. Indeed, according to five balanced accounts from Ur,³⁸ the expected yield rate from fermented milk (*ga-se₁₂-a*) amounts here to 6.5–6.6 % of the milk volume for butter and 9.9–10 % of the milk volume for “sour milk cheese” per adult cow per year (Gomi, 1980: 21 fn. 25). It is still not clear why the yields of butter and cheese from fermented milk in Ur had to be higher during the reign of Ibbi-Suen even though the deliveries of dairy products by the herders decreased, probably as a consequence of the political instability at the end of the Ur III period (Gomi, 1980). It is possible that a poorer nutritional status caused by bad management of livestock herds led to a lower milk output. But, on the other hand, the Ur herders might have developed a different or more efficient manufacturing process that allowed for a higher concentration of fat in the fermented/sour milk (see below § 4.2 Stage 1)? In the absence of more data, this must remain an open question. Interestingly, among nomadic pastoral communities of Khenia, concentrated fermented milk is made by removing whey to increase the total solids in the curd (Aneja *et al.*, 1990c: § 5.1.2).

As mentioned at the beginning, the documents on the management of milk products from Umma feature a constant relationship of 2:3 between the two main dairy products, butter and “sour milk cheese”. In contrast, the administrative sources from *Ĝirsu* feature a relationship of 1:1.³⁹ On this basis, we can reconstruct the following manufacturing process.

4.2 The production of butter and cheese: reconstruction of the manufacturing process⁴⁰

Mesopotamian climatic conditions featuring relatively high ambient temperatures and the absence of refrigeration facilities imply that milk became sour in 12 to 24 hours (Aneja *et al.*, 1990c: § 5.1). Natural fermentation was and still is a means to preserve milk from spoiling. Thus, as already mentioned at the beginning, many traditional dairy manufacturing processes include a fermentation stage, and this affects the product’s shelf-life, quality, and characteristics (Aneja *et al.*, 1990a).

³⁷ See Nisaba 15/2 1034 i 3’–5’.

³⁸ The final subscript is not preserved for each of these texts, but because of their structure, they are nevertheless all to be considered as balanced accounts: UET 3 1215; UET 3 1216; UET 3 1214; UET 9 1103; UET 9 1026.

³⁹ See also Paoletti, 2022g.

⁴⁰ This paragraph deals in more detail with the data collected and discussed by Paoletti, 2022l.

Stage 1: fermented/sour milk.

We assume milk with 4 % fat both for bovine as well as for caprine milk (Rosenstock *et al.*, 2021: 257; Park, 2017: 44). Both milk types were not intentionally processed separately and – as mentioned above – if processed together, then this enhanced coagulation (Rosenstock *et al.*, 2021: 257).⁴¹ The raw milk is left to stand and ferment spontaneously until the fat coagulates.⁴² During coagulation, the fat gathers on the surface and is skimmed off (Boussekine *et al.*, 2020: 75 § 3.3.1.1). This step is necessary because, according to the Sumerian administrative texts, both products – butter and cheese – resulted from the same milk batch. Consequently, not all the milk is churned for butter production, as is usually the case.⁴³ In Jordanian traditional dairy products, milk is either placed in a container (in the past, a pottery vessel) or in a specially prepared goatskin to ferment. The use of skins is not documented in our sources from Mesopotamia, as no such product occurs among the provisions of the herders, nor is it recorded in other types of administrative texts. Instead, clay vessels often occur in connection with fermented milk. Moreover, once pottery, crockery or other equipment have been used to ferment milk, traces of the culture are always present that facilitate fermentation again (Rosenstock *et al.*, 2021: 258; Palmer, 2002: 184, 192). In this primary fermentation stage, the milk will likely lose a little water, which could

⁴¹ Milk from horses and donkeys has very high lactose concentration and does not form firm curds (Rosenstock *et al.*, 2021: 257).

⁴² Following Rosenstock *et al.* (2021: 258; 268), spontaneous fermentation of untreated milk is possible thanks to pro-technological milk-borne microbes (LAB = Lactic Acid Bacteria) that excrete lactic acid and other substances that inhibit pathogenic microbes. And even more so if the ambient temperature did not drop below 20°C. See also the observation by James (1975) that yoghurt is fermented at ca. 40°–50°C (thermophilic LAB), while sour milk (mesophilic LAB) requires much lower ambient temperature (Rosenstock *et al.*, 2021: 256) and compare, e.g., traditional dairy manufacturing in Jordan in Palmer (2002: 184, 192). Rosenstock *et al.* (2021: 258, 269) also discuss the pros and cons of mesophilic vs thermophilic LAB fermentation and their different onset conditions depending on geographical and climatic regions. Mesophilic LAB fermentation does not require boiling off the fresh milk nor a tight temperature control to ensure the manufacturing of sour milk and related products. Instead, thermophilic LAB fermentation requires very tight temperature control and higher temperatures to provide the output of yoghurt-like products, being not suitable for all lifestyles or climates. Moreover, sour milk from mesophilic LAB fermentation produces lactic acid that can be metabolised by infants. In contrast, thermophilic LAB fermentation might produce a type of lactic acid (levotary, L-) that cannot be metabolised by infants.

⁴³ This also strengthens the identification of *ga-ara₃/murub₄* with “sour milk cheese” from skimmed sour milk (Stage 2.2 below) because full-fat cheese variants are more suited for rennet than lactic acid coagulation (the latter being best suited for skimmed sour milk cheeses (Rosenstock *et al.*, 2021: 269).

lead to a slightly higher fat concentration (see above § 4.1 on the yield rates from fermented milk in Ur III Ur).

Fermented/sour milk is written in Sumerian with the terms *ga-še/se₁₂(SIG7)-a* (Stol, 1993–1997: 193, 198; Attinger, 2021: 367). In the Ur III period, the term *ga-še-a* is attested in the administrative documents mostly from Umma and Puzriš-Dagān, a few times from Ĝirsu and Irisaĝrig, once also in Nippur (earlier also once respectively in Sargonic and Lagash II Ĝirsu). In contrast, the variant *ga-se₁₂(SIG7)-a*⁴⁴ mainly occurs in Ur III Ur, sometimes in Ĝirsu and Umma. Herewith the distribution of these terms is complementary in the Ur III period. As we already mentioned, according to the herdsmen’s accounts, fermented milk constituted the basis for butter and “sour milk cheese” production.⁴⁵

Fermented milk was measured according to its capacity or in jars (dug). It was poured into and stored in clay jars of different capacities, often ranging from 2 to 15 litres.⁴⁶ These vessels could have been closed by a piece of leather.⁴⁷ A text from Umma lists a sieve for milk and other kinds of sieves.⁴⁸ These clay tools could have likely served for the “resting”, i.e., the fermenting of the milk. Again, according to ethnographical data from north Jordan, they used pottery vessels rather than skins for the processing of milk. Even the straining of *laban*, the fermented sour milk, could be done without a straining cloth, and in north Jordan, they once used pots rather than fabric (Palmer, 2002: 192).

Stage 2.1: butter and buttermilk.

Most traditionally manufactured butter is made by churning fully soured (i.e., fermented) whole milk⁴⁹ or cream (Aneja *et al.*, 1990b: § 6). When churning, the milk fat (cream) separates from the low-fat, watery matter (skimmed milk). Coagulated and acidified milk, i.e., fermented/sour milk, churns into butter more

⁴⁴ The etymology of *ga-še/se₁₂(SIG7)-a* is still unclear. Because the *se₁₂* variant does not end in -g, the term cannot be linked to *si₁₂-g* “green, yellow” (on the reading of SIG7 see Molina / Such-Gutiérrez (2004: 4–5), Attinger (2020) and Attinger (2021: 1044 fn. 3294).

⁴⁵ When not processed into other dairy products, sour milk was intended for various purposes, including being delivered to the palace and for performing various rituals (e.g., “rites” *šiškur₂*, “bathing, washing” *a tu₅-a*), for the kitchen and to bake sourdough bread (*babir₂*), for the manufacture of scented oils (e.g., JCS 14 112 17: PD; BPOA 6 1527, BCT 2 195: Um; MVN 07 199: Gi).

⁴⁶ E.g., BCT 2 195 and UTI 6 3627 (Umma).

⁴⁷ BPOA 6 0459 (Umma).

⁴⁸ Santag 6 041 r. ii 25 (Umma).

⁴⁹ According to Rosenstock *et al.* (2021: 259), the manufacture of butter by churning the separated cream is possible only with cow milk; all other kinds of milk require churning from fermented whole milk. Moreover, in traditional butter making from soured whole milk, the fat losses to the buttermilk are higher in hot weather; therefore, higher yields of butter are obtained in cold weather (Aneja *et al.*, 1990b: § 6.1.7).

rapidly than sweet milk owing to the lower viscosity of its serum (Aneja *et al.*, 1990b: § 6.1.7). The residual liquid left is buttermilk (Vaclavik / Christian, 2014: 248–251; Velisek, 2013: 119).

Cream (gara₂) is well attested in the administrative texts from the Presargonic period as a delicacy for the deities, less in the later Sargonic and Ur III periods (see § 3.4). Instead, the Sumerian terms regarding the proper production of butter, i.e., “to churn” (dun₅),⁵⁰ the churn (dug^gšakir₃)⁵¹ as a vessel and “buttermilk”⁵² as residue, are rarely attested in the administrative sources,⁵³ but almost only in literary and lexical ones.⁵⁴ As already mentioned, this is probably due to the lack of interest in manufacturing procedures or by-products from the point of view of the central administration.

Stage 2.2: “sour milk cheese”.

After removing cream for butter, the remaining fermented milk further “matures” thanks to the natural lactic acid bacteria in it, and it curdles. This provides the basis for cheese manufacturing. Indeed, buttermilk obtained from churning fermented milk is rich in protein and can be further processed into almost fat-free dried sour milk cheese, like, e.g., Alpine grey cheese, i.e., a by-product of butter production (private communication of J. Peters and E. Märtlbauer) or also the German *Harzer Käse* (Rosenstock *et al.*, 2021: 259). This stage does not require rennet for coagulation to obtain clots of solid cheese, as this is accomplished by the lactic acid excreted during fermentation (Rosenstock *et al.*, 2021: 259). Moreover, no extra heating is needed to remove moisture from the watery mass. In traditional Jordan dairy production, the skimmed fermented/acidified milk (called laban or imhayḍ) that remains from butter manufacturing is either consumed directly or is further processed into cheese. For this, it is strained either in a cloth, in a hollow in sandy sediment or a pot and dried into balls (*jamīd*) which have a long storage life. Depending on climatic conditions, extra heating is not always necessary during this stage. Similarly, the *šīrāz* cheese in Luristan and *kama*

⁵⁰ Attinger, 2021: 312.

⁵¹ Attinger, 2021: 967.

⁵² Attinger, 2021: 551.

⁵³ (Sour) buttermilk ((ga) i/i₃-ti-ir-da) is twice attested in administrative texts from Ur III Ur (UET 3 1219 and UET 9 0825). The churn for butter is indirectly attested only once in Presargonic Ġirsu: dug ga šakir₃ duru₅ “jar of fresh buttermilk”, literally “churn-milk” (DP 59 xvii 12; personal communication of Walther Sallaberger).

⁵⁴ See Jacobsen (1983) for the study of an Old Babylonian Dumuzi lament and particularly the passage o. iii 13 – iv 4 of the main source A (Source A = VS 10 123; B = VS, 2 30 RS; C = N 100; D = CT 58 8); sources B, C, D are syllabic duplicates of the main source A according to Civil (1994: 108 fn. 131) (personal communication of Pascal Attinger). See also the Old Babylonian royal hymn Išbi-Erra E ll. 29–31 in the study of Reisman, 1976. Both these passages deal with dairy processing.

cheese in north-eastern Persia are produced without heating by putting the butter-milk into a skin and allowing the curds to precipitate (Balland, 1992). According to Rosenstock *et al.* (2021: 261), the shelf life of sour milk dried cheese significantly increases if made from fat-reduced by-products of butter production.

Stage 3: From butter to clarified butter or ghee.

Butter contains around 80% fat, about 2% non-fat components (proteins, carbohydrates, and other substances), and the rest (ca. 18 %) is water. However, water in butter facilitates oxidation, which is then leading to rancidity. To avoid oxidation, water must be forced off from butter as much as possible, leaving almost pure butter oil, i.e., ghee (Englund, 1995b: 379–380; Boussekine *et al.*, 2020: 75 § 3.3.2; Sserunjogi *et al.*, 1998). This is traditionally done by heating butter in vessels to temperatures between 40 and 120°C (Aneja *et al.*, 1990b: § 6 and Table 19). However, in the short term, rancidity does not represent a health hazard; instead, it seems to be just a matter of taste and odour. Indeed, many cultures still use and praise rancid fats today, e. g., salted *smen* in Morocco (Deeth / Fitz-Gerald, 2006: 481ff., 513–516, 517ff.).

5. The identification of the main dairy products: butter and cheese⁵⁵

5.1 What is *i*₃-nun?

*i*₃-nun is a fatty substance derived from fermented/acidified milk. *i*₃-nun literally means “princely fat, oil”, and in the Presargonic and Sargonic periods, it primarily indicated goats’ milk butter.⁵⁶ In Ur III Ur and sometimes also in Umma, *i*₃-nun was often abbreviated to *i*₃ “fat, oil” (e.g., UET 3 1214). Like other fats, *i*₃-nun was used to manufacture scented oils, among them *i*₃-nun du₁₀-ga “scented butter” and *i*₃-nun 𒄩𒀭 “...”. According to Sumerian literary texts of the Old Babylonian period (sour) buttermilk (ga *i*/*i*₃-ti-ir-da) and/or butter (*i*₃) resulted from the churning of milk (ga) or cream (gara₂).⁵⁷ As we have extensively discussed in § 3, according to Sumerian administrative sources, butter (*i*₃) together with “sour milk cheese” (ga-ara₃/murub₄) was delivered by cows’ and goats’ herders as a share of their dairy products. In this respect, *i*₃-nun “butter” is one out of many dairy products documented in the administrative texts of the Ur III period, such as “cream” (gara₂), “fermented/sour milk” (ga-se₁₂/še-a) or “sour milk cheese” (ga-ara₃/murub₄). Butter (*i*₃-nun) was kept in jars (dug, e.g., JCS 24 154 27), in clay pots (^{dug}utul₂, e.g., AUCT 1 320) and “travel baskets” made of reed (^gkaskal, e.g., BPOA 1 0658) as well as “(clay) bottles” (^{dug}kur₄-kur₄ “clay large-bellied bottle” DP 265; ^{dug}saman₄ “(clay) bottle” DP 515). This evidence strengthens the iden-

⁵⁵ This paragraph analyses in more detail the data collected and discussed by Paoletti, 2022i: §3.

⁵⁶ See the recent treatment by Paoletti, 2022h; 2022i.

⁵⁷ See the references given above in § 4.2 Stage 2.1.

tification of *i*₃-nun with “butter” (Deimel, 1926: 10 and *pace* the hitherto commonly accepted interpretation as “ghee” or as “clarified butter”; Englund, 1995b; Stol, 1993; 1993–1997; Butz, 1973–1974: 37ff followed by Foster, 1982: 166 fn. 70).

5.2 Butter vs ghee

If subjected to heating, butter could also have been processed into ghee, i.e., clarified butter, to avoid rancidity (Stage 3 above; Matissek, 2019: 570; Sserunjogi *et al.*, 1998). However, there is hardly evidence for this stage of the manufacturing process in the administrative texts from the third millennium BCE. Only one text mentions a fuel delivery for processing butter and “syrup” (*lal*₃). While it is possible that this text documents the process of obtaining “more liquid” butter (and syrup), it can also very likely document a further treatment of already manufactured butter (*i*₃-nun) (and syrup), possibly to produce scented oils/fats (BPOA 1 1659). Given the rarity of fuel and its tight bookkeeping by the central administration (e.g., Brunke, 2011), it is not very likely that butter had always been further processed into ghee and almost did not leave any trace in the administrative written evidence. Butter could have also been heated together with baking bread and/or cooking soup at household level (compare the simultaneous baking and cooking with the same fuel according to Brunke, 2011: 185, 186–189, 220). Due to its specific calorific values compared to reed or wood (Deckers, 2011) and its use predominantly for non-kiln firings (Sillar, 2000: 46), dung fuel might have suited well for the manufacturing of ghee out of butter.⁵⁸ Nevertheless, the documents do not support the assumption that herders in the countryside would have had appropriate cooking vessels for ghee.⁵⁹ In this regard, a passage of the Cylinder B of Gudea offers a detail that might confirm the non-use of heat for the manufacture of butter: “syrup, butter, grapes, fermented milk ... (all) things untouched by fire: it is food of the gods” (*lal*₃ *i*₃-nun *ġešt*_{in} *ga-še-a* ... *niġ*₂ *izi nu-ta*₃-*ga niġ*₂-*gu*₇ *diġir-re-ne-kam*, RIME 3/1.01.07.CylB iii 18–22).

Possibly, a product closely related to ghee or clarified butter could also have been obtained without extra heating simply by exploiting the high ambient temperatures under hot climatic conditions (see also the remark of Deimel, 1926: 10 about liquid butter during summer). Indeed, an intermediate product between but-

⁵⁸ For the use of dung as fuel in Mesopotamia and neighbouring regions, see in particular McCorrison, 2002: 490 and Matthews, 2010: 106. See also Samuel, 1989: 276 for an experiment of dung-fuelled fires in Egypt with local village-made dung cake fuel obtaining a maximum of 640 degrees C in 12 minutes, falling to 240 degrees C after 25 minutes and 100 degrees C after 46 minutes. For the various uses of dung and its prints in the archaeological evidence, see Smith *et al.*, 2018; Laugier *et al.*, 2021: 13; Stein, 2022: 5.

⁵⁹ *Pace* Jauß, 2018: 188–190; Jauß (2017: 30–32) that assumes ghee cooking in strap-handled jars on open fires for the Uruk period. For a more detailed discussion on this matter, see Paoletti, 20221.

ter and ghee, *nigour kibe*, lit. meaning “melted butter” is made in southern and eastern Africa, using only mild heat (about 40°C). This product contains about 10% moisture and can be kept at average room temperature for about six months without developing noticeable rancidity (Aneja *et al.*, 1990b: § 6 and Table 19). Nevertheless, the administrative sources would not document this process either.

5.3 What is *ga-ara₃/murub₄*?

The term *ga-ara₃* identifies “sour milk cheese”, i.e., cheese obtained from the natural curdling of fermented milk after the cream is skimmed off for butter production (§ 4.2 Stage 2.2 above; Englund, 1995b: 380). The term *ga-ara₃* includes the lexeme *ga* “milk” and *ara₃*, which is generally interpreted as “to mill”, although the latter’s exact relation to cheese remains unclear.⁶⁰ In Ĝirsu, Ur and sometimes also in Umma, *ga-ara₃* was often abbreviated to *ga* “milk”; in Umma, however, it was written as *ga-murub₄* (*MURU₂* = UD-gunû), literally “medium milk”. In the Sumerian terminology and according to the lists from administrative documents, *i₃-nun* “butter”, literally “princely oil”, represented the best dairy product. In contrast, *ga-murub₄* “sour-milk-cheese”, literally “medium milk”, represented the average dairy product.⁶¹

“Sour milk cheese” was manufactured from skimmed sour milk *via* spontaneous fermentation and natural coagulation thanks to Mesopotamia’s relatively high ambient temperatures and the milk-borne lactic acid bacteria. As mentioned above, in this stage, no rennet nor extra heating is required, as happens in the case of the acid-coagulated cheeses of central Germany, known as “acid curd cheese” or “Harzer-Käse”.⁶² Moreover, there is no explicit evidence that herders used any rennet, be it the stomach of young animals or plant-based ones. Despite herders

⁶⁰ Despite the suggested literal interpretation of Englund (1995b: 381 fn. 10) “milled milk (product)” and the reference of Stol (1993: 105) to a study by E.R. Ellison that interprets the element *ara₃* as “milled”: “thinking of the sun-dried curd-cheese being grated into a powder before use”. Indeed, there is no attestation of explicitly milled cheese, not even when used in the preparation of food (Brunke, 2011: 208) (note that Brunke, 2011: 133 assumed that cheese for the preparation of the *inda₃-gug₂*-bread had to be triturated or rasped). In this respect, the small cheese clots resulting from natural coagulation – as illustrated in this paragraph – could have been used for baking bread. See also Attinger, 2021: 178; 368–369.

⁶¹ Compare it to *a-ša₃ murub₄* “medium quality fields” in Umma, treated by Paoletti, 2022a: § 2.1.

⁶² Indeed, acid curd cheeses are produced from acid curd quark, and quark is manufactured from acid-coagulated milk with or without the addition of rennet. The cold fermentation occurs at a temperature of 21–27°C for 15–18 hours. After cutting and stirring, the curd sinks to the bottom and the whey is removed. The subsequent maturation first occurs at temperatures between 22°C and 24°C for 48–72 hours, then between 16°C and 19°C; see Hartmann *et al.*, 2018: 436–437 and Bintsis / Papademas, 2018: 131–132.

were the principal suppliers of dead and slaughtered animals for the provincial administration of Umma (Stępień, 1996: 199), there is no evidence that they also dealt with parts of the slaughtered animals and/or meat itself (Stępień, 1996: 97). Instead, according to Stępień (1996: 199), there was a so-called “meat distribution agency” to which herders delivered the entire dead or slaughtered animals. This confirms that herders may have occasionally had access to parts of slaughtered animals but not on a regular basis. Therefore, the stomachs of young animals were not constantly available to them to use regularly as rennet for cheese making, even if they only needed a tiny part of it to enhance the coagulation process.⁶³ There is no evidence that herders used fuel, a very scarce and expensive source, and the specific tools required to heat the curds.

The Sumerian administrative texts sometimes specify that “sour milk cheese” could be “small”⁶⁴ or “big”,⁶⁵ but they keep measuring it according to the capacity, sometimes indicating the vessel it is filled into.⁶⁶ They never count cheese in pieces, at least from the Fārā period onwards.⁶⁷ Therefore, this specification can refer to a detail on its form. And in particular, it could refer to the size of the cheese clots obtained after curdling,⁶⁸ i.e., “small” or “big” “cheese(-clots)”. In this regard, we know from the sesame oil milling that a “sieve for barley flour” (^ge^cma-an-sim dabin)⁶⁹ must have had a very narrow mesh and was likely used to separate sesame seeds from fine impurities like earth. The “sieve for groats” (^ge^cma-an-sim niĝ₂-ar₃-ra)⁷⁰ allowed, instead, the removal of larger impurities, like residues of leaves and stalks. Indeed, a sieve occurs once for cheese, flour, and other products (BPOA 2 2530). It could have served among others for their processing and, regarding cheese, possibly also to separate the cheese clots from the whey. There isn’t so far any explicit evidence in the Sumerian administrative sources about putting cheeses on a stick or lying down, possibly to dry, as suggested by some Old Babylonian literary sources.⁷¹ “Sour milk cheese” could

⁶³ Moreover, according to the hitherto available investigation methods, rennet cheese can be documented only from the Late Bronze Age onwards (Rosenstock *et al.*, 2021: 269).

⁶⁴ ga-ara₃ tur, e.g., TRU 382; ASJ 03, p. 154 no. 111.

⁶⁵ ga’ar gal-gal, e.g., DP 051; ga-ara₃ gal, e.g., TRU 382.

⁶⁶ Englund, 1995b: 381 and fn. 10.

⁶⁷ Only in the archaic period cheese was counted in “discrete units”, according to Englund, 1995a: 40 and fn. 34.

⁶⁸ See also the argumentation of Stol (1993: 104) against the comparison of “mall” and “big” cheese with the Jordan *kišk* cheese because of the measuring unit.

⁶⁹ E.g., SANTAG 06 41 o. iii 4.

⁷⁰ SANTAG 06 41 o. iii 5 and *passim*.

⁷¹ See the Dumuzi lament treated by Jacobsen (1983) and, in particular, source A (VS 10 123) o. iii 13–14: “He laid down for her the small cheeses (as) for winnowing – the lad, he laid down for her the large cheeses for the stick – the lad in the desert” (ga-ara₃ tur-tur bu_x(SU₇)-še mu-na-nu₂ ĝuruš-e / ga-ara₃ gal-gal ĝidru-še₃ mu-na-nu₂ ĝuruš-e edin-na).

also have gone bad⁷² or be old.⁷³ “Sour milk cheese” is attested only measured in capacity and without indication of any vessels, but if so, then mostly in connection with clay pots (^{du}g^utul₂),⁷⁴ sometimes also baskets (gur^udub)⁷⁵ and other specific vessels.⁷⁶

The documents of the Ur III period on dairy products also register a particular variety of cheese written ga(-ara₃)-GAZI. The exact difference between ga(-ara₃)-GAZI and the ordinary “sour milk cheese” ga-ara₃/murub₄ has yet to be determined beyond doubt. The administrative texts do not offer any detail on the manufacturing of ga(-ara₃)-gazi nor offer any more detail regarding its nature. As already seen for ordinary cheese, ga-ara₃ is often abbreviated to ga “milk”, also in the case of ga-ara₃-GAZI.⁷⁷ In the administrative documents, ga(-ara₃)-GAZI is always listed after butter and/or other fats/oils⁷⁸ but before ga “milk” and/or ordinary “sour milk cheese” (ga-ara₃/murub₄).⁷⁹ As expected, according to the hierarchical order in the texts, ga(-ara₃)-GAZI was more expensive than ordinary cheese (see § 7.2 below). ga(-ara₃)-GAZI could have also “gone bad”⁸⁰ and could have been of “second” quality.⁸¹

Three balanced accounts on dairy products register the conversion of ga(-ara₃)-GAZI into ordinary cheese,⁸² namely 1 litre of ga(-ara₃)-GAZI corresponded to 1.5 litres of standard “sour milk cheese” (ga-ara₃/murub₄). If we were to interpret it literally as an empirical value for its production, as we already did for the yield of butter and cheese from fermented milk (§ 4.1 Table 2), then out of 1 litre of ga(-ara₃)-GAZI one would obtain 1.5 litres of ordinary “sour milk cheese” (ga-ara₃/murub₄). This is a massive volume increase of 50 %!⁸³ Apart from this rather unrealistic yield, out of ga(-ara₃)-GAZI, one would be producing the ordinary “sour milk cheese” (ga-ara₃/murub₄), not the elsewhere yet attested ga-

⁷² BPOA 1 0678: r. 1 “sour milk cheese gone bad” ga-murub₄ al-ḥul-la.

⁷³ Ontario 2 217: o. 1 “old sour milk cheese” ga-murub₄ šumun.

⁷⁴ E.g., AUCT 1 061.

⁷⁵ E.g., ITT 2 04422 (Sargonic Ġirsu).

⁷⁶ ^{du}g^ugir_{13/16} (e.g., RTC 214): a vessel attested from the Sargonic to the Ur III period and often used for dairy products, soda, or wet barley (personal communication of Walther Sallaberger); niġ₂-du₃ (FTP 100; OSP 1 126): a vessel used for both fruits and cheese (personal communication of Walther Sallaberger).

⁷⁷ As already suggested by Englund 1995: 417; see, e.g., BIN 3 385 o. 2 vs, e.g., UTI 5 3177 o. 4–5 and *passim*.

⁷⁸ E.g., MVN 3 349, 00.00.00.00.

⁷⁹ E.g., BCT 2 122; BPOA 1 0173; ITT 2 00892.

⁸⁰ BPOA 1 0678: o. 7 “GAZI-cheese gone bad” ga-GAZI al-ḥul-la

⁸¹ UET 3 1021: o. 2’ ga-GAZI us₂, Šu.42/AS.06.00.00.

⁸² MVN 15 108 r. ii 2–3; SET 130 r. ii 29–30, r. iii 6–7 and *passim*; TCL 5 6040 r. iv 10–11.

⁸³ Englund, 1995b: 417.

ara₃-GAZI (not abbreviated to ga-GAZI). Yet, we have already pointed out that ga-GAZI represented the abbreviation of ga-ara₃-GAZI. Therefore, the conversion is to be regarded as an equivalence of the particular variety of cheese ga(-ara₃)-GAZI into its corresponding amount in ordinary “sour milk cheese” (ga-ara₃/murub₄). And taking into consideration that this equivalence occurs only in balanced accounts, it served only for the bookkeeping, i.e., for the settlement of the accounts according to the benchmark product “sour milk cheese”. A comparable equivalence that only served for the bookkeeping appears in the same balanced accounts between silver and butter (i₃-nun). Since the accounts only convert ga(-ara₃)-GAZI into its equivalent amount in ordinary “sour milk cheese”, it confirms the identification of ga(-ara₃)-GAZI as a variant of cheese and not as any other dairy product that one could possibly value in butter as well.

Once cleared that ga(-ara₃)-GAZI is a variant of “sour milk cheese”, we can try to narrow down its identification. Given the countless varieties of cheese, some of them indeed obtained from fermented/sour milk, with herbs or other ingredients that are still in use in the Middle East, ga(-ara₃)-GAZI could be a “sour milk cheese” with the additional ingredient GAZI, as already assumed in previous studies. However, despite GAZI being a common seasoning or vegetable and abundantly attested in cuneiform sources,⁸⁴ it is of hitherto unclear identity.⁸⁵ GAZI is often translated as “mustard”⁸⁶ but also as a kind of “mustard cabbage” (German “Senfkohl”)⁸⁷ and recently also as “tamarind”.⁸⁸ In this regard, an Old Babylonian forerunner to the thematic lexical list 𒀠AR-ra *hubullu* Tablet XXIV⁸⁹ offers a series of cheese varieties that might resemble the wide cheese varieties still in use in the present Middle East. The fragmented list is preserved on a prism kept in the Oriental Institute of Chicago,⁹⁰ the provenience of which is unknown. The section on cheese lists varieties such as cheese with *arzana*-groats, cheese with pulse’s groats, cheese with groats, cheese with cucumber/pumpkin (*qiššū*) or cheese with beet (*laptu*). Unfortunately, these varieties are not attested in the Sumerian administrative sources but so far only in the lexical ones.

⁸⁴ Englund, 1995b: 417–418 and fn. 70–72.

⁸⁵ Brunke (2011: 170) following Powell (2003: 20) with further literature.

⁸⁶ E.g., Bottéro, 1983: 289.

⁸⁷ Kienast / Volk, 1995: 221.

⁸⁸ Choukassizian Eypper, 2019. I thank Shiyanthi Thavapalan for kindly bringing this article to my attention. An in-depth investigation and more precise identification of GAZI would yet go beyond the scope of this paper, and therefore, it must remain a topic for future studies.

⁸⁹ For a more detailed discussion and edition of the lexical list Old Babylonian Urra VI and the canonical list 𒀠AR-ra *hubullu* Tablet XXIV concerning dairy products, oils, and fats, see Paoletti / Sallaberger, 2022.

⁹⁰ Reiner / Civil, 1974: 161; Forerunner no. 17 (= A 7895B).

Extract from Urra VI = Forerunner No. 17 to 𒀠AR-ra = *hubullu* Tablet XXIV in MSL 11 (Reiner / Civil, 1974: 161).

Col.	13	ga-ara ₃	“sour milk cheese”
vi’	14	ga-ara ₃ ar-za-na	“sour milk cheese” (with) <i>arzana</i> -groats
	15	ga-ara ₃ niĝ ₂ gal-gal se ₁₂	greenish “sour milk cheese” in big pieces ⁹¹
	16	ga-ara ₃ gu ₂ niĝ ₂ -ar ₃ -ra	“sour milk cheese” (with) pulses’/broad beans’ groats ⁹²
	17	ga-ara ₃ niĝ ₂ -ar ₃ -ra	“sour milk cheese” (with) groats
	18	ga-ara ₃ duru ₅ GAZI	fresh’/moist’ “sour milk cheese” (with the) GAZI-ingredient
	19	ga-ara ₃ kuš ₈	“sour milk cheese” (with) cucumber/pumpkin (<i>qiššū</i>) ⁹³
	20	ga-ara ₃ lu-ub ₂ ^{SAR}	“sour milk cheese” (with) beet (<i>laptu</i>) ⁹⁴
	21	ga-ara ₃ da-la ₂ ^{SAR}	“sour milk cheese” (with) da-la ₂ -plant
	22	ga-ara ₃ gan ₂ -na ^{S[AR]}	“sour milk cheese” (with) gan ₂ -na-plant
			Eight more lines only with ga-ara ₃ preserved, rest of column broken

6. Dairy products from cow’s milk and goat’s milk in Ur III Umma: a quantitative description⁹⁵

The following data should give an impression of the quantities of butter (i₃-nun) and “sour milk cheese” (ga-murub₄) registered in Umma documents, respectively, from cows’ and goats’ milk as well as an estimation of the total annual deliveries of these products to the provincial administration.

6.1 The data explicitly available from the Umma sources

The annual balanced account on butter and cheese management by the overseer of cowherds Atu (MVN 15 108, AS.03.00.00) registers 1,540 litres of butter and 2,310 litres of “sour milk cheese”. According to his seal, Atu was the overseer of the cow herders of the Šara temple (Stępień, 1996: 114). The text does not mention the number of cows engaged in primary milk production, but it can be estimated based on the annual delivery quotas expected in Umma (§ 3.1 above). This results in min. 308 adult cows engaged in primary milk production, which agrees well with the analysis of Stępień (1996: 28, 61), who calculated that in the year Amar-Suena 7, a total of ca. 600 adult cows were held in the three major temples of Umma, i.e., Šara, Ninurra and Šulgi. Stępień (1996: 61) also estimated that the total livestock in Umma amounted to ca. 2000 head of cattle, of which ca. 50.5 %, i.e., ca. 1000, were milk/adult cows. Therefore, assuming the cow herders of

⁹¹ The sign SIG₇ with value se₁₂ is very likely to be interpreted as the verb se₁₂-g “to be/ become green, yellow” (Attinger, 2021: 915–916).

⁹² Private communication of Walther Sallaberger. See also Attinger, 2021: 422–423, 787.

⁹³ Attinger, 2021: 660.

⁹⁴ Attinger, 2021: 687.

⁹⁵ This paragraph expands the data collected and discussed by Paoletti, 2022f: §4.

Umma held a total of ca. 1000 adult cows, they were due to deliver ca. 5,000 litres of butter and ca. 7,500 litres of “sour milk cheese” per year to the provincial administration.⁹⁶

Although the final administrative subscript is not preserved, we can safely assume the account Nisaba 24 27 (XX.XX.00.00) was a balanced account of shepherds and goat herders of various temples in Umma because of what is still preserved of its structure (it is very similar to the balanced account Nisaba 06 08). The temples (partially) preserved on Nisaba 24 27 are the temples of Inana of Zabalam, Šulgi, Ninurra and Šara. The section of the text documenting the herds of nam-en-na-goats probably of the Šara temple (r. iv 16’–38’) is almost entirely preserved and offers the following data: it lists a total of 1,548 nam-en-na-goats of which 566 were nanny goats (ud₅), i.e., ca. 38 %, and were very likely involved in the primary milk production. The passage registering the delivery quota of dairy products expected from these 1,548 nam-en-na-goats⁹⁷ is not entirely preserved,⁹⁸

⁹⁶ As we have discussed above in § 3.1, due to the large margin of error in the estimation of the total milk production per adult cow per year in the third millennium BCE Babylonia, it is not possible to estimate the total annual production of milk, butter, and cheese in the province of Umma nor how much excess milk was left to the herders after delivering the due quotes to the administration.

⁹⁷ The term nam-en-na cannot refer to a particular breed because it can specify various types of animals, among them caprines (sheep, e.g., BPOA 1 1733 o. 2; goats, e.g., YOS 04 237 o. ii 16) and bovines (TCL 2 5483), as well as various types of herders (e.g., OrSP 2, p. 56 MM 171 o. i 5’). Moreover, among the “shepherds of the nam-en-na (caprines)” (sipa nam-en-na-ke₄-ne) occur herders of goats and sheep without any specification as well as herders of ga-za-PI-goats (OrSP 47–49 348). Stępień (1996: 50) interprets nam-en-na as a “term signifying native sheep” yet cites it also in connection with goats without further explanation. He also refers to the phrase sipa nam-en-na-ke₄-ne as “shepherds of temple stocks” (Stępień, 1996: 83). Van de Mierop (1993: 168) suggested that the nam-en-na may be a group of goats that the herder “agrees to supervise for another owner”. Nevertheless, the documents never specify his name. Moreover, among the herders specified as nam-en-na occur many herders of the Umma province, who oversaw provincial herds made of various types of animals. Greco (2021: 4–5, 7) has analysed the management of herds and grazing land in the province of Ġirsu documented by a group of balanced accounts and showed that among the provincial herds, there were also herds or parts of them falling under royal concern yet managed and held by provincial herders. Hence nam-en, literally meaning “sovereignty”, in Umma could refer to herds or parts of them that pertained to the royal sector and to herders that were entrusted with such animals apart from the provincial livestock but were employed by and accounted to the provincial administration of Umma. Yet only a comprehensive assessment of the herding management in Umma with a particular focus on the possible interaction between different sectors or institutions could confirm or contradict this hypothesis.

⁹⁸ Lines r. iv 37’–38’. The editors restored the first total (l. 37’) as “sour milk cheese” (gamurub₄), but this amount is more likely to refer to “butter” (i₃-nun) (see the same sequence in the following section of totals r. vi 12’–14’). The following line (l. 38’) indicates then

but the section on the herds of Ur-Dumuzida documents the delivery quota of dairy products expected from his animals (o. vii 30 – r. i 21). This section registers 34.5 litres of butter and 53.08 litres of “sour milk cheese” expected from 68 nanny goats.

This results in an annual delivery quota of ca. 0.5 litres of butter and ca. 0.78 litres of “sour milk cheese” per nanny goat. Unfortunately, the sections documenting other categories of goat herds or possibly specific breeds, with or without their delivery of dairy products, are not entirely preserved in the text and do not allow an assessment of the whole number of registered goats. However, this information is necessary to estimate the amount of dairy products annually delivered by the goat herders of Umma to the provincial administration. In this regard, the administrative sources documenting and monitoring the herds falling under provincial concern offer valuable information.

6.2 How data on the structure of the caprine herds in Ur III Umma can help estimate the annual delivery of dairy products to the provincial administration

To achieve an estimation of the annual delivery of butter and cheese from the goat herders of Umma, we need to know the total number of goats involved in the primary milk production in Umma in the Ur III period or the total number of goats held in the province of Umma, unregarded of their age. Unfortunately, these figures are either not recorded at all or not entirely preserved in the texts (Stępień, 1996: 24–25; 191–192; 211–212); therefore, we have to estimate them according to other data offered by the available sources. In particular, the Umma sources that assess the structure of the caprine herds according to sex and gender enable us to calculate two significant rates:

- a. The average sheep:goat ratio (Stępień, 1996: 25; Redding, 1981: Ch. X and XI).
- b. The average percentage of nanny goats per herd.

Moreover, the Umma sources allow us to estimate either the total number of caprines or the total number of sheep held by the province. Combining the sheep:goat ratio and the average percentage of nanny goats per herd with either of these estimations enables us to calculate how many nanny goats might have been involved in the primary milk production.

the amount of “sour milk cheese” instead of an amount of wool and can be restored as follows: [1.1.5] 9 $\frac{2}{3}$ [sil₃]¹ [ga-murub₄]. Unfortunately, no picture is available of this text, and the passage cannot be collated; hence this restoration remains tentative for now. This way, we obtain 266.5 litres of butter and likely 419.66 litres of “sour milk cheese”, which would correspond to a quota of ca. 0.47 litres of butter and 0.74 litres of “sour milk cheese” per nanny goat per year.

A partial set of data is offered by the list YOS IV 237 (Stępień, 1996: 52) that registers 956 nam-en-na-goats in the year Šu-Suen 7 in eight temples of Umma, of which 447 were nanny goats, i.e., ca. 47 % (r. iii 15–18). The herds of ga-za-PI-goats are documented in this text, too, yet without distinction of age.⁹⁹ At the end of the text, the total registers 1,488 goats and 4,378 sheep, with a sheep:goat ratio of 2.9:1. These herds were supervised by Kas and Uree. According to Stępień (1996: 50), this text does not register all herds of the Umma province because the total number of goats (and sheep) is too small. Another balanced account on shepherds and goat herders (Nisaba 06 08) assesses goats and sheep of the eight principal temples of Umma in the year Ibbi-Suen 3, distinguishing the animals according to gender and age. The totals at the end list 828 goats, of which 408, i.e., 49 %, were nanny goats. The total number of sheep amounted to 1,430 pieces, resulting in a sheep:goat ratio of 1.7:1 (Nisaba 06 08). Another balanced account on herds in Umma that distinguishes the livestock according to gender and age features a similar average of nanny goats: 49 %. Unfortunately, the text is partially damaged and does not allow calculating the sheep:goat ratio (Nisaba 06 31). In the year Amar-Suena 4, the balanced account SET 130 (o. vi 5) records a total of 1,449 goats (no distinction of age or gender) and 2,325 sheep under the responsibility of Uree (no distinction of temple affiliation), resulting in a sheep:goat ratio of 1.6:1. The following table summarises these data.

Table 3: The number of goats and sheep in caprine herds of Ur III Umma according to selected sources.

Herder	Goats' Specification	Nanny Goats in Stock			Total No. of Goats	Total No. of Sheep	Sheep:Goat Ratio	Date	Text
		No.	% of the Total no. of Goats in Stock	Average					
-	n.a.	n.a.	n.a.		1,449	2,325	1.6 : 1	AS.04.00.00	SET 130
Šarakam		160+	n.a.	49.5	308	n.a.	n.a.	ŠS.06.00.00	Nisaba 06 31
Lugal-[...]		22	46		48				
Lu-Šara		n.a.	n.a.		70+				
Lu-Suen		30	53		56				

⁹⁹ Unlike the nam-en-na-goats, the administrative documents of the province of Umma rarely differentiate the age or gender of the animals when documenting the herds of or with ga-za-PI-goats. To my knowledge, this occurs only in AUCT 2 391 and possibly in AAICAB 1/3 Bod. S 144.

Herder	Goats' Specification	Nanny Goats in Stock			Total No. of Goats		Total No. of Sheep	Sheep:Goat Ratio	Date	Text
		No.	% of the Total no. of Goats in Stock	Average						
Šarakam	nam-en-na	180	51	43	354	1,488	4,378	2.9 : 1	ŠS.07.02.00	YOS 04 237
Lugalemahe		6	35		17					
Šakuge		14	33		43					
Lu-Šara		80	51		157					
Luibgal	ga-za-PI	100	no age distinction		120					
Ludiġira		40			50					
Šakuge		79			95					
Ursilaluġ		15			20					
Lu-Šara	ga-za-PI	30	no age distinction		40					
Imani	ga-za-PI	15			29					
Mama	nam-en-na	52	40	42	130					
Girinisa		80	43		188					
Girinisa	ga-za-PI	54	no age distinction		75					
Lu-Suen	nam-en-na	35	53	53	66					
Imani	ga-za-PI	20	no age distinction		30					
A'akalla		20			28					
Temple of Ninġilisu	ga-za-PI	40			45					
Šarakam		146	48	50–51 %	305	828	1,430	1.7 : 1	IS.03.00.00	Nisaba 06 08
Lugalemahe		10	48		21					
Lu-Šara		84	47		178					
Ur-Šara		80	50		159					
Šu-Eštar		27	55		49					
Lunirġal		39	56?–65?		60?/ 69?					
Lu-Suen		22	47		47					

Herder	Goats' Specification	Nanny Goats in Stock			Total No. of Goats		Total No. of Sheep	Sheep:Goat Ratio	Date	Text
		No.	% of the Total no. of Goats in Stock	Average						
Da'amu	ga-za-PI?	158	43	39.6	366	679	n.a.	n.a.	IS.04.0 7.00	AAICA B 1/3 Bod. S 144
Urdu-Šara	ga-za-PI?	85	39		219					
Lunirġal	ga-za-PI?	35	37		94					
Urrur	nam-en-na	12	46 (with new arrivals then 26)	38	26 (then 47)	n.a.	n.a.	[...]	Nisaba 24 27	
Uree	nam-en-na	255	33		779					
Šaraisa		50	37		136?					
Ur-Dumuzida		46	48		96					
Š[arakam]		110	37		297					
Total Temple of Šara?		566	37		1548					
Ur-Lisi		ud- [...]	298	34	43	877	n.a.	n.a.	00.00.0 0.00	AUCT 2 391
	ga-za-PI	501	51	988						

Stępień (1996: 25–26) compared the sheep:goat ratios of individual herds documented by various Umma sources. After excluding extreme values, he calculated an average sheep:goat ratio of 3.6:1. If we instead calculate the average sheep:goat ratio considering all the data collected by Stępień, then we get a ratio of 3.9:1. Stępień (1996: 26) himself doubted whether this data is indicative of Umma herds in general. Indeed, Redding (1981: 148–206; 251) illustrates that the herding strategies followed by the individual herders can vary a lot, even from herd to herd, from herder to herder, and all these variations are reflected in the sheep:goat ratio. In this respect, he refers to, e.g., an ethnoarchaeological study of the herd structure in Hasanabad, a village in western Iran. According to this study, the sheep:goat ratio is 5:1 if the goal is energy production (protein) and 1.8–4:1 if the goal maximises herd security (low mortality). A study of the herd structure by the Yomut Turkmen in north-eastern Iran also showed that the wide variation in the sheep:goat ratio and the concentration of values at 1:0 and 0:1 indicate that the herders sought multiple goals. Eventually, one has to bear in mind that, on the one hand, these data on herd structure and the possible strategies followed by each

herder are particular to each group analysed by the ethnographers, and they are subject to variations depending on the type of subsistence economy practised in the region under consideration (Redding, 1981: 253–254).

On the other hand, the sheep:goat ratio calculated according to the available sources from Umma may vary due to the fluctuating number of goats yearly held by the herders. And these fluctuating numbers of goats may have resulted from various conditions, such as, e.g., higher or lower mortality linked to occasional diseases. Notwithstanding all these margins of error, one can try to follow the estimation according to the average sheep:goat ratio of 3.6:1 as calculated by Stępień (1996: 25–26) and keep in mind that the figures obtained may have varied from year to year. To do so, we need the percentage of nanny goats per goat herd as documented in the sources that distinguish the age and sex of the animals. According to the sources presented in table 3, it amounted on average to ca. 45 %.

6.3 The annual delivery of butter and cheese in Ur III Umma: an estimation

According to Stępień (1996: 212), the 30 to 40 shepherds hitherto documented in the Umma sources would hold a total of about 23,000 to 26,000 sheep. Now, if we consider an average sheep:goat ratio of 3.6:1 as calculated by Stępień (1996: 25), we obtain ca. 6,000–7,000 goats. Considering now an average percentage of 45 % of nanny goats in total, it results in ca. 2,700–3,100 nanny goats that might have been involved in the primary milk production on average. This results in an annual delivery of a maximum of ca. 1,500 litres of butter and a maximum of ca. 2,200 litres of cheese to the provincial administration of Umma if we consider the highest delivery quota of 0.5 litres of butter and 0.75 litres of cheese per nanny goat per year.¹⁰⁰ Stępień (1996: 212) also estimated that the total caprines held in Umma could have reached an average of 50,000–60,000 pieces of livestock. Considering an average sheep:goat ratio again of 3.6:1 (Stępień, 1996: 25), we obtain ca. 13,000–16,000 goats, 45 % of which results in about 5,800–7,200 nanny goats that might have been involved in the primary milk production. This results in an annual delivery of a maximum of 3,600 litres of butter and a maximum of 5,400 litres of cheese to the provincial administration of Umma if we consider the highest delivery quota of 0.5 litres of butter and 0.75 litres of cheese per nanny goat per year.

Herewith, the goat herders of Umma might have delivered annually ca. 1,500 to 3,600 litres of butter and ca. 2,300 to 5,400 litres of cheese, considering the higher delivery quota.

¹⁰⁰ These figures are explicitly rounded to the hundreds and not to the units or tens in order not to give a misleading impression of precision, as they are merely estimations possibly subjected to significant variations from year to year.

These numbers nonetheless represent an estimation of average figures that may have varied quite a lot from year to year due to the fluctuations in the number of goats held by the herders (Stępień, 1996: 24–26).

7. Price of dairy fats in the Ur III period¹⁰¹

Here follows an analysis of the data on prices of butter (i₃-nun), scented butter (i₃-nun du₁₀-ga) and ...-butter (i₃-nun ḪA), sour milk cheese (ga-ara₃/murub₄) as well as GAZI-cheese (ga-(ara₃)-GAZI) in the Ur III period.

7.1 Price of butter (i₃-nun), scented butter (i₃-nun du₁₀-ga) and ...-butter (i₃-nun ḪA)

The available data point to a significant drop – almost seven times lower – in the price of standard butter from the middle to the end of the reign of Šulgi, followed by a quite constant trend from the end of Šulgi’s reign to the reign of Šu-Suen.¹⁰²

7.1.1 Price in litres of butter per one *giġ* of silver



¹⁰¹ This paragraph expands the data collected and discussed by Paoletti, 2022n.

¹⁰² Compare the price of sesame and sesame oil in Paoletti, 2022b.

7.1.2 Price in *giġ* of silver per one litre of butter

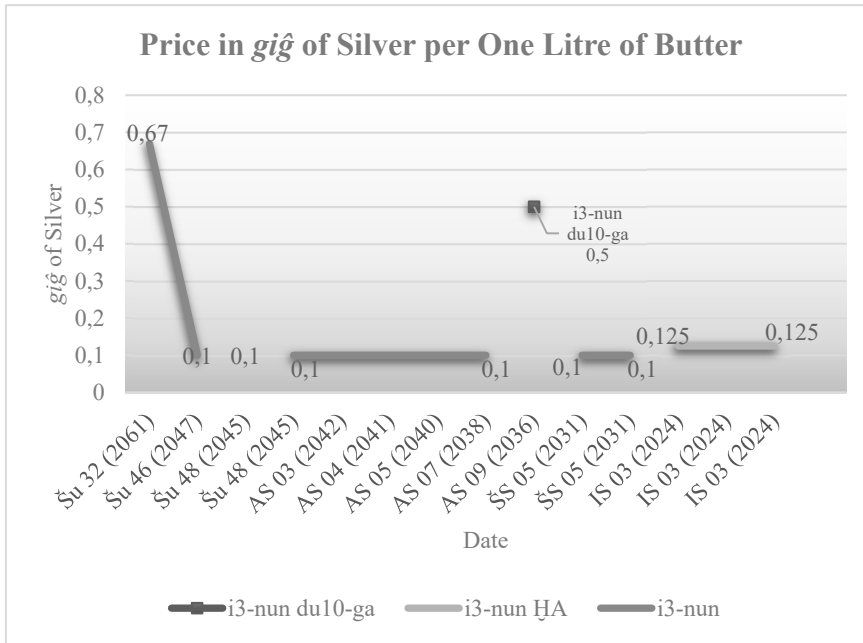


Table 4: Price of butter (i3-nun).

Date	Quantity of Butter in Litres	Quantity of Silver in <i>giġ</i>	Litres per One <i>giġ</i> of Silver	Price of One Litre in <i>giġ</i> of Silver	Text	Place	Type of Text
Šu.32.00.00	1	0.67	1.49	0.67	BPOA 2 1877 r. i 11–12	Ġirsu	Bal. account on silver
Šu.46.00.00	180+	20	9–	0.1+	BPOA 7 1569 o. 1–2	Umma	Receipt of silver by Dadaga as reimbursement for butter
Šu.48.00.00	275	27.5	10	0.1	TCL 2 5499 r. iii 3, 5	Puzriš-Dagān	Bal. account on PN, administrator (saġġa) of GN

Date	Quantity of Butter in Litres	Quantity of Silver in <i>giĝ</i>	Litres per One <i>giĝ</i> of Silver	Price of One Litre in <i>giĝ</i> of Silver	Text	Place	Type of Text
AS.03.00.00	895.87	89.58 ¹⁰³	10	0.1	MVN 15 108 r. 1–11	Umma	Bal. account on dairy products
AS.04.00.00	5	0.5	10	0.1	VDI 137/3 110–111 r. 18	Umma	List of expenditures of various goods
AS.05.00.00	6	0.6	10	0.1	Nisaba 09 307 o. 1	Umma	Expenditure of various goods for the bala-obligation
AS.07.00.00	3	0.3	10	0.1	Nisaba 33 1090 r. 11	Umma	Bal. account on silver of PN
AS.09.00.00	3,005.83	3.96	759	0.0013	BBVO 11 257 4N- T197 r. iii 15–16	Nippur	Bal. account of the Inana temple in Nippur
ŠS.05.00.00	1.67 ¹	0.17	9.82	0.1	AuOr 35 107 r. i 10’– 11’, r. iii 11’	Umma	Bal. account on oil/fat and wool of the shepherds of Kas for six years
	1.03	0.1	10.3	0.1			
[...]	0.33	0.05	6	0.17	UDT 179 r. 1–2	Puzriš-Dagān	Receipt of various goods: Price of butter and sesame oil
[...].00.00	3.83	0.64	6	0.17	NATN 160	Nippur	List of various fats with their addressee

¹⁰³ This results from the sum of the silver amounts listed in ll. r. i 1–10, including also the “weight adjustment” (*saĝ-na4-bi*) indicated in l. r. i 10 (Waetzoldt, 1972: 30 fn. 252).

Date	Quantity of Butter in Litres	Quantity of Silver in <i>giĝ</i>	Litres per One <i>giĝ</i> of Silver	Price of One Litre in <i>giĝ</i> of Silver	Text	Place	Type of Text
[...]	50	5	10	0.1	Princeton 2 372 r. 1–2	Umma	Account of various goods with their prices

BBVO 11 257 4N-T197, AS.09.00.00, Nippur

The price attested in the balanced account of the Inana temple in Nippur is not illustrated in the chart because it suspiciously deviates from the price otherwise attested in all other sources and would completely distort the graph.

NATN 160, [...].00.00, Nippur

This is an account of sesame oil, scented sesame oil and butter with the indication of their prices and their addressee, sometimes an individual, a cultic place, or deities. The lack of a specific administrative term does not allow the identification of the transaction in greater detail. The total of scented oil/fat (i_3 du₁₀-ga) in line o. 7 exactly matches the sum of the individual amounts listed on lines o. 1–6 only if line o. 6 reads as follows: “ $\frac{1}{2}$ sila: Niĝar” ($\frac{1}{2}$ sila₃ niĝar^{ĝar}). Moreover, the price registered in line r. 8–10 poses a similar question. R. 10 could refer to the amounts registered in the previous two lines, r. 8–9, although r. 8–9 distinguish “butter” (i_3 -nun) without addressee from “butter: Niĝar”. If taken together, the price of butter results as given in the chart and resembles that attested in other sources. Taken separately, the price indication must remain inconclusive.

Table 5: Price of ...-butter (i_3 -nun 𒄩A).

Date	Quantity (litres)	Price (silver in <i>giĝ</i>)	Litres per one <i>giĝ</i> of silver	Price of one litre in <i>giĝ</i> of silver	Text	Place	Type of Text
Šu.48.00.00	2.17	0.22	9.86	0.1	SNAT 302 o. 1–2	Umma	Balanced account on (the activity of) Dadaga
IS.03.00.00	27.3	3.4	8	0.125	UET 3 1514 o. 7–9 ¹⁰⁴	Ur	Account of the herders of native sheep and goat herders in Ur

¹⁰⁴ o. 8 reads $27 \frac{1}{3}$ sila₃ instead of $27 \frac{2}{3}$ according to the translation in the “Corpus Sumerian Glossary” (<https://corpus.writing-sumeroian.assyriologie.uni-muenchen.de>).

Date	Quantity (litres)	Price (silver in <i>giġ</i>)	Litres per one <i>giġ</i> of silver	Price of one litre in <i>giġ</i> of silver	Text	Place	Type of Text
IS.03.00.00	5	1.74	<u>8 (2.9)</u>	<u>0.125 (0.3)</u>	UET 3 1198 o. 1–3; r. 6’–7’	Ur	Account of the fat, cheese, and sheep (wool) arrears of the goat herders in Marum in the territory of Irisaġrig
	80.67	17.77	<u>8 (4.5)</u>	<u>0.125 (0.2)</u>			
[...]	1	0.17	6	0.17	AUCT 1 517 r. 6–7	Umma?	List of various goods with their prices
[...]	11.6	1.84	6.3	0.16	UET 9 0916 o’. 4–5	Ur	Fragment of account with dairy products

UET 3 1198, IS.03.00.00, Ur

The text explicitly indicates in o. 3, r. 7’ that 1 *giġ* of silver did buy 8 litres of ...-butter (i₃-nun 𐤇𐤀), although the registered quantities of silver and ...-butter in ll. o. 1–2, r. 5’–6’ do not correspond to this rate. Moreover, l. 1 (and many other lines of the text) feature traces either of signs then cancelled by the scribe or due to damages caused during the excavation. In the chart, I added the correspondent price in brackets. In the graph, I decided to illustrate the price given in ll. o. 3, r. 7’ as the deviating amounts might result from various reasons, considering the many unclear traces on the tablet.

Table 6: Price of scented butter (i₃-nun du₁₀-ga).

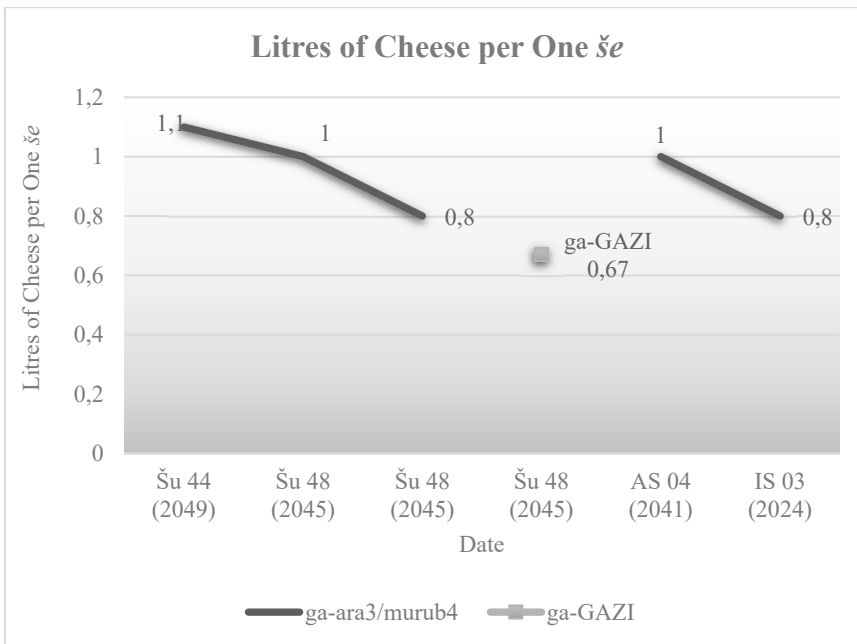
Date	Quantity (in litres)	Quantity of silver in <i>giġ</i>	Litres per one <i>giġ</i> of silver	Price of one litre in <i>giġ</i> of silver	Text	Place	Type of Text
AS.09.00.00	9.65	4.84	2	0.5	BBVO 11 257 4N-T197 r. iii 13–14	Nippur	Balanced account of the Inana temple in Nippur
[...]	1	0.33	3	0.3	AUCT 1 293 o. 4–5	Unkn.	List of various fats/oils with the indication of their prices

7.2 Price of “sour milk cheese” (ga-ara₃/murub₄) and GAZI-cheese (ga-(ara₃)-GAZI)

In the Ur III period, cheese was of great value but not as expensive as butter (see above) or sesame oil.¹⁰⁵ One litre of “sour milk cheese” cost, on average, about one grain of silver, i.e., with one *giĝ* of silver (8.333 g), one could buy from 150 to 200 litres of “sour milk cheese”. The orange dot illustrates the price of the particular variety of gazi-cheese: with one *giĝ* of silver, one could buy 120 litres of this particular cheese, i.e., 30 to 80 litres less than the ordinary one.

The one-time rise in the year AS.09 is attested only in the balanced account of the Inana temple in Nippur. This text is published only in transliteration; neither a hand copy nor photos are available to verify – and, if necessary, to collate – the passage (BBVO 11 257 4N-T197 r. iii 21–22). Comparable rises are also attested in two undated texts (SAT 3 2102 and Nisaba 15/2 1034), which – without date – are not illustrated in the graph. Moreover, SAT 3 2102 is published only in transliteration without hand copy or photos, and according to the edition, the passage is epigraphically unclear.

7.2.1 Litres of cheese per one še (= 0.0463 g) of silver



¹⁰⁵ Paoletti, 2022b.

7.2.2 še (= 0.0463 g) of silver per one litre of cheese

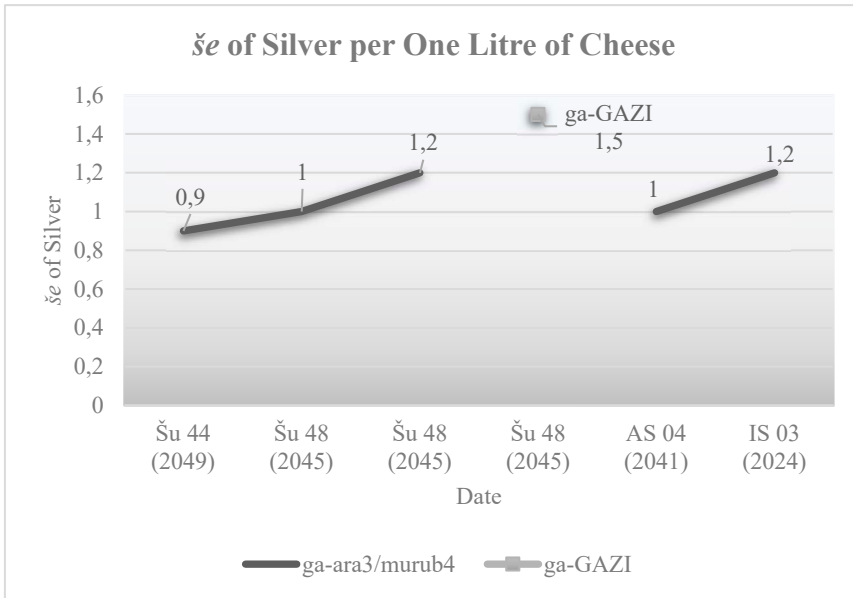


Table 7: Price of “sour milk cheese” (ga-ara3/murub4).

Date	Cheese Quantity (in litres)	Silver Quantity (in še)	Litres per one še of silver	Price of one litre in še of silver	Text	Place	Type of Text
Šu.44.00.00	150	135	1.1	0.9	BPOA 7 2029 r. 2–3	Umma	Receipt of various goods from Lugal-izim to Dada-ga with the indication of their price
Šu.48.00.00	7	7	1	1	SNAT 302 o. ii 10–11	Umma	Balanced account on (the activity of) Dadaga
Šu.48.00.00	412.5	495	0.8	1.2	TCL 2 5499 r. iii 4, 6	Puzriš-Dagān	Bal. account on PN administrator of GN
AS.04.00.00	3	3	1	1	VDI 137–3, p. 110–111 r. 20	Umma	List of expenditures of various goods

Date	Cheese Quantity (in litres)	Silver Quantity (in še)	Litres per one še of silver	Price of one litre in še of silver	Text	Place	Type of Text
AS.09.00.00	5.5	157.5	0.03	28.6	BBVO 11, p. 257 4N-T197 r. iii 21–22	Nippur	Balanced account of the Inana temple in Nippur
IS.03.00.00	41	-	0.8	1.2	UET 3 1514 o. 10–r. 1	Ur	Account of the herders of native sheep and goat herders in Ur
IS.03.00.00	121	-	0.8	1.2	UET 3 1198 o. 4–5	Ur	Account of the fat, cheese, and sheep (wool) arrears of the goat herders in Marum in the territory of Irisağrig
00.00.00.00	0.5	10?	0.05	20	SAT 3 2102 o. 5–6	Umma	Expenditure of various goods with the indication of their price
[...]	2,089.33	31,750	0.1	15.2	Nisaba 15/2 1034 r. iii 3–4	Irisağrig	Fragment of an account of dairy products

Table 8: price of GAZI-cheese (ga-(ara₃)-GAZI).

Date	Cheese Quantity (in litres)	Silver Quantity (in še)	Litres per one še of silver	Price of one litre in še of silver	Text	Place	Type of Text
Šu.48.00.00	8	12	0.67	1,5	SNAT 302 o. i 3–4	Umma	Balanced account on (the activity of) Dadaga

8. The consumption of oils and fats in Babylonia in the second half of the third millennium BCE: a short overview

I will now offer a short overview of the consumption of butter, cheese and, when necessary, oils and fats in general.¹⁰⁶ Sesame oil or lard was distributed as allotments primarily to messengers, but sometimes also to the workforce. The oil/fat they received as allotment was only in very few cases clearly intended for consumption as food along with other products.¹⁰⁷ Instead, it was explicitly intended for anointing or skin treatment¹⁰⁸ or didn't indicate its use at all.¹⁰⁹ Therefore, simply receiving an oil allotment (i₃-ba) did not mean this oil was intended for food provision. Butter, instead, never occurs as an oil allotment nor cheese is regularly distributed to the workforce. So, who had access to them? On which tables did they land, if they did? And what uses do the written evidence document?

As I pointed out earlier (§ 3), herders from the Presargonic to the Ur III period had to deliver a fixed share of their dairy products, but they probably were left with the rest. Therefore, herders had access to dairy products for their own consumption or their own benefit. But what about other professional groups?

According to the administrative sources of the Ur III period, the receipts of standard soups and dishes served to the workforce included neither oils nor milk fat nor lard.¹¹⁰ Instead, dairy products, among them cheese and butter, played an important role in the preparation of various dishes, from soups to “desserts”, which instead ended up on the table of high-ranking officials or the king itself and that the administrative records document throughout the Pregargonic and Sargonic up to the Ur III period. Soup of the best quality could feature sour milk cheese and other expensive ingredients like meat (Brunke, 2011: 219). A soup with cheese is attested once in the Ur III period during the meal offered at the burial place, very likely of a deceased king (Brunke, 2011: 219). Cheese and sometimes oil of the best quality also occur in the sweet dish called NIĜ₂-i₃-de₂-

¹⁰⁶ Paoletti, 2022c.

¹⁰⁷ Lard, among other products, as food for the female and male workforce: e.g., AAICAB 1/1, Ashm. 1911–218: o. 3–5 “54 litres of lard, 840 litres of dates: food (for) female and male workers” 0.0.5 4 sila₃ i₃-šaḥa₂ / 2.4.0 zu₂-lum gur / niĝ₂-gu₇-a geme₂ urdu₂-da; e.g., CUSAS 40–2 0153 o. 1–2 “120[+... litres of] lard, the female weavers ate it” 0.2.0 [... i₃-š]aḥa₂ / geme₂ u[š]-b[ar]-e / ib₂-gu₇. See also parallel attestations in MVN 16 1377, Nebraska 14 and Princeton 1 319. Instead, some sources clearly distinguish the use of bread for nutrition (“they ate it” ib₂-gu₇) and the use of lard for anointing (“they anointed (themselves)” ib₂-šeš₄), e.g., SAT 3 1823 o. 1–r. 1.

¹⁰⁸ šeš₄/pašāš_u “to anoint, to apply on a surface” (Attinger, 2021: 987–988) is explicitly attested, e.g., with lard (e.g., CUSAS 3 0472), with sesame oil or scented sesame oil (e.g., UET 9 0889, UET 3 1688).

¹⁰⁹ E.g., MVN 05 226.

¹¹⁰ Brunke, 2011: 165–170 and Sallaberger, 2021.

a.¹¹¹ Sour milk cheese is also documented as a component of the most expensive variant of a baking mixture called *inda₃ gug₂*, which contains dates, dried grapes, butter and cheese on top.¹¹² *PAD saĝ si₃-ga* was a dessert that seems in some ways to be a “luxury version” of the *NIĜ₂-i₃-de₂-a* one: the full recipes include all the ingredients for the basic *NIĜ₂-i₃-de₂-a* except flour and in addition many other fruits and syrup.¹¹³ Butter and sometimes fermented milk were ingredients for the rarely attested bread variety *inda₃ /ĥa(r)marmasum/ bread*¹¹⁴ and other sorts like the *inda₃ ne-mur-ra*¹¹⁵ bread or the *inda₃ i₃ bread*.¹¹⁶

Such sweet dishes were often served at banquets for deities or the king or during meals organised at the burial place of deceased kings or high officials.¹¹⁷

Dairies, fruit and vegetables would often appear at the royal table¹¹⁸ or reserved for high-ranking officials,¹¹⁹ as shown by the issue of foodstuffs for the king or a deity during the reign of Gudea.¹²⁰ In the Ur III period texts, cheese, fermented milk and butter, together with other delicacies, belonged, for example, to the food supplies destined for consumption in the palace.¹²¹ These data confirm how milk fat (butter, cream) and cheese, among other products, played an important role in the diet of the higher social strata.¹²² In this regard, the lists of regular deliveries (*sa₂-du₁₁*)¹²³ to the deities and of deliveries for special offerings¹²⁴ feature butter and cheese, together with fruits and vegetables and all sorts of other products, offering an interesting parallel¹²⁵ to what we know about the delicacies reserved for the higher social strata.

But now: how did people not belonging to the elites and not being professionally engaged in dairy manufacturing cover their needs for fatty substances? On the one hand, they could access them if they participated in festivals or

¹¹¹ Brunke, 2011: 203–209.

¹¹² Brunke, 2011: 132–136.

¹¹³ Brunke, 2011: 209.

¹¹⁴ Brunke, 2011: 138–139.

¹¹⁵ Brunke, 2011: 143.

¹¹⁶ Brunke, 2011: 139.

¹¹⁷ Brunke, 2011: 213–219.

¹¹⁸ Brunke, 2011: 223–228, e.g. Ist L 07032.

¹¹⁹ Brunke, 2011: 223–228, e.g., Ist L 07030.

¹²⁰ E. g., ITT 4 7030 or ITT 4 7032 (22nd c. BCE.).

¹²¹ Brunke, 2011: 227 and e.g., UET 3 913, Bull. Buffalo SNS 11–2 151 17 and BIN 5 082.

¹²² Brunke, 2011: 223.

¹²³ E.g., DP 051 (Presargonic); OrSP 47–49 396, BPOA 2 1896 (Ur III).

¹²⁴ Brunke, 2011: 228.

¹²⁵ E.g., JNES 63, p. 209 no. 1 (fruits, butter, and cheese as offerings to deities). Cf. also similar references by literary compositions like *Enki and the world order* (ECTSL c.1.1.3) ll. 28–31, according to which the products of sheep- and cow herders, among them in particular butter and milk, would do honour to the lunch of the gods.

ceremonies during which these special dishes were served.¹²⁶ On the other hand, they very likely covered their needs with meat and mainly with fish:¹²⁷ fish was abundantly available, it was abundantly distributed to the workforce, and some fish types were extremely fatty.¹²⁸ Moreover, we can also assume that they had access to milk fat (butter, cheese or in whatever form) because, e.g., the sale documents show that various individuals owned cattle and/or goats for their own benefit.¹²⁹

Summing up: cheese and butter were, albeit not being regularly distributed as allotments or food provisions, primarily produced for consumption as food and those documented by the archives from the main organizations ultimately ended up on tables of the higher social strata and reached various professional groups *via* various (cultic) celebrations. Nevertheless, butter along with lard and sesame oil is also often documented by the administrative sources of the third millennium BCE as a base ingredient to manufacture scented oils for anointing¹³⁰ and for technical applications.¹³¹

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¹²⁶ E.g., CUSAS 40–2 0324 that documents as fruits, cheese and butter prepared for the banquet of deceased kings (ki-a-naĝ) ended up being eaten (“they ate it” ib₂-gu₇) by menial workers (uĝ₃-ga₆-e-ne).

¹²⁷ Englund (1990) and, more recently, Borrelli (2021).

¹²⁸ Pöllath, Nadja: “Fish, Fishing and Fish Oil in Ancient Lower Mesopotamia – A Slippery Matter” and Greco, Angela: “Fish-Oil in the Written Documents from Fourth and Third Millennium Southern Mesopotamia”, papers held within the international workshop “Animal Fats in the Ancient Near East and Beyond: An Interdisciplinary Colloquium” in Paris, June 16th, 2022.

¹²⁹ Steinkeller, 1989: 133, 138 and Gelb *et al.*, 1991; see also, e.g., BE 3–1 021 or PPAC 5 1469 about the sale of cows; BE 03/1, 077 with goats (and sheep) among the property of an individual.

¹³⁰ See, for example, the numerous attestations of scented butter (i₃-nun du₁₀-ga) in the administrative texts from the Sargonic to the Ur III period: e.g., Nisaba 26 088 o. 10’–11’ featuring scented butter for anointing (šeš₄-de₃). See also the expenditure of butter (i₃-nun) for the production of fragrant oil (i₃ ir-a) to the perfumer (i₃-ra₂-ra₂) in the Presargonic period: e.g., DP 271.

¹³¹ E.g., HSS 04 003 ii 7–15 (sesame oil and lard for a door lock; sesame oil for the wagon of Bau); e.g., PPAC 5 1181 or BPOA 1 0161 (sesame oil or lard for treating textiles); e.g., BIN 08, 320 (butter for a wagon) or MVN 09 177 (butter and tallow for treating leather bags).

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Reviving Food through Mesopotamian Recipes and Archaeological Data

New Methodological Approaches to the Ancient Nutrition Studies

Andrea Polcaro * / *Paolo Braconi* **

1. Introduction

The history of food nutrition is a complex topic of research, usually linked strictly to the textual evidences and mostly centered on the historical periods, from the Roman Empire to the Middle Ages. The interest for the Mesopotamian kitchen grew after the discovery and translation of the Yale Tablets, containing the most ancient written recipes since now discovered, dated to the 2nd millennium BC.¹ The study of the textual evidences was recently accompanied by experimental archaeology, with the tentative to reproduce these ancient Mesopotamian recipes.

However, it must be considered that the ancient written sources, actually very few, concerning detailed description of dishes preparations, are always related to an *elitarian* diet. They are intended to be a guide for whom have to cook for the palaces, while the popular kitchen is always transmitted as oral tradition.² Thus, the Yale Tablets gave to us just a limited vision of the nutrition of ancient Mesopotamian population, because they are clearly referred to Sumerian upper classes

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¹ Translated by J. Bottéro the Yale Tablets are considered the first written receipts in the ancient world (Bottéro, 2004).

² This is true also for the later written sources of Roman Period, particularly regarding the opera of Apicio (I century BCE). Wrongly interpreted as a mirror of the popular ancient Roman cousin, it is clearly that he's lost opera, divided in ten volumes, the "*De Res Coquinaria*", was directed to the high class of the Roman population, which could afford to obtain even rare and expensive ingredients (Grocock / Grainger, 2006). Moreover, his kitchen is voluntarily complex and difficult to realize, with the aim of pleasantly surprising the guest. In this specific aspect, the Yale Tablets present many similarities with the much later Apicio's work.

and can not be directly a mirror of what usually people eat in Southern Mesopotamia.

To have a complete vision of the nutrition in Mesopotamia is necessary to look more carefully to the archaeological context, which can give to us more information than expected, if approached with a wide multidisciplinary methodology. In particular, the analysis of botanical samples have to be extended to any vegetal charcoal recovered inside a oven, not only to the seeds or to other macroscopical organic remains collected inside or around a cooking installation during excavations. Moreover, the cooperation of an archaeo-zoologist to study the animal bones remains and, in a second instance, also of a biologist and a geneticist to analyze the ancient DNA of plants and animals, is nowadays very important to have a wider range of interpretations about the reconstruction of the food traditions of an ancient population. In this regards, the restart of the excavations in Southern Iraq can give in the next future more data from Mesopotamian archaeological sites attesting food production activities, in domestic, as such as in public contexts.

2. The case of Tell Zurghul, ancient Nigin, Area A

In order to show an example of this multidisciplinary approach to the ancient Near East history of nutrition, we present here the results of the analyses on the food production installations identified in the Area A at Tell Zurghul, ancient Nigin.³

The Area A of Tell Zurghul was investigated by Sapienza University of Rome and by Perugia University between the 2015 and the 2017 excavation seasons at the site.⁴ The Area A is located on the southern side of Mound A, the main tell of the site, where the Sirara temple complex, knew from cuneiform texts since the Early Dynastic Period, is under excavation by the Italian Expedition.

In Area A a mud-bricks building was partially brought to light (Fig. 1). Seven phases of occupation have been identified so far, extended from the Late Uruk, phase 1, to Jemdet Nasr, phases 2–4, and ED I, phases 5–7.⁵ The Jemdet Nasr phases are clearly dated from the findings,⁶ in particular by large entire painted jars discovered inside the building (L. 131 and L. 108, Phase 3).⁷ Moreover, the continuity of use of the building from the Jemdet Nasr Period to the Early Dynas-

³ In the framework of the undergoing research carried by the Research Unit of Perugia University, directed by Andrea Polcaro, in the framework of the National PRIN 2017 Fluid Crescent, coordinated by Davide Nadali of Rome Sapienza University. The research of the Unit of Perugia University is centered on the reconstruction of the food production systems and cooking traditions between the 4th and the 3rd millennium BC along the Fertile Crescent.

⁴ Nadali / Polcaro, 2020.

⁵ See Nadali / Polcaro, 2020: 288, tab. 2.

⁶ See Pizzimenti, 2020: 137–140, figs. 12–13.

⁷ See Polcaro, 2020: fig. 10, 31.

tic Period is also proved by C14 analysis performed on charcoals sampled in the upper layers of the structure, dating 3017–2882 BCE.⁸ The Building seems to have maintained its function through the centuries, mainly connected to the production of large quantities of food and beverages, presumably distributed for great feasts in occasion of religious festivities, as typical in the Mesopotamian tradition.⁹



Fig. 1: Overview of the Building A, Tell Zurghul, ancient Nigin, from Southwest.

Building A had a frontal open courtyard, where Phase 2 and 3 have been identified (Fig. 2). Here several installations have been recovered, all connected to production of aliments. The food was probably later distributed inside bowls of different dimensions, mainly recovered piled against the other wall of Building A or fell from wooden tables or shelters, sometimes discovered with organic remains inside. In Phase 2, close to the main entrance of Building A, a *tannur* oven was discovered (Fig. 3). The *tannur* (T. 109), of circular shape (50 cm of diameter)

⁸ SG/17 T.419; Lab. Code Fi 3812 (years AD - 1 σ : 3017–2882BC) (years AD - 2 σ : 3104–2851BC). The C14 analysis was performed by the “Laboratorio preparazione campioni per misure isotopiche” of the “Dipartimento di Scienze e Tecnologie Ambientali, Biologiche e Farmaceutiche” of the Università della Campania “L. Vanvitelli”, at the facility AMS of the Laboratory INFN – LABEC (“Laboratorio di tecniche nucleari per l’Ambiente e i Beni Culturali”) of Florence (Nadali / Polcaro, 2020b).

⁹ The importance of feasting in the Mesopotamian ideology and economy is well attested both from visual art since the Uruk Period and from the cuneiform texts since the Early Dynastic (Bray, 2003; Pollock, 2003; Reynolds, 2008; Romano, 2015).

and preserved only in the lower part, was filled with ash layers. The same ashes were discovered also in the layers covering the beaten earth floor outside the installation. Beside the *tannur*, the footstep of a sort of wooden table was also identified.

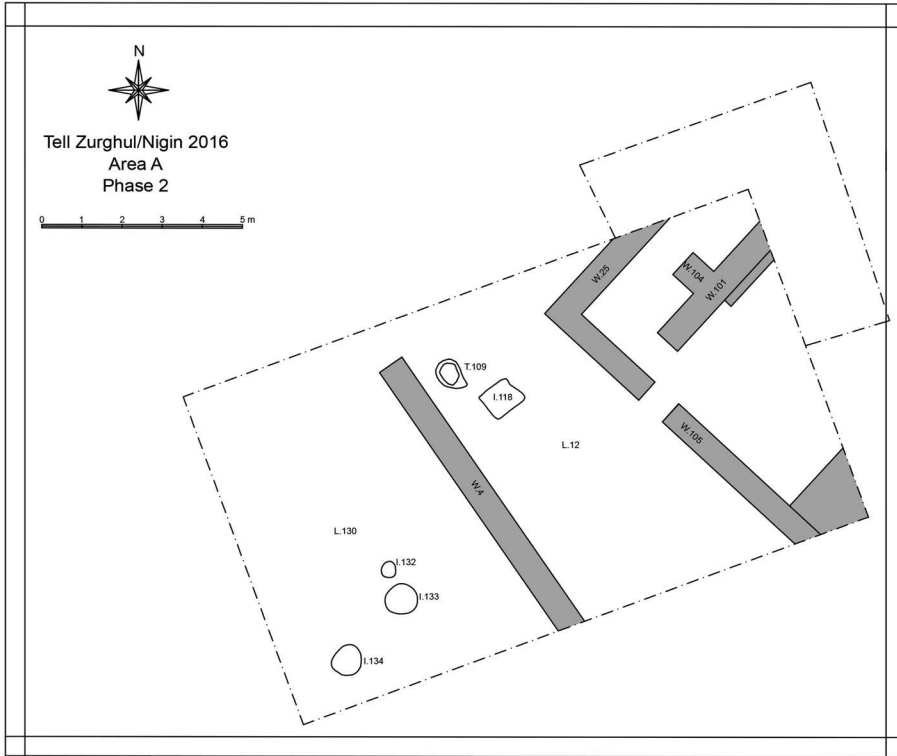


Fig. 2: Plan of Area A of Tell Zurghul, Phase 2.

This kind of oven, of cylindrical shape, open on the top, still very common in the Middle East, is known from the cuneiform texts as the *tinūru*, mentioned several times in the Yale Tablets,¹⁰ the most ancient culinary texts discovered in the ancient Near East, dated to the first half of the 2nd millennium BC. They were used to prepare the typical flat bread, with direct cooking against the internal walls of the oven. The *tannur* could also be used to heat, or cook with indirect cooking, other kind of aliments inside a pot located on the top of it.¹¹

¹⁰ Bottéro, 2004: 47–49.

¹¹ The *tannur* is a typical kind of clay oven widespread in all the Near East at least from the Neolithic Period and very common in all the ages till modern time. Deeply studied for its Southern Levantine attestations (see e.g. London, 2016: 111–117), this kind of oven is also largely quoted in Syrian and Mesopotamian excavations (see e.g. Rova, 2014). Even if its shape can be slightly differ in the uppermost part, the *tannur* have always a slightly

The second kind of cooking installation discovered in the external courtyard (Phase 2) is a sort of very regular fireplace. Three fireplaces (I. 132, 133, 134), of precise circular shape and different dimensions (80, 60 and 40 cm of diameter), have been since now identified in the area (Fig. 4). The smaller two are located close to each other, while the larger one is placed at 1.5 m away to the south. The different dimensions of the fireplaces suggests that they are intended to produce different level of heat, to cook in the same time three different dishes or ingredients. Moreover, the perfect shape of the three circles of ashes exclude the possibility that they are the traces of open fireplaces. In fact, even if originally bordered with stones, these kind of installations can not produce such regular footsteps. Thus, it is more probable that they have to be identified as the rests of portable ovens or stoves.

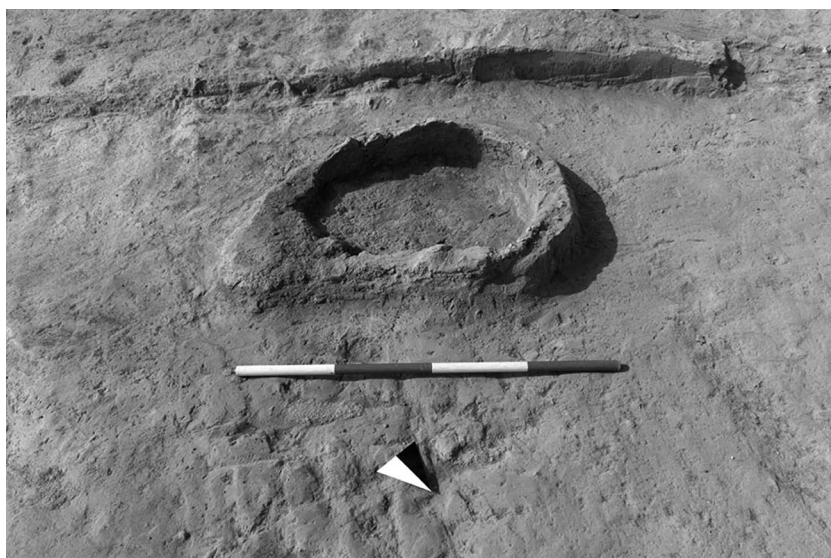


Fig. 3: The *tannur* (T. 109) discovered in Area A.

These portable stoves are quotes in the Mesopotamian cuneiform sources: they could made of pottery or metals, like the *kinunu*,¹² a sort of cylindrical brazier, able to sustain a large vessel on the top. Another metal example is the copper cauldron *ruqqu*,¹³ mentioned in the Yale Tables of the 2nd Millennium BC. This is perhaps the same represented on the Ishtar's Obelisk of Tell Mardikh / Ebla.¹⁴

conical form about one meter high and 40–50 cm wide (Mulder-Heymans, 2002). It's circular base and vertical side are usually the only remains identified in the archaeological layers during excavations.

¹² Bottéro, 2004: 47.

¹³ Bottéro, 2004: 51.

¹⁴ Matthiae, 2011: 742, fig. 6.

The monument, dated to the first half of the 2nd millennium BC, has a scene of cooking carved on the upper register, where a large cauldron is clearly identifiable.¹⁵

The last installation discovered in the Courtyard was in Phase 3, far from the main Building A. It is a fire installation, full of ashes inside, made of clay, a tannur-like oven of rectangular shape.¹⁶ Also this installation, possibly shorter than the tannur of Phase 2, was able to sustain large metal or clay vessels on the top.

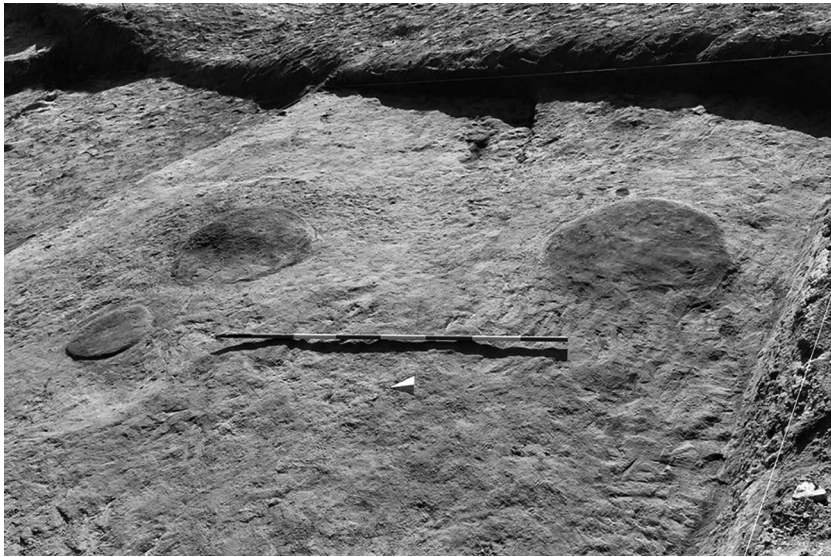


Fig. 4: The fireplaces (I. 132, 133, 134) identified in Area A.

3. The analysis of the samples and materials from the ovens of Area A

In order to understand what kind of fuel the people of Tell Zurghul used inside the ovens and stoves discovered in Area A of Tell Zurghul, several samples of charcoals have been taken inside the installations. Remains of Tamarix, Prunus and Alnus trees have been identified thanks to the collaboration between Perugia University with the Federico II University of Naples. These are small woods coming from a marsh landscape and probably they were likely mixed with animal manure to make the fires. It is also not possible to exclude the use of bitumen as fuel, at least to start the fire, a material very common in Southern Mesopotamia and discovered by the Italian Expedition in Tell Zurghul, also in Building A, probably used to seal the store jars discovered inside the structure.¹⁷ We can not exclude also the use of different kind of vegetal materials, like reeds or date palm

¹⁵ See Pizzimenti, 2015: 177, fig. 7.

¹⁶ See Polcaro, 2020: 31, fig. 9.

¹⁷ See Polcaro, 2020: 34, fig. 15.

remains, even if this kind of materials were not identified by the botanical analysis performed on the charcoals samples.

It is important to note that the kind of fuel used to make fire in a food production installation effects directly the method of cooking. In fact, the kind of fuel identified in Tell Zurghul is not able to roast meat through direct cooking on the fire, first of all because the small woods of the marshlands are not able to produce large charcoals to cook well the meat, second because the meat absorbs bad smell and taste of the manure. This is probable the reason why direct cooking is not so common in Southern Mesopotamia and it is more attested in the Northern areas. On the contrary, the indirect cooking through water, obtained through the use of large vessels of pottery or metal, preserves the food to take the smell and taste of the fuel. Boiling the meat inside closed containers permits to preserve its taste, and different spices and flavors could be added directly in the water before and during the cooking.



Fig. 5: Different bowls identified in the courtyard in front of Building A.

Finally, looking the pottery discovered in the Late Uruk/Jemdet Nasr phases of the courtyard of Building A, mostly of the sherds and of the entire vessels identified during the excavations are related to conical bowls, deep bowls, large cups and flower pots.¹⁸ These open shapes are perfectly suitable to eat humid food with its liquid, like soups and stews (Fig. 5). Together with these vessels, jugs and jars to contain and pouring beverages have been also recovered.¹⁹ During excavations of the all phases, both inside and outside Building A, no one sherd pertains to cooking or kitchen ware has been identified so far. Kitchen ware seems to be not

¹⁸ See Pizzimenti, 2020: 120–127, figs. 4–7.

¹⁹ See Pizzimenti, 2020: 130–131, fig. 9.

identifiable between the sherds discovered in Building A, even for the paste, inclusions or external fire traces.²⁰

Resuming the available data: we have a complete absence of “cooking ware” or pottery with external fire traces during all the phases from the 4th to the 3rd millennia BC. On the contrary there is a strong majority of simple ware open vessels, particularly conical cups suitable for semi-liquid food like soups and stews. The attested fuel for the ovens is not suitable to made charcoals reaching sufficient heat to roast meat directly on it, especially considering the terrible taste which meat can take from fuel like manure and bitumen. Later culinary cuneiform texts of the 2nd millennium BC like the Yale Tablets mention mainly indirect cooking with water to made soups and stews or a double treatment of the meat first in the *ruqqu* cauldron and then in the cooking pot.²¹ All this information let us advance the hypothesis that in the external Courtyard of Building A large quantities of soups and stews were prepared, possibly in copper large vessels,²² placed on the top of the three so-called fireplaces, probably above circular stands or stoves of different dimensions, and also above the *tannur* oven. These meals were possibly served inside the conical bowls together with flat bread cooked inside the *tannur*.

The vegetal and animal remains discovered in the archaeological contexts of Area A, sometimes inside the conical bowls recovered in the external courtyard are related to legumes, in particular lentils, emmer and barley seeds, discovered undressed and toasted, and animal bones, ribs fragments, possibly related to sheep, but to ruined to be surely identified (Fig. 6).²³ This let us think to emmer or legumes soups, lamb stew and other dishes well known in the receipts of the Yale Tables.²⁴ From other cuneiform texts several kinds of soups are known as such as the chick-pie soup, the emmer broth, the lentil soup, meat broth or turnip soup.²⁵ A more general term attesting the indirect cooking of the meat through

²⁰ Pizzimenti, 2020: 107–108, 110–111.

²¹ Bottéro, 2004: 51.

²² The absence of copper fragments in the archaeological layers that could be related to cauldrons, like the Akkadian *ruqqu*, it is not strange due to the typical costume of reuse the metal materials in antiquity; particularly in the region where copper was less easy to reach as in Southern Mesopotamia.

²³ The first analysis on the botanical samples were performed by Dr. Alessia D’Auria, Research Fellow at the Department of Humanities, Perugia University. Further analysis on the same samples are undergoing thanks to a scientific collaboration with Prof. Gaetano di Pasquale, Department of Agriculture, Naples University “Federico II”. The animal bones are first recognized by Dr. Rossana Roila and Prof. David Ranucci, Department of Veterinary, Perugia University.

²⁴ See in particular the Tablet A (*YOS II 25*), Bottéro, 2004: 26–29.

²⁵ See Limet, 1987.

water is *silqum*, boiled meat, also common in the Sumerian and Akkadian cuneiform texts.²⁶

Thus, the role of water in the kitchen of Southern Mesopotamia must have been very important, considering the receipts of stews, broths and soups of the Yale Tablet, the attestation of boiling from the figurative art and the landscape of Sumer, a marshland water landscape, not able to produce the kind of wood that is needed for a good roasted meat, surely most common in the northern and eastern mountainous regions.

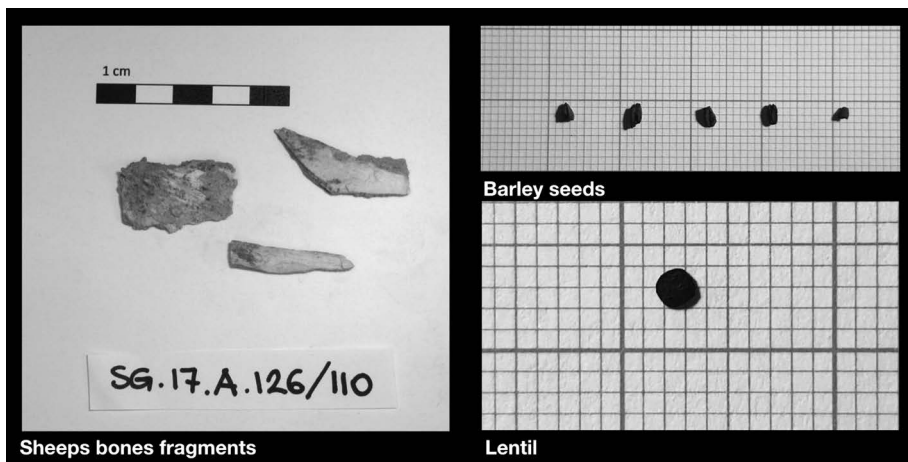


Fig. 6: Legumes, barley seeds (left) and sheep ribs (right) identified in the filling layers of the ovens of Area A.

4. The function of Building A

Coming back to Nigin, it was thus probable that the open space in front of Building A was dedicated to the production of great quantities of food; particularly, soups, stews and bread. The location of the building in a central area of the settlement, at the base of the Sirara Temple dedicated to the goddess Nanshe, could be connected with the large distribution of aliments during the religious festivities.

Looking to the inner space of Building A, some of the rooms were also used to prepare some kind of aliments in the following Phase 5, dated to the Early Dynastic I Period (Fig. 7). In particular the two small rooms of the northern wing present two different kind of fireplaces. The Southern one (L. 418) has a smaller pit in the center of the floor (T. 419).²⁷ It was lined with sherds and filled with ash layers. The shape of the installation suggest some kind of fireplace. The ethnographical evidences can suggest another type of indirect cooking in this case: the fire was set inside the pit, heating the sherds, after that the charcoals will be re-

²⁶ See Limet, 1987: 147.

²⁷ Polcaro, 2020: 22–23.

moved and the food settled inside the pit, then covered by the hot charcoals and ashes.

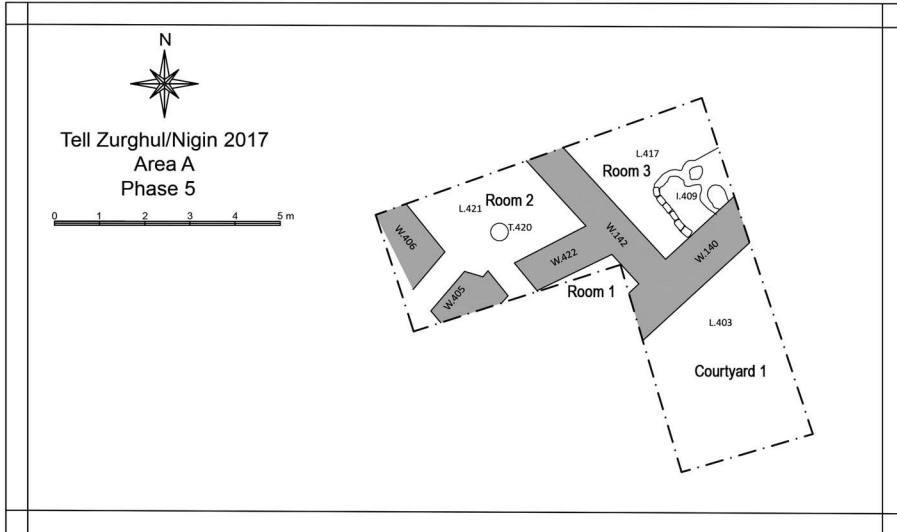


Fig. 7: Plan of Area A of Tell Zurghul, Phase 5.

The most interesting installation is the I. 409, discovered in the second small room of the northern wing of Building A (L. 417).²⁸ It consists of a large oval basin, made of mudbricks and plastered inside (Fig. 8). Beside it, close to the eastern side, there were a small circular oven and another circular installation to set a pot, probably a jar. The circular oven connected to the basin was discovered filled with ashes and the mud bricks of the wall close to it present strong signs of burning.

At the present state of art, without further paleo-botanical analysis, it is not possible to surely establish the function of the oval basin. However, it could be advanced the hypothesis that it could be used as a place to work some liquid or semi-liquid material, which need to be heated. In this regard, the production of beer, well attested in ancient Sumer and described by the later Hymn of Ninkasi,²⁹ foresees the preparation of a mesh that often could be heated with different kind of systems.³⁰ For example, these kind of processes are attested archaeologically at the end of the 4th Millennium BCE in the Early Dynastic Egypt,³¹ or in the later

²⁸ Polcaro, 2020: 24–25.

²⁹ Heimpel, 1981.

³⁰ Damerow, 2012.

³¹ Attested both at Tell el-Farkha (Delta Region, Lower Egypt) and at Abydos (Upper Egypt), the action of heating is part of the brewing process, aiming to produce a sort of porridge or gruel-like mass of well cooked grain, which was, together with the uncooked malt, one of the two main ingredients of the beer (see Adamsky / Rosinska-Balik, 2014).

Middle Bronze Age Cyprus,³² where similar heated basin have been discovered and linked to the production of beer. If this hypothesis is correct, the installation discovered in Building A could be a system to prepare a mash inside the basin at controlled temperature, hot enough to help the fermentation but not too strong to ruin the process. The small installation for the jar could be useful to have handy water to add to the mesh. This could suggest that at least one of the function of the inner spaces of Building A was to produce large quantities of a fermented liquid, possibly beer, to be redistributed to the population of the city in the occasion of the periodical religious festivity.³³



Fig. 8: The oval basin I. 408, discovered in Building A. modern taste.

5. Conclusions

Finally, in our research concerning the nutrition and food traditions of the ancient Near East, we performed also some experiments about the reconstruction of ancient receipts, like the “*Tuh’u* beet broth” and the “small birds cake” quoted in the Yale Tablets (Fig. 9).³⁴ In this case the aim was not to strictly reproduce the reci-

The same costume and brewing technique was recently attested in Upper Egypt at Hierankopolis (Wang / Friedman / Baba, 2021).

³² For Cyprus see the site of Kissonerga-Skalia (Crewe / Hill, 2012).

³³ It must also be considered that the beer could be used in the ancient Mesopotamian cousins as an ingredient (see Bottéro, 2004: 89–93; Reynolds, 2008: 182).

³⁴ The “*Tuh’u* beet broth” is quoted in Tablet A (*YOS II 25*), see Bottéro, 2004: 28; the “little bird cake” is quoted in Tablet B (*YOS II 25*: 1–49), see Bottéro, 2004: 29–30. The receipts were studied by the authors and reproduced by the Chef Marino Marini.

pes, because the textual and archaeological data can not give enough information about the cooking processes and the measures of the ingredients. Thus, the aim was to propose the Yale Tablets receipts in a reinterpreted way, suitable for the modern taste.³⁵

The revival of ancient Mesopotamian receipts does not only have the purpose to create commercial products, useful for example in the tourism sector. It could also be seen as a practical experiment, which could provide the archaeologists with more information concerning the various implications about the use of a particular cooking technique or a specific ingredient.



Fig. 9: The “small birds cake” in a single portion created by the Chef Marino Marini.

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³⁵ This approach to the ancient history of nutrition was already experimented by the Project Archeofood, with the study and realization of food products coming from ancient receipts of the Roman Period. Archeofood is a Cultural Association and a Trade Mark funded by Paolo Braconi and Marino Marini with the goal of rediscover, innovate and disseminate ancient food products.

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Food and Craft Production at Tulūl al-Baqarat, Mound 7

A Typological and Functional Analysis of Fire
and Work Installations from Building A

*Eleonora Quirico**

Since 2015, archaeological investigations in the Tulūl al-Baqarat archaeological area (Wāsit Governorate, southern Iraq) have intensively focused on the mound named TB7. The activities conducted at the site, which is located in the south-eastern part of the archaeological area, have allowed a preliminary reconstruction of early phases of occupation. In particular, the excavation of Sounding 3 has revealed the existence of a residential structure (Building A) in the north-western sector of the site; this building is characterised by the presence of large inner and outer open spaces intended for productive activities such as food processing and craft production of utilitarian goods. The classification and analysis of the numerous associated installations provides significant insights into Early Uruk production practices and traditions at the site.

1. Introduction

The Italian Archaeological Expedition at Tulūl al-Baqarat, sponsored by the Centro Ricerche Archeologiche e Scavi di Torino (CRAST), the Università degli Studi di Torino and the Italian Ministry of Foreign Affairs and International Cooperation started its first season of work under the direction of Professor C. Lippolis in 2013. This archaeological area, located in the district of An-Numaniyah (Wāsit Governorate), is made up of a series of mounds of different size and chronology, including nine main tells. Except for the main tell, known as TB1, which is characterised by a longer and more continuous cultural sequence, the other mounds seem to have been occupied for shorter periods. The analysis of settlement patterns in the area suggests a progressive relocation of settlements from an early south-eastern location to the north-west.¹

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¹ For an overview of the main results of the Italian activities at Tulūl al-Baqarat, see: Lippolis, 2016; 2018; 2020; Lippolis / Di Michele / Quirico, 2016; Lippolis *et al.*, 2019; Lippolis / Viano, 2016.

After the first archaeological investigations on TB1, and starting from 2015, the Italian team focused on the exploration of the south-eastern part of Tulūl al-Baqarat, where the mounds named TB7 and TB8 are situated. These two tells are located about 1 km south-east of TB1 and have a roughly circular shape. TB7 presents a central elevation and measures approximately 300 m in diameter (about 8 hectares), while TB8 is flat and has a diameter of about 170–190 m (roughly 4 hectares). It is very likely that the two tells were part of the same settled area in ancient times; indeed, the pottery and other archaeological materials on the surface of the two mounds, collected during an intensive survey in 2015, are culturally consistent and refer to the same chronological horizon, the Uruk period.



Fig. 1: TB7, Sounding 3, viewed from the north-west.

Following the opening of soundings on the top and the north-western slope of the central elevation of TB7, a third excavation area named Sounding 3 was inaugurated in the north-western sector of the site (Fig. 1).² The selection of this area, which is slightly raised above the surrounding plain, followed the discovery of square and rectangular baked bricks scattered on its surface, probably as a conse-

² For the preliminary report on archaeological activities in this sector, see Quirico, 2020.

quence of recent illicit diggings. Some of these bricks, both complete and fragmentary, bore neo-Babylonian royal inscriptions.³

2. Building A

The architectural unit exposed in Sounding 3 was named Building A. The external limits of the building (or buildings) have not been completely identified yet; nevertheless, drone images show distinguishable traces of lateral walls and sub-surface alignments, suggesting the presence of additional structures neighbouring Building A to the north-west, south-west and south-east.

With the exception of the late reoccupation of the area during the Parthian period (Fig. 2),⁴ all the structures and elements of material culture from Building A pertain to the same cultural horizon, the Early Uruk period.

Before discussing the stratigraphic sequence of Building A, it is necessary to stress how interpretative difficulties complicate the chronological distinction between occupational phases in the excavated area. Indeed, the area has suffered damage as a result of strong erosion phenomena and illicit diggings, which have disrupted and at times obliterated the archaeological deposit and complicated the stratigraphical analysis. For these reasons, some data remain difficult to interpret and may require future reassessments.

3. Occupational phases

Two main phases of occupation and several sub-phases have been recorded in Building A so far.⁵

³ For an analysis of the epigraphic material from Tulūl al-Baqarat, see: Devecchi, 2016; Viano, 2016; 2019.

⁴ The Parthian occupational phase (phase III) in the area of Sounding 3 represents a spatially limited occupation of this sector of the site, which, however, cannot be simply related to an occasional presence, given the existence of carefully built work installations. The first installation is a water drainage system (US16) made of reused Neo-Babylonian baked bricks, which cut the archaeological deposit relating to earlier phases. The second one is a large pit (US149) of approximately 1.5 by 1 m, which housed six overturned jars arranged in two rows; the pit was filled with potsherds, animal bones and abundant organic residues, suggesting it was used for drainage or waste disposal purposes.

⁵ It has to be mentioned that structural remains pertaining to the most ancient architectural sub-phase identified at the site (sub-phase Ia) were exposed and investigated during the 2021 Autumn campaign. Preliminary reconstructions are currently ongoing and a definitive analysis of the stratigraphic and chronological sequences of the building, along with an in-depth discussion of structures ascribable to sub-phase Ia and sub-phase Ib, will be published in the final report on the Italian investigations at the site.

They all refer to the same Early Uruk cultural horizon,⁶ albeit with some significant transformations in the layout and function of structures throughout the occupational sequence.

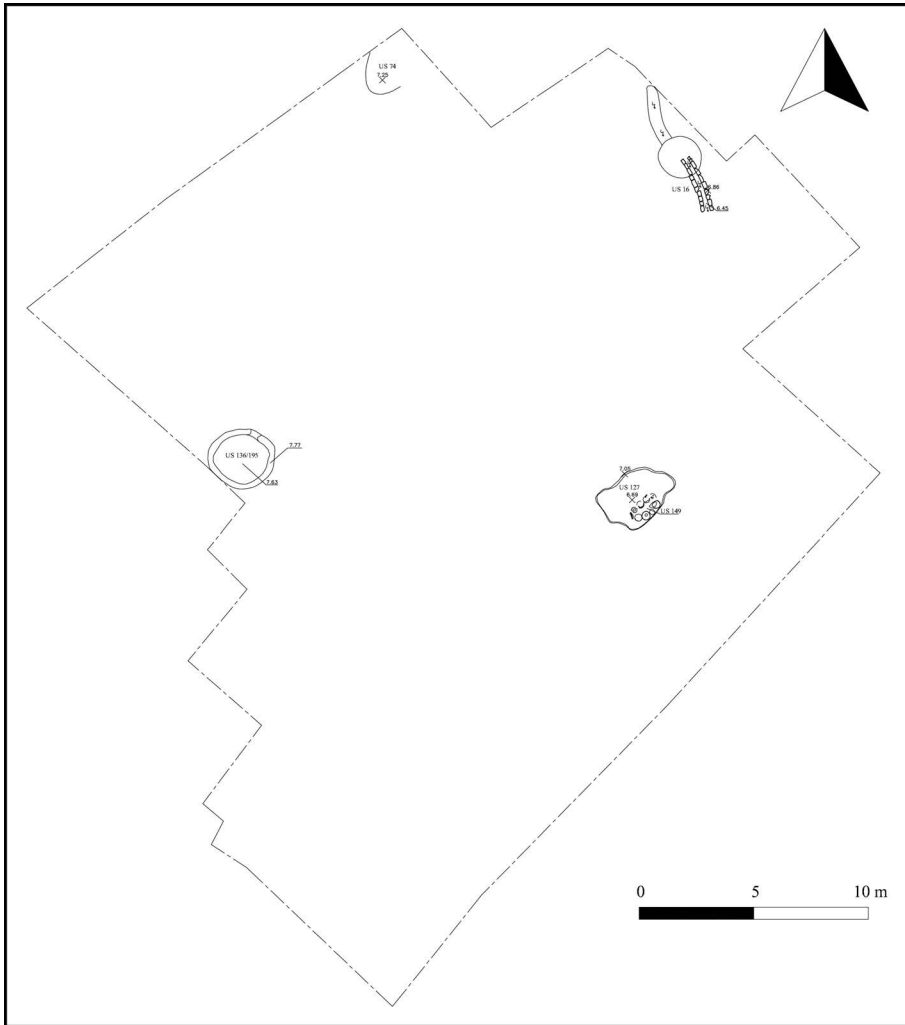


Fig. 2: Plan of Sounding 3, Phase III, with indication of relevant architectural remains and work installations. *Author:* Mirko Furlanetto.

⁶ For the analysis of the pottery from S3 and, more in general, TB7, and for an assessment of ceramic material from the other mounds investigated by the Italian team, see Bruno, 2020.

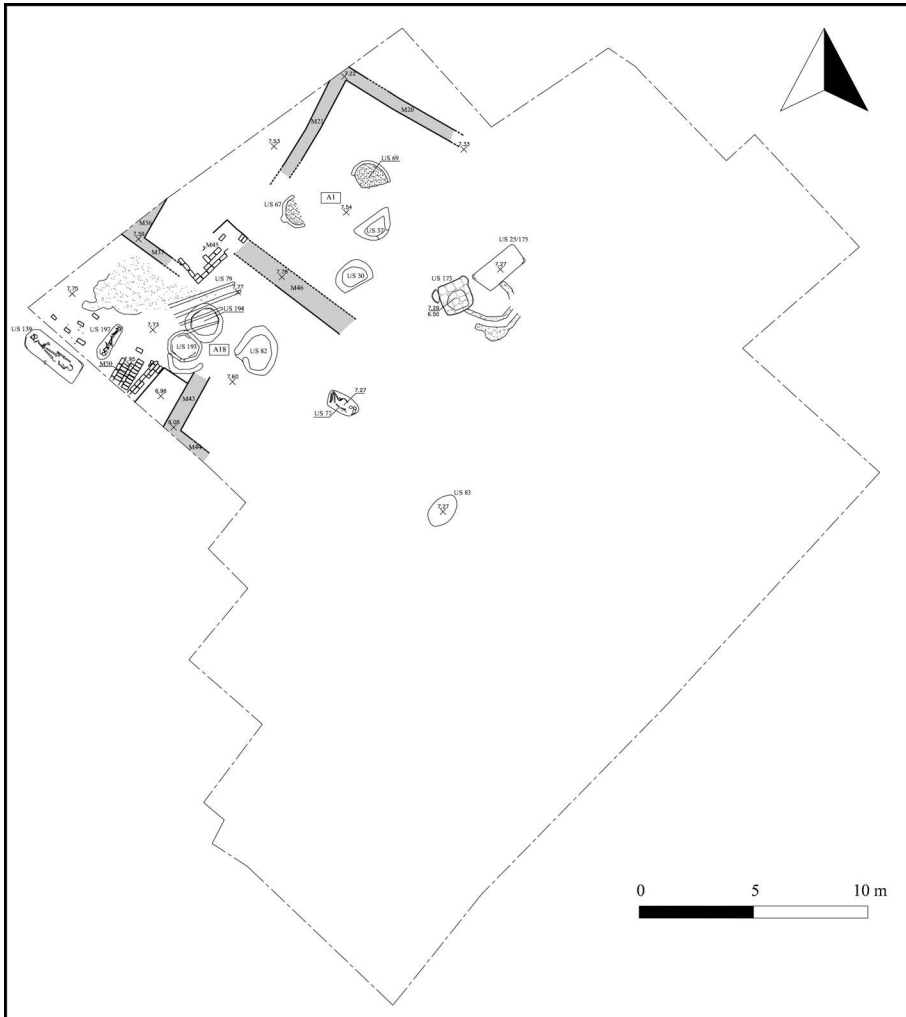


Fig. 3: Plan of Sounding 3, Phase II, with indication of relevant architectural remains and work installations. *Author:* Mirko Furlanetto.

Phase II, the latest of the Uruk phase, was extensively investigated in the northern and north-western parts of the sounding, where the archaeological deposit is less affected by erosion and the higher elevation of the ground corresponds to a better preservation of mudbrick structures (Fig. 3). This phase is characterised by the presence of numerous installations, particularly connected with fire-related practices. Production activities carried out over a wide area in the northern part of S3 resulted in the accumulation of thick, overlapping layers of ash and organic material. This uninterrupted stratigraphic sequence, which is also reflected in the superimposition of work installations, suggests different, albeit functionally homogeneous sub-phases of use in the area (IIa, IIb and IIc).

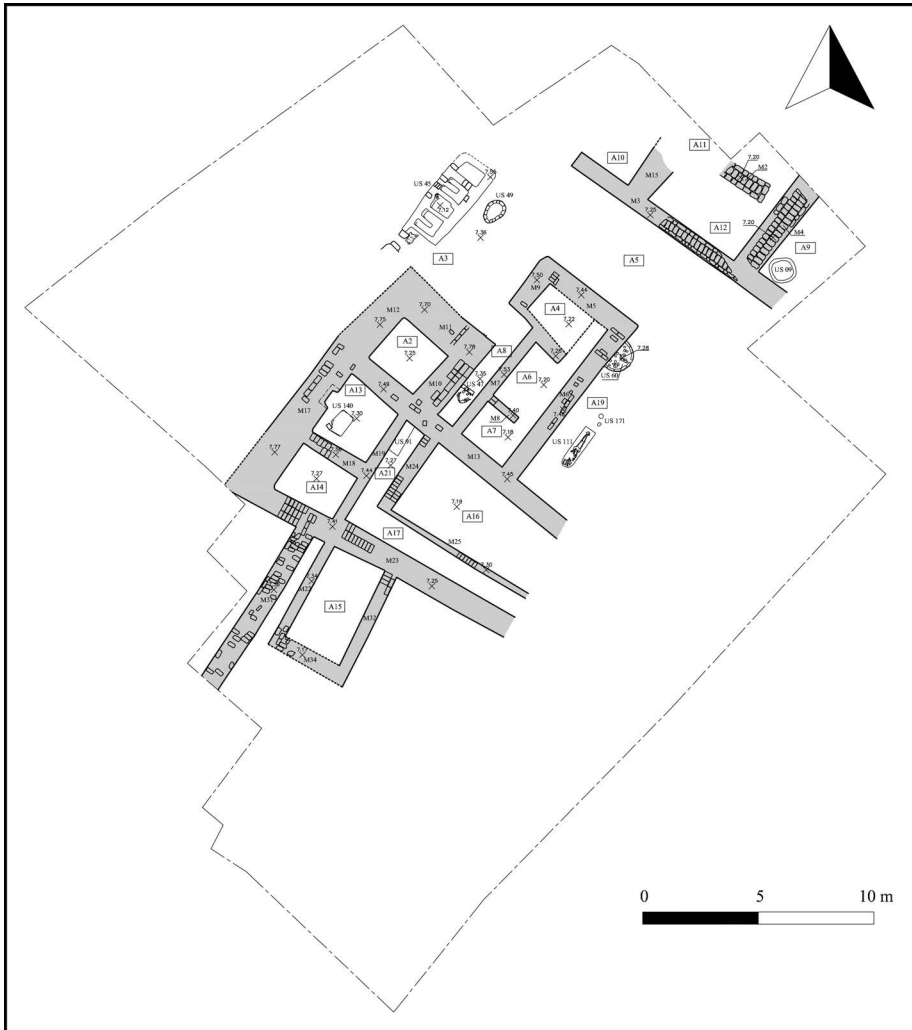


Fig. 4: Plan of Sounding 3, Phase Ib, with indication of relevant architectural remains and work installations. *Author:* Mirko Furlanetto.



Fig. 5: Preliminary plan of Sounding 3, Phase Ia, with indication of relevant architectural remains and work installations. *Author:* Mirko Furlanetto.

The most ancient sub-phases of Building A, referred to as Ia and Ib, are divided by thin deposit layers (Figs. 4–5). Despite a substantial transformation in the internal layout of the building, the apparent uniformity in the residential and domestic function of spaces seems to justify their identification as two sub-phases within a continuous occupational episode (phase I), rather than two separate phases of occupation.⁷

⁷ The distinction between phases is mainly based on changes in the functions and use of the investigated area, while the reorganisation of spaces and the magnitude of structural

4. Work installations

A brief overview of some of the most meaningful work installations excavated in Building A is provided here. Installations associated with occupational activities represent an irreplaceable tool for a better understanding of the specific function of spaces and of the types of tasks carried out during each phase of occupation.

The archaeological investigations in the area of Building A exposed open spaces, hallways, large central rooms and smaller peripheral rooms. Open spaces are consistently characterised by the presence of several craft installations and abundant deposits of accumulated materials resulting from extensive production activities.

The presence of continuous, overlapping layers of light and dark grey ash mixed with organic material, potsherds and animal bone fragments in the north-western part of S3 suggests particularly intense craft and food production during phase II, in relation to which at least two sub-phases (IIb and IIc) could be recognised. An elongated clay structure with inner partitions forming narrow compartments (US79) can be attributed to the more recent sub-phase (IIc).⁸ The construction technique, the absence of waterproof covering and comparisons with similar installations⁹ suggest that the structure was used either for the storage of food-stuffs or for the drying of cereals. Two ovens placed side by side (US193, located to the south-west, with a maximum diameter of about 1.5 m and US194, located to the north-east, with a maximum diameter of about 1.65 m) and a third oven located in proximity to the other two (US82, with a maximum diameter of about 1.8 m), belong to the earlier sub-phase (IIb). Some ceramic slags were discovered close to these fire installations and may be indicative of their function as pottery kilns.

interventions were not taken as sufficient indicators of different phases of occupation when considered individually. For example, although sub-phase Ib reflects a significant transformation in the layout of Building A compared to sub-phase Ia, both sub-phases are ascribable to the same occupational episode based on a complete homogeneity in the function of spaces. Conversely, phase II can be associated with a marked functional change in the area, the characteristics of which appear more consistent with spaces allotted to food and craft production. Therefore, even though this phase belongs to the same cultural horizon as the earlier sub-phases, the different use of spaces supports the identification of a separate macro-phase. Concerning Parthian levels in Sounding 3, the available archaeological evidence does not provide sufficient insights into the use of the area (residential and/or productive); in this case, however, the chronological and cultural distance from phase II justifies the classification of relevant traces of occupation as a distinct macro-phase.

⁸ Unfortunately, the installation was in a poor state of preservation (maximum length preserved: 2.5 m; maximum height preserved: 10 cm).

⁹ For a preliminary comparison, see for example: Forest, 1991: 94–101.

A different and less carefully built type of fire installation, presumably used for food preparation, was identified at the centre of the northern part of S3 (sub-phase IIa). These installations include two partially preserved hearths (US67 and US69) with a diameter of about 1.2–1.5 m, which are separated by some incomplete courses of poorly preserved square mudbricks (of about 30×30 cm). It can be hypothesised that these bricks would have formed a large platform serving as a support for fire-related activities carried out in this area.

Concerning phase I, and specifically sub-phase Ib, a rather irregular rectangular clay installation with internal compartments of different dimensions (US45) was found between rooms A1 and A3. This structure, which is preserved for a maximum length of 2.2 m and a maximum width of about 0.8 m, might have been used to store or process cereals or other foodstuffs. Although dissimilar in layout, the installation can be compared to the previously described US79.

An open space pertaining to both sub-phases is located in the eastern part of S3; this area corresponds with a large and elongated rectangular space named room A5 in phase Ib, and room A19 in phase Ia. The presence of fire installations (e.g. hearth US161, located to the north and measuring about 0.65 m in diameter, and oven US56, located to the south-west and measuring about 1 m in diameter) hints at its use as a domestic working space.

Although only few internal passages have been identified, some spaces can be interpreted as corridors linking the different parts of Building A. Among these, A8 probably connected room A3 with the core of the building during phase Ib. A circular ceramic fire installation (US47) located in this passage and apparently contemporary with the floor of sub-phase Ib must have been used for the performance of fire-related household tasks.¹⁰ The presence of the installation at the centre of this passage leading south-west, where it would have hindered internal circulation, suggests that it was placed in this position after the space lost its linking function.

Another interesting fire installation is represented by an oven (US186) pertaining to sub-phase Ia. Its internal walls and bottom are entirely coated in vitrified clay, certainly as a consequence of the high temperatures reached on the inside. Abundant faunal remains were detected in the upper layers of the fill, while the lower layers contained numerous ceramic slags. Accordingly, it is possible to hypothesise that an earlier use of this installation as a pottery kiln was followed by its functional conversion into an oven for food production.

The last sector here presented is located at the north-eastern limit of the sounding. The rooms here identified, named A9, A10 and A12, probably pertain to a neighbouring domestic building. The structures here investigated include the

¹⁰ This sort of ceramic brazier is not completely preserved in its upper part and measures approximately 0.6 m in diameter.

circular hearth US9 in room A9: the dimensional and morphological characteristics of this installation could be considered the evidence of domestic fire-related activities performed in this space.

5. Conclusions

The stratigraphic excavations carried out in S3 provided valuable insights into settlement dynamics within the Tulūl al-Baqarat archaeological area. Through the analysis of architectural and material remains from the site, it was possible to explore and reconstruct a residential and productive area in a 4th millennium BCE settlement. The archaeological data thus obtained are remarkable, as they offer unprecedented information on settlement dynamics, architecture, domestic traditions, funerary customs¹¹ and manufacturing techniques in the southern Mesopotamian alluvium during the little-known Early Uruk period.

Excluding the archaeological evidence pertaining to phase III (the Parthian reoccupation), the structures and materials excavated in S3 reflect a general cultural and chronological homogeneity between phases I (a–b) and II (a–c). The area seems to undergo a significant functional transformation between these two phases, with the use of spaces shifting from residential to productive. Nevertheless, a complete cessation of the domestic function of the building at the transition between sub-phase Ib and phase II cannot be confirmed at the moment. Indeed, except for the northern part of S3, where the upper strata relating to phase II are well preserved, it is not possible to reconstruct contemporary occupational levels and relevant structures in the central and southern parts of the sounding owing to the marked deterioration of the archaeological deposit. Furthermore, excavations in the northern part of S3 have not yet reached levels ascribable to phase I; therefore, the specific use of the area prior to phase II remains to be clarified.

Archaeological data on production activities from S3 are extremely meaningful. Based on what is known so far, tasks connected both with food and craft production would have been carried out in the area. The type, features and number of installations and associated materials suggest that production was partly intended for consumption and use on a household scale (particularly during phase I), and partly destined for a broader supply network. Household production can be considered typical of the economy of small settlements during the Early Uruk period, with single households functioning almost as self-sufficient economic units.¹²

Evidence of artisanal production is provided by the presence of ceramic slags in the proximity of some fire installations, which can thus be related to the firing of pottery and/or the production of clay sickles.¹³

¹¹ For a preliminary analysis of the burials excavated in S3, see Ragazzon, 2020.

¹² On this topic see for example Pollock / Pope / Coursey, 1996.

¹³ Clay sickles, in particular, were frequently found on the surface of TB7 and within the excavated layers. These tools made of fired clay, which became widespread during the

Concerning the spaces where production activities would have taken place, it has to be noted that most of the installations were identified in open areas, while their presence inside the rooms of Building A was only occasionally documented. Overall, the location and the arrangement of the installations is in line with the traditional features of residential units in Mesopotamian settlements, where open spaces were extensively used for domestic and craft activities.

This paper provides a brief overview of some of the most significant work installations discovered in S3. The quantitative assessment of these structures, along with the analysis of their location, distribution and main features, offered valuable tools for the reconstruction of the specific functions of spaces, contributing to a better understanding of occupational episodes and functional shifts within the excavated area.

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Ubaid period and remained in use until the early third millennium, were mainly employed for the harvesting of crops, the clearing of weeds and the cutting of reeds for manufacturing purposes (Benco, 1992; Moorey, 1999: 165). Accordingly, their abundant presence in and around S3 may testify to the agricultural nature of the activities carried out in the area.

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3.

Resource Management

Boire et manger d'après la documentation palatiale de Nuzi (14^{ème} s. av. J.-C.)

Première partie: les denrées alimentaires

Philippe Abrahams / Brigitte Lion

1. Introduction

Le site de Nuzi, fouillé par des missions américaines de 1925 à 1931, a livré une très riche documentation tant archéologique qu'épigraphique; cette dernière atteint peut-être 8000 tablettes et fragments,¹ datant surtout de la fin du XV^e et du début du XIV^e s. Nuzi était alors une ville du royaume d'Arraphe, soumis au Mit-tani. Dans la ville haute, outre des quartiers d'habitations et deux temples, le palais a été fouillé (voir Fig. 1). La présente communication se fonde sur la documentation archéologique et épigraphique issue de ce palais, où 630 tablettes ont été découvertes, et sur celle trouvée dans un bâtiment entrepôt dit « Group 36 », au nord du palais, qui abritait plus de 200 tablettes administratives, proches par leur contenu de celles du palais.

Cet article se limite à la présentation des sources et à un inventaire des produits alimentaires issus de la flore et de la faune tels qu'ils apparaissent d'après les données du palais et du « Group 36 ». Stockage, transformation et consommation feront l'objet d'un autre article.²

2. Les sources

2.1 Les données archéologiques

Le rapport de fouilles de R. F. S. Starr (1937 et 1939) contient deux pages sur les restes animaux et végétaux qui furent ramenés à Harvard pour y être analysés;³ malheureusement leur lieu de découverte n'est presque jamais indiqué. L'étude du palais a été reprise tout récemment par H. Mönninghoff, qui a localisé avec une grande précision tout le matériel découvert grâce au journal de fouille et aux

¹ Estimation de Maidman, 2020: 10.

² Traiter l'ensemble aurait largement dépassé les limites imparties pour la publication des Rencontres. Nous remercions les organisateurs de la RAI de Turin qui nous ont permis de retenir cette solution.

³ Starr, 1939: 429–494.



Fig. 1: Plan du palais de Nuzi, Mayer 1978, Anhang IV.3, d'après Starr, 1937: Plan No. 13, archives conservées à Harvard.⁴

⁴ Mönninghoff, 2020.

Starr a identifié le Group 36, un ensemble architectural de 33 pièces, à un bâtiment de stockage (1939: 242–243 et 252–253). Il ne fait pas allusion à la présence de céréales, mais on pourrait envisager que le lieu ait servi, au moins en partie, de grenier pour les céréales enregistrées dans les tablettes de ce même bâtiment.

2.2 Les données des textes

La plupart des textes du palais sont de nature administrative et près de 200 concernent la gestion des produits alimentaires, notamment celle des céréales. Y sont également mentionnés d'autres plantes, du bétail et des produits transformés comme le pain, la bière et l'huile.

Certains produits alimentaires d'usage courant, absents de la documentation du palais et de celle du « Group 36 », sont cependant attestés par des restes archéologiques et des tablettes d'autres provenances et seront mentionnés le cas échéant.⁵

3. Les céréales

3.1 Les données archéobotaniques

D'après le rapport de fouilles, parmi les restes de végétaux carbonisés découverts en grandes quantités à la fois dans le palais et dans les maisons, l'orge prédomine; elle est parfois difficile à distinguer du blé mais, lorsque l'identification est possible, il s'agit d'orge.⁶ Plusieurs pièces du palais, L22, L44, R50 et R127, ont livré des céréales.⁷ La pièce L22 contenait aussi de petits pains ronds et plats.⁸

3.2 Les données des textes

Les céréales les mieux représentées sont l'orge, le blé et le blé amidonnier.⁹ Des trois, l'orge prédomine dans les distributions.¹⁰

Le terme pour « orge », le plus souvent écrit en sumérien ŠE, doit probablement être lu *uṭṭatu* comme le montre HSS 14 109 (= HSS 13 179). Dans ce document, plusieurs prêts d'orge (ŠE) appartenant à la reine sont récapitulés dans le

⁵ Les pièces du palais d'où proviennent les tablettes sont indiquées entre parenthèses après la référence au texte. L'absence de cette indication concerne des tablettes rattachées par leur contenu à la documentation du palais mais dont la provenance exacte n'est pas connue. Voir à ce sujet le catalogue de Mayer, 1978: 84–99 et Abrahami / Lion, 2012.

⁶ Starr, 1939: 493–494.

⁷ D'après les données synthétisées par Mönninghoff, 2020: 207, Abb. 170, ainsi que 246.

⁸ Starr, 1939: 148; Starr, 1937: 33F; ces pains ont environ 6 cm de diamètre.

⁹ Fincke, 2000: 158–159.

¹⁰ La prédominance de l'orge est aussi reflétée dans les comptes relatifs aux récoltes et aux semences de l'archive de Šilwa-Teššub: le blé amidonnier y représente environ ¼ des quantités d'orge enregistrées et le blé seulement 1/6, voire 1/10. Voir en particulier les tableaux de synthèse dans Wilhelm, 1985: 191, 194, 199 et 202.

décompte final par le terme akkadien *uṭ-ṭe₄-ti₄*.¹¹ Le terme hourrite *kade* correspondant à l'orge est probablement attesté dans le texte HSS 14 123 (D6): 18 et 21, un document qui enregistre la production et les rendements en orge de champs de différentes localités.¹²

La qualité de l'orge est définie par les adjectifs *damqu*, « bonne », ou *šinahilu*, « de deuxième qualité » (HSS 14 145 et HSS 16 189, D21). Il est aussi fait mention d'orge « ancienne » (*labēru*)¹³ et « nouvelle » (*eššu/i; eššēti/tu*).¹⁴

ŠE détermine parfois un terme qui doit désigner certaines variétés d'orge qui ne sont pas aisément identifiables. Deux types d'orge par exemple ne sont attestés qu'à Nuzi:

- ŠE *kalburhe*:¹⁵ elle est relativement peu mentionnée aussi bien dans les textes du palais que dans les autres lots d'archives, néanmoins cette orge est produite et consommée en grande quantité. Dans HSS 14 86 (D3), 70 ANŠE de cette orge servent de semences en même temps que 43 autres d'orge *samminnu* (cf. ci-dessous). Toutes sortes de catégories de personnes en bénéficient indépendamment de leur position sociale ou de leur âge: les reines et les jeunes enfants royaux (HSS 14 119, R76), des soldats (HSS 14 217, D3), du personnel domestique et des chanteurs (HSS 16 31); cette orge sert aussi à l'alimentation animale, en l'occurrence pour des mules (ANŠE.EDIN.NA) dans HSS 15 273 (D3). On l'utilise aussi comme l'orge « ordinaire » pour la transformer en farine et réaliser certaines préparations comme *l'arsannu* (HSS 14 54, D6). Il ne s'agit donc pas d'une orge rare et elle devrait représenter avec le ŠE (*uṭṭatu*) l'un des types d'orge commune cultivées.
- ŠE *samminnu*:¹⁶ on a probablement affaire à une autre variété d'orge comme le suggère HSS 15 273 (D3) où l'indication *samminnu* au niveau du total

¹¹Voir déjà à ce propos, le CAD U: 351 1e) et 357 ainsi que le CAD Š/2: 355a. Le glissement de /š / => /s/ dans la formule « X quantité, leur orge », ŠE.(MEŠ)-*sū-nu*, en est probablement une autre preuve, cf. par exemple HSS 14 535 (R76): 3, rev.: 6 et 11; HSS 14 593 (R76): 20, 23 et *passim*; HSS 16 357 (R76): 9 et 20; HSS 16 358 (R76): 8.

¹²Edition du texte par Zaccagnini, 1975: 185–187 (le texte est aussi mentionné dans Starr, 1939: 533 n. 51). Pour l'identification du terme hourrite *kade* (écrit *ga-a-ti/tu₄*) dans ce texte, l. 21, cf. Fahdil, 1983: 10a et le commentaire de Zaccagnini, 1990: 203. Pour le terme hourrite en général, cf. Richter, 2012: 197.

¹³Dans les textes de D3, HSS 16 123, HSS 16 136 et dans l'archive de Šilwa-Teššub HSS 16 28 = AdŠ 100.

¹⁴Dans l'archive de Šilwa-Teššub: HSS 13 395 = AdŠ 102, HSS 16 62 = AdŠ 89 et HSS 16 236 = AdŠ 123.

¹⁵Richter, 2012: 181, *kalburḫu*.

¹⁶AHw: 1018a sous l'entrée *samīnu* où sont rassemblées les occurrences paléo-babyloniennes associées aux signes classificateurs Ú/SAR et celles de Nuzi précédées de ŠE. Le CAD S: 116b et 118b fait deux entrées séparées: *samīnu* « une plante aromatique » et *samminnu*, « un type d'orge ».

reprend des dépenses d'orge ŠE. Cette orge est rarement documentée, mais comme pour le *kalburhe*, les quantités produites peuvent être importantes (HSS 14 86, D3, ci-dessus). Elle peut servir à nourrir des animaux: des moutons dans HSS 15 273, D3 et des chevaux dans HSS 16 124, D3. Cette orge peut être aussi brassée (HSS 16 124, D3).

Le blé est écrit GIG et parfois phonétiquement, *kibātu*, dans ce cas toujours au pluriel. Le texte HSS 14 163 documente un blé GIG.A. Dans la mesure où il ne s'agit pas d'une variante graphique, on peut, en fonction du sens que l'on attribue à l'élément A, envisager différentes possibilités. Un « blé d'eau » correspondrait à du blé *šiqū*, c'est-à-dire un blé cultivé grâce à l'irrigation. Une lecture DURU₅ pourrait caractériser un blé moissonné précocement.¹⁷ La consommation de blé est peu fréquente. Dans les textes du palais, en bénéficient les reines,¹⁸ les épouses secondaires et les jeunes enfants,¹⁹ mais il est aussi consommé par des catégories subalternes (*niš bīti* et garde *taluhlu*: HSS 16 32). Dans HSS 16 45 (R56), une partie des 216 ANŠE de blé prévus pour les rations est attribuée à « 12 vieux » (*puršumu*).

Le blé amidonnier est exprimé le plus souvent par l'akkadien *kunīšu*. Son équivalent sumérien ZÍZ.AN.NA est plus rare (voir par exemple HSS 14 153). Le terme hourrite *utte*, connu par un vocabulaire quadrilingue de Ras-Shamra, apparaît dans des contrats de Nuzi, notamment des prêts antichrétiques (*tidennūtu*) dans lesquels sont pris en gage des champs spécifiquement dévolus à sa culture.²⁰ Dans l'ordre d'énumération des textes de comptabilité, l'amidonnier est mentionné juste après le blé à quelques exceptions près où il figure avant.²¹ D'autres attestations mentionnent son utilisation comme semences.²² L'amidonnier est cependant surtout documenté avec le blé comme faisant partie de l'allocation-*šukunu* attribuée aux reines de Nuzi et d'Al-ilāni.²³ Des usages rituels sont également indiqués: en offrande à la déesse Ištar (HSS 14 163 et HSS 15 267), pour les rites funéraires (*kipsāti*) et la fête (SIZKUR) dans HSS 14 152.

Le millet, *duhnu*, est assez bien attesté, mais hors de la documentation du palais, principalement comme moyen de paiement avec l'orge.²⁴ Cependant un pas-

¹⁷ Powell, 1984: 64.

¹⁸ HSS 13 155, HSS 13 498 (R76) et HSS 14 119 (R76).

¹⁹ HSS 13 498 (R76) et HSS 16 69 (R76).

²⁰ Justel, 2019.

²¹ Voir par exemple HSS 14 163, HSS 15 275. Dans HSS 16 25, par rapport à la séquence normale, l'ordre est inversé: blé amidonnier, blé, orge.

²² HSS 16 114, HSS 16 134 deux textes de D3 et HSS 14 127 où les semences sont destinées aux champs de la reine à Nuzi.

²³ Voir par exemple HSS 14 116; HSS 14 143; HSS 14 144; HSS 14 152; HSS 14 156; HSS 14 160; HSS 14 161; HSS 14 164 et *passim*.

²⁴ Voir par exemple dans les textes de la maison de Tehip-Tilla: JEN 98 (T16); JEN 265

sage de AASOR 16 1 (L2) montre que le palais en produisait probablement et disposait de stocks: le maire corrompu Kušši-harbe est accusé d'avoir fait cultiver du sésame et du millet pour son compte avec les semences du palais en requérant la force de travail d'une trentaine d'individus.²⁵

4. Les autres végétaux

4.1 Les données archéobotaniques

Des pois chiches et des noyaux de dattes ont été découverts dans des maisons, ainsi que dans le palais: en L22 avec des pistaches, de l'orge, du blé et les petits pains plats,²⁶ et en M100.²⁷ Des glands sont signalés tant dans les maisons que dans le palais, ainsi que des grenades mais sans indication de provenance.²⁸

4.2 Les données des textes

La grande tablette HSS 14 593 enregistre les rations de 82 serviteurs du palais (ĪR), avec mention de leur profession. Elle compte 2 jardiniers et 2 *paššiššu* (aides ?) des jardiniers (R. 9 et 14). Ils devaient travailler dans les vergers du palais, attestés par HSS 14 33 (L20). En ce qui concerne les produits qu'on y cultive, les informations des textes sont assez éloignées des données archéobotaniques.

Trois tablettes comptabilisent des plantes livrées au palais.²⁹ Dans l'une d'elles, HSS 14 239 = 601 (L1), il s'agit l'*iškāru*, une livraison obligatoire faite par des villes ou des personnes.³⁰ Une première série est fournie par les « jardiniers des arbres », une autre par les « jardiniers des légumes ». ³¹ Les « jardiniers des arbres » versent les produits suivants, qui ne sont pas toujours faciles à identifier:

- du *kasû*, terme en général traduit par « moutarde »,³² mais la cuscute a aussi été proposée et, plus récemment, le carthame, car la plante est utilisée au I^{er} millénaire pour fournir une teinture rouge; les graines carthame peuvent être

(T15) ou encore JEN 617 (T15).

²⁵ Sur le dossier de Kušši-harbe, voir Maidman 2010: 81–123, en particulier 93–96 pour AASOR 16 1 + EN 10/2 70.

²⁶ Starr, 1939: 493; Starr, 1996: 28–29.

²⁷ Mönninghoff, 2020: 207, Abb. 170: ils sont définis dans le journal de fouilles comme « coffee like beans / date stones ». Parmi les restes de bois analysés (sans provenance indiquée), il y avait du palmier (Starr, 1939: 494).

²⁸ Starr, 1939: 493.

²⁹ Toutes trois sont mentionnées par Zaccagnini, 1979: 128–129.

³⁰ Justel, 2020: 354–357, avec la bibliographie antérieure.

³¹ l. 36: *an-n[u-tu₄] iš-ka₄-ru š[a LÚ].MEŠ NU.[GI]Š.KIRI₆-tù(sic) ša GIŠ.MEŠ*; l. 54–55: *an-nu-tu₄ iš-[k]a₄-re-e ša LÚ.ME[Š] NU.GIŠ.KIRI₆ š[a w]a-ar-qí*.

³² D'après B. Landsberger dans Landsberger / Gurney, 1957–1958: 337–338 et Landsberger, 1967: 151–152 n. 70. Cette identification est suivie par AHw: 455a. Le CAD K: 250b est plus réservé.

- consommées comme épices.³³
- du *šimiru*, fenouil.³⁴
 - du *kamūnu*, cumin.³⁵
 - du *kussibirrītu* ou *kussibirru*, coriandre.³⁶
 - du *kizibiannu*: le mot n'existe qu'à Nuzi, il serait une variante de *zibibiānu*/*zibibānu* ou *zizibiānu/zizibānu* et désignerait le cumin noir.³⁷
 - la plante *kušpae* n'est pas identifiée, le terme est un hapax.³⁸
 - du *hurātu*, et des graines de *hurātu*: cette plante produisant une teinture rouge est désormais identifiée à la garance.³⁹
 - du *nīnū*: l'identification n'est pas certaine.⁴⁰

Il s'agit donc majoritairement de condiments, ou de plantes ayant une utilisation artisanale pour la teinture, comme la garance.⁴¹ D'autres peuvent avoir un usage médicinal.

Quant aux « jardiniers de légumes », ils livrent quasiment les mêmes produits, sauf la garance-*hurātu*. S'y ajoute l'*attultu*, un produit non identifié,⁴² mais qui diffère peut-être des autres par sa nature, car il est compté au poids, en talents, alors que tous les autres sont mesurés en capacités, par ŠĪLA ou BĀN.

Un autre reçu, HSS 13 353 (L2), mentionne une livraison de cumin et de coriandre, alors que d'autres produits restent à livrer: *sāmidu*, cumin noir, et carthame. Le AHw suggère que le *sāmidu* soit la saponaire, et le CAD le définit comme épice ou légume;⁴³ le produit est associé, depuis l'époque paléo-babylonienne, au carthame, à la coriandre, au cumin et à l'*azupīru*, peut-être connu aussi

³³ Quillien, 2021: 224–226, avec la bibliographie antérieure.

³⁴ AHw: 1238a et CAD Š/3: 8b–9a, *šimiru*.

³⁵ AHw: 434a; CAD K: 131b–132.

³⁶ AHw 426a, *ki/usibirrītu(m)*; CAD K: 420b, *kisibirrītu* et 420b–421a, *kisibirru*.

³⁷ AHw: 496a, *kizibi(j)annu* et 1526, *zibibiānum*; CAD K 477a, *kizibiānu*, variante de *zibibānu*, CAD Z 102b–103a.

³⁸ Le CAD K: 660a, à *kušpa'e*, renvoie à *kušupha* (602b), mot hurrite, spécifique à Nuzi, qui désignerait une préparation à base d'orge car il y a des allocations d'orge *ana kušupha*. Cependant la graphie *kušpae* n'est attestée que dans ce texte, où il ne semble pas s'agir d'une préparation mais d'un produit brut, mentionné parmi des épices et non des produits céréaliers. AHw: 516b propose pour *kušpae* « ein Gericht ? Nuzi. Koriander *ku-uš-pa-e* » et sépare le terme de *kušupha*. Voir Richter, 2012: 231.

³⁹ Quillien, 2021: 331–332, avec la bibliographie antérieure.

⁴⁰ AHw: 791a propose « Ammi, Zahnstocherdolde »; CAD N/2: 241: « a medicinal plant ».

⁴¹ Abrahams, 2014: 295.

⁴² AHw: 88a et CAD A/2: 515a; le terme n'apparaît qu'à Nuzi.

⁴³ AHw:1018a: « ein Seifenkraut ? »; CAD S: 114b–115, *samīdu*. Il existe un terme homonyme également employé à Nuzi, AHw: 1018a, *sāmidu(m)* I: « ein Mehl »; CAD S: 115b–116a, *samīdu* B, « a type of groats ».

à Nuzi (ci-dessous). La quantité attendue, 1 ANŠE, est plus importante que pour les autres plantes, au moins le double.

Une troisième livraison, faite par un médecin, concerne des *riqqu*, plantes aromatiques (HSS 14 213 = 539). On y retrouve le fenouil, la coriandre, le cumin, le carthame, le *nīnū* et une autre espèce, l'*azappuru*, dont l'identification au safran est discutée.⁴⁴

Cinq billets découverts en D6, HSS 14 69, 70, 73, 90 et 184, mentionnent des distributions de *sahlū*; la reine figure parmi les bénéficiaires dans HSS 14 69, des dames du palais dans HSS 14 69 et 184, et quatre filles du roi dans HSS 14 90. Le *sahlū*, en général identifié au cresson ou à des graines de cresson, l'a aussi été à la cardamome.⁴⁵ Dans HSS 14 69, la livraison est reçue « à la place de pois chiches » (*kīma hullūru*) ou « à la place de lentilles » (*kīma kakkū*), ce qui ferait plutôt penser à des légumineuses; ce texte indique donc incidemment que pois chiches et lentilles étaient consommés.

Les fruits apparaissent très rarement. Parmi les textes du palais, un seul (HSS 14 215, R76) consigne sept livraisons de dattes vertes (*uhinnu*), de 4 ou 5 SĪLA à chaque fois, pour des personnes ou des villes, ainsi que quatre livraisons de *haluli*, allant de 3 SĪLA à 1 BĀN, à des personnes. Ce terme hurrite, dont c'est la seule occurrence à Nuzi, est compris par les dictionnaires comme désignant un fruit,⁴⁶ probablement en raison de la proximité avec les dattes. Selon T. Richter, il pourrait s'agir de raisin, car *haluli* en urartéen désigne le vin.⁴⁷

5. Les animaux

5.1 Les données archéozoologiques

Dans le rapport de fouille, les restes animaux sont brièvement évoqués, sans données chiffrées ni indications de provenance.⁴⁸ Les os de chèvres et de porcs sont qualifiés de « common », ceux de bovins de « rare », et ceux de chevaux et de moutons d'« uncommon », ce qui, pour cette dernière espèce, est surprenant. On trouve aussi de nombreuses coquilles d'œufs d'autruche.

H. Mönninghoff⁴⁹ a pu préciser la provenance de ce matériel, finalement assez restreint: le palais dans la plupart des cas. Il s'agit d'ossements non travaillés, qui peuvent être interprétés comme des restes de cuisine (pièces M94, M90, R98); il y avait également des os de crânes (M100, R95–R96–R426). Des coquilles d'es-cargots viennent de L11.

⁴⁴ AHw: 92a, *azabb/ppuru*, envisage de rapprocher le terme d'*azupīru* (p. 93a), safran. CAD: 530–531a doute cependant de cette identification, car quand des parties de la plante sont mentionnées, il s'agit des graines.

⁴⁵ AHw: 1009b–1010a; CAD S: 62–64.

⁴⁶ AHw: 314; CAD H: 55b.

⁴⁷ Richter, 2012: 122b, avec la bibliographie antérieure.

⁴⁸ Starr, 1939: 492–493.

⁴⁹ Mönninghoff, 2020: 209–210 et Abb. 171.

D'autres restes animaux ne relèvent peut-être pas d'activités culinaires: osselets de gazelles (L1–L3A), bois de cerfs (N120). Le cas des coquilles d'œufs d'autruche est ambigu, car les œufs pouvaient être mangés et les coquilles conservées comme objets précieux;⁵⁰ la pièce L22, d'où proviennent 7 fragments, abritait de la nourriture et des contenants, dont certains étaient assez élaborés.⁵¹

Une corne de chevreau a été découverte en M100. Or dans le Group 36, où R. F. S. Starr signale relativement peu de matériel, plusieurs pièces ont livré des cornes de chèvre sans ossements associés, ce qui suggère un usage artisanal plutôt qu'alimentaire.⁵²

5.2 Les données des textes

La tablette HSS 14 593 (r.4, 25) compte trois bergers et un bouvier parmi les esclaves du palais et la documentation palatiale comprend des comptes de moutons,⁵³ ou de moutons et de chèvres.⁵⁴ Ces animaux étaient élevés pour leur laine, leurs poils et leur peau, comme le montre par exemple une remise de peaux de moutons et de chèvres à un artisan.⁵⁵ Mais ils étaient aussi, certainement, consommés, de même que leur lait, qui n'est jamais mentionné. Le palais prévoit aussi des achats de moutons, payés en blé.⁵⁶

Certains textes du Group 36, pièce D3, enregistrent des dépenses d'orge pour des animaux: moutons;⁵⁷ chevaux, moutons et porcs;⁵⁸ porcs et cheval.⁵⁹ Dans ce cas, on peut supposer que les moutons et les porcs étaient engraisés avant abattage. Une autre distribution d'orge pour des porcs se trouve dans un texte du palais.⁶⁰ Une déposition contre Kušši-harbe, le maire corrompu de Nuzi, concerne le vol, par ses acolytes, d'un porc engraisé.⁶¹ Kušši-harbe a détourné tant les biens des particuliers que ceux du palais, mais le fait qu'il s'agisse ici d'un animal engraisé fait penser plutôt qu'il relève de la seconde catégorie. Une livraison de

⁵⁰ 1 *pè-el lu-ur-mi ṛša-al-mu*, « un œuf d'autruche complet », est par exemple mentionné dans HSS 14 247: CG 1 (M79), un inventaire de biens du palais.

⁵¹ Starr, 1939: 148, repris dans Mönninghoff, 2020: 366.

⁵² Starr, 1939: 246–248: il s'agit des pièces D4, D 15, D3–D6. Starr, 1939: 248, note que les Arabes de la région utilisent les cornes de gazelles pour tasser les fils de trame des métiers à tisser.

⁵³ HSS 13 189 (M79), HSS 13 312 (L2), HSS 16 278 (L24), HSS 16 283 (L6).

⁵⁴ HSS 16 279+299 (R50), HSS 16 291 (M61), HSS 16 308 (R76), HSS 16 312 (N120).

⁵⁵ HSS 14 255 (L2).

⁵⁶ HSS 16 63: R.7–8 (M61).

⁵⁷ HSS 15 273: 7 (D3).

⁵⁸ HSS 16 416 (D3). Sur les porcs à Nuzi, voir Lion, 2009.

⁵⁹ HSS 16 117 (D3).

⁶⁰ HSS 13 78 (R76).

⁶¹ AASOR 16 1: 45–47 (L2), cf. ci-dessus n. 25.

28 porcs et porcelets « de montagne » semble due au palais.⁶² De l'orge et du blé amidonnier sont aussi destinés à des oiseaux, ce qui suppose que le palais entretenait une basse-cour.⁶³ Enfin les attestations de pêcheurs suggèrent la consommation de poisson.⁶⁴

Il y a peu de documents concernant la viande des animaux, mais JEN 551 (T12) traite des offrandes animales que doivent fournir « les maisons du palais » pour la capitale:⁶⁵ elles consistent en viande de bœuf et de mouton. Le document est une décision (*tēmu*) adressée à Tarmi-Tilla, qui doit la faire appliquer dans son district (*halšu*). On peut donc penser à un ordre d'origine royale, envoyé en plusieurs exemplaires aux gouverneurs des districts, pour faire remonter les productions des domaines agricoles que le palais d'Arraphe possède sur tout le territoire. L'abattage des animaux se fait à la campagne et les carcasses sont amenées à Arraphe: le texte mentionne les os et la viande de bœuf. La peau et les tendons sont remis aux gens soumis à la corvée (*ālik ilki*) et aux tenanciers ou résidents (*aššabū*),⁶⁶ ils doivent les vendre puis verser le prix au palais.

La viande de porc n'est pas mentionnée dans les textes du palais. Cependant, l'animal n'étant élevé que pour la boucherie, elle devait être consommée. Le saindoux apparaît dans HSS 15 167 (N120), inventaire de la maisonnée de Teššubatal découvert dans le palais: après des esclaves hommes et femmes, des animaux et divers objets, et juste après 1 *tallu* d'huile de sésame, figurent « 2 *tallu* de saindoux de bonne qualité (Ī ša DU₁₀.GA ša ŠAH), 3 *tallu* de saindoux (*na-a-hi*) ».

On ignore si le goût pour la viande de cheval était répandu et si elle était mangée au palais, mais sa consommation est attestée dans deux procès issus de la maison de Tehip-Tilla (JEN 334 et JEN 360).

⁶² HSS 15 252. La provenance exacte de la tablette n'est pas connue mais Mayer, 1978: 95 la classe parmi celles du palais.

⁶³ Orge: HSS 16 141 (D3), 142 (D3), 167 (D6) et 194 (provenance inconnue); blé amidonnier: HSS 16 152 (D6). Ces références sont données par Mayer, 1978: 196 et n. 4 et 5. On peut ajouter une autre distribution d'orge, HSS 14 48 (D3).

⁶⁴ HSS 13 58 (R76), HSS 16 403 (D6), également mentionnés par Mayer, 1978: 196.

⁶⁵ Translittération, traduction, étude: Müller, 1968: 265–291; translittération et traduction: Jankowska, 1981: 196; commentaires: Zaccagnini, 1988: 90–93. Löhnert, 2015: 341 identifie ce texte comme « royal decree ». La tablette aurait été découverte sur le tell nord-ouest, pièce 12, mais cette localisation pose problème: on s'attendrait à ce qu'une tablette adressée à Tarmi-Tilla provienne de sa maison, soit de la pièce 13 de cette zone, où ont été trouvées ses archives. La pièce 12 en revanche appartient à la maison voisine, celle des descendants de Kizzuk. Jankowska, 1981: 196 n. 2 suggère que cette tablette et quelques autres « were erroneously registered or moved accidentally into other rooms ».

⁶⁶ Ces catégories n'ont de sens que dans la classification établie par le palais, voir von Dassow, 2008: 351–356.

6. Conclusion

D'après la documentation du palais de Nuzi, les céréales et produits céréaliers occupaient une place prépondérante dans l'alimentation. Les autres végétaux attestés sont surtout des épices et condiments. Il y a là probablement un effet de sources: les tablettes ne consignent que ce qui pouvait être géré par le palais, donc transporté, stocké et distribué, ce qui exclut les produits rapidement périssables comme les légumes et les fruits frais, les laitages ou le poisson; ces derniers suivraient ce que nous appelons aujourd'hui des « circuits courts » et, n'étant pas stockés au palais, ils n'y ont pas non plus laissé de traces archéologiques. La viande semble avoir tenu une place non négligeable, mais sans qu'il soit possible de déterminer sa part exacte dans la diète, ni si certains produits étaient plus prisés que d'autres, ou consommés par l'élite plutôt que par l'ensemble de la population palatiale.

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Feeding *māt Aššur*

Barley Supplies as a Means of Governance in the Western Middle Assyrian State

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This paper deals with the coordination of a regional network, that ensured the supply of barley, troops, and plough oxen in the Western part of the Middle Assyrian Empire during the second half of the 13th century BCE. We examine a dossier of cuneiform texts from Middle Assyrian Dūr-Katlimmu (modern Tell Sheikh Hamad)¹ that documents the operation mode of the palatial network in the western

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¹ In addition to the abbreviations commonly used in the subject, we use the following short references in this paper:

(1) The texts from the excavations at Tell Sheikh Hamad (ancient *Dūr-Katlimmu*) are published in the series *Berichte der Ausgrabungen Tall Šēḫ Ḥamad* (= BATSH). BATSH 4 refers to Cancik-Kirschbaum, E. (1996): *Die mittellassyrischen Briefe aus Tall Šēḫ Ḥamad / Dūr-Katlimmu*, 1994, Berlin. BATSH 9 refers to Röllig, W. (2008): *Land- und Viehwirtschaft am Unteren Ḥābūr in mittellassyrischer Zeit*, Wiesbaden. BATSH 10 refers to a forthcoming volume by Eva Cancik-Kirschbaum that assembles amongst others a number of legal documents. BATSH 18 refers to Salah, S. (2014): *Die mittellassyrischen Personen- und Rationenlisten aus Tall Šēḫ Ḥamad / Dūr-Katlimmu*. Wiesbaden.

(2) In the absence of a genuine list of eponyms, the linear order of eponymates is still reconstructed using deductive methods. This sequence is not yet stable in detail. For a reconstruction as based on texts from Tall Šēḫ Ḥamad see Salah BATSH 18, XLVII–XLVII and the useful discussion in Freydank, 1991; 2016b: 7–14. However, our reconstruction of the sequence differs in detail (see Cancik-Kirschbaum, BATSH 10 and Cancik-Kirschbaum, in preparation_b as well as Dornauer, in preparation_a). We therefore always provide the name of the eponym, as far as it is preserved in the respective text. In brackets we indicate what we consider to be the corresponding year of the reigning Assyrian monarch – as far as we can judge for now. These conventionalized dates are approximations in many ways. Apart from the correct assignation of the eponymate, they neglect the effects that a purely lunar calendar would have on the conversion of reigning years (cf.

Ĝazīra (Fig. 2). At the centre of the events is the ancient city of Šalūša, somewhere in the region of the Upper Balikh river valley. The article not only provides an insight into the operations of the regional administrative level of the Middle Assyrian state. It shows how even the fact-based documentation of the state administration – albeit on a modest scale – occasionally sheds light on the larger historical event horizon. We show how the Middle Assyrian state strategically used its grain resources to bolster north-western Ḫanigalbat, which was threatened again and again by riots, crop failures and hostile invasions.

(1) As an introduction we will shortly describe the role of *Dūr-Katlimmu* in the system of provincial districts under Tukulti-Ninurta I. (2) As the agro-economic parameters determine to a large extent the options for action of the Middle Assyrian state, we will then sketch the management of the barley-yields at *Dūr-Katlimmu*. (3) In a third step we will describe the situation of the city of Šalūša round the middle of the reign of Tukulti-Ninurta I as seen from *Dūr-Katlimmu* and as reflected in a historical statement from a text from *Kār-Tukultī-Ninurta*. Finally, we will summarize the consequences for our understanding of the Middle Assyrian provincial system.

1. *Dūr-Katlimmu* – centre of a provincial district in Ḫanigalbat

From the excavations at the Middle Assyrian provincial centre of *Dūr-Katlimmu*, Tell Sheikh Hamad on the Lower Khabur river some 358 Middle Assyrian clay tablets and fragments have been recovered.² Although these tablets have been found in a secondary context, removed from their original situation, it is safe to assume that they (all of them?) stem from the local palatial ‘archive’ or, to put it in a more general way: these tablets once were part of a collection of administrative documents connected to the government of *Dūr-Katlimmu* and the Western realm of the Middle Assyrian state, in the 13th century BCE still known under the name of *Ḫanigalbat*. The texts largely document activities and processes in the context of the local palatial economy concerned with livestock husbandry, agriculture and the organization of human labour in the service of the palace.³ They provide insights into means and measures of governance and some references can be linked to historical events that are also mentioned in other sources on the Middle Assyrian period.

recently Jeffers, 2017). The letter S refers to Shalmaneser I (1263–1234 BCE) and T to Tukulti-Ninurta I (1233–1197 BCE). S3 therefore corresponds to the third year of the reign of Shalmaneser I, i.e., the year 1260 BCE.

² For a recent summary see Kühne, 2021b: 17–18. Information on the archeological record for “Schriftfunde” is provided by Rohde, 2021.

³ For some preliminary considerations regarding the archival systematics of the Middle Assyrian administrative records from *Dūr-Katlimmu*, see Cancik-Kirschbaum, 2021b.

1.1 The historical context – Dūr-Katlimmu becoming a centre of governance in the West

In the wake of the Assyrian campaigns and conquests in the 13th century BCE the Lower Khabur, the Khabur Triangle and temporarily also the regions between the rivers Balikh and Euphrates became part of *māt Aššur* “land of *Aššur*”. The newly conquered territories were divided into a number of smaller ‘provinces’ or rather districts (Akkadian *pāḫutu*), each under the control of a *bēl pāḫete*, a term conventionally translated as “governor”. Probably already under Adad-nirari I, the site on the eastern bank of the Khabur, today known under the name of Tell Sheikh Hamad, was seized, an Assyrian palace was set up there and the town became the centre of a provincial district.⁴ The letters found at Tell Sheikh Hamad indicate that *Dūr-Katlimmu* – being the southernmost Assyrian outpost in the region and thus of major strategic importance – at least at times served as a base and centre of operations of the *sukkallu rabi’u* “Grand Vizier” who additionally held the title of *šar māt Ḥanigalbat* “King of Hanigalbat”.⁵

1.2 *māt Aššur* and the role of the ‘provinces’

The evaluation of the role and possible importance of *Dūr-Katlimmu* is linked to the question of the functions of the so-called provinces for the government of the Middle Assyrian state. Initiated by Emil Forrer’s seminal study *Die Provinzeinteilung des assyrischen Reiches*,⁶ research into the Middle Assyrian provincial districts focused on questions of number, size and geographical localisation.⁷ The possible origins of this kind of spatial organisation are still under debate.⁸ With regard to the functions of Middle Assyrian ‘provinces’, the focus was primarily on the strategical role of Middle Assyrian provincial centres as nodes of communication networks to secure long-distance-trade and communication routes.⁹

In his essay *Kār-Tukultī-Ninurta als Agrarprovinz* H. Freydank in 2009 drew attention to yet another aspect.¹⁰ He argued that *Kār-Tukultī-Ninurta* had been founded primarily to foster the agricultural development of the regions east of the

⁴ See Kühne, 2021a: 280–287.

⁵ See BATSH 4: 19–31.

⁶ Forrer, 1920.

⁷ With the increasing availability of original Middle Assyrian documents, a whole series of studies on various aspects related to the subject has appeared, cf. e.g. Machinist, 1982; Postgate, 1985; Radner, 2008; Rosa, 2010; Llop, 2011 (with a detailed history of research on pp. 1–2), Llop, 2012, Cancik-Kirschbaum, 2014.

⁸ E.g., Postgate, 2011 argues that the Middle Assyrian state was the successor of that of Mitanni, from which it took over the provincial structure. In contrast, Düring, 2015 emphasizes that the Middle Assyrian hegemonic practices are completely different from those of Mittani.

⁹ Liverani, 1988; recently Kühne, 2010: 118. See the critical response in Postgate, 1992.

¹⁰ Freydank, 2009.

Tigris. Thus another *raison d'être* for the provincial system came into view, namely: to ensure the agricultural sustenance and thus the well-faring of *māt Aššur*, the “land of Aššur”. Besides the Eastern Tigris, other important centres of agricultural production such as the Khabur-Triangle, the Upper Tigris and the Upper Balikh valley come into mind.¹¹ However, it has been argued that the overland-trade of grain was too expensive as to have constituted a relevant strategic element. Thus, for instance M. Liverani stated in 1992 with regard to the tributes paid to the Neo Assyrian King Ashurnasirpal II (883–859 BCE) after his conquests: “Cereals and other agricultural products are not the object of tributary withdrawal, since their long-distance transportation would be too expensive”.¹² Does this also apply to the situation *within* Assyria in Middle Assyrian times? Under what circumstances does a primarily locally oriented agricultural production become a central force for power? Some sources from the middle Assyrian palatial economy attest to the fact that at least in case of need the transport of large quantities of barley to distant places was issued by the government. Well-known examples are the shipment of barley from *Ālu-ša-Sîn-rabî* to *Kār-Tukultī-Ninurta*¹³ and the shipment of barley from *Tille* on the Upper Tigris to *Aššur*.¹⁴ Another example is – interestingly enough – supplied by the texts from *Dūr-Katlimmu*.

1.3 *Dūr-Katlimmu* – the agro-economic situation in the 13th century BCE

The location of the site on the eastern bank of the Ḥabūr between the estuaries of the Wādī Sa'ib Ḥamad and the Wādī Ġarībe is far beyond the 200–250 mm precipitation isohyet, which is considered the limit of rain-fed agriculture.¹⁵ The intensive surveying in the Khabur-region proved the existence of a supra-regional canal that branched off somewhere at the confluence of the Jaghjagh with the Khabur.¹⁶ Its existence already in the 13th century BCE is documented by textual evidence from *Dūr-Katlimmu*.¹⁷ To some extent then the transformation of the original natural landscape in the 2nd millennium BCE is a predecessor of large-

¹¹ Radner, 2004; Wiggermann, 2000.

¹² Liverani, 1992: 158; see also Dahlheim, 2003: 214, with references to the situation in the Roman Empire.

¹³ Llop, 2010 referring to tablets from *Kār-Tukultī-Ninurta* (MARV 1,1; MARV 4,27; MARV 4,30; MARV 4,50; MARV 4,143; MARV 8,4; MARV 8,51) dealing with the distribution of barley from *Ālu-ša-Sîn-rabî* (see also the critique in Freydank, 2011: 359–365, regarding J. Llop's historical-chronological conclusions).

¹⁴ See the comments in Freydank, 2001: 17 on MARV 4,39 = VAT 18069.

¹⁵ See for instance Reculeau, 2011: 15. *passim*.

¹⁶ Ergenzinger / Kühne, 1991.

¹⁷ See E. Cancik-Kirschbaum, BATSH 4: 134–135. on this subject with references to BATSH 4, 8: 32f. and BATSH 4, 17: 10–12. It cannot be ruled out that this hydraulic structure, or at least parts of it, is significantly older, Kühne, 2016.

scale operations as attested in the Neo-Assyrian period. Whether this is to be considered a ‘valorisation’ (“In-Wert-Setzung”) as H. Kühne put it,¹⁸ is yet another matter. However, given the environmental conditions of the 13th century BCE this additional water-supply was crucial for the sheer existence of the city, since it allowed to considerably enlarge the amount of land to be successfully cultivated.

Calculations of yields, food requirements and population figures in antiquity are still extremely problematic.¹⁹ Not only the geographically quite different conditions contribute to this. Also the uncertainties in modern equivalents for ancient units of measurement and the fragmentary knowledge about food sources that are not mentioned in the texts play a role here. H. Reculeau calculated a maximum arable area of about 507 ha for Middle Assyrian *Dūr-Katlimmu*.²⁰ We do not know exactly how the land that was available and suitable for growing crops in the immediate surroundings of *Dūr-Katlimmu* was organised. The crop reports²¹ from the palatial archive indicate that at least the fields cultivated by the palace could be reached by additional irrigation.²² However, given the precarious climatic conditions, it is extremely likely that all the grain fields in *Dūr-Katlimmu* and *Duāra* were irrigated.²³

A simple, very rough calculation illustrates the given circumstances: The mean daily consumption for ancient societies has been estimated about 2,100–2,300 kcal per capit. Since 1 kg of grain provides about 3,500 kcal, 1 ha of land under rainfed-cultivation is needed to keep a grown-up individual for about 12 months.²⁴ With regard to *Duāra* R. Koliński pointed out that the barley yields of one hectare there could actually have fed an adult for only about three months.²⁵ Any considerations regarding the local population living in ancient *Dūr-Katlimmu* (and *Duāra*) have to take into consideration these correlations. Although in a recent chapter on the history of *Dūr-Katlimmu* H. Kühne has considerably reduced his former estimations of the population from ca. 2,250 to now ca. 1,200 individuals,²⁶ this number is probably still too high. On the basis of the textual data, we

¹⁸ Kühne, 2021a: 303.

¹⁹ A few indications might suffice here: A simulation of Neo-Assyrian yields calculates 557–1,080 kg/ha for Neo-Assyrian rainfed agriculture and 1,137–1,416 kg/ha for irrigated agriculture (Altaweel 2008). C. Zaccagnini on the other hand, assumes just 200–600 l/ha ≈ 140–420 kg/ha for Neo-Assyrian rainfed agriculture (Zaccagnini, 1999: 337).

²⁰ Reculeau, 2011: 188–190; but cf. the significantly lower figures in Kühne, 2021a: 302 table 12.02.

²¹ The crop reports (German „Ernte-Rapporte“) have been published by W. Röllig as BATSH 9 (see above footnote 1).

²² Reculeau, 2011.

²³ Reculeau, 2011: 91.

²⁴ Koliński, 2003: 91.

²⁵ Koliński, 2003: 91.

²⁶ Kühne, 1991: 32 (and see the critique in Postgate, 2018: 265–266) and Kühne, 2021b

calculate a maximum of 900 permanent inhabitants for the Middle Assyrian town. This number is based on the following considerations: (1) From the administrative documents, we can deduce a number of about 40 *šiluḫlū*, including their families, young and old, who served as fully dependent labourers in the palace economy. (2) The local elite, i.e. the various individuals who had civil and/or military duties either in the palace itself, or in the local administration of the city, and the local priesthood is unlikely to have numbered more than 40–50 people. (3) The majority of the inhabitants of middle Assyrian *Dūr-Katlimmu* were the families of peasants (German: “Kleinbauern”). They were organised in 6–8 groups with an average of 30–40 members (for the greater part male heads of the house), each under a *rab hanšē* “great of the 50”.²⁷ If we assume an average of 4 up to 7 members living in such a peasant household, the number of individuals from the peasant families in *Dūr-Katlimmu* ranges from 720 to 2,240. (4) Together with the *šiluḫlū* and the local elite this would have resulted in a population of 800–2320 individuals living in *Dūr-Katlimmu*. (5) It has been observed that specialised craftsmen such as metal workers are missing from the documents found at Tall Sheikh Hamad. Yet, these should not have made up more than 10% of the population in a pre-modern society and accordingly, we would have to reckon with numbers between 880 and 2,552 individuals for ancient *Dūr-Katlimmu*.²⁸ (6) However, on account of the comparatively low crop yields in the period under consideration²⁹ and given the fact that the agriculturally productive soil on the first terrace of the Khabur River is limited, only the lowest value, i.e. 900 individuals as permanent inhabitants of ancient *Dūr-Katlimmu* seems to be plausible.³⁰ In addition, it seems hardly possible to generate a really large surplus – not least because there is a constraining correlation between labour and cultivated land.

2. The management of grain-resources at *Dūr-Katlimmu* – local to transregional

So it seems fairly clear that *Dūr-Katlimmu* was not an agricultural province in the proper sense. The basic environmental conditions and the local situation limit any secure expectations with regard to a regular substantial surplus in the agricultural production.

On the other hand, and contrary to the observations just stated, the available records from *Dūr-Katlimmu* provide information on surplus stocks in the palatial storage facilities. In some instances these stocks seem to have lasted for several years. The palatial administration once and again drew on these stocks: they were

referring to Salah, BATSH 18: 2

²⁷ On details see Dornauer, in preparation_a.

²⁸ On details see Dornauer, in preparation_a.

²⁹ See Reculeau, 2011.

³⁰ On details see Dornauer, in preparation_b.

used for example as loans of barley to the local peasants, as temporary provisions for additional groups of workmen or detachments of *hurādu*-troops, or even to hand over *rīmuttu*-gifts on behalf of the king.³¹ To these we can add a further application: regional or even transregional emergencies in which *Dūr-Katlimmu* functioned as a hub for collecting and redistributing barley reserves from the network of regional palaces, as was the case with the town of *Šalūša*.

2.1 Annual routine: budgeting the harvest

Within the administrative framework of the palatial domains, annual reports about the yields of the respective fields and the expected demands for the following year were generated. The crop report BATSH 9, 81, dated to the 20.xii. of the eponymate of *Adad-bēl-gabbe* (T4), may serve as an example. The report lists the barley harvested in that year from the palace fields of both, *Dūr-Katlimmu* (ll. 1–11), and the *Duāra* sub-plant (ll. 21–22). The text gives the following quantities: 3,929 *Sūt* from the *Dūr-Katlimmu* fields and 633 *Sūt* from *Duāra*, in total: approximately 3 tons of barley. Subsequently, the estimated expenses for different purposes during the year to come are given in a more or less fixed sequence for both locations: seed (ll. 12–13 and 23a), fodder for plough cattle (ll. 13b–16a and 23b–25a), rations for the *šiluhlu*-labourers (ll. 16–17 and 25–26) and – not always applicable – a rest that went to storage (ll. 19f. and 27f.). In the following year, that is the eponymate of *Šunu-qardū* (T5), pretty much the exact amount of barley for the *šiluhlu*-rations, that had been budgeted in the previous years' crop report, is accounted for in the tablet BASTH 18, 49 (*Šunu-qardū*, T5). The document registers 1,235 *Sūt* (BATSH 18, 49: 42), thus only slightly less than the 1,248 *Sūt* calculated in the crop report BATSH 9, 81: 16f.

In principle a rather thick network of documentation would allow the scribes to control calculations and modify the prognoses regarding available grain resources. It must be kept in mind though that the available evidence is still fragmentary and not all kinds of documents extant for other years must have existed. Thus, from the year when *Adad-bēl-gabbe* was eponym, there is no note about the distribution of seeds to the *rabē ikkarāte* in charge of the palace fields, notifying the grain budgeted for them in the crop report;³² nor do we have records about grain-loans taken by local farmers who needed additional barley for their own fields;³³ but we find a text documenting the surplus from that year, that is the *rēhtu* that went into the storage facilities of the palace.

³¹ Cancik-Kirschbaum, 2021a.

³² See BATSH, 95 (S14, *Aššur-nādin-šumē*) barley seeds and fodder and BATSH, 96 (S4/S5, *Aššur-mušabši*) wheat seeds for *rab ikkarāte* from *Dūr-Katlimmu*.

³³ For example, see BATSH 10, 2 (undated; presumably from the reign of Tukulti-Ninurta).

2.2 Storage

BATSH 9, 93 was made out on the same day as the crop report BATSH 9, 81, namely 20.xii. of *Adad-bēl-gabbe* (T4). BATSH 9, 93 records the entry of 754 *Sūt* barley intended for stockpiling into a local store.³⁴ How often the palatial fields actually produced such a surplus, is difficult to judge since over a period of about 35 years, reliable documentation is extant for just about half of the time. It is therefore extremely problematic to derive trends from scarce database. However, two general situations prevail: on the one hand, in some years the crop yield is just enough to cover the budgeted consumption for the coming year; on the other hand – at least within the periods documented by texts, around half of the harvests produce surpluses.

This can be seen, for example, in the protocol BATSH 9, 89 (20.ix. *Aššur-da''ān* (T12); Fig.1). There, section by section, the amount of 4,380 *Sūt* barley stored in the *karmu*-house³⁵ is listed for a total of 5 individual eponymates: 1,900 *Sūt* barely from the eponymate of *Urad-ilāni*; 860 *Sūt* from the eponymate of *Adad-uma'i*; 310 *Sūt* from the eponymate of *Abattu*, son of *Adad-šamšī*; 470 *Sūt* from the eponymate of *Abattu*, son of *Adad-šumu-lēšir*, and, finally, 840 *Sūt* from the current eponymate of *Aššur-da''ān*. With regard to this last eponymate the total of 4,380 *Sūt* of barley accumulated over the last 5 years is indicated in line 13 of the text.

Apart from the year of *Adad-uma'i* (T9) where no crop report has been preserved, the data from the crop reports regarding the quantities placed in storage coincide with the data on the quantities registered in the storage places.³⁶ Comparison of the numbers given shows, that small quantities of barley from the eponymate of *Urad-ilāni* are missing: The crop report BATSH 9, 75: 21–23 states 2,052 *Sūt*, the inventory BATSH 9, 89 reports 1,900 *Sūt*.³⁷ But the surpluses from the following years are still completely preserved in the granary. Despite the ups and downs of the crop yields: at the beginning of the second decade of the reign of Tukulti-Ninurta I. the granaries of the local palace of *Dūr-Katlimmu* were surprisingly well stocked with barley. According to BATSH 9, 91, the same applies

³⁴ Whether the slightly divergent amounts, 754 *Sūt* vs. 745 *Sūt*, are due to a scribal lapsus will have to be checked on the original.

³⁵ BATSH 9, 89: 14–17 gives a very detailed indication of the place where exactly the barley was heaped up: *ina bēt karme ša tarši bēt rugbi ša ana erābe ana šumelāni ina IM.TA*.

³⁶ Compare BATSH 9, 89: 1–2 and, 75 (20.xii.T8 (*Ui*)): 30–31; BATSH 9, 89: 5–7 and, 76 (20.xii.T10 (*A₁*)): 20–21; BATSH 9, 89: 8–10 and, 77 (20.xii.T11 (*A₂*)): 15–16; BATSH 9, 89: 11–12 and, 78 (20.xii.T12 (*Adn*)); on details see Cancik-Kirschbaum, in preparation_a.

³⁷ The *rēhtu* from the eponymate of *Urad-ilāni* was divided between two (or more) storage facilities.

to the eponymat of *Aššur-zēra-iddina* (T17), when 4,600 *Sūt* of barley are recorded in three granaries of the local palace of *Dūr-Katlimmu*.

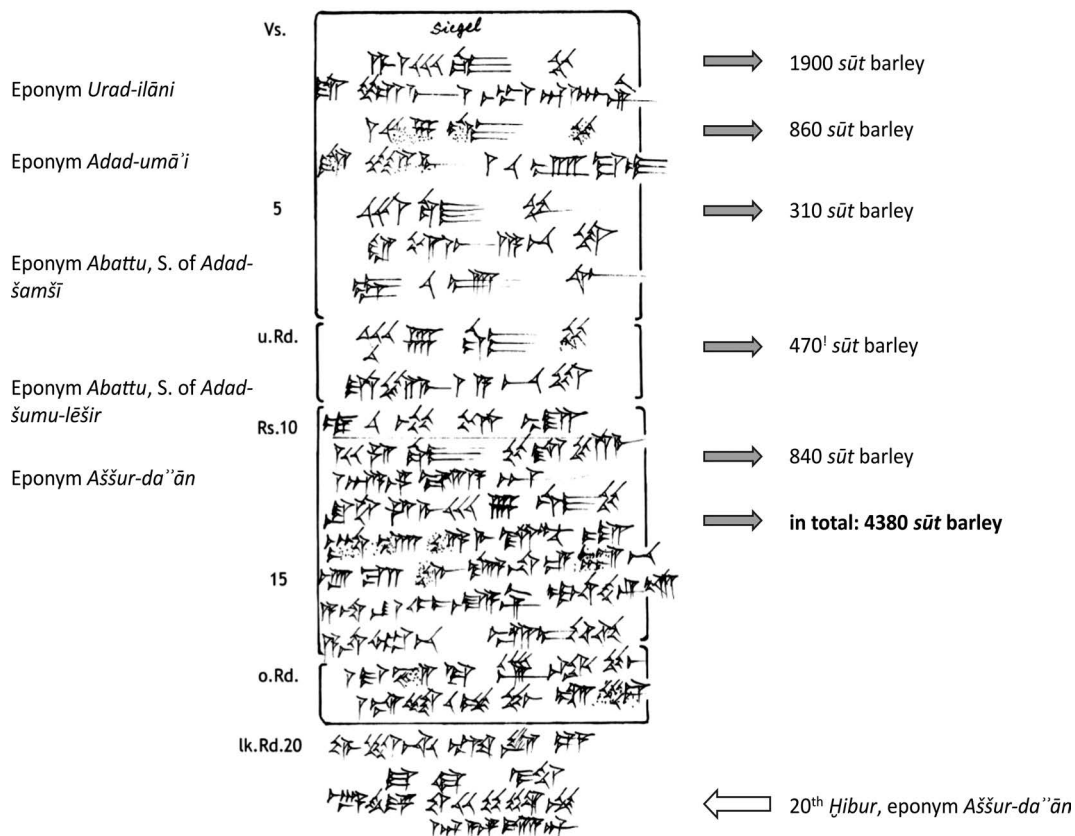


Fig. 1: 4,380 *Sūt* barley of at least 5 crop years stored in a granary (BATSH 9, 89)

2.3 The archival evidence on *Šalūša* in *Dūr-Katlimmu*

The ancient town *Šalūša* was situated somewhere northwest of *Dūr-Katlimmu* within reach of the Balikh river.³⁸ Altogether nine documents from four consecutive eponymates attest to a difficult situation developing in the region there. When trying to put together the pieces the order of the eponyms is of utmost importance; the sequence followed here (*Aššur-bēl-ilāni* = T15 >> *Enlil-nādin-apli* = T16 >> *Aššur-zēra-iddina* = T17 >> *Ina-Aššur-šuma-ašbat* = T18) is based on shallow evidence³⁹ – and thus the order of events might change when new arguments regarding the sequence of the eponymates come up.

³⁸ For attestations of the name see MTT I/2 p. 130 s.v. *Šalūša* and MTT II/2 p. 164.

³⁹ See above footnote 1.

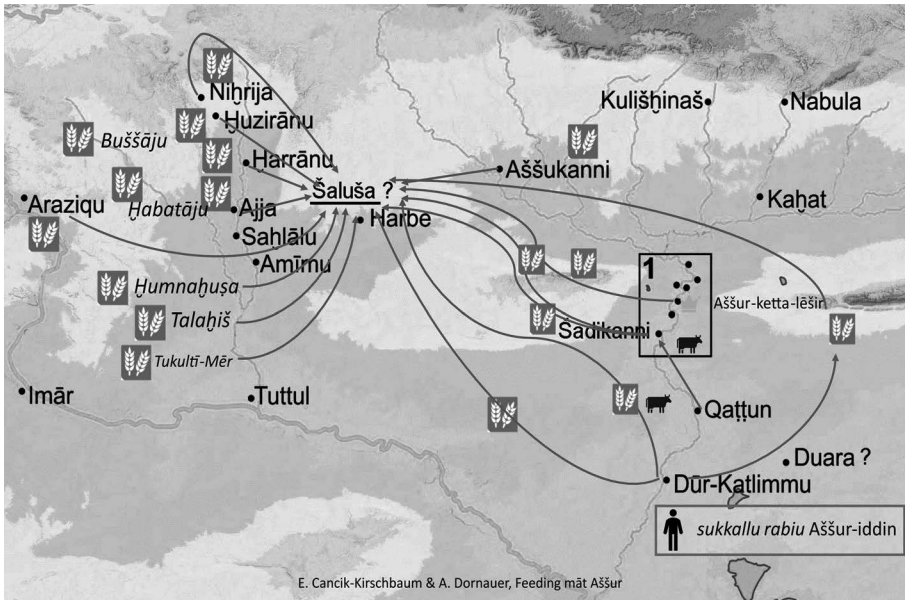


Fig. 2: Barley infrastructure in north-western H̄anigalbat – deliveries for Šalūša

BATSH 10, 31, dated to the 12th of *Abu-šarrāne* in the eponymate of *Aššur-bēl-ilāni* (T15), mentions the quantity of 90 *Emar* of barley that obviously were sent out to Šalūša:

“90 *Emar* barley in the *hiburnu*-measure taken from the middle granary. For food it is given. On the day that *Aššur-ketta-lēšir* took away the three-man chariots and the fortress troops, (and) let grain enter Šalūša; withdrawn and given. *Eṭir-Marduk*, the district lord (and) *Ištu-Adad-gabbu*, the clerk have delivered. On the day when *Aššur-ketta-lēšir* went to *Dūr-Adad*. Month of *Abu-šarrāne*, 12th day, eponym (is) *Aššur-bēl-ilāni*.”

On the 7th of *Kalmartu* in the eponymate of *Enlil-nādin-apli* (T16), BATSH 10, 51 registers a delivery of 133.7 *Emar* (approx. 13,000 litres ≈ 8,840 kg) for Šalūša and an additional 10 *Emar* (approx. 1,000 litres ≈ 680 kg) for the accompanying troops – due to the order of *Assur-iddin*, the *sukkallu rabiu* “Grand Vizier”. The relevant lines read as follows:

ll. 1–2: 1 ME 30+3 ANŠE NIGIDA 1 BĀN ŠE *i+na* ^{GIŠ}BĀN *hi-bur-ni a-na* ^{URU}Ša-lu-ša e-mi-di

“133 *Emar*, 7 *Sūt* barley according to the *Sūt* (measure) of the *hiburnu* for the town of Šalūša imposed.”

ll. 3–5: 10 ANŠE ŠE a-na ÉRIN^{MES} IGI-an ^{URU}BĀD-kat-li-ṛmu¹ ṛša¹ iš-tu¹ Ni-nu-a-ie-e a-na ^{URU}Ša-lu-ša¹ il-lu-ku-ú-ni ta-din

“10 *Emar* of barley given for the troops in front of *Dūr-Katlimmu* who will go to the town of *Šalūša* together with *Ninu ’āju*.”

BATSH 10, 47, written three days later on the 10th of *Kalmartu*, deals with precisely this delivery.⁴⁰ The document shows that this large amount of barley – 133.7 *Emar* – was not provided by *Dūr-Katlimmu* alone but is composed of 15 different shares. BATSH 10, 47 lists these portions line by line declaring in the summary in ll. 16–18 reads like a quotation merged from the two entries in BATSH 10, 51:

ll. 16–18: ŠU.NÍGIN 1 ME 33 ANŠE 1 NIGIDA 1 BÁN ŠE *i+na* ^{GIŠ}BÁN
ḫi-bur-ni a-na ^{URU}Ša-l[u-š]a ¹Ni-nu-a-ju-ú e-te-me-di
 “133 *Emar*, 7 *Sūt* barley according to the *Sūt* (measure) of the *ḫiburnu* for the town of *Šalūša* *Ninu ’āju* has imposed.”

The largest shares of the total, 38 and 29 *Emar* of barley respectively were contributed by *Eṭir-Marduk* the *bēl pāhete*, the ‘governor’ of *Dūr-Katlimmu* and by *Sîn-mudammeq*, the *turtānu*, a high military commander. The smaller shares, ranging from 0.7 to 9.6 *Emar* of barley, were supplied by altogether 11 towns. The localization of some of these toponyms is more or less clear, such as *Ḫuzirānu*, *Ḫarrānu*, *Niḫrīja* in the Upper Balikh valley, *Qaṭṭun* in the lower Khabur valley, the capital of the district of *Ḫāna elū*, or *Arazīqu* south of Carchemish. Toponyms such as *Buzāja*, *Ḫumnaḫuša*, *Ḫabajātu* or *Aja*, so far unidentified, are most likely also to be located in the Upper Balikh valley. And finally, the tablet names two individuals as donors of barley for *Šalūša*. The names of these men are particularly interesting since they are known as rulers of semi-dependent local dynasties: *Tukultī-Mēr*, presumably the semi-dependent ruler of the land of *Ḫāna šaplītu* with its capital *Terqa*; and *Aššur-ketta-lēšir*, the semi-dependent ruler of the land of *Mari* with its capital *Ṭābete* in the Khabur valley.⁴¹

If the interpretation of BATSH 10, 47 and BATSH 10, 51 is correct, the barley was not directly delivered from these places to *Šalūša*. This is rather surprising, since most of the settlements must have been significantly closer to *Šalūša* than *Dūr-Katlimmu*. Instead, as the text BATSH 10, 51: 22–24 explicitly states, the entire amount of barley was provided for by *Dūr-Katlimmu* and transported under guard from there to *Šalūša*:

ll. 22–24: (...) ša É.GAL.LIM *i+na* É *kar-me qa-bal-ti ša pi-i* É KÁ.GAL
 ša É *tam-le-e na-áš-ra ta-din*

⁴⁰ Since the text provided a number of toponyms, some already known, others yet unknown, the text was published in advance in Röllig, 1997: 283–284.

⁴¹ For these two individuals see Cancik-Kirschbaum, in preparation_a.

“(grain) taken from the property of the palace, in the middle *karmu*-storage house, at the entrance of the large gatehouse of the terrace-building; handed out.”

Apparently, *Dūr-Katlimmu* made some kind of “advance payment” set in motion by the procedure set down in BATSH 10, 51. The other towns, districts and local petty-kings listed would therefore have been debtors of *Dūr-Katlimmu* – since they would have to repay their shares, as is stated by the accumulative record of 15 obligations in BATSH 10, 47. The quantity of barley conveyed to *Šalūša* corresponds to about one-third of the barley stored in the granaries of *Dūr-Katlimmu* in the eponymy of *Aššur-da’ān* (T12).

The text BATSH 10, 53, dated to the 23rd of *Allanātu* in the eponymate of *Aššur-zēra-iddina* (T17) is a debt note that has been kept in *Dūr-Katlimmu*. It states that approximately 140 *Emar* of barley have been assigned for *Šalūša* by the palace of *Šadikanni*. The barley, in the charge of the grand vizier *Assur-iddin*, is incumbent on two men from *Qaṭṭun*, the capital of the Assyrian district of *Ḫāna elū*. Only two days later, on the 25th of *Allanātu*, BATSH 10, 25 is issued by the order of the Grand vizier *Assur-iddin*: the document records 30 *Emar* of barley for *Šalūša*. The barley, in charge of an anonymous chief farmer from *Šadikanni*, is owed by *Marduk-...-A*, a man from *Ṭābete*. Another four months later, two more documents deal with supplies for *Šalūša*. BATSH 10, 103 mentions another 105 *Emar* of barley for *Šalūša*; and, most importantly, BATSH 10, 57 records plough oxen that were sent from *Dūr-Katlimmu* to *Šalūša* to till the fields there. Finally, in the 18. year of Tukulti-Ninurta, one more obligation was issued: BATSH 10, 70 records on the 7th of *Qarrātu* in the eponymy of *Ina-Aššur-šuma-ašbat* (T18) approximately 90 *Emar* of barley for *Šalūša*, again issued by the palace of *Dūr-Katlimmu*. The barley in the charge of the grand vizier *Assur-iddin* this time is owed by *Aḫu-ṭāb*, again a man from *Ṭābete*.

Repeatedly, over a period of four years, large quantities of barley as well as plough cattle to support the field work, were brought to *Šalūša*. This is interesting in itself since in both the years that immediately preceded the first *Šalūša*-actions, the harvest in *Dūr-Katlimmu* and perhaps also in other parts of the Khabur-region was not sufficient: According to BATSH 9, 79 (eponymate of *Ušur-namkur-šarri* (T14)) there was no harvest neither in *Dūr-Katlimmu* nor in *Duāra* in this year, nor in the year before. And BATSH 9, 80 tells us that in the year of *Aššur-bēl-ilāni* (T15) due to hostile actions the palatial fields in *Duāra* were not available.

Despite this rather critical local situation, the grand vizier was capable to command an alliance of local palaces and dependent local kings to supply the Assyrian actions at *Šalūša*. The documentation for these transactions was kept in *Dūr-Katlimmu*. Even if the ‘debtors’ and responsible individuals come from other places such as *Ṭābete*, *Šadikanni* or *Qaṭṭun*, the wording of the texts seems to suggest that the grain was delivered from *Dūr-Katlimmu*. However, although mentioned in some of the documents, it is not the *bel pāḫete* of *Dūr-Katlimmu* who oversees

the entire action, but the *sukkallu rabiu* “Grand Vizier” *Aššur-iddin*. He obviously commands the cooperation of the respective palatial resources and the (probably all high standing) individuals to contribute. To be accepted as such, the delivery of the shares in *Šalūša* is to be proven by a receipt which than has to be presented to the officials in *Dūr-Katlimmu*.

3. The historical background as mirrored in the textual documentation

So far, nowhere in the documents the circumstances of this complicated action are indicated. This comes to no surprise: the historical background is scarcely of interest to the clerks and officials of a local palace. They simply refer back to the chain of command, the responsible officials being two high standing members of the royal house: the royal *qēpu Ninu’āju* and the grand vizier *Aššur-iddin*.

3.1 Trouble in north-western *Ḫanigalbat*

Some light is perhaps shed by two letters sent by the *sukkallu* “Vizier” *Sîn-mudammeq* to the *sukkallu rabiu* “Grand Vizier” *Aššur-iddin*. In BATSH 4, 2, dated to the 20.iv. of the eponymate of *Ina-Aššur-šuma-ašbat* (T18) and BATSH 4, 3, dated to the 5.v. from the same eponymate, *Sîn-mudammeq* reports about ongoing military conflicts in the region between the rivers *Khabur* and *Balikh*. Moreover, a locust infestation obviously caused heavy crop failures in the region. Many people left the cities and there was nothing left but chickpeas. *Šalūša* is explicitly mentioned among the affected cities. *Sîn-mudammeq* describes a rather desperate situation:

BATSH 4, 3: ll. 27–30a: ERÍN^{MEŠ} *gab-bu ur-ki ba-la-a-té i-ta-pàr-ku la-a i+na* URU *áš-šu-ka-ni ù la-a i+na*¹ URU *a-mi-mu LÚ* ¹*ut-ta*¹ *a-mur*

“All the troops withdrew after provisioning. Neither in *Waššukanni* nor in *Amīmu* I saw people.”

BATSH 4, 3: ll. 33–37: *áš-šúm* ERÍN^{MEŠ} *-ma*¹ *ša* URU *ša-lu-ša ša la-a ú-na-me-ša-ni il-mi-il-¹ta*¹ *e-ri-šu*¹(DU) *an-nu-ú-tu i-ta-¹še¹-ru-ni* 10 U₄^{MEŠ} *ana-a-te il-¹mi¹-il-tu-šu-nu lu-pa-ši-i-šu ig-ri-šu-¹nu lim-ḫu¹-ru*

“Concerning the troops from the city of *Šalūša*, who did not leave, they request chickpeas. This came straight to me. These 10 days they must go by their chickpeas and then they may receive their provisions.”

Apparently, there are larger military detachments under the command of the *sukkallu* “Vizier” *Sîn-mudammeq* in the region – and there are no resources available to provide for these troops. Two problems seem to coincide here: regional crop failures and military campaigns against revolting groups in *Ḫanigalbat*.

3.2 The king and the city of *Šalūša*

To the perspicacity of H. Freydank we owe the identification of the toponym *Šalūša* in the final passage (section 21) of MARV 2, 17+, a large compilation of barley distributions to various groups, found in *Kār-Tukultī-Ninurta* (tablet Z. 102–114, envelope Z. 101'–112'), in MARV 2, 17+ Z. T: 110.⁴² Unfortunately the state of preservation of the entire passage is rather fragmentary on the tablet as well as on the envelope, and thus the syntax is not yet entirely clear. Line 110 correlates a statement about the general historical background – royal activities in and contra *Ḫanigalbat* – to the issues specified on the tablet and in the summary. A sequence of three royal actions is introduced with the well-known formula *ina ūmi šarru* “when the king”. The text reads:

T:110: (...) *i+na* U₄-mi LUGAL *a-na ḫu-ra-d[i a-na* ^{KUR}*Ḫa-ni-ga]*l-bat *il-li-ku-ni* ŠE-am *ú-še-li-ú-ni* ^{URU}*Ša-¹lu-ša¹* *ik-šu-du-ni* (...)
 “(...) the day the king went on campai[n to the land of *Ḫanigalbat*], let barley go up (there), reached the town of *Šalūša* (...)”

In his commentary on the relevant section 21 (tablet lines 102–114, envelope lines 101'–112') H. Freydank proposed a connection between the document DeZ 3281 (now BATSH 10, 47) from *Dūr-Katlimmu* and the royal actions in *Ḫanigalbat*.

“Hiernach ist die Möglichkeit zu denken, dass Texte aus *Dūr-Katlimmu* unmittelbar oder mittelbar auf Ereignisse Bezug nehmen, die sich in den Ablauf eines der in MARV 2, 17+ angesprochenen Feldzüge nach *Ḫanigalbat*, nämlich des ersten einfügen lassen. DeZ 3281 erklärt zwar nicht die Zweckbestimmung der Gerste, lässt aber vermuten, dass *Ninu`āju*, womöglich in militärischer Funktion, für den assyrischen König agiert. Da die Menge anteilig von 15 Orten bzw. Vertretern aus der Region aufgebracht wird, scheint man einer außerplanmäßigen Forderung nachzukommen. Im Vergleich mit den in KTN eingesetzten Gerstenmengen (vgl. T 102 / H. 101') geht es dabei um ein relativ mäßiges Quantum. Ohnehin bleibt es offen, ob gerade diese Gerste für Assyrien bestimmt ist oder etwa einen aktuellen Bedarf assyrischer Truppen während eines Feldzuges decken soll.”⁴³

In 2016 Freydank took up the problem of the chronology of the events alluded to and explicitly mentioned in MARV 2, 17+.⁴⁴ He came to the following conclusion:

“Das sollte den Vorschlag rechtfertigen, weiterhin mit ‚zwei Feldzügen‘ zu rechnen, nämlich einem ersten, der mit dem Ziel Gerste zu requirieren, zur

⁴² Freydank, 2015: esp. 113–119.

⁴³ Freydank, 2015: 115.

⁴⁴ Freydank, 2016a: 95–108, esp. 95–96.

Einnahme der Stadt *Šalūša* geführt hat, und einem zweiten, der notwendig bereits in das Folgeeponymat (*Salmānu-šuma-ušur*) datiert und sich ebenfalls gegen *Ḫanigalbat* wendete.”⁴⁵

Apart from the fact that Freydank’s translation of *ikšuduni* as “eingenommen” is perhaps too much influenced by the military context (as stated already by Freydank), there can’t be any doubt that the problems referred to here are somehow related to what we find reflected in the documents from *Dūr-Katlimmu*. The evidence from the local archive at *Dūr-Katlimmu* however antedates the actions described in the text from *Kār-Tukultī-Ninurta* which relates the events to the two eponymal years of *Abi-ilī* (T21) and *Šulmānu-šuma-ušur* (T22). Both eponymates are most probably to be assigned to the third regnal decade of Tukulti-Ninurta I., they certainly are later than the group of eponyms that date the *Šalūša*-Dossier from *Dūr-Katlimmu*. The city of *Šalūša* had some role here – even if *kašādu* is taken simply as “to reach”. With the necessary caution we might conclude then that finally, in the eponymate of *Abi-ilī*, the Assyrian king took matters in his own hands and went on campaign to settle the situation on the north-western border of his kingdom. Within this context, the lack of barley in the region – be it for the local population, be it for the Assyrian troops struggling against the enemy – is prominent enough, that it is mentioned as part of a historical statement in an administrative document from *Kār-Tukultī-Ninurta*. The expression *še’am ušeliūni* “he had grain brought up there” in the historical statement most certainly refers to the actions taken formerly by *Aššur-iddin* to secure the situation *in sītu*. Even though the amount of grain raised may seem modest compared to what was required to feed deportees and dependent labourers in *Kār-Tukultī-Ninurta*, it was not an insignificant amount for the Habur region. The difficult situation in the north-western part of *māt Aššur* obviously required not only the presence of the grand vizier and heavy military interventions. The circumstances also prompted accompanying interventions such as the grain alliances documented here, which are managed from *Dūr-Katlimmu*.

4. Conclusion

The network of provincial centres yields a kind of dormant infrastructure. To activate this infrastructure, to raise the needed amount of grain from different sources, is a deliberate demonstration of royal power, of governance. Consider the following two arguments:

(1) The total of barley provided by the barley-network for *Šalūša* over some 3 to 4 years adds up to approx. 635 *Emar* (≈ 43.2 tons); at least this can be gathered from the administrative documents that have come down to us. This amount of grain could well have been raised by the province of *Dūr-Katlimmu* itself, at least in those years when the granaries were apparently quite well stocked. In the 17th

⁴⁵ Freydank, 2016a: 96.

year of Tukulti-Ninurta, for example, there were still 460 *Emar* of barley in stock. In relation to the huge amounts of grain mobilized in the course of the great royal campaigns against Hanigalbat – see, e.g., MARV 2, 17 – this is a small amount. But, what is of interest here is not so much the quantity as the mode by which these needed quantities were raised: The Assyrian mode of governance allowed the establishment of a regional network to raise a large quantity of required commodities through small individual shares.

(2) The involvement of different actors, namely district centres, individual towns, and members of the Assyrian elite and local semi-dependent rulers such as the kings of *Māri* and the kings of *Hāna*, is complex. And yet this effort has not been spared. Instead, what we see here is a coordinated action, albeit by order from above. It is probably a measure to keep the Assyrian troops in the region on track. And it is certainly an attempt at regional stabilization, the maintenance of food security, and ultimately, with it, the fortification of the settlement structure in a region that was obviously subject to major unrest during this period. According to the imperative valid for agrarian societies that consumer and producer are identical, it is crucial to keep the population in the region. The Assyrian state – mediated by individual stakeholders, actively intervenes to maintain the region as an Assyrian dominion. Governance in spaces of limited statehood such as the region of the Upper Khabur and between the Balikh and the Euphrates in the West is directed to maintain stability in *māt Aššur*. Keeping up such an infrastructure is all the more difficult, the more critical agrarian stability is. We have seen that a major part of the yields from the Lower Khabur remained in the region. The role of *Dūr-Katlimmu* was not only to ensure military control, but also to provide food security for the population. Governance in the West of *māt Aššur* was also expressed through a kind of “barley infrastructure” administered by the palace and the grand vizier in *Dūr-Katlimmu*. Feeding *māt Aššur* thus, is here – as far as we can judge from the local textual evidence – an important element for the demonstration of civil governance.

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Economy and Food Production at the Beginning of Urbanization

The Case Study of Jebel al-Mutawwaq

Alessandra Caselli / Andrea Polcaro* / Juan Ramon Muniz***

1. The settlement

Jebel al-Mutawwaq is an Early Bronze Age I site settled on the top of a mountain located along the Middle Wadi az-Zarqa Valley, Jordan, between the middle and the end of the Fourth Millennium BC.

The site was surveyed by Hanbury-Tenison in 1984 and 1986, then excavated by a Spanish expedition of Oviedo University directed by J. A. Tresguerres-Velasco from 1989 to 2011 and now investigated by an Italian-Spanish team from Perugia University (Italy) and Pontificia Facultad San Esteban of Salamanca (Spain), co-directed by Andrea Polcaro and Juan Muniz since 2012. At the present state of art, it seems that Jebel al-Mutawwaq site and necropolis have two main phases of use, one dated to the end of the Early Bronze Age IA (a long period usually dated from the 3500 to the 3200 BC) and the Early Bronze Age IB (3200–3000 BC).¹

The site consists of a village, surrounded by a settlement wall and by several clusters of dolmens (Fig. 1). The village had at least 200 domestic units with a typical oval or double-apsed plan, able to host more than one thousand people.²

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¹ The first phase of occupation of the site is dated to EBIA by the C14 analysis performed on some samples collected in the 2019 campaign in the Great Enclosure (5470–5316 cal BP = 3521–3367 cal BC – Beta Analytic 576901); the EBIB phase is attested in the necropolis, in the Temple of the Serpents and in the domestic contexts (From Cave C.1012: 5190–5053 cal BP = 3241–3104 cal BC – Beta Analytic 561343; from Dolmen 11: 4980–4856 cal BP = 3031–2907 cal BC – Beta Analytic 576899; from the Temple of the Serpents: 5290–5040 cal BP = 3340–3090 cal BC – Beta Analytic 194526; from House 400: 5064–4870 cal BP = 3115–2921 cal BC – Beta Analytic 576900). The details about the analysis are reported in Polcaro / Muniz, *in press*.

² Fernandez-Tresguerres Velasco, 2001; Polcaro, 2019a; Polcaro / Muniz 2020a; Caselli, 2020.

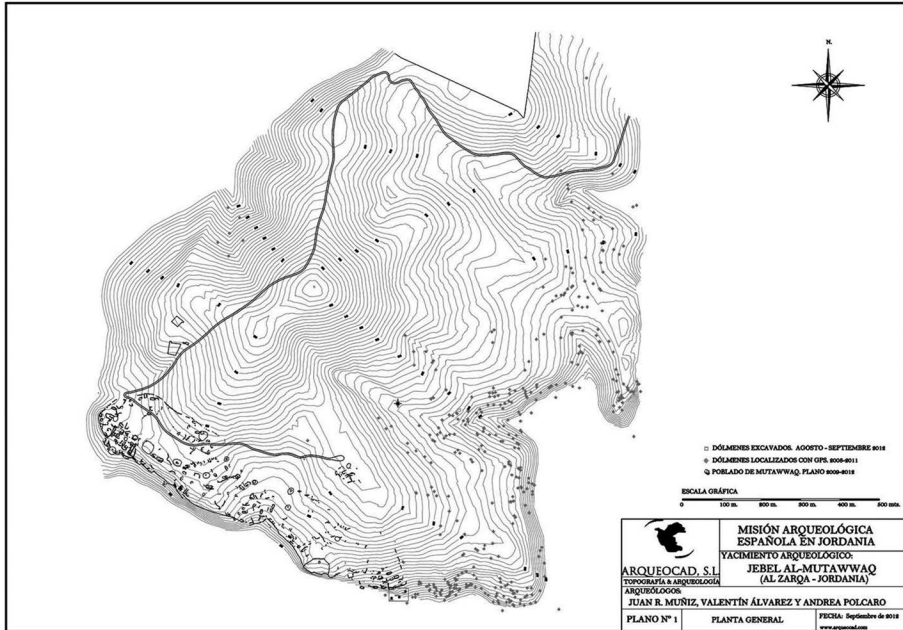


Fig. 1: Topographical map of Jebel al-Mutawwaq.

2. The sacred area

In the central sector of the village a sacred area (called Temple of the Serpents), surrounded by a *temenos* wall, has been identified and investigated by the Spanish team between 2003 and 2005 (Fig. 2).³ The cult was performed in the main building of the sacred area, called House 76, where large jars with applied serpent decorations on the shoulders have been discovered (Fig. 3).⁴

The complex of the Temple included also a small complex of five rooms, where different production activities were performed. To the South of this room another structure was built, House 75. This building was divided in two rooms by an inner partition wall. In the southern room, a stone slab and several large tabular scrapers have been discovered, together with several grinding stones and stone pestles of basalt and limestone, testifying production activities related to agricultural and pastoral products. All the materials were concentrated in the southern

³ Fernandez-Tresguerres Velasco, 2005; 2008; Polcaro / Muniz / Alvarez / Mogliazza 2014.

⁴ Due to the presence of other features, as such as a deep cup-mark, carved inside a block of raised bedrock, probably used as a mortar, it was advanced the hypothesis that in this room some kind of “healing potion” or medicine could be prepared and consumed inside the cultic vessels decorated with serpent applications (Polcaro, 2019b).

JEBEL AL-MUTAWWAQ
Temple of the Serpents

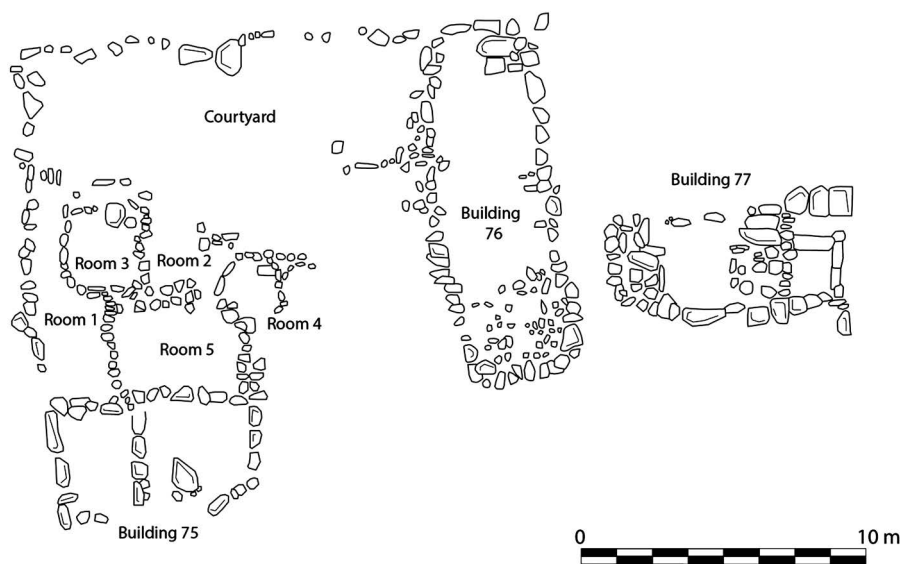


Fig. 2: Plan of the sacred area (the Temple of the Serpents).

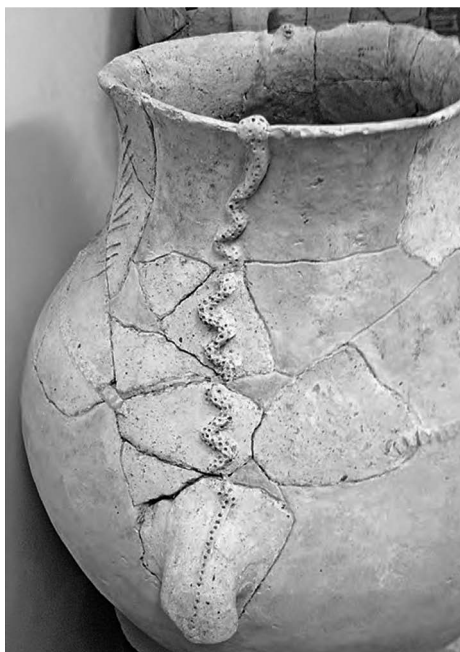


Fig. 3: A jar decorated with an applied serpent found inside House 76.

room, while in the northern room there was a large hearth covered by 70 cm of accumulated ash deposit, suggesting that the room had the main function of cooking food in large quantities. From burned olive seeds discovered inside the temple area come the only two C14 dates that could be used to date the structure: 3340–3090 BCE and 3320–3220 BCE.

3. Area C

The Area C of Jebel al-Mutawwaq, investigated since 2014, together with area D and EE, gave in the last seasons of excavations the most interesting data till now discovered in the site from the beginning of the Italian-Spanish expedition.⁵ It is located just against the lower sector of the settlement wall, in correspondence of the Central Sector of the EB I village. The area has a large view on the Valley of the Wadi az-Zarqa and it is well visible from the Temple of the Serpents.

The largest structure identified in Area C is the Great Enclosure, a large semi-circular enclosure, about 60 meters in diameter. This huge structure, still under investigation, is characterized by the presence of a standing stone in the central part of the enclosure (Fig. 4).



Fig. 4: A general view from Southeast of the Great Enclosure and the standing stone.

This large open space is delimited with a massive stone wall (W. 102), built close to the southern cliff of the mountain. The external line of W. 102 is still preserved in some points for three courses of stones, reaching a height of 1.50

⁵ Polcaro / Muniz / Caselli, *in press*; Polcaro / Muniz, 2021; Polcaro / Muniz, 2020b.

meters. The only entrance of the enclosure was on the southwestern corner of W. 102; the door, D.1110, is very well preserved (Fig. 5). It is made by two lateral stone slabs and a megalithic lintel still in place.

The large structure is dated to the EB IA, fact confirmed by the last C14 analysis performed on a burned olive seed dated 3521–3367 BCE, corresponding to the last phase of use of the Great Enclosure, before his final sealing.⁶



Fig. 5: A photogrammetric capture of D.1110, the entrance of the Great Enclosure.

Behind the megalithic stele close to the northern part of the delimiting wall, a deep elongated corridor was carved directly on the bedrock along W. 102 behind the stele (Fig. 6).

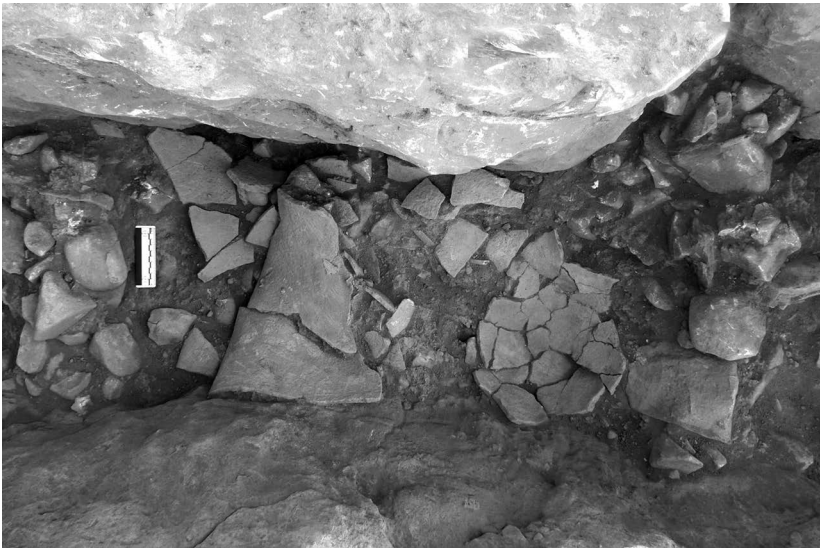


Fig. 6: The installation found along W.102 in the Great Enclosure.

⁶ Polcaro / Muniz, 2021.

In the upper layer, a circular installation (I. 193) delimited by small stones was discovered, containing a jar with inside food remains, in particular animal bones. Under this installation in the lower level, another circular one of the same dimensions was discovered, also with some pottery sherds inside, suggesting that the deposition of food offering behind the stele of the Great Enclosure was a periodic cultic activity.

In the same Area C other buildings have been identified around a large courtyard of about 150 square meters, L. 51 (Fig. 7). Close to the Northern border of Courtyard L. 51, the natural bedrock rises in elevation; here the rock was carved in order to obtain small circular installations (I. 65 and I. 66) to host large storage jars, partially discovered in situ. Thus, it seems that at least this part of the open courtyard was used as a storage area⁷ (Fig. 8).

Close to the southern wall of Building 131, two large circular installations, I. 158 and I. 159, were identified. The installations, 1.8 m of diameter and 20 cm high, are stone lined and filled with leveled layers of small white rubbles.⁸ The installations occupied almost completely the southern part of the building, clearly with some purpose of production.

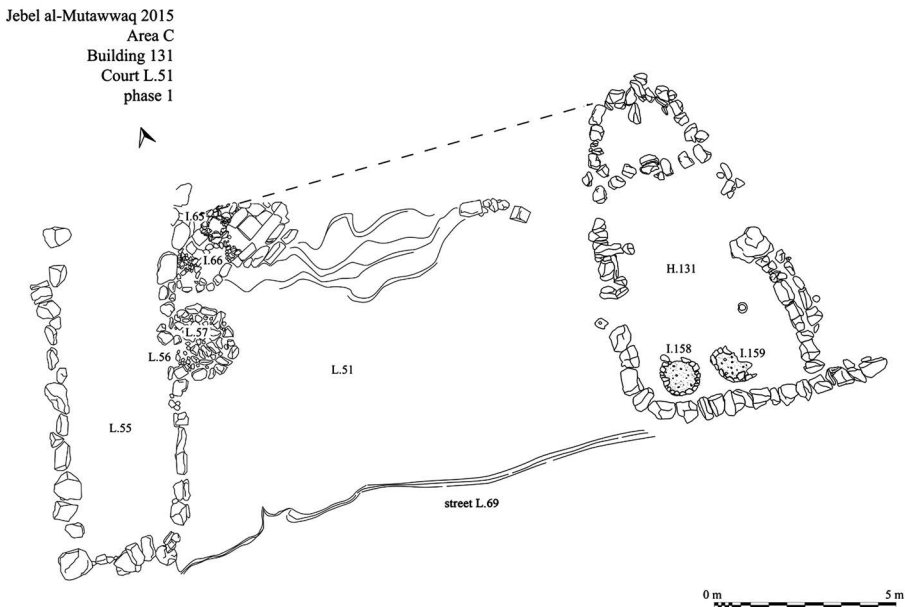


Fig. 7: Area C, the plan of the first phase of use of L. 51 and Building 131.

⁷ Polcaro / Muniz, 2020b.

⁸ Casado *et al.*, 2016: 285, fig. 8; Polcaro / Muniz, 2020b.

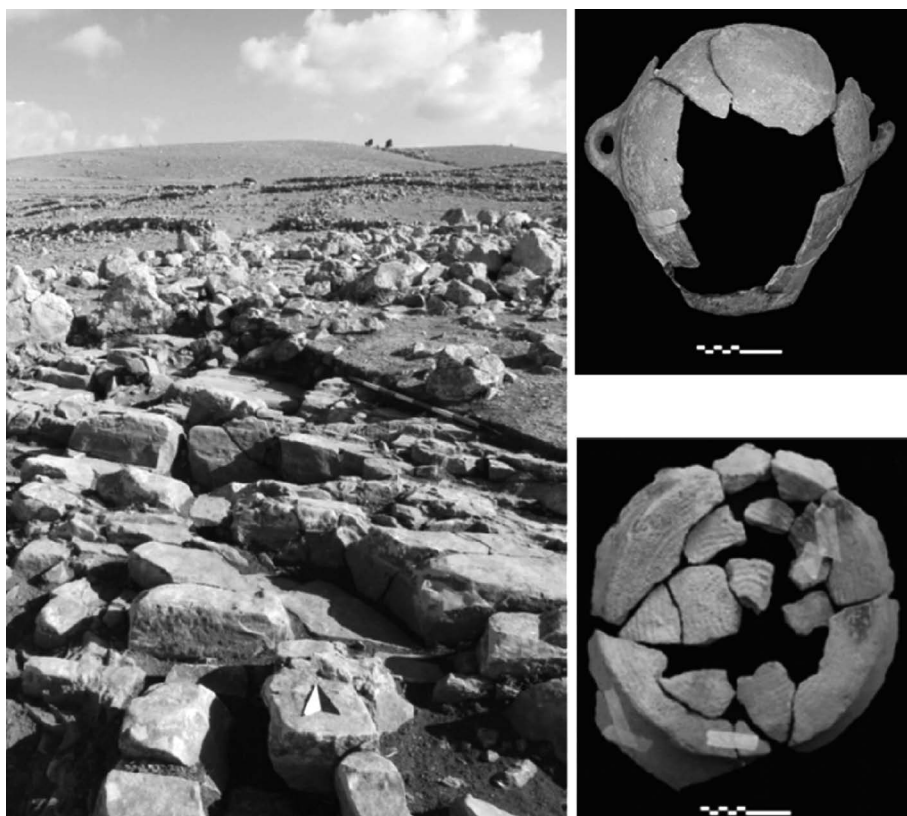


Fig. 8: The courtyard L.51 and two storage jars found in it.

Nearby, two cup-marks were discovered (Fig. 9), the easternmost has a well smoothed inner surface with raised edges, probably used as a mortar. The westernmost, located in the center of the room, is composed by a main hole with a smooth surface and the edge only partially raised, and a second smaller hole with high raised edges. Even if a certain function cannot be identified, it is probable that these cup-marks were used for food production activities related to the two large circular installations.⁹ This indicates that Building 131 could have had not a domestic purpose but was dedicated to the production of food in greater quantity.

⁹ Cup-marks are rock cut features difficult to interpret, very common in Southern Levantine sites since the Natufian Period and used also in the Late Chalcolithic and Bronze Age (see Kerner, 2022; Van Der Brink, 2008). Nevertheless, their shape can give some information about their use. The cup-marks found inside the buildings of Jebel al-Mutawwaq, particularly in connection with other food production installations like in this case, have in some cases a shallow shape and clearly visible circular marks on one or all sides suggesting a continuous rubbing activity with an element hard enough to leave such signs on the limestone. This aspect suggests their use for food production activities, particularly connected to pounding vegetal elements, like olives.

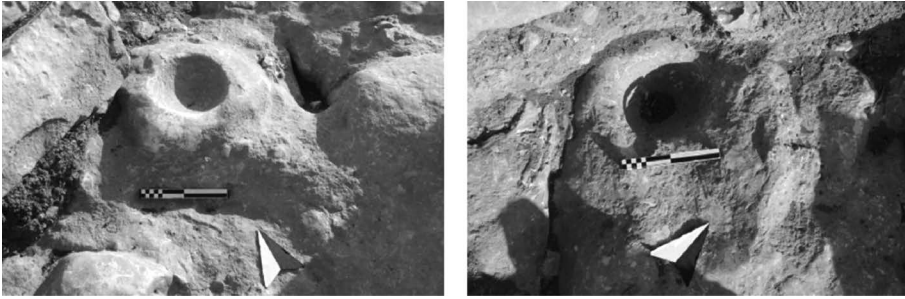


Fig. 9: Two cup-marks found inside Building 131.

4. Area D

The excavations of 2019 and 2021 performed by the Spanish team of the Pontificia Facultad San Esteban of Salamanca discovered an entire domestic unit located far north on the slope of the mountain in the central sector, in Area D. The house, of double apsidal plan, had a door, blocked at the end of the use of the dwelling, very well preserved with the two door's stone jambs still in place. The house contained several entire storing jars and other kind of vessels, together with grinding stones and working installations with several olive seeds, some of them burned.¹⁰ From one of these seeds the C14 analyses gave an age of 3115–2921 BCE, corresponding to the EB IB.¹¹ This means that the Jebel al-Mutawwaq village in this period reached its larger extension, at least in the northern part of the site, when the settlement wall was also possibly built. In this phase, while the domestic units grow in numbers and, possibly, in architectural and topographical differentiations, something happened in the Mutawwaq society, changing the function of the southern part of the Central Sector of the settlement in Area C. The Great Enclosure already ended its first cultic use around 3300 BCE, perhaps in favor of the construction of new cultic centers in the settlement, like the Temple of the Serpents.

5. The Southern Necropolis

Slightly later, Area C and the whole extra-mural southern zone close to it, started to be used for the construction of large dolmens, all characterized by particular funerary gifts and by the presence of food production installations.

The first excavated dolmen of this group was Dolmen 534 (season 2014). The dolmen, dated from the findings to the EB IB, was built directly against the southern wall of Building 131 in Area C, his monumental access was a stepped corridor, very well built with large, squared stone blocks.¹² The angular plan of the *dromos* could have the purpose to preserve Building 131, a structure dedicated to food

¹⁰ Polcaro / Muniz / Caselli, *in press*; Polcaro / Muniz, *in press*.

¹¹ 5064–4870 cal BP = 3115–2921 cal BC – Beta Analytic 576900.

¹² Polcaro / Muniz, 2018.

production activities, that was probable still in use at the time of the dolmen construction (Fig. 10).

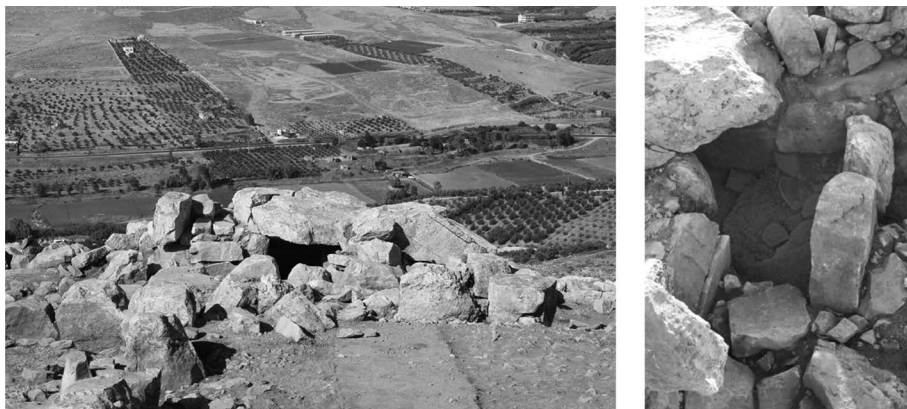


Fig. 10: Dolmen 534, a general view from North (on the right) and its angular access (on the left).

The second excavated was Dolmen 535 (seasons 2016–2018), which is characterized by a large burial chamber, about 2 meters high. The entrance of Dolmen 535 had two stone steps leading to the burial chamber. In front of the entrance, a beaten earth floor has been recovered, together with a circular installation, just to the left of the entrance of the chamber. Even if it is not possible to reconstruct its function due to its bad state of preservation, it seems it must be related also in this case to some kind of food preparation.¹³ This floor hid a shaft cut in the limestone, about three meters deep, leading to a cave, also artificially cut inside the rock, and then used as a burial chamber for secondary burials (Fig. 11).¹⁴ The funerary assemblage discovered in the cave consist only of miniaturist vessels, generally interpreted as small bottles for perfumes, unguents or oils used in the funerary rituals. From the human remains recovered inside Cave C.1012 comes the C14 date 3241–3104 BCE, thus again the EB IB.¹⁵

The last dolmen excavated in this group is Dolmen 11 (season 2019), located along the Southern settlement wall, like Dolmen 535, not far from the Southern gate of the Jebel al-Mutawwaq settlement and from a large water cistern, close to the village entrance (Area EE). C14 analyses performed in 2020 on human bones, giving an age between the 3031 and the 2097 BCE, clearly dated the use of the burial chamber of Dolmen 11 to the EB IB.¹⁶ An interesting characteristic of Dolmen 11 is the presence, next to the structure, of a standing stone in front of which

¹³ Casado *et al.*, 2019.

¹⁴ Polcaro / Muniz, 2021.

¹⁵ Polcaro / Muniz / Caselli, *in press*; Polcaro / Muniz, *in press*.

¹⁶ Polcaro / Muniz / Caselli, *in press*; Polcaro / Muniz, *in press*.

has been identified a stone bench carved in the bedrock, a cup-mark, probably used as a mortar,¹⁷ and several grinding stones that testify productive activities connected to the dolmen (Fig. 12).



Fig. 11: Dolmen 534 and the access to the cave C.1012, a capture from the 3D model.



Fig. 12: The carved bench and the cup-mark found in connection with Dolmen 11.

6. Discussion

In order to reconstruct the production activities and subsistence economy of the Jebel al-Mutawwaq community in the two phases of occupation of the site and the consequences of these changes on the nutrition and food consumption, we recently started to perform several analyses on osteological and botanical samples collected in the past seasons. Concerning the first phase of occupation of the site (EB IA), the most important context to investigate the food consumption habits was the Great Enclosure. The animal bones discovered in the jar deposited apparently as food offering behind the standing stone pertain to a sheep (Fig. 13).

¹⁷ Also in this case, as such as for the carved rock features of Building 131, the shape of the cup-mark and the signs inside it suggest that it was used for pounding activities.

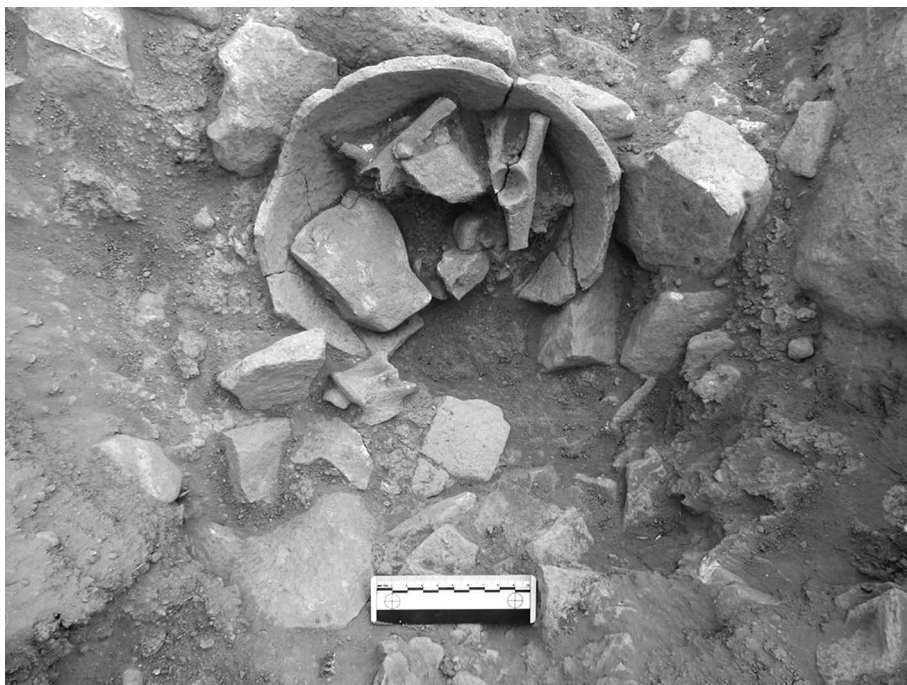


Fig. 13: The deposition of I. 193 in the Great Enclosure.

The choice of the meat steaks, in particular the shoulder and the pelvis, points to interpret the bones as food remain.¹⁸ Concerning possible comparison with food remains located inside narrow rock cut corridors in cultic place, as such as the one discovered in the Great Enclosure, it is interesting to mention the site of Megiddo. In the Temple area of Megiddo, in the level J-2 (early EB IB), an holemouth jar filled with bones pertaining to a single young sheep was discovered. It was not interpreted as a food offering because there were both burnt and unburnt bones. It was interpreted as a sort of deposit of debris linked to the cultic activities (see Wapnish / Hesse, 2000: 444, 449). At the same time, in the later layer J-4 in the Temple area, three narrow corridors have been identified filled with bone refuse and were interpreted as *favissae* linked to a ritual dimension of the discard process (see Adams / Finkelstein / Ussiskin, 2014: 291).

The bones discovered in the jar deposited in the Great Enclosure of Jebel al-Mutawwaq do not present any traces of burning suggesting boiling as the cooking technique. Moreover, after the cleaning of the bones and the removal of the compact layer of earth attached on their surface, clear traces of butchering have been identified. Furthermore, it would be interesting to reconstruct the age of the sheep found inside the jar because recent analysis performed in EB I other sites of the Southern Levant suggest that this aspect could be related to the function of the

¹⁸ Polcaro / Muniz / Caselli, *in press*; Polcaro / Muniz, *in press*.

context where the animal bones are collected.¹⁹ At the site of Megiddo, for instance, EB IB samples coming from the sacred area have been compared to the samples collected at Tel Megiddo East, a town site, and it was possible to observe that the faunal remains from the Temple pertain to young caprines, indicating that those animals were mainly exploited for their meat. On the contrary, faunal remains collected at Tel Megiddo East are mainly adults indicating that the town was focused on the production of secondary products, as wool and milk.²⁰ These data are consistent with the social complexity of the Early Bronze Age IB period in the Southern Levant.²¹

The food remains recovered at Jebel al-Mutawwaq pertain to the Great Enclosure, which is dated to the EB IA period, when the community was beginning to settle permanently the site and the society had not reached the complexity attested in the second phase of occupation of the site.

However, the discovery strongly suggests a cultic function of the Great Enclosure, characterized by periodic rituals including food offering depositions, possibly connected to recurring economic activities performed inside the structure by, at least, part of the population of the EB IA village. For this reason, the identification of the age of the animals could be an interesting data to investigate if an internal differentiation in the exploitation of caprines can be detected in the site since EB IA.

Concerning the typology of food related to the offering (or to the remains of a meal) deposited inside the jar behind the standing stone of Great Enclosure, at the present state of art, it is possible to advance the hypothesis that it was a sort of stew of lamb.

It has to be considered that boiling is a common cooking technique in the landscapes characterized by the absence of substantial wood remains able to produce large charcoals, as attested also in Mesopotamia, at least by the available textual evidences, the Yale Tablets.²² Moreover, the boiling technique can be related to the toughness of the meat and, consequently, to the age of the animal. Recently, the consumption of stew with inside bones of caprines was proposed for the Late Chalcolithic site of Shaki Kora in northern Mesopotamia, where analysis on beveled rim bowls detected fat animal residues.²³ The consumption of this kind of food fits with landscapes characterized by pastoral exploitation, with a less

¹⁹ Identifying the age of the animals is not an easy task in the case of the sheep bones discovered in the Great Enclosure because of the absence of long bones or teeth, sampling of animal ancient DNA is undergoing for this reason.

²⁰ Sapir-Hen / Fulton / Adams / Finkelstein, 2022: 216.

²¹ For a detailed analysis about the evolution in the animal exploitation in relation to the increase of the social complexity of the communities of the EBA Southern Levant see Gaastra / Greenfield / Greenfield, 2020.

²² Polcaro / Braconi, in this volume.

²³ Perruchini *et al.*, 2022.

presence of cereal crops typical of area of intensive irrigated agriculture, as such in the case of the Transjordanian Highlands.

Concerning the change in the alimentation happened in Jebel al-Mutawwaq between the EB IA and the EB IB, it is noteworthy that among the botanical samples from the Early Bronze Age IB contexts, pertaining to the second phase of occupation of the site, both in domestic, cultic, and funerary structures, several olive seeds of *Olea Oleaster* *Europea* have been collected. A strong concentration of olive seeds, both crushed and entire, was discovered in the house of Area D, in the funerary hypogeum connected to the Dolmen 535 and in the structures inside the Temple area. The presence of these seeds strongly suggests that during EB IB the olive cultivation became a main economic activity of people living in Jebel al-Mutawwaq. This cultivation is in fact connected to a permanent presence of the human group in the site, because of the constant care needed by the olive trees to fulfill large productive purposes. Moreover, olive cultivation needs a planned, well organized, agricultural landscape. This perfectly fits with the historical context of proto urbanism during the last two centuries of the Fourth Millennium BC well attested in the whole Southern Levant.

The possibility that the olive cultivation in EB IB Jebel al-Mutawwaq was connected to the production of olive oil is still under investigation.²⁴ In particular, the carved rock features like the cup-marks could be used to crush olives to prepare the paste. Moreover, the two large installations discovered inside Building 131 could be thus interpreted as the bases of some kind of olive press system. However, further analysis currently performed on the collected samples from Building 131, could give more data about this topic.

This kind of products was surely a main request at the end of the Fourth Millennium BC from the growing pharaonic Egyptian state, the demand of olive oil from Egypt could have had an important role in the urbanization process in the Southern Levant and perhaps also in the Transjordanian highlands. The increase of this production activity certainly had an impact also on the nutrition and food consumption, due to the specific properties of olive oil. In fact, on one side the consumption of raw olive oil gives many medical benefits to the human being, on the other side it permits new kind of cooking techniques, changing forever the taste and flavor of food.

²⁴ Olive trees cultivation and specialized production of olive oil along the rivers of the Transjordan Highlands is also attested for the end of the Early Bronze Age (EB IV) from the site of Khirbet Ghozlan (see Fraser *et al.*, 2021). Moreover, the changing of the relationship between men and landscape since the beginning of the Early Bronze Age (EB I) and the appearance of a megalithic funerary tradition, linking people to the territory, is suitable with the grow of olive trees cultivation, a practice that needs control of the land and careful care of the plants for most of the year. For a description of the evolution of olive cultivation during the Early Bronze Age in the Southern Levant see Sabatini, 2019.

Finally, another strong change between the EB IA and the EB IB in Jebel al-Mutawwaq concerns the relation between funerary structure and food production installation. The large dolmens discovered in the Southern Necropolis, close to the main southern gate that gave access to the site clearly indicate the presence of continuous cultic activities connected with these monuments. The religious festivity connected to the celebration of the ancestors of the families or clans using these monuments, built close to the settlement wall and to one of the main gateway to the site, must have involved also the preparation of foods in great quantities. This is proved by the presence of food installations connected to the three dolmens since now excavated of this cluster, nos. 534, 535 and 11. Even if at the present state of art is very difficult to reconstruct which kind of food the people was eating in this occasions, the presence of grinding and pounding activities in the same place, as such as for the installation beside of Dolmen 11 close to a sacred feature (the standing stone), points to a specific productions of aliments. The consumption of food dedicated to religious occasion such as funerals or periodic celebrations of the dead is fully documented for the urban communities of the Near East, particularly in connection with the rise of power of the first urban elites.²⁵ This is a clear sign of the evolution of the Jebel al-Mutawwaq settlement at the very early beginning of the Third Millennium BCE and of the fact that the site, before its final abandonment happened probably around the 2900 BC, was transforming from a large village community in a real urbanized society.

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²⁵ The ritual of *kispum*, the festivity dedicated to the royal ancestors, known mainly from the Middle Bronze Age text of Mari / Tell Hariri in Syria (Jacquet, 2002; Colonna d'Istria, 2021), and performed also for the members of the royal family in Qatna during the Middle and the Late Bronze Age, where it is proven clearly by archaeological evidences (Pfälzner, 2016), was performed also in the Middle Bronze Age Ebla / Tell Mardikh (Matthiae, 1980; Polcaro, 2015; 2018). Despite this typology of ritual is well known for the royal elites of the Second Millennium BC, the celebration of ancestors through dedicated festivities involving the consumption of large quantities of food by the whole communities or by the members of the urban elites was probably performed also in the Third Millennium BC (as such as in the case of the elite cemetery of Umm el Marra (see Schwartz *et al.*, 2006). Even if more difficult to recognize in the Southern Levantine first urban communities, the concept of remembering the ancestors with periodic commemorative rituals was advanced for the site of Bab edh-Dhra; here during the EB IB – EB II the urbanization process involved a strong change in the funerary rituals with the construction of the new "charnel houses" tombs. The accessibility to these tombs from the new city suggests a frequency of repetition of memorializing ceremonies for specific clans or extended families (see Chesson, 2007).

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The Value of Food

Historical, Prosopographical and Quantitative Aspects of the Final Letters and Related Texts from Ebla Palace G (3rd Millennium BC)*

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Fiammetta Gori*** / Marco Bonechi*****

The recent publication of *ARET XVIII*¹ makes the entire Ebla epistolary corpus available, part of which was previously published in *ARET XVI*.² Among the new features that have already been noted in these two volumes, those concerning problems in the food supply are of particular relevance. The information on this topic is scattered throughout many letters, and therefore the compilation of a coherent thematic dossier is rather complex, also considering the general difficulties in interpreting the Ebla letters.

As a matter of fact, the information regarding food supply problems is found in the most recent letters. There is a consensus that the letters found in the Vestibule (L.2875) of the Great Archive, published in *ARET XVIII*, are to be dated to the very late phase of the Royal Palace G. For this period, some letters found in the nearby Great Archive (L.2769), published in *ARET XVI*, can also be referred

* In this presentation we will focus on a specific part of our ongoing research within the framework of the PRIN 2017 “Big Data. Measuring Settlement Dynamics and Environmental Exploitation in the Ebla Region during the 3rd Millennium BC: Archaeological Record, Cuneiform Texts, and Remote Sensing”. We are cross-referencing data from letters with those from administrative texts of comparable chronology, with a particular focus on prosopography and the morpho-syntactic analysis of numbers and units of measure. In the same RAI session, Luca Peyronel, Agnese Vacca, Simone Mantellini and one of us, Marco Bonechi, have presented the paper “Food for the Capital”, which also derives from the same PRIN 2017, including an overview of the primary resource exploitation of the Ebla territory. This paper is a joint work of the authors; in particular, § 1 is by Catagnoti, § 2 is by Cianfanelli, § 3 by Gori, and § 4 by Bonechi.

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¹ See Catagnoti / Fronzaroli, 2020.

² See Catagnoti / Fronzaroli, 2010.

to, as their content makes it certain that they are contemporary with the letters of the Vestibule.

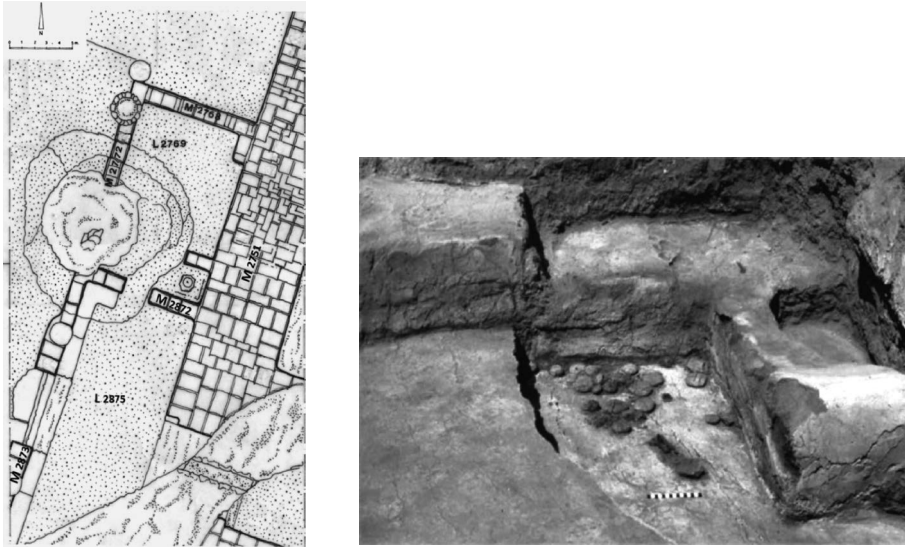


Fig. 1: On the left, floor plan of the Great Archive (L.2769) and the Vestibule (L.2875) (*ARET XVIII*: XVII). On the right, detail of the Vestibule (Matthiae, 2010: 122, fig. 55).

As a working hypothesis, these problems in the food supply may be dated to the turn of the final two years of the reign of the last Ebla king, *Iš₁₁-ar-da-mu*. In the following we will discuss topics such as food shortage and hunger, complaints by the people, seasonality and natural contingencies.

1. Food shortage and hunger

In these letters the king writes as follows:

ARET XVI 12 (*Iš₁₁-ar-da-mu*'s letter to *Du-bù-ḫu-d'Á-da*), obv. III:8–IV:5:
 wa / an-na / wa / ir₁₁-ir₁₁-SÛ / wa / zà-ús / lú áš-da-a / mi-na / kú
 “And I, and his (i.e., *I-bí-zi-kir*'s) ir₁₁-servants, and the zà-ús-troops that are with me, what shall we eat?”

ARET XVI 2 (*Iš₁₁-ar-da-mu*'s letter to *I-bí-zi-kir*), obv. II:9–III:1:
 mi-na / kú kalam-tim^{ki}-kalam-tim^{ki}
 “What shall the countries eat?”³

³ See Kogan / Krebernik, 2021: 768 fn. 290, whose syntactic interpretation of *ARET XVI* 2 II:7–III:1 is here adopted (cfr. Catagnoti / Fronzaroli, 2010: 24, 28).

One can note that what the king wonders about, and most likely fears, is positively recorded in another letter, in which the sender states:

ARET XVIII 12 (I-bi-zi-kir's (?) letter to Du-bù-ḫu-d'Á-da), obv. I:3–II:6:
su-ma / ninda / ba-su-ga / wa / še-mar-tuku_x(ḪÚB) / dam-dam // lú I-bi-zi-
kir / wa / gurušda / zid / dam-dam / ḫi-mu-DU

“If the food is scarce so that *I-bi-zi-kir's* women are hungry, then the animal fattener shall bring the flour to the women!”⁴

Soon after, the sender continues stating that the same should be done for the women who reside with *Du-bù-ḫu-d'Á-da*. In their two following short messages to *Du-bù-ḫu-d'Á-da*, *A-bu* and *Šè-ma-d'KU-ra*⁵ recommend him to provide supplies also to *Da-na-núm* and *Ti-ḫir-Ma-lik*, two sisters of *I-bi-zi-kir*. Therefore, apparently, a general condition of food scarcity also extended to the upper levels of the Ebla society. Interestingly, in this passage the two notions of “shortage” (**pšq*) and “hunger” (**ḫmš*)⁶ are visibly connected. Elsewhere, in *ARET XVI 3* the noun *pušqum*, “dire straits”, is used in the context of food that may be in short supply.⁷ The same should apply in *ARET XVIII 2* (see below, § 4). As for *še-mar-tuku_x*, it further occurs in *ARET XVIII 14*, said of *ir₁₁*-servants.

Before discussing other aspects of this food shortage, it is worth pointing out who the protagonists of this correspondence are.

Fig. 2 displays letters published in *ARET XVI* and *ARET XVIII*. In their incipits these letters often included the names of senders and addressees. Although, in some cases, the incipits of the letters are broken or absent, it has been possible to guess the sender or the addressee from the content.

⁴ Alternatively, it could be proposed the hendiadys *ba-su-ga wa še-mar-tuku_x*, i.e. *paššuqā wa ḫammušā*, from *pašāqum*, “to become narrow”, and *ḫamāšum* “to be hungry”, both referred to the “women” (*dam-dam*), thus resulting: “If, regarding food, *I-bi-zi-kir's* women are in straits and are hungry, then the animal fattener shall bring the flour to the women!”.

⁵ They both were *I-bi-zi-kir's* *maškim*-agents, *Šè-ma-d'KU-ra* being also his *ugula za_x* “overseer of the goods”.

⁶ The Semitic form concealed by the Sumerogram *še-mar-tuku_x* is *ḫamāšum* (Akk. *emēšum*), see Catagnoti / Fronzaroli 2020: 61 as for VE 1407'a, EV 0388–0389, with literature.

⁷ *ARET XVI 3* obv. III:13–IV:1, *bù-su-ga* // *ninda*, said of *kam₄-mu* / *uru-bar* (Catagnoti / Fronzaroli, 2010: 34, 37, “scarsità di cibo”; Kogan / Krebernik, 2021: 793, 846, “scarcity of bread”).

<i>Iš₁₁-ar-da-mu to I-bi-zi-kir</i>	<i>Iš₁₁-ar-da-mu to Du-bù-ḫu-^d’Ā-da</i>	<i>I-bi-zi-kir to Iš₁₁-ar-da-mu</i>	<i>I-bi-zi-kir to Du-bù-ḫu-^d’Ā-da</i>
ARET XVI 2	ARET XVI 8	ARET XVI 16	ARET XVIII 6
ARET XVI 3	ARET XVI 9	ARET XVI 17	ARET XVIII 7
ARET XVI 4	ARET XVI 10	ARET XVI 18	ARET XVIII 8
ARET XVI 5	ARET XVI 11 (?)	ARET XVI 19 (?)	ARET XVIII 10
ARET XVI 6	ARET XVI 12	ARET XVIII 3	ARET XVIII 12
ARET XVI 7		ARET XVIII 5	ARET XVIII 13 (?)
ARET XVI 13 (?)			ARET XVIII 14 (?)
ARET XVIII 1 (?)			ARET XVIII 17 (?)
			ARET XVIII 18 (?)
			ARET XVIII 20 (?)
<i>Iš₁₁-ar-da-mu and Du-bù-ḫu-^d’Ā-da to I-bi-zi-kir</i>		<i>I-bi-zi-kir to Iš₁₁-ar-da-mu and Du-bù-ḫu-^d’Ā-da</i>	
ARET XVIII 2		ARET XVIII 4	
<i>I-bi-zi-kir to Ru₁₂-zi-ma-lik</i>			
ARET XVIII 9			

Fig. 2: Chart of senders and addresses in the Ebla letters.

As can be seen, most of the letters are addressed from *I-bi-zi-kir* to *Du-bù-ḫu-^d’Ā-da* and, in almost equal numbers, from *Iš₁₁-ar-da-mu* to *I-bi-zi-kir*. The correspondence in our possession was therefore held by the Ebla elite. Aside from the last king, *Iš₁₁-ar-da-mu*, the minister *I-bi-zi-kir* and his son *Du-bù-ḫu-^d’Ā-da* are the most important persons attested in these letters. Interestingly, *Iš₁₁-ar-da-mu* and *Du-bù-ḫu-^d’Ā-da* together are the senders of at least one letter addressed to *I-bi-zi-kir* and, vice versa, both together are the addressees of one of the minister’s letters. Unfortunately, there are no letters whose sender is only *Du-bù-ḫu-^d’Ā-da*, while only one letter was sent from *I-bi-zi-kir* to *Ru₁₂-zi-ma-lik*, another of his sons. Moreover, many of the persons recorded in these letters by their personal names are already known from the administrative texts. They can mainly be identified as members of the king’s and the minister’s families as well as Palace officials almost always connected, through working relationships, with the minister. Therefore, they too belonged to the highest level of Ebla society and administration. In their letters, *Iš₁₁-ar-da-mu* and *I-bi-zi-kir* mention these people mainly due to their journeys and their activities which, unfortunately, in most cases are not clearly explained.

2. Complaints by the people

An extraordinary piece of information preserved in several letters is the complaint by the people due to the lack of barley and flour, as the king writes in the following letter:

ARET XVI 10 (*Iš₁₁-ar-da-mu*’s letter to *Du-bù-ḫu-^d’Ā-da*), obv. V:2–14:
 ì-na-sum / na-se₁₁-na-se₁₁ / ma-ti-iš / ba il-da-zu / u₉-mu / kam₄-mu / uru^{ki}
 / šu mu-nígin / lú uru^{ki} / še / kú / i-na-a / zà-ús-zà-ús
 “You (sg.) have to give (the silver) to the people (who) have here shouted
 greatly, during the days when the *kam₄-mu*-people were returning to the

city, (because of) the barley of consumption of the city that he diverted to the zà-ús-troops”⁸

It seems that the complaint of the *na-se₁₁-na-se₁₁* (the Ebla Akkadogram for “people”) was due to the allocation of the city’s barley (i.e., Ebla’s), needed for the consumption of the *na-se₁₁*-people themselves, to the zà-ús-troops. By comparing other letters,⁹ it seems that the minister *I-bí-zi-kir* diverted the allocation of barley to the troops, who were probably with him outside the kingdom of Ebla.

In this passage, the verb indicating complaint is *šasāyūm* (Akk. *šasūm*), “to shout”.¹⁰ Also, the verb *rabāṭum* (Akk. *rabāšum*), “to raise claims, lay claim to something”, is used to lodge a complaint in connection with protests by the people, as can be seen in these other two passages:¹¹

ARET XVI 2 (*Iš₁₁-ar-da-mu*’s letter to *I-bí-zi-kir*), rev. III:5–9:

wa / da-ra-ba-šu / na-se₁₁-na-se₁₁ / ma-da a ma-da-ma / áš-du-nu

“And the complaint by the people is getting greater and greater by us”

ARET XVI 11 (*Iš₁₁-ar-da-mu*’s letter to *Du-bù-ḥu^{-d}’Á-da*?), rev. V:6–10:

ba / dar-ba-šu / na-se₁₁-na-se₁₁ / ra-ba-ša-ga / a-ra-ba-ša-ga

“And here, (as) for the complaint by the people, I will lodge a complaint against you!”¹²

In two further passages, the verb *rabāṭum* is used in contexts of more complex interpretation:

ARET XVI 3 (*Iš₁₁-ar-da-mu*’s letter to *I-bí-zi-kir*), obv. II:12–III:3:

ir-da-^rba¹-^rša¹-am₆ / ninda / al₆-tuš / uru^{ki}

“He advanced recourse about the city residents’ food”

ARET XVIII 13 (*I-bí-zi-kir*’s letter to *Du-bù-ḥu^{-d}’Á-da*), obv. I:5–II:7:

wa / il / zíd / ba-[šè-am₆] / s[a₆] / si-in / guruš-guruš / gál-taka₄ / wa / ti-la-ba-šu / guruš-guruš / ^rtaka₄¹ / nu sa₆

“And they are to bring good flour, (as) available, to the men who are opening up (waters), as the(se) men are advancing recourse (saying that) the remaining (flour) is not good anymore”¹³

⁸ Previous interpretations in Catagnoti / Fronzaroli, 2010: 77, 80f; Kogan / Krebernik, 2021: 797 fn. 439, 805, 821 fn. 575, 894.

⁹ See in particular *ARET XVI 8*, *ARET XVI 9*, *ARET XVI 12*, and *ARET XVIII 2*.

¹⁰ Catagnoti / Fronzaroli, 2010: 81. See also Kogan / Krebernik, 2021: 685, 830.

¹¹ On *rabāṭum* in the Ebla texts see Catagnoti / Fronzaroli, 2010: 37, Catagnoti, 2012: 221, and Fronzaroli, 2020: 293; also Kogan / Krebernik, 2021: 782 fn. 369. We thank Gojko Barjamovic and Ryan D. Winters, who discussed with us this specific topic.

¹² Previous interpretations in Catagnoti / Fronzaroli, 2010: 87, 91; Kogan / Krebernik, 2021: 780 fn. 357, 795, 852, 893f.

¹³ Cf. Catagnoti / Fronzaroli, 2020: 63.

One can see that, in addition to the *na-se*₁₁-people, these protests also concerned groups of workers, such as the *guruš*, men employed by the Palace in various occupations, including military service. As a matter of fact, in other letters (see below, § 3) the king *Iš*₁₁-*ar-da-mu*, the minister *I-bi-zi-kir* and his son *Du-bù-ḫu-d*^d *’A-da* make an effort to find barley, flour and, in some cases, even silver to buy foodstuffs for various categories of personnel: the *guruš*-workers themselves, the *ir*₁₁-servants and the *zà-ús*-troops.

The scarcity of food and the need to obtain supplies also affected groups of people coming from outside the kingdom of Ebla, who resided there or were travelling through it. This is the case of the *al*₆-*tuš*-people, a term that frequently indicates groups coming from abroad and residing in the Ebla kingdom. The case of the *kam*₄-*mu*-people can be added. They were groups of itinerant people, employed by the Ebla Palace mainly for seasonal works. As discussed in the next paragraph, the king had to provide for the maintenance of these groups of people.

3. Seasonality

The search for barley and flour for all the people and personnel categories seen so far responds to an allocation planned by the Palace administration, as is shown by some letters.

In *ARET XVI* 10, after dealing with provisions for the 10th and 11th months, the king asks:

ARET XVI 10 (*Iš*₁₁-*ar-da-mu*’s letter to *Du-bù-ḫu-d*^d *’A-da*), obv. II:10–III:1:

mi-na / *še* / *a du-ša-ga-du* / *na-se*₁₁-*na-se*₁₁ / *iti ŠUKU*

“How much barley will you (pl.) actually transport for the people for the 12th month?”¹⁴

Shortly thereafter, in this same letter, the king is also concerned in advance about the barley supplies needed for the 1st month.

Probably in this same month *I-bi-zi-kir* also faces supply difficulties, as can be seen in the following passage:¹⁵

¹⁴ For a different interpretation cfr. Kogan / Krebernik, 2021: 768. As for the interpretation of *du-ša-ga-du* as a singular form see Kogan / Krebernik, 2021: 807, fn. 497. The interpretation of *du-ša-ga-du* as a plural form is maintained here by the context of the letter, which records the presence of men from Armi.

¹⁵ The attribution of this letter to *I-bi-zi-kir* is based on palaeographic peculiarities concerning the signs DU and AN (see obv. IV^o:3). It is a very fragmentary letter and the passage presented here is one of the few that are intact.

ARET XVIII 20 (*I-bí-zi-kir*²'s letter to *Du-bù-ḫu-d'À-da*), obv. V':3'-rev.
 I:1: *wa / nu i-ti / 5 li-^rim¹ gú-bar še / si-in / iti // lú^dA-dam-ma*
 "And 5,000 *kubār*-measures of barley did not arrive for the 1st month"

This statement contains two items of interesting information.

The first concerns the shipment of barley (*še*). This is a fact confirmed by other letters, which also suggest that foodstuffs could be transported over great distances.¹⁶

The second concerns *I-bí-zi-kir* himself: from various elements scattered in the documentation we know that he was abroad, at the head of an Ebla expedition. The group of people travelling with *I-bí-zi-kir* possibly included *guruš*-workers, *ir₁₁*-servants and *zà-ús*-troops. To estimate more precisely the value of these 5,000 *kubār*-measures of barley, the following data can be taken into account.

Firstly, the amount of barley mentioned by *I-bí-zi-kir* refers to the 1st month.

Secondly, on the grounds of *ARET VII 82*, 2 *kubār*-measures of barley corresponded to 1 shekel of silver.¹⁷ Accordingly, one may extrapolate that 5,000 *kubār*-measures of barley corresponded to 2,500 shekels of silver.

Thirdly, the chancery text *ARET XVI 12* reports that 20,000 shekels of silver comprised the *še-ba*-allotment, over ten months, for 2,000 members of the *zà-ús*-troops, with a monthly payment of ten shekels of silver each.¹⁸ The same text also reports that 30,000 shekels of silver were the *še-ba*-allotment, over ten months, for 6,000 *guruš*-workers, with a monthly payment of five shekels of silver each.¹⁹ Therefore, this text (*ARET XVI 12*) refers to 200 members of the *zà-ús*-troops and 600 *guruš*-workers. It thus appears that the 5,000 *kubār*-measures of barley mentioned by *I-bí-zi-kir* in *ARET XVIII 20* may imply that either 250 members of the *zà-ús*-troops or 500 *guruš*-workers were travelling with him. These latter two figures are compatible with the data of *ARET XVI 12*. However, unfortunately the

¹⁶ See, for example, *ARET XVIII 3*, rev. IV:4-16: *in-na / kù:babbar / ŠĒ / šu mu-taka₄ / še / níg-sám / še-ba / guruš-guruš / 1 iti / si-mi / i-ti / si-in / Na-gàr^{ki}*, translated as "Di certo l'argento consegnato per l'orzo per comprare le razioni degli uomini, prezzo per un mese, è arrivato a Nagar" in Catagnoti / Fronzaroli, 2020: 13.

¹⁷ *ARET VII 82*, obv. II:1-5: 2 *ma-na ŠA.PI kù:babbar / 3 mi<-at> 20 še gú-bar / áš-da / En-sa-gi-su / lú 1 mu*, following the interpretation in Archi, 1988: 115; Archi, 2002a: 100; Catagnoti, 2003: 235; Catagnoti/Fronzaroli, 2020: 11. This seems to agree with the datum of *ARET XVIII 4*, indicating that 20 *níg-sagšu*-measures of flour corresponded to 1 shekel of silver, see *ARET XVIII 4* obv. V:14-15: 1 *gín-DILMUN kù:babbar / 20⁽²⁾ níg-sagšu zid*, following the interpretation in Catagnoti / Fronzaroli, 2020: 20, 26. Therefore, 1 *kubār*-measure of flour corresponded to 1 shekel of silver. The passage "TM.75.G.1985 obv. VII 6-8: 1,480 *gú-bar še a-dè 3 ma-na bar₆:kù '1,480 measures g. of barley: value of 3 minas of silver'" (Archi 2002b: 13) will be discussed elsewhere.*

¹⁸ *ARET XVI 12* obv. II:11-III:1 3 *mi-at 33 ma-na ŠÚ+ŠA / kù:babbar / še-ba / 2 li<-im> zà-ús 10*.

¹⁹ *ARET XVI 12* obv. I:5-7 5 *mi-at ma-na kù:babbar / še-ba / 6 li [gu]ruš^r 5¹*.

texts do not record how much barley was apportioned among the men belonging to this expedition.²⁰

A further comparison between chancery and administrative texts can be made considering the data of TM.75.G.427,²¹ a tablet found in the Small Archive (L.2712). It accounts for flour and einkorn for various categories of employees and single individuals belonging to the Palace administration over seven years. This text, belonging to the final years of the Archives, is very useful for obtaining information about the fluctuations of cereal expenditures during this period.

The most consistent piece of information regards the še-ba-allotments for the guruš-workers.

As can be seen from the charts in Fig. 3, the trend in annual allocations, over this seven-year period, shows some fluctuations and a slight decrease in the last year.

As for the last two years, this text records – besides the regular še-ba-allotments – a diri-addition. Nevertheless, this fact does not affect the negative trend of the fluctuations.

This negative trend could be confirmed by *ARET IX 5*, *ARET IX 8* and *ARET IX 9*, assuming that these administrative texts, dated to three different years by their editor,²² refer also to three consecutive years of the same final period.²³

In particular, looking at graphs 2 and 3 in Fig. 4, one can see that the light-grey data-set from *ARET IX 9* shows a decrease in the allotments, even when taking the diri-additions into account. If so, this data indicates a decrease also in the amount of barley given to the personnel of the “House of the king” (é en).

²⁰ Nonetheless, in *ARET XVI 12* the ratio of guruš-workers to zà-ús-troops is 3:1. Therefore, a possible number of people travelling with *I-bi-zi-kir* may be 300 guruš-workers (3,000 *kubār*-measure of barley) plus 100 members of the zà-ús-troops (2,000 *kubār*-measure of barley). It is noteworthy how both figures are compatible with a division into groups of 20 people each, i.e., é-durus^{ki} (respectively, 15 groups of guruš-workers and 5 groups of zà-ús-troops).

²¹ This text has been published in Pettinato 1974–1977; it will be re-published as *ARET X 100*.

²² Milano, 1990: 8.

²³ As a working hypothesis, the sequentiality of these three texts may be suggested by comparing the presence of the diri-additions in *ARET IX 8* and *ARET IX 9* with those in the last two years recorded in TM.75.G.427.

	še-ba guruš	še-ba guruš + diri
1 mu	5340	—
2 mu	5200	—
3 mu	4000	—
4 mu	5200	—
5 mu	4800	—
6 mu	5500	360
7 mu	4800	720

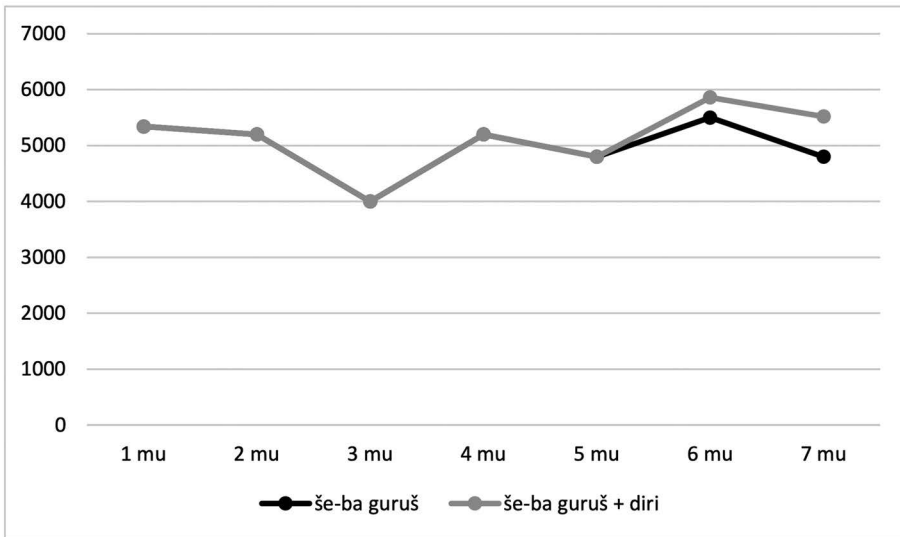


Fig. 3: Food allotments (še-ba) for male personnel (guruš) over the years recorded in TM.75.G.427.

4. Natural contingencies

Regarding, in particular, the food supply problems here investigated, natural contingencies might be among the causes explaining them.

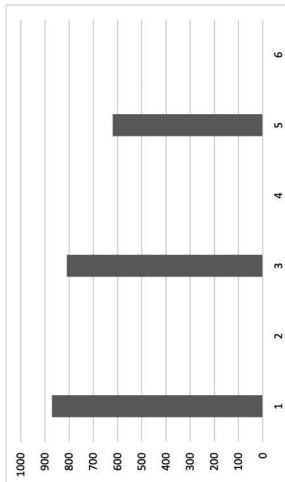
In the various letters seen so far, there are several references to months. They are mainly polarized around the 12th and 1st months, i.e., about ten months after the previous harvest and some months before the next one: accordingly, a period in which storehouses might have been half-empty.

This topic needs further cross-referenced data from administrative texts. At present, the following information from two other letters should be considered.

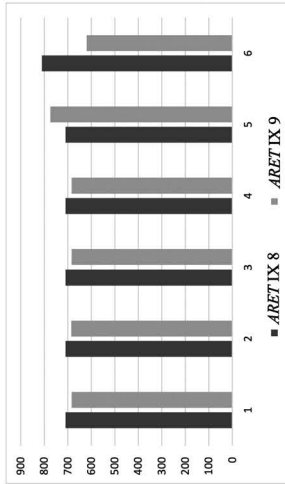
In the first one, *Iš₁₁-ar-da-mu* warns *I-bi-zi-kir* about the problem of parasites infesting grain, which probably was stocked in storehouses:

	ARET IX 5		ARET IX 8		ARET IX 9	
	monthly allotments	diri(A.SI)	monthly allotments	diri(A.SI)	monthly allotments	diri(A.SI)
9th	—	—	710	255	684	255
10th	—	—	710	—	685	—
11th	—	—	710	—	684	—
12th	—	—	710	—	684	—
1st	—	—	710	—	774	—
2nd	871	—	810	—	620	—
2nd bis	—	—	875	—	—	—
3rd	—	—	875	—	—	—

(1) 2nd month allotments comparison over 3 years



(2) 9th to 2nd month allotments over 2 years



(3) 9th to 2nd month allotments with diri-supplement over 2 years

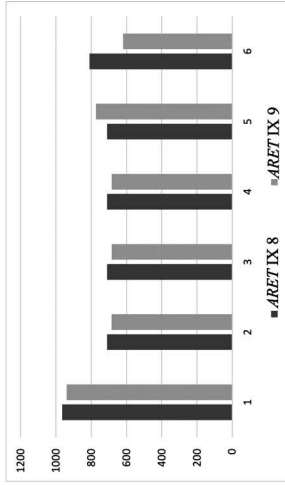


Fig. 4: Food allotments (še-ba) for the “ House of the king” (é en) – ARET IX 5, ARET IX 8 and ARET IX 9.

ARET XVI 2 (*Iš₁₁-ar-da-mu*'s letter to *I-bi-zi-kir*), rev. IV:1–6:

𐎠𐎢𐎣 / še / da-ga-ri-sa-am₆ / i-na / i-^rti¹ / é su-wa-ti-ma

“The parasite of barley has certainly infested the grain of that house”²⁴

This was probably a common and recurrent problem, as documented for instance by this other passage:

ARET XIII 1 rev. X:14–XI:3:

[w]a-a / [i]-ti / si-ma / é / 'a₅-si / a-la-mi-im

“And I carried the grain to the house (of the god?); it shall not be filled with vermin”²⁵

Perhaps during that year's season, when the storehouses were half-empty and in some cases infested with pests, there was also an invasion of locusts, a natural and less recurrent event, which could have had disastrous consequences.

Iš₁₁-ar-da-mu and *Du-bù-ḥu^d-À-da* write to *I-bi-zi-kir* that they had gone to check the state of affairs following a number of problems, such as:

ARET XVIII 2 (*Iš₁₁-ar-da-mu* and *Du-bù-ḥu^d-À-da*'s letter to *I-bi-zi-kir*)

obv. III:4 – v. I:7:

wa / ama-ug₅¹-ga / an / wa / gi₄ / na-se₁₁-na-se₁₁ / wa / bù-su-gu / na-se₁₁-na-se₁₁

“And the locust of the sky and the return of the people and the straits of the people”

To conclude, in general, shortage issues, hunger (§ 1), complaints (§ 2), and natural contingencies (§ 4) are topics that typically recur in cuneiform letters of the Ancient Near East. Interestingly, they are now also documented at Ebla, together with seasonality problems (§ 3). Since the dossier discussed here can be dated shortly before the fire of Palace G, it is desirable that it will be part of any future investigation regarding the end of Ebla.

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²⁴ Previous interpretations in Catagnoti / Fronzaroli, 2010: 25, 30; Kogan / Krebernik, 2021: 778 fn. 338. For *i-^rti¹* see Marchesi, 2013: 280.

²⁵ This translation follows Marchesi, 2013: 279f.

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On the Logistical Probabilities of Maništušu's 'Magan' Campaign

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The content of this study may prove somewhat different from that promised by its title, since my views on the location of Magan underwent alteration in the course of my research and the original thesis receded from view in the process. I had originally accepted the *opinio communis* to the effect that the land of Magan in Bronze Age texts is to be found in the southeast Arabian Peninsula, and my idea was to argue that Maništušu's campaign, recorded in the Standard Inscription, was not in southeast Arabia and hence not in Magan. Now I am arguing that it was not in southeast Arabia, whether it was in Magan or not. I will attempt to clarify this conclusion in the explanation below.

A country or region can lay claim to a certain pride by identifying itself with a place-name sanctified by antiquity. In southeast Arabia that pride issues from identification with the ancient land of Magan. This suggestion was advanced as early as 1917 by Kmoskó,¹ and was vigorously promoted by archaeologists and other researchers working in the region in the 1970's, prior to which point the scholarship displays less unanimity. Much of their work was supported by the reformist regime of the late Sultan Qaboos in Oman from 1970, and by the rulers of the United Arab Emirates after the federation of 1971 and the growth of national identity. Their success is evident; nearly all texts now locate Magan in today's Oman and the contiguous UAE. To quote a random sample: "In Sargonic-period texts we read of maritime trade with the lands of Magan (the Oman peninsula)"; "Magan – the name for the Oman peninsula in cuneiform sources"; "Magan, the ancient name for the Oman peninsula, was important for the mining and smelting of the local copper ore as well as other minerals."² The designation has become an element of pride locally – signs outside modern copper mines in Oman sport the title "Magan."³

As a resident of Arabia, I long adhered to this identification, aided by an element of wishfulness. But we must acknowledge that the trail of evidence for Ma-

¹ See Potts, 1986: 271–272.

² Bernbeck / Pollock, 2005: 19; Olijdam, 2006: 594; Hoyland, 2001: 11.

³ J. Lawton in *Aramco World* 34.3, May/June 1983 (<https://archive.aramcoworld.com/issue/198303/oman-the.lost.land.htm>).

gan's location seems to go cold before it quite reaches Arabia, and in a few important cases it is counterindicative. Arabia is often mentioned in connection with Maništušu's Standard Inscription (Frayne, *RIME* 2.1.3.1, 1–41 with his translation):

- 1) *ma-an-iš-tu-šu*
- 2) LUGAL
- 3) KIŠ
- 4) *ì-nu*
- 5) *an-ša-an.KI*
- 6) *ù*
- 7) *ši₄-ri-ḫu-um.KI*
- 8) SAG.GIŠ.RA-*ni*
- 9) *ti-a-am-tàm*
- 10) *ša-pil-tàm*
- 11) MÁ.MÁ.GIŠ.LA-*e*
- 12) *u-ša-bi-ir*
- 13) URU.KI.URU.KI
- 14) *a-bar-ti*
- 15) *ti-a-am-tim*
- 16) 32 *a-na*
- 17) REC 169
- 18) *ip-ḫu-ru-nim-a*
- 19) *iš₁₁-ar*
- 20) *ù*
- 21) URU.KI.URU.KI-*šu-nu*
- 22) SAG.GIŠ.RA
- 23) EN.EN-*šu-nu*
- 24) [*u-š*]a-am-[*q*]*í-it*
- 25) *ù*
- 26) *iš-tu[m-ma]*
- 27) *i[d-ké-aš-šu-nu-ni-ma]*
- 28) *a-di-¹ma¹*
- 29) *ḫu-ri KÙ*
- 30) *il-qù-ut*
- 31) *ŠA.DÚ-e*
- 32) *a-bar-ti*
- 33) *ti-a-am-tim*
- 34) *ša-pil-tim*
- 35) NA₄.NA₄-¹*šu¹-nu GI₄*
- 36) *i-pu-¹lam-ma¹*
- 37) *in MÁ.MÁ*
- 38) *i-ša-¹na-ma¹*

- 39) *in kar-ri-<im>*
 40) *ši a-kà-dè.KI*
 41) *ir-ku₈-us*

“(1–3) Maništušu, king of the world: (4–8) when he conquered Anšan and Širiḫum, (9–12) had ... ships cross the Lower Sea. (13–19) The cities across the Sea, 32 (in number), assembled for battle, but he was victorious (over them). (20–24) Further, he conquered their cities, [st]ru[c]k down their rulers (25–30) and aft[er] he [roused them (his troops)], plundered as far as the Silver Mines. (31–41) He quarried the black stone of the mountains across the Lower Sea, loaded (it) on ships, and moored (the ships) at the quay of Agade.” (Note: Širiḫum is now often transcribed Šeriḫum.)

The site of the Elamite capital Anšan is known as Tall-e-Malyan, located well inland in Iran. A casual reading of the inscription might give us a locale for the 32 kings on the Arabian side of the Gulf. Therefore we often hear reference to the “32 lords of Magan” even in professional literature: “... There are textual indications of a polycentric distribution of power in southeastern Arabia. For example, Manish-tushu records that he defeated the ‘32 lords of Magan,’ a term indicating a political landscape consistent with the settlement distribution of the Umm an-Nar period.”⁴ Or, “Manishtushu’s allusion to campaigning against no fewer than 32 ‘lords of Magan’ implies a decentralized political landscape at the time ...”⁵ In the same fashion: “Akkadian cuneiform records from Mesopotamia make reference to several third millennium military campaigns against the “lords of Magan”,” and “Textual descriptions of the military exploits of the Akkadian ruler Manishtushu (ca. 2269–2255 BC) brag of his invasions of Magan in order to acquire diorite.”⁶

The quotation marks around ‘32 lords of Magan’ imply a textual authority which the phrase does not possess. In fact the Standard Inscription does not mention the name Magan at all; the scene of Maništušu’s campaign goes unnamed. What has happened, it seems, is a circular iteration whereby some readers have placed Maništušu’s landing in Arabia, which they assume is called Magan, and then others have used the text as evidence that Magan was located in Arabia. Once the phrase “32 Lords of Magan” appeared in print, it then circulated like a germ through the secondary literature until it was believed to possess some textual basis. Some justification for the first step is found in Maništušu’s quarrying of stone, no doubt gabbro or diorite, in the subjugated realms (most of the extant fragments of Maništušu’s statues are olivine gabbro).⁷ This stone is certainly provided by

⁴ Magee, 2014: 118.

⁵ Potts, 2001: 40.

⁶ Gregoricka, 2011: 53, 70.

⁷ Eppihimer, 2010: 367–369.

the Hajar Mountains, but they were not the exclusive source. The *hu-ri* KÙ of line 29 has found a variety of interpretations: *Edelmetall-Minen*, metal mines, copper mines.⁸ These readings are not impossible, but neither is there any reason to recommend them except to make Arabia a better fit for the location. In view of the fact that, in the Sargonid Royal Inscriptions, the terms URUDU and KÙ.GI are used to specify copper and gold (E2.1.2.6, 132–134), Frayne is probably correct in adhering to the normal meaning of unmodified KÙ and rendering the phrase “silver mines.” These are better attested in Iran, and to my knowledge have not been proven for Bronze Age Arabia, but still they are not inconceivable there, as some silver is currently produced in Oman. A lengthy excursus would be otiose as neither the presence of silver nor of copper would suffice to ascertain a locality.

The text does not identify Maništušu’s point of embarkation, but it was not Anšan proper, which is sited well inland. The closest port was probably Liyan near modern Bushehr, and it would have been little more difficult to proceed to the Tigris or Euphrates mouth, a better base of re-supply, than to Liyan. From any probable point of departure, his “crossing” is very difficult to orient, though some have insisted that *a-bar-ti / ti-a-am-tim / ša-pil-tim* indicates a landing on the Arabian side opposite Anšan or Šerihum.⁹ If he did depart from Liyan rather than retiring to refit, a voyage directly across the Gulf from Anšan / Liyan would not have landed him anywhere near modern Oman or the UAE – Dilmun or adjacent Al Hasa province would be a better conjecture on that basis. But in any case, textual parallels from the Sargonid Royal Inscriptions caution us not to invest *a-bar-ti / ti-a-am-tim / ša-pil-tim* with any such directional specificity. *A-bar-ti* can be rendered “across, on the opposite shore,” such as when a river crossing is at issue,¹⁰ but in other loci such as in Naram-sin’s victory inscription (E2.1.4.28, 15–20) we have the specific phrase *a-bar-ti ti-a-am-tim* (reliably restored) for which this meaning is inappropriate: here *a-bar-ti / ti-a-am-tim / ša-pil-tim / a-di-ma / ti-a-am-tim / a-li-tim* is a formulaic phrase indicating a general direction, at the far end of the Lower Sea, or even past it: “When the four quarters together revolted against him, *from beyond the Lower Sea as far as the Upper Sea* he smote the people and all the Mountain Lands for the god Enlil” (ll. 9–27; cf. E2.1.4.29, 5–15).¹¹ In this occurrence, the point of reference is certainly not Anšan. In truth it is impossible to gain any precise locale for the 32 EN.EN, except that it was some-

⁸ Heimpel, 1982: 67 fn. 21; Potts, 1986: 273–274 and fn. 16; Laursen / Steinkeller, 2017: 33 – “copper mines apparently are meant.”

⁹ Heimpel, 1982: 66–67; Potts, 1986: 273; Laursen / Steinkeller, 2017: 32–33. The latter maintain that the text identifies Šerihum as the point of embarkation, but this is uncertain. The Royal Inscriptions enumerate campaigns of conquest and would not trouble to record intervening logistical movements.

¹⁰ E.g., *RIME* 2.1.4.2, 9.

¹¹ The same phrase is found in another inscription of Naram-Sin (E2.1.4.29 l.9) and in one of Šar-Kali-Šarri (E2.1.5.5, 16–18).

where at the further end of the Arabian Gulf or the Gulf of Oman, whichever the side, and thus his journey must refer to a lengthwise southeastwardly crossing. Wengrow notes: "Mesopotamian royal inscriptions, from the late third millennium BC onwards, routinely assert the conquest of 'all the peoples and mountain lands from across the Lower Sea to the Upper Sea' ... The scope of these geographical locations was not rigidly fixed, changing with experience and perhaps also the with the contexts in which they were used."¹² The "Upper Sea" can refer to either the Mediterranean or the Caspian, or both. A phrase such as *a-bar-ti / ti-a-am-tim / ša-pil-tim / a-di-ma / ti-a-am-tim / a-li-tim* reflects the habit of defining realms in terms of their polar boundaries, in phrases of the sort "from Dan to Beersheba," wherein the precise geographical locales are secondary to the spatial dimensions which they delimit. The English verb "cross" for such phrases as *u-ša-bi-ir* (E2.1.3.1. line 12) and *i-bi-ir-ma* (E2.1.4.3 line 23) can be misleading, since we envision one traversing the breadth of a sea as opposed to the length, where the Akkadian verb does not imply the same.¹³ So the campaign really cannot be placed either in Arabia or in Magan on the strength of this inscription.

Maništušu's son Naram-Sin did, however, reach Magan, wherever it may have been. The inscription on the reverse of the Jena tablet has not been cited much in this connection (E2.1.4.3). But this inscription again does not identify any direction, so if it does refer to Magan it could be anywhere at the further end of the Gulf. *Qáb-li ti-a-am-tim* "in the midst of the sea", lines 25–26) is also difficult to construe. Foster's commentary advises that it refers to the site of the battle and "this line should not be cited as evidence for the specific location of Magan" (Foster, 1990: 38). This inscription would refer to his original conquest. The revolt of Manium (or variants Mannu, Ma-annu, Manidan) of Magan described in the better known "Victory" statue inscription from Susa (E.2.1.13) gives us no further help; the name of Magan is more legible there but there are no details of the location. The name of Magan's king requires restoration, for which certainty is impossible.¹⁴ Lombardi suggests an Elamite origin for the name, while Michaux-Colombot, following Glassner, favors Semitic.¹⁵ The Neo-Babylonian *Chronicle of Early Kings* (BM 26,472) gives the form Mannu-Dannu (line A27). No firm consensus on the name has emerged, and in the end, we have no textual evidence from the Royal Inscriptions which could accurately map Magan. The materials associated with Magan are diorite or gabbro, which Naram-Sin mentions as quarrying there, as well as copper. Recent research from the University of Tübingen indicates that diorite and gabbro brought from Magan for royal statues could orig-

¹² Wengrow, 2018: 23–4.k.

¹³ See C. J. Gadd, *CAH* 3rd ed. 1.2, 440, fn. 2 on this verb as *locus conclamatus*.

¹⁴ See Potts, 1986: 276–277 for a list of conjectures.

¹⁵ Lombardi, 2015: 25; Michaux-Colombot, 2001: 344

inate in the Jiroft Culture of Iran, in Kerman province near the Gulf.¹⁶ The several alabaster jars inscribed as “Booty of Magan” from Naram-Sin’s campaign (E2.1.4.4), taken later to Susa, have been identified as Iranian by origin.¹⁷ The origin of the alabaster proves little, but at the least it furnishes no evidence in favor of an Omani Magan.¹⁸ One impetus for placing it in southern Arabia was the similarity noted by archaeologists of the German Mining Museum between the composition of ancient bronze samples from Oman and Mesopotamia. Again, recent work makes the provenance of the copper samples from SE Arabia more questionable; surprisingly, some may be imported.¹⁹

Textual evidence after the Akkadian period continues with some counter-indications for an Arabian location. Gudea’s Cylinder A mentions the timber of Magan’s mountains (*ETCSL* 2.1.7., 392–396 / A15.6–10):

- 392) elam elam-ta mu-na-ĝen
 393) šušin ki šušin-ta mu-na-ĝen
 394) má-gan me-luḥ-ḥa kur-bi-ta gú ĝiš mu-na-ab-ĝál
 395) é^dnin-ĝír-su-ka dù-dè
 396) gù-dé-a iri-ni ĝír-suki-šè gú mu-na-si-si

“The Elamites came to him from Elam, the Susians came to him from Susa. Magan and Meluḥḥa loaded wood from their mountains upon their shoulders for him, and to build the house of Ninĝirsu, they gathered for Gudea at his city Ĝirsu” (*ETCSL* 2.1.7, 392–396).

The phrase kur-bi-ta specifies Magan’s mountains as the source of the timber. Unless we contend that Gudea or his scribes were ignorant of the timber’s original source, Magan is not in the Hajar Mountains, even allowing for differences in flora and climate since the Bronze Age. The somewhat less arid environment of Oman’s Jebel Akhdar still is not known to furnish trees in sufficient size or profusion for lumber export, and it is dubious to posit more favorable conditions in

¹⁶ Pfälzner / Soleimani 2015: 134–135. We should note here the testing recounted in Heimpel (1987), which was limited to visual analysis and was essentially inconclusive. It could neither rule out nor confirm an Omani origin for Maništušu’s statues (primarily olivine gabbro) or Gudea’s (primarily diorite), with particular reservations expressed over the diorite. See also Heimpel, 1982; Yule / Guba, 2001; Laursen / Steinkeller, 2017: 28.

¹⁷ Potts, 1986: 283.

¹⁸ We may mention the steatite vessel also identified as “Booty of Magan” which features the incised concentric circles characteristic of Umm-an-Nar work (Laursen / Steinkeller, 2017: 27–29, fn. 27). Note, though that the name “Magan” here is entirely a restoration, and also that these vessels were widely distributed outside the Gulf, some examples probably being of local manufacture. A specimen has been excavated as far afield as the Gonur Royal Necropolis in Turkmenistan (Lombard, 2020: 612–614).

¹⁹ Weeks, 2007: 90–94.

Ur III, since increasing aridity and vegetation loss in the region began ca. 2100–2000 BC,²⁰ and prior to that time the fuel demands of intensive copper smelting through the 3rd mill. BC had likely depleted the already sparse wood supplies. Magan, with Meluḥḥa, remains persistently identified as a source of wood,²¹ and is so referenced in a pair of late 3rd-millennium school texts, perhaps slightly earlier than Gudea: “May Magan and Meluḥḥa ship wood to you.”²² This is probably the mes or meš wood often described as mes of Magan, Akkadian *misukannu* with many variant spellings (*Urra=ḥubullu* Tablet III.204²³ has ^{giš}mes má-gan-na = *mu-su-ka-nu*). We find it in *Enki and Ninḥursaġa* along with stone: “May the land of Meluḥa load precious desirable cornelian, meš wood of Magan and the best abba wood into large ships for you. May the land of Marḥaši yield you precious stones, topazes. May the land of Magan offer you strong, powerful copper, dolerite, u stone and šumin stone” (*ETCSL* 1.1.1 49A-I).

The first passage above also employs the verb *gú ḡiš – ḡál* for which the reading “wear a neck-stock / subjugate, submit” is patently incorrect in this context. All these cited passages represent the enduring literary topos which reaches to Gilgamesh and Solomon, the arrival of building woods from distant lands at royal behest, which descends from the Early Dynastic formula *má-dilmun kur-ta gú-ḡiš mu-ḡál* found throughout the inscriptions of Ur-Nanše, always in contexts of royal building commissions.²⁴ The meaning is clearly, “Ships of Dilmun brought wood from abroad”; any effort to translate the verb merely as “submit/subjugate” produces nonsense. Likewise, the text Ni. 13208 (*ISCT* 1 212) has *má-gan.ḡki*/*me-luḥ.ki*/ *gú ḡiš ḥa-ra-ab-ḡál* (i.6–8) sited in a description of precious building material arriving from abroad, so Michalowski renders it correctly as above: “May Magan and Meluḥḥa ship wood to you!” In the Gudea passage the translation “submit” is highly awkward in relation to the nominal phrase *kur-bi-ta*. We can also adduce Gudea's Statue D (*E3/1.1.7.StD*, 7–11), where the verbal phrase *gú ḡiš mu-na-ḡál-la-àm* appears directly before *má-ḡiš-dù-a-bi lagaš.KI-šè* and obviously refers to lumber shipments to Lagaš from Magan, Meluḥḥa, Gubin and Dilmun. To repeat, the verb *gú ḡiš – ḡál* only occurs in conjunction with the timber-furnishing lands and only in the context of construction supply in the royal texts, never with the obvious meaning of “subjugate” or “submit,” for which various other terms are employed – *gú – ḡar*, *ḡiri-ni-še – ḡar* (*E1.9.3.2*, 11, *1.9.4.9*, 7–8, *E3/2.1.4.1*, ii.4). The neck-stock for a defeated enemy is an Akkadian custom

²⁰ Gregoricka, 2011: 34.

²¹ Hansman, 1973: 556–557; Michaux-Colombot, 2011: 209.

²² Ni. 2126+4178 (*ISCT* 1 211) / Ni. 13208 (*ISCT* 1 212), treated by Michalowski, 1988.

²³ Landsberger, 1957: 109.

²⁴ *E1.9.1.2.1*, 4–6; *E1.9.1.5*, 5–6; probably *E1.9.1.6A*, ii.11 ff.; *E1.9.1.17*, v.3–5; *E1.9.1.20*, iv.1–3; *E1.9.1.22*, 16–18; *E1.9.1.23*, 16–18; *E1.9.1.25*, 1–3.

signified by the term ^{gis}si-ġar and inflicted in much more brutal circumstances than those of the Sumerian building texts (E2.1.1.1, 27).

Ur-Nanše's formula implies that the timber did not originate in the lands of the merchant ships which supplied it. Accepting Dilmun as Tarout Island or other points around Bahrain, this locale is no more likely to supply lumber than is south-east Arabia, so Dilmun's ships are merely the carriers. But in this formula we find only the phrase kur-ta. In the Gudean passage we find kur-bi-ta, where the added pronoun makes all the difference. The wood is from the local mountains, and Magan is not a mere lumber depot.²⁵ It may be significant that in this passage, Dilmun does not appear; where it is, such as in Statue D mentioned above (E3/1.1.7.StD, 7–11), the kur-bi-ta is absent. Conceivably Gudea's scribes simply were mistaken or indifferent regarding the original provenance of the timber, but that would be a gratuitous assertion. The persistent coupling of Magan and wood in our sources strongly suggests a forested land.

The *misukannu* wood of Magan is generally identified as *Dalbergia sissoo*, the sissoo or North Indian rosewood of southern Iran and the Indian subcontinent.²⁶ Remains of this wood have been found at Tell Abraq, a sizeable Bronze Age coastal city in current Sharjah Emirate of the UAE, to which it was imported.²⁷ The wood returns in Neo-Babylonian times, when Nebuchadnezzar mentions its use in the rebuilding of Esāġila,²⁸ and it is prominent in several Achaemenid inscriptions, where it is written as ^{gis}MEŠ.MÁ.GAN.NA in the Akkadian versions of DSz (line 14) and DSf (lines 24–25). The latter text also reveals its origin: [^{gis}MEŠ].MÁ.GAN.NA šá a-gan-na ip-šu ul-tu ^{kur}Gan-da-ri u ^{kur}[Kar-ma-na] na-šá-a, “the Magan-wood used here was brought from Gandara and Carmania.”²⁹ The name Carmania is reliably restored on the basis of the Elamite version (lines 31–32), which provides a clear reading³⁰ and which renders Magan-wood as ^{gis}ia-ka₄-um following the Old Persian *yaka*. Darius was thus bringing his wood of Magan from regions of current Iran and Pakistan, and Gudea was likely to have been doing the same. Although several stands were reported in Jebel Akhdar wadis in 1975, the sissoo is not considered indigenous to Arabia,³¹ and wadi growth would not support the major logging industry suggested in the Lagaš and Achaemenid texts. In contrast to the desiccation of Arabia, medieval accounts tell us of great lion-haunted Iranian forests once surrounding Jiroft in Kerman province as well as nearby Jabal Bariz, along with silver mines in the vicinity.³²

²⁵ Pace Hawley, 1970: 37–38; Laursen / Steinkeller, 2017, 7.

²⁶ Mellowan, 1965: 4; Tengberg, 2002: 77; Tavernier, 2020: 353.

²⁷ Potts, 2000: 67; Tengberg, 2002: 75–77.

²⁸ Langdon, *DNK Nebukadnezzar* nr. 15, col. II.31, 124.

²⁹ Tavernier, 2020: 357.

³⁰ The tablet is reproduced in Vallat, 1970: 153.

³¹ Tengberg, 2002: 75–77.

³² Le Strange, 1905: 315–316.

During Ibbi-Sin's reign in late Ur III, imports to Ur include Magan onions, sum-sar Má-gan^{ki}, (UET III 751)³³ and counting boards (?) of Magan reed, ^{gis}ŠID-ma gi Má-gan-na (UET V 678 line 17) – the meaning of the first term is doubtful;³⁴ its translation comes by way of *Urra=hubullu* Tablet IV.16, which gives the Akkadian as *iṣ-ṣi mi-nu-ti*.³⁵ Whatever the exact nature of these commodities, the Musandam and Oman Peninsulas are not the most probable exporter of vegetables or humid-zone plantstuffs; such produce is more plentifully cultivated on the other side of the Gulf.

We do not know that Maništušu's campaign was in Magan, but given the similarities with this and Naram-Sin's campaign – the location across the Lower Sea, the quarrying of black stone – there is a good chance that it was, or at least that Magan chieftains joined the confederation of 32 lords. Now, to mention what was to have been the major theme of this study, which has become a footnote: a military federation of 32 settlements – whether cities or villages are meant by URU/*ālu* – is nearly unexampled in the region. Large military campaigns logistically are difficult or indeed impossible in a region such as the Oman Peninsula when the invading force must depend on local food and water supplies. The observation of Diodorus is in this case on target, and applies to all pre-modern periods: “Thus neither the Persians later, nor the Macedonians, though far greater in strength, were able to subjugate this race, for Arabia is wholly difficult for foreign powers to wage war in, on account of the barrenness of their land, which is scant in water, dotted with wells which are hidden and known only to the inhabitants” (*Hist* 2.1.5–7).³⁶ Had he written a few years later he could have included Gallus' campaign among the fruitless efforts to conquer Arabia. For ancient periods the traces of violent destruction at certain sites, such as Muweilah and Mleiha, do not give us an idea of scale. The one possible parallel is the Dikka campaign of the Ridda wars, ca. 633 AD, for which there are few reliable details on numbers, and for which the invaders had the benefit of camel transport with experienced drivers. In historic times the hostile actions in the region include coastal raids such as those mounted by the Portuguese fleet at Khor Fakkan in 1507 and 1534, or the British at Ras al Khaimah, 1809 and 1819, which did not penetrate inland. Even twentieth-century wars with modern logistics have involved a thousand men or fewer to a side – such was the case in the Dubai-Abu Dhabi border war of 1945–47, the Buraimi Crisis (1952–55), or the Jebel Akhdar War (1954–59). In stark contrast

³³ Leemans, 1960: 21.

³⁴ Leemans, 1960: 26; Hansman, 1973: 556, 559, 581–582.

³⁵ Landsberger, 1957: 151.

³⁶ “... διόπερ οὐθ' οἱ τῶν Περσῶν βασιλεῖς ὕστερον οὐθ' οἱ τῶν Μακεδόνων, καίπερ πλεῖστον ἰσχύσαντες, ἠδυνήθησαν τοῦτο τὸ ἔθνος καταδουλώσασθαι. καθόλου γὰρ ἡ Ἀραβία δυσπολέμητός ἐστι ξενικαῖς δυνάμεσι διὰ τὸ τὴν μὲν ἔρημον αὐτῆς εἶναι, τὴν δὲ ἄνυδρον καὶ διειλημμένην φρέασι κεκρυμμένοις καὶ μόνοις τοῖς ἐγχωρίοις γνωριζομένοις.”

the Carmania-Gandara region has been a frequent scene of major hostilities; we note Alexander's military and political actions in the Lower Indus and Carmania,³⁷ and the region remained a perpetual battleground through the eras of the Diadochoi, Arsacids, and later. In this respect, the latter region is a likelier venue for the repeated large-scale conquests of Maništušu and Naram-Sin.

None of this proves that Magan was not in Arabia; it is possible to imagine a scenario which would make SE Arabia an entrepôt of timber, reed and foodstuff. But even less does it prove that Magan *was* in Arabia. Perhaps we can just cut out the middleman. We see that, among Magan's exports, only copper and diorite with its related igneous rocks among are known to occur in SE Arabia and are not exclusive to that location, whereas all the materials can be found in Iran and points adjacent.³⁸ The efforts to locate Magan in Arabia gained impetus in the 1970's with the relationship between bronze samples discovered by German researchers, as mentioned. Given that Magan is a major source of copper, that Bronze Age copper works exist throughout the Musandam and nearby, and that metallurgical similarities with Mesopotamian copper were observed, there appeared a probable chain of evidence. That reasoning led to a retrojective identification of Maništušu's conquest and Magan which the text itself does not confirm. And with the source of copper now questionable, the chain of reasoning is further attenuated. There is the possibility that Magan encompassed both sides of the Gulf,³⁹ but such a suggestion remains hypothetical and probably unnecessary.

As a postlude: the scarcity of references to Magan in the 2nd millennium BC, and its re-emergence on a different continent in first-millennium texts, present a maddening phenomenon. On the Rassam Cylinder Ashurbanipal explicitly places both Magan and Meluḥḥa in or closely adjoining Egypt and Kush in the account of his campaign against Tirhakah/Tarkû.⁴⁰ Another inscription, K 3082, detailing the same campaign, records the name as Māgannu, associated with a broken city toponym Ma-ak[], written with the MA sign rather than the MĀ in Māgan or Māgannu.⁴¹ See the ORACC version in the review. Magan also appears in the text KAV 92, *Geography of Sargon*, found in Neo-Assyrian and Neo-Babylonian versions.⁴² The location is ambiguous in this work since it depends on measurements from a series of unidentified toponyms, and the editors give widely divergent readings, but there is a good chance that here too an African placement is in-

³⁷ Arrian, *Anabasis* 6.15–28.

³⁸ As observed by Hansman, 1973: 559.

³⁹ Eilers, 1983: 104–105; Salles, 1990: 114; Laursen / Steinkeller, 2017: 6–7.

⁴⁰ BM 91026, Cylinder A, Col. 1, ll 51–52.

⁴¹ *History of Esarhaddon*, reverse ll. 11–12; see Budge, 1880: 120–121.

⁴² This text is treated by Albright, 1925, and another version, BM 6438,2 by Grayson, 1974–1977.

tended.⁴³ The traditional solution offered by Landsberger has been thought exceptional, that is, that the Assyrian scribes had as it were dusted off the names Magan and Meluhḫa found in archaic documents and transposed them to a different locality.⁴⁴ But the conjecture may be warranted in this case, where no non-exceptional solution suggests itself.⁴⁵ We must believe either that such a transposition indeed took place, or that the earlier Akkadian scribes did not know their geography, or that a remarkable pair of homonyms existed between the southerly Gulf and Africa (the solution offered by Albright, that we must in fact place Bronze Age Magan by the Red Sea in Africa, Sinai, and northwest Arabia, has not gained wide acceptance).⁴⁶ Little less perplexing is Magan's relationship to the Achaemenid Maka (with its ethnonym Maciyā) and to the modern Makran region. These forms are rendered *qa-di-e*^{ki} (DSaa line 31) or *qa-du-ú* (DSe line 16) in the Babylonian versions of Darius' inscriptions, and if this place corresponds to Sargonic Magan, we can only speculate how its original name, misplaced in Babylonians and Assyrians, was retained in Persia. The temptation is to derive this term from the Semitic root signifying "East, sunrise; ancient or primordial; in front, before," seen in the Akkadian *qadmu/qudmû*, Hebrew *qedem*, Arabic *qadīm*, all of this leaving us little the wiser.⁴⁷ We should note that Qade is not the only term for Magan in Achaemenid Babylonian. The reading *Ma-ak* often given for DB I, 7 (the Behistun Inscription), is a restoration: "*ma-ak*: Perhaps should be restored *qa-du-ú* as in DNa 19, but there would be spacing difficulties";⁴⁸ but the Akkadian version of XPh gives a clear *ma-ak* for Magan (line 19; Old Persian has *maciyā*, line 25; Elamite *ma-zī-ia*, line 20). A link with modern Oman has been made on the strength of an inscription (AAA 20) placed by Ashurbanipal in Nineveh's temple of Ishtar. The text records the tribute brought by a distant king after a six-months' voyage: *^mpa-de-e LUGAL KUR qa-de-e ša ina URU iz-ke-e aš-bu* ("Padê king of the land of Qadê, dwelling in the city of Izkê"). Some authorities maintain a connection between Izke and the ancient town of Izki in northeast Oman, e.g., Potts writes; "Pade's capital, Iz-ki-e, moreover, is easily identified with the central Omani town of Izki, long claimed to be the 'oldest' town in Oman ... Since the Sultanate of Oman and the United Arab Emirates share one and the same landmass as well as the same archaeological cultures, there is no doubt that the names Magan, Makkan, Maka and Makkash applied equally to the entire re-

⁴³ Egypt is favored by Albright (1925: 238), followed by Michaux-Colombot (2001: 345); Grayson, (1974–1977: 58) places Magan east of Akkad.

⁴⁴ Michaux-Colombot, 2001: 329–332.

⁴⁵ Evidence favoring such a toponymic shift is given by Gelb, 1970: 7–8.

⁴⁶ Albright, 1925: 238–240, followed by Michaux-Colombot, 2001; the objections are enumerated in Gelb, 1970: 7–8.

⁴⁷ This Semitic root has even been associated with ancient Greek Thebes through the city's mythical founder Kadmos of Tyre.

⁴⁸ Benedict / Voigtlander, 1956: 5.

gion.”⁴⁹ The firm connection asserted among Magan=Maka=Qade>Izki appears rather a long strand of cobweb, stretched across 1500 years. We cannot be confident of the first thread, that Magan is Maka, since it depends mainly on superficial resemblance, and such an identification is further complicated by Ashurbanipal’s own chronicle, which places “Māgannu” in Africa. Moreover, Cerro Linares notes the absence of an Iron Age building record at Omani Izki for ca. 1000–300 BC. This absence indicates its near-abandonment during the period in question, making it an improbable seat for a royal residence (“Esta realidad arqueológica vuelve a situar a Izkī lejos de la antigua Izkê de los textos neosiricos”).⁵⁰ Conclusions from purely phonetic similarities are treacherous. There is also an Izki in Iran, on the Caspian, and we cannot assume Oman’s exclusive possession of the name in the Iron Age. We cannot even feel confident that the Qade of the Nineveh inscription is identical to that of the Achaemenid Babylonian inscriptions, given the evidently fluid state of toponyms by the Neo-Assyrian period and the variants in the Babylonian texts.

The same caution should apply to the complex of toponyms with the elements Mak- or Mag- through the Near East. The Semitic meaning of the term, “place,” reflected in Arabic *makān* and Hebrew *māqom*, assures its widespread occurrence in toponyms which otherwise bear no relation; sometimes they are not even cognate: *ma*, as well as being perhaps the most widely used Arabic particle, is a frequent linguistic element worldwide. An effort has been made to identify sacred Makkah as ancient Maka/Magan;⁵¹ we note too the towns Makkan and Makash in northern Iran, and a Mahan in Kerman.⁵²

It is possible that the place-name Maka of Darius’ and Xerxes’ empire had no connection to the Magan of the Bronze Age. Such an identification is often maintained⁵³ but remains a *non liquet*; there is too long a gap in the phonetic record. This caveat then extends itself to the network of ethnic or geographic designations in Classical sources, which offer some perplexities requiring separate treatment. There is Maketa (Μάκετα) in Arabia recorded by Arrian (*Indica* 32.7) clearly referring to the Musandam Peninsula. The relation of this name to Magan/Maka is dubious. Elsewhere, *Macetae* from Greek *Maketai* is a word for the Macedonians,⁵⁴ found in Greek feminine forms also,⁵⁵ and quite possibly someone has at-

⁴⁹ Potts, 2000: 56.

⁵⁰ Del Cerro Linares, 2013: 52–53; see also 59.

⁵¹ See H. M. I. M. Aboul-Enein (2022), “Makoraba, Mochorba & Maka Revisited: A Geo-Linguistic Perspective”, unpublished MS: https://www.researchgate.net/publication/358647117_Makoraba_Mochorba_Maka_Revisited_A_Geo-Linguistic_Perspective.

⁵² Maka has also been identified with Mocha (Mukhā) in Yemen; see *RE (Realencyclopädie der classischen Altertumswissenschaft)* 14.1: 615, *Makai* (Grohmann, 1928).

⁵³ E.g., Eilers, 1983: 107–108.

⁵⁴ Aulus Gellius 9.3.1.

⁵⁵ Strabo 10.4.10; Bianor and Adaeus in *Anthologia Graeca* 7.49 and 7.51.

tempted to trace them to Magan on grounds of phonetic semblance. *Maketa* suffered contraction after several centuries to *Makai/Macae* as the name for the Musandam promontory or its Arab tribes,⁵⁶ so the similarity between this term and Persian *Maka* is deceptive, and in any case it bears no necessary connection to Bronze Age Magan: "So geistvoll derartige etymologische Zusammenstellungen auch sein mögen, sie überzeugen doch kaum von einer tatsächlichen Beziehung zwischen den M(akai) und dem Land Magan."⁵⁷ An unrelated people of the same name, *Makai* or *Macae*, are placed in Libya.⁵⁸ The *Mykoi* of Herodotus' Persian catalogues (Herodotus 3.93.2, 7.68.1) may or may not represent the *Maka/Maciya* of the Achaemenid inscriptions – it bears the closest phonetic resemblance among Herodotus' satrapies and forces, but the many divergences between his and the Persian data recommend caution.⁵⁹ In any case, the *Mykoi* are grouped in these loci with the Sagartians, Sarangians, and Utti (*Outioi*), all of them Iranian peoples.

We have the possibility that Maništušu's campaign is indeed in Arabia and in Magan; or that it is in Arabia but that this land is not Magan. Or, the thesis reluctantly favored here, that neither his campaign nor Magan, whether or not these are in the same place, are to be located in SE Arabia but on the Persian side of the Gulf, in the regions of Kerman and Baluchistan, to which the compass-point of the evidence seems to be tending. This thesis is by no means original, but it currently has fallen out of favor.⁶⁰ The consideration makes a difference when scholars draw inferences and conclusions for Bronze Age Arabia based on the

⁵⁶ Strabo 16.3.2, Pliny *Nat. Hist.* 6.26.98, Pomponius Mela 3.68, Ptolemy *Geography* 6.7.14, Priscian *Periegesis* 887 and elsewhere; Ammianus Marcellinus has *Maces*, 23.6.10.

⁵⁷ *RE (Realencyclopädie der classischen Altertumswissenschaft)* 14.1: 615, *Makai* (Grohmann, 1928).

⁵⁸ Strabo 4.175.12; Diodorus 3.49.1, Pseudo-Scylax *Periplus* 109; Ptolemy *Geography* 4.3.27; as *Macae*, Pliny, *Nat. Hist.* 5.5.34.

⁵⁹ Eilers regards the *my-* of *Mykoi* as the labialized form of *ma-* (1983: 102). Without further information I consider this conjectural; in Greek, at least, parallels for such a vowel shift are lacking.

⁶⁰ It is maintained in Hansman, 1973; Thapar, 1975; partly in Eilers, 1983 as well as in many early works, but becomes rarer in more recent studies. Laursen / Steinkeller, 2017 provide no new evidence for the location, offering a broad range of geographical possibility: "To use Makkan as a specific example, it is likely that . . . this name indeed describes, from the Babylonian perspective, the Oman peninsula and the coastal area immediately to the west of it. This is strongly indicated by the fact that Makkan was consistently thought by the ancients to be a source of copper and diorite, both of which are found in Oman. At the same time, it is possible that Makkan also had a broader sense in which it designated the coastal region of Iran along the Strait of Hormuz and perhaps even of the western section of Baluchistan as well" (6–7). We have seen that the presence of copper and diorite is insufficient to identify a specific location. See also p. 33.

Magan texts.⁶¹ A location in the Oman Peninsula cannot be ruled out, but the consensus for an Arabian Magan has acquired a firmness disproportionate to the supporting evidence.

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⁶¹ e.g., Magee, 2014: 118, cited above.

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Accounting for Alimentary Items in Third Millennium Southern Mesopotamia

Some Notes on the Role of Waxed Boards in the Historical
Development of Early Mesopotamian Bookkeeping

*Massimo Maiocchi**

1. Introduction

An administrative system, be it ancient or modern, does not exist in a void – it is deeply conditioned by environmental, technological, and social factors. Accordingly, it is only through an interdisciplinary approach that takes in due consideration the complexity of human interactions with its ecological premises that one may make sense of the problem of administration in antiquity, especially when it comes to the management of alimentary items. The foundations for such study have already been laid in the past 50 years, thanks to important contributions tackling the questions from various angles.¹ Still, the topic of administration, broadly understood, remains a hot one nowadays, due to constant advancement in methodologies for landscape archaeology, artifact analysis, and the ever increasing amount of epigraphic data available to modern scholars. For reasons of personal competence and in the interest of time, the scope of the present contribution is limited to the interplay of technological aspects, written records and administrative patterns, mostly belonging to late third millennium BCE southern Mesopotamia.² More in detail, the impetus for this paper came from the recognition that the terminology involved in the cuneiform sources dealing with alimentary items is rich and poorly studied.

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¹ The literature is vast, see many contributions in Lipiński, 1978; Zaccagnini, 1981, in turn drawing on Weber and his school; Gibson / Biggs, 1991; Brosius, 2003.

² The primary sources one may study are in fact not merely linguistic in nature: evidence from the archaeological record, such as *cretulae* from the prehistoric period onward, provide us with a complementary set of data very relevant to such an inquiry (Fiandra / Frangipane, 2007). Architectural analysis is also very important, in order to achieve a better idea of how the facilities for the processing and storage of primary production worked in antiquity, with special reference to the spaces where the distribution of food and commodities occurred.

2. Administrative procedures: selected evidence from the Ur III period

The richest data set comes from the Ur III period, which will serve as a case study. Let us consider here a cuneiform text from Ur dated to the early reign of Ibbi-Suen, concerning dates:

UET 3 1097: 60 liters of (dried) dates (*zu₂-lum*): PN₁; 60 liters: PN₂; 60 liters: PN₃; 60 liters: PN₄; PN₅ the garden manager (*santana*);³ 60 liters: PN₆; 60 liters: PN₇; 60 liters: PN₈; 60 liters: PN₉; PN₁₀ (=PN₉) the garden manager; 240 liters: PN₁₁; PN₁₂ the garden manager. Total: 720 liters of dates, delivery of the gardeners (*nu-^{ĝes}kiri₆-ke₄-ne*). On behalf of Šulgi-iriĝu [PN] received (the items). Via Ur-mes, the *sukkal*-official. Expenditure, month Šu'eša. Year following the year "the great wall was built" (=Ibbi-Suen 7). (These items) were not accounted for (as debit) on waxed wooden board(s) (*le-um-ma nu-ub-ĝar*).

The tablet most likely stems from secondary context in the monumental area, within the Dublamah building (Widell, 2003: 91–95, 98; Jacobsen, 1953: 125–126). It belongs in a large miscellaneous group of roughly 1.100 texts related to an institution named *e₂-kišib₃-ba* – a very large administrative unit in charge of the management of the granary, as well as of agricultural and animal products, raw materials and finished products (Widell, 2018: 28, 31).

It appears that the figures in our text are all round. This is almost certainly due to the fact that the tablet does not record the actual production of dates for the given year. Instead, it reflects the administrative point of view on such matter (Steinkeller, 2004). In other words, it is to be considered as an administrative fiction, providing data which may be inaccurate in the eyes of modern scholars, but acceptable to the officials in charge of the management of alimentary items in third millennium BCE. One may reconstruct the events in the tablet under present scrutiny as follows:

1. Income of dates: sometime before this very tablet was produced – possibly months – the garden managers deliver a certain amount of dates to the *e₂-kišib₃-ba* bureau.
2. Delivery request: Šulgi-iriĝu, which is located somewhere far from the administrative center in Ur, is to get 3 gur of dates. He is either not able to reach the local institution there via a direct channel, or he reached first another storage facility, which ran out of goods and redirected him to the *e₂-kišib₃-ba*. A man named 'x' is therefore sent to carry out his request.

³ For an understanding of *santana*-officials in terms of garden managers within the provincial administration system see Greco, 2015: 88–114; 292–297. See Greco, 2015: 44 for *nu-^{ĝes}kiri₆* as a designation of skilled personnel performing work in gardens. On gardens see further Focke, 2015.

3. The bureau acknowledges the request, and produces the tablet under present scrutiny: its immediate function is to explain, in case of inspection, the fact that 3 gur of dates are not at hand anymore. The now missing dates are also supposed to be annotated on a waxed wooden board, but for some reason this turns out to be impossible.
4. Finally, the e₂-kišib₃-ba sends Ur-mes as intermediary in the shipment of dates to 'x'. In turn, 'x' will deliver the items to Šulgi-iriĝu.

Some comments on the individual points outlined above are in order.

1. We do have at hand the primary sources concerning income of dates.⁴ Contrary to UET 3 1097, the amounts of dates in such records are not rounded up or down.
2. The man operating on behalf of Šulgi-iriĝu should have with him a mean to verify his identity, as well as the one of Šulgi-iriĝu – ideally in the form of a sealed document, which however has not been recovered from excavation.
3. This and similar documents have also a long-term function, as primary sources for the redaction of balance accounts covering several years, or for the estimate on production for the years to come.
4. If this reconstruction of the events is correct, it is conceivable that the full set of documents involved in the delivery of dates included: sealed cretulae on dates containers to be opened by the e₂-kišib₃-ba official in order to get the dates in the storage area; the original request of dates by Šulgi-iriĝu; a document proving that 'x' (be it a PN or institution) acts on the behalf of Šulgi-iriĝu (this may be in the form of a cylinder seal, a sealed document, or the like); tags attached to the actual dates containers, stating the provenance and exact amount of the items being shipped, and possibly mentioning Ur-mes as well. Although this is not stated in the present text, copies of the documents issued to the recipient may be produced in the e₂-kišib₃-ba as well, as stated in another tablet from the same archive.⁵

A question may arise at this point: why did the scribe produce a document with both incoming and outgoing items in the first place? The answer is that this practice must be useful for accounting purposes, namely to keep track of goods whose data are to be entered in the waxed wooden boards containing running accounts.⁶ In fact, the colophon of UET 3 1097 implies that such boards were regularly used as accounting tools in daily scribal practice. When this very tablet was written down, something unexpected must have happened, prompting the writer to be more explicit than usual on the nature of the procedure.

⁴ See for instance BBVO 11, 279, income (mu-ku_x(DU)) of [x]+4 gur and 150 sila of dates from Ur-Baba, sealed.

⁵ SAT 3, 2027, i.e.: gaba-ri kišib₃ ga-ti-e.

⁶ Cf. Jursa, 2004: 179 wn 79 for a similar conclusion based on first millennium evidence.

3. Waxed boards in the late third millennium BCE

The only archaeological evidence concerning waxed boards from the third millennium BCE is presently limited to the possible representation of such devices in two Gudea's statues (B and F).⁷ The earliest textual reference to a waxed board (le-um) is dated to the same period, being mentioned in Gudea's cylinders (cyl. A v 3 and vi 4). There, the context is clearly not representative of daily practice: the object is in fact made of lapis lazuli (za-gin₃), and is being held by the god Nin-dub(a). The board is told to contain the plan of the new temple to be erected for the god Ningirsu. As for the use of such devices in administration, the earliest evidence dates back to the Ur III period (Molina / Steinkeller, 2023: 29–37). In such context, le-um objects must have been made of a wooden frame containing a malleable substance, presumably a mixture of wax and ochre (or orpiment), as in later periods.⁸ Waxed wooden boards are in fact rarely attested in Ur III documents. However, it appears that they played a key role in daily bookkeeping practices, as suggested by the technical lexicon associated with them. The actions of entering, removing, and checking information (see discussion below) speak in fact for a complex system, featuring both complementarity and redundancy of data.

3.1 Transfer of information

The technical term expressing the transfer of information is *dib*, which is equated with both Akk. *bā'u* “to walk along, to go through, etc.” and *etēqu* “to pass along, through, by, etc.”. The meaning “to transfer” belongs to the Š forms of both roots, although it seems that the G form of *etēqu* may also be used in first millennium sources to express such a meaning, perhaps with a nuance that however remains difficult to clarify (see examples in CAD E, 386 s.v. *etēqu* A c) 4'). As for *dib*, it

⁷ Cammarosano *et al.*, 2019: 129–130. The interpretation rests on the identification of the associated styli as spatulae, as well as on the fact that the boards bear an architectural plan, which is in agreement with textual information (see *infra*).

⁸ As in the famous ivory boards from Nimrud, dated to the eighth century BCE (Cammarosano *et al.*, 2019: 153–154). As a substance, wax was known in Mesopotamia at least since the Sargonic period, as one may infer from the fact that the bronze statues of Sargonic kings were in fact made using the lost wax process. However, no evidence from such period points to the use of wax for other purposes, most notably as a writing medium. Indeed, the very word for wax – Akkadian *iškurum*, possibly a foreign word, also written logographically as LAL₃.HUR e GABA.LAL₃ in Old Babylonian sources – never occurs in textual sources from before the Ur III period (see most recently Molina / Steinkeller, 2023: 29–30 with previous references). Of course, one may imagine that the substance used in the boards was not actually wax, but a surrogate (Steinkeller, 2004: 76 wn 18) – this is however not relevant for the present discussion. Experimental results by Cammarosano *et al.*, 2019: 157 show that the use of tallow is excluded, but this does not rule out other options.

occurs in the colophon of two tablets, namely MVN 11, 93 (BDTNS 24222, P116107) rev. 17 and ASJ 19, 138 122 (BDTNS 44687, P102679) rev. ii 10. Both documents record data concerning subsistence plots (*šuku du₃-du₃-a*), which are told to have been transferred from the waxed wooden board (*le-um-ta dib-ba*). The action presumably implies that the information on such devices was subsequently erased.

3.2 Checking information

The verb *gi-in* = Akk. *kānu* “to be firm” is used to refer to the action of verifying the content of a document. It is attested in TJA pl.53, IOS 15 (BDTNS 14315, P134109) rev. 2: (sheep) not checked against the waxed wooden board (*le-um-ma nu-ub-gi-in*). The presence of the negative prefix *nu-* seems to suggest that the norm in Ur III administration involved (cross-)checking of the content on waxed wooden boards and clay tablets.

3.3 Entering information

3.3.1 As debit

The technical term referring to the action of entering information as credit is *ĝar* “to place (as debit)”. It is attested in UET 3 1097, left edge: (dates) not placed (as debit) on the waxed wooden board (*le-um-ma nu-ub-ĝar*). One must note the technical nature of the terminology implied here. In fact, the action of “placing” information (*ĝar*) concerning alimentary items has a more nuanced meaning compared to the action of “writing” *tout court* (expressed by *sar* = Akk. *šaṭāru*).⁹ This applies also to the Akkadian equivalent of *ĝar*, namely *šakānu* (see CAD Š, s.v., lexical section, 116–119), whose basic meaning is again “to place”, but in technical context it means “to deposit into an account”, and “to charge to someone, to debit”.¹⁰

3.3.2 As credit

The verb for entering information as credit is *tur* = Akk. *šeḥēru*, whose basic meaning is “to be small”. Again, the term must be interpreted in technical context as “to count as credit” (CAD Š, 120–121), *i.e.* in complementary sense to *ĝar* (see above 3.3.1). It is attested in MVN 11, 91 (BDTNS 24220; CDLI P116105), rev. 3: (land) deducted (as credit) from the waxed wooden board (*le-um-ta mu₂-a im-*

⁹ Verbal forms belonging to **škn* and **štr* alternate in mathematical texts from later periods as well. There, the former root may also have a precise technical meaning, but its nature remains difficult to ascertain (Høyrup, 1990: 57–58).

¹⁰ Also “to add to”, and (mostly in the stative) “to be present, exist, be available, to be located at a certain spot”. In addition, one notes the existence of the expression *ina tuppil/kanīki šakānum*, which is comparable with the above mentioned expression *le-um-ma ... ĝar*.

ma-an-tur).¹¹ Quite interestingly, MVN 11, 91 features several erasures, as well as a set of cuneiform numbers in an otherwise large unscribed space. Apparently, something went wrong in the standard procedure, forcing the scribe to double check calculations, as well as to provide an explicit mention of the current status of the waxed wooden board. This implies that such device was commonly used for accounting purposes within local administration.

3.4 Further remarks

Interestingly, the operations described above are attested not only with reference to waxed boards, but also to DUB-objects,¹² clay tablets (im),¹³ and in connection with technical terms related to accounting practices.¹⁴ Accordingly, the specificities of waxed wooden boards with respect of other media are not as clear-cut as one may think in the first place. This is overwhelmingly clear in first millennium administration, where transfer of information is bidirectional from clay to wax and the other way round.¹⁵ Although it is difficult to state a final word on such matter, the advantage of the waxed boards over clay tablets would be that it meets all the following criteria at the same time: 1) under the right conditions, the medium remains indefinitely writeable; 2) it is easy to carry around and trans-

¹¹ For a different interpretation see most recently Zimmerman, 2022: 41 (size of land being reduced).

¹² Here I intentionally avoid the translation “(clay) tablet” for DUB, which is commonly found in Assyriological literature. The reason is that DUB may refer not only to clay tablets, but to different inscribed objects as well, depending on the textual corpus where it occurs, as well as on context, an analysis of which is beyond the purpose of this paper. The disambiguation between the possible readings of DUB as dub and kišib₃ “seal, sealed document” is also often difficult, and it must be made on a case by case basis, therefore further complicating analysis. In this regard, it must be stressed that the current understanding of DUB as either dub “clay tablet” or kišib₃ “seal” is flawed by a *tertium non datur* fallacy. A cursory overview of the evidence from the Sargonic period onwards in fact reveals that DUB may refer to any type of inscribed artifact or medium (see preliminarily examples quoted in CAD T, 129 ff. s.v. *tuppu* A). This fact allows for a broader meaning for DUB, in terms of “document” or “inscription” of any kind, including those on perishable media. On the basis of this simple (albeit often neglected) evidence, an in-depth re-analysis of all occurrences of this term is needed, in order to avoid the risk of circular arguments and unwarranted assumptions. The present contribution is agnostic in such respect, therefore maintaining DUB as preferred reading.

¹³ See for instance: SNAT 506 rev. 4 (fields): im-bi nu-ḫa-la nu-gi-in; SANTAG 6 115 rev. 6: im tug₂-ba e₂-gal-ka nu-ub-gi-in.

¹⁴ In terms such as “account” (niĝ₂-ka₉), “capital amount” (saĝ), and “balance section” (ugu₂), see for instance: UET 3 295 obv 5: DUB-ba-ni nu-ta-tur; SNAT 390 rev 2: niĝ₂-ka₉ ak-bi nu-u₃-ta-tur; ASJ 2, 20 58: rev. 11: ¹ugu₂-a nu-u₃!(DIB-)ĝar; BBVO 11, 299, 6N-T827: rev. 1: niĝ₂-ka₉ nu-u₃-ĝar; BPOA 6, 1293 obv. 6: saĝ-bi nu-u₃-ĝar-še₃.

¹⁵ MacGinnis, 2002: 223–227; Jursa, 2004: 174–178.

port;¹⁶ 3) its writing surface may be extended adding further “leaves” to a polypticon;¹⁷ 4) one may seal a very long document contained in a polypticon with a single seal, instead of having several tablets to be individually sealed. Of course, clay tablets are also easy to transport and under the right conditions remain writeable, but these two properties do not happen at the same time – if one is to carry a tablet while still wet chances are that the readability of inscription might be affected. The above-mentioned characteristics make waxed boards ideal for running accounts and field surveys, as attested in cuneiform sources. On the down side, it must be noted that wax in the late third millennium BCE was a quite expensive commodity, albeit well within the fiscal capacity of Ur III administration.¹⁸ However, the potential re-usability of waxed boards may contribute in lowering the final cost. The fact that access to wax was limited may actually be used as an argument in favor of its adoption for official purposes, as it was arguably harder to produce a fake le-um than a fake clay tablet, but this remains speculative.

4. Conclusions

Although the very introduction of le-um boards in Gudea’s time seems intimately connected to architectural drawing rather than writing down administrative data, the use of such devices within Ur III bureaucracy appears to be restricted to the annotation of primary production and related matters, i.e. alimentary items and subsistence land. The reason perhaps lies in the fact that such information is more prone to changes of contingent nature, therefore forcing administration to frequently update its global records. Of course, generalizations should to be avoided when dealing with accountable systems in antiquity, as each archive shows its own features and quirks. However, it seems that by the very end of the third millennium BCE bureaucracy in southern Babylonia entered a phase characterized by a continuous mode of accounting, long time reporting to a higher authority (possibly indefinitely), as well as a punctual mode of control, meaning that each person in the operational chain has to justify its activities on the spot, if need be, on the basis of official documents. The new accounting mode makes sense only on the premises hinted at in the beginning of this paper: without the long process of selection of alimentary items suitable for long term storage, and the development of technologies for food processing such system can’t possibly develop. A system that aims at tracing every single step in the movement of products does so not only in order to maximize efficiency, but also to avoid frauds, which were perhaps the norm. Cultural factors may thus contribute significantly in the establishment of an intensified administration, as outcome of the long term interactions

¹⁶ As noted by Zimmermann, 2022: 7, 42 wn 69.

¹⁷ A set of 18 dyptich boards (^{ges}i₂-u₃) is attested for instance in PPAC 5 400 obv. 3.

¹⁸ 1/2 shekel of silver for 1 mina of wax, as noted by Volk, 1994: 284.

between the urban phenomenon and its landscape, which started more than a millennium earlier, in the Uruk period.

The introduction of waxed wooden boards at the end of the third millennium BCE must be framed as a technological response to the need of such an intensified bureaucracy. The same is probably true for other innovations brought about by the Ur III dynasty, such as the frequent use of envelopes, and seal impressions on clay tablets, which is a huge topic which would require more space than it is here permitted. Suffices to say that without such developments the system probably loses an important boost and a sharp mean of control, reverting to a looser regime, as for instance the one in use during the Sargonic period. In turn, le-um boards must be framed in a larger bureaucratic space, whose material culture reflects the complicatedness of human social relationships. Although many features of the Ur III administrative system were already operative in the Early Dynastic period, it is only in the last century of the third millennium BCE that administration appears not only mature, but also robust in terms of dealing with possible issues. This is achieved by technological innovations, introduction of new procedures, as well as by an increased redundancy in document production, especially when it comes to the administration of alimentary items.

Finally, the use of waxed boards brings about cognitive implications as well: the ease of adding, removing, and replacing information in such devices impacts on the practitioner's vision of the administrative world. Fictional as it may be, this deeply interpreted reality results in a much more dynamic entity, compared to the fixity of records on clay and other media. Whereas the perception of past administrative events was certainly strong since the very introduction of writing and accounting, it is only in the late third millennium BCE that the present dimension of accountable procedures emerges with clarity to the eyes of the administrators, as in a constantly up-to-date snapshot of what goes in and out of their sphere of competence. In it, I see a huge leap forward in the long process of externalization of human thought. The ability of creating indexes and conceptual bridges within live data was essential to navigate the complex layers of administration in the Ur III period, as it is in our own society.



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Health and Social Crises in 108/107 BC as Recorded in the Late Babylonian Astronomical Diaries

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1. Introduction

The global health and social crises that emerged as a result of the COVID-19 outbreak from the end of 2019 onward paved the way for major changes in modern urban civilization. Many health (and social) crises have affected urban society over time. One of the most significant crises in ancient times was the Antonine plague, which broke out in the late second century AD. This took place in Mesopotamia during the Parthian campaign led by Roman emperor Lucius Verus at the end of 165 AD or at the beginning of the following year. It quickly spread to Rome through soldiers who returned from the East and perhaps lasted until the 180s or 190s AD, with another outbreak in 189 AD (Littman / Littman, 1973: 243; Duncan-Jones, 2018: 43, 48–50).

How have human beings confronted the chain of health crises from ancient to modern times? Have there been no ways to prevent the occurrence and spread of such crises? To answer these questions, we must read historical documents and

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Each Babylonian year begins in the spring and ends in the spring of the next Julian year. I thus use two consecutive Julian year numbers for one Babylonian year in this paper. For example, 108/107 BC is the Babylonian year 204 SE (Seleucid Era). Babylonian month names (Nisan, Ayyar, etc.) are abbreviated with Roman numerals (I, II ...) in this paper.

analyze information on the crises. This analysis combines the conditions of human societies and environmental parameters of the same period. Late Babylonian Astronomical Diaries are an ideal cuneiform source for such analysis. A tablet of “Short” and “Standard” diaries collects historical accounts, daily reports of the sky, price lists of commodities, and river level reports of the Euphrates for a certain period in a single tablet.¹ Many diary tablets were derived from the fourth to mid-first centuries BC. These records can help us understand historical crises and their environmental backgrounds and social influences from late Achaemenid to early Arsacid Babylonia. In this contribution, I will clarify the process of the health-social crisis recorded in the diaries from 108/107 BC and discuss the cause of this social disorder (or the aggravation of economic crisis as its part).

2. Crisis of 108/107 BC

I summarized the historical accounts concerning disease (plague), famine, mass deaths, and human trafficking (as an indicator of a difficult social condition) from the diaries published in *ADART* 1–3 in Mitsuma, 2021: 114, Table 1. Grainger thought that mentions of diseases in the diaries seemed to represent the most obvious, or large-scale, epidemics in the Babylon area, as references were made to them only occasionally in the diaries before the Arsacid Period,² and there were not so many references from the Arsacid Period. Mitsuma, 2021: 114, Table 1 lists 10 entries on diseases from the Neo-Babylonian to the Seleucid diaries (dated from 568/567 to 144/143 BC) and 11 entries from the Arsacid diaries (dated from 125/124 to 84/83 BC). The diaries show that a significant crisis took place in 108/107 BC. Among the 34 entries in the table, nine came from 108/107 BC (Mitsuma, 2021: 114, Table 1, Nos 22–30) and five to seven among them concerned some diseases (including rabies). I have revised and presented these nine entries in English in Table 1. The entry numbers are recounted from 1 here, instead of from 22 in the former table.

Table 1: Crises of 108/107 BC as described in the Astronomical Diaries

No	Source	Ruler	Date	Descriptions	Remarks
1	–107B 'Rev. 15'	Mihrdāt II	VI	Many people were ill(?) as before.	
2	–107D 'Obv.' 17'	Mihrdāt II	VIII x	There was much [...] 'x ¹ tú in the land. Many people are mentioned.	

¹ Mitsuma, 2015: 53–55.

² Grainger, 1999: 320: n31.

No	Source	Ruler	Date	Descriptions	Remarks
3	-107D 'Obv.' 30'-31'	Mihrdāt II	IX x	Lamentation and anxiety in a city.	Recorded in the barley price reports for the month.
4	-107D 'Obv.' 32'	Mihrdāt II	Until IX.22	Selling in the streets of Babylon was interrupted.	
5	-107D 'Obv.' 36'	Mihrdāt II	IX	Dogs became mad and died.	
6	-107D 'Obv.' 36'	Mihrdāt II	IX	Mention of a disease.	
7	-107C 'Rev. 2'	Mihrdāt II	XI	Disease in the land as before ³ .	
8	-107D 'Rev.' 20'	Mihrdāt II	XI x	Some became mad and died.	
9	-107C 'Rev. 21'	Mihrdāt II	XII	Disease in ⁴ the land as before.	

The diary tablets from 108/107 BC are numbered -107x (the aforementioned entries are cited from B, C, or D). The term “-107” represents the astronomical year to which the larger part of 108/107 BC (204 SE) belongs. According to the astronomical year dating system, 1 BC becomes 0 and 2 BC becomes -1. Thus, 108 BC becomes -107. Capital letters are attached to the numbers of tablets from the same year (A, B, C, etc.). The alphabetical arrangement is made according to the chronological order of the coverage of tablets. Among the three tablets shown in the table, -107B covers the earliest portion of 108/107 BC. The condition of each tablet is shown according to the method described in *ADART* 1: 38. For example, “'Obv.’” indicates that the top and bottom of the obverse of the tablet were damaged and lost.

Babylon and Babylonia faced many difficulties in 108/107 BC. -107C 'Rev. 15' reports thus: “That year, there were no rains and floods.”⁵ Many people seemed to have suffered a disease (GIG) in Month VI according to No. 1. While Biggs suggested that some attestations of sick people (^{lú}GIG^{me} / ^{lú}GIG) recovering

³ The transliteration with a partial copy of this sentence (*ADART* 3:368) can be read as follows: I[TI BI] GIG ^ri²-^lna² KUR G[IM² IGI-ú] (I checked my photograph of the tablet). The last three signs are estimated from the similar (or identical) sentence in -107C 'Rev. 21' (No. 9).

⁴ The transliteration of this part: ^rx¹ ana (*ADART* 3:370) may be emended as: ^ri²-na¹, if my reading of ^ri²-^lna² in -107C 'Rev. 2' (No. 7, see note 3) is correct (I checked my photograph of the tablet at this point).

⁵ I owe this translation of KUD^{mes} to Bert van der Spek.

in the diaries (–368 'Rev.' 8'; –366A col. ii 10) may reflect recovery from ergotism or other kinds of mycotoxicoses,⁶ the identity of the disease (GIG) of Nos. 1, 6, 7, and 9 is uncertain. In Month VIII, something ([...] 'x' *tú*) spread around Babylonia according to No. 2. 'x' seems to represent a vertical stroke at the left end of the copy of BM 34707 (–107D₁) 17' (*ADART* 3: pl. 261), and the damaged part can be reconstructed as [... *ri-š*]u-*tú*.⁷ If this reconstruction is correct, this entry mentions the spread of *rišútu* disease, which was a kind of skin disease or itch (relating to *rašû* B, "to itch") according to *CAD* R: 381–382, s.v. *rišútu*; 207, s.v. *rašû* B. *AHW*: 989–990, s.v. *rišútu*[*m*], *rišítum* connects *rišútu* (*rišítu*) with *rašû* II "rot sein" (*AHW*: 962, s.v. *rašû* II) and offers the meaning "Rötung"; eine Hautkrankheit" to *rišútu* (*rišítu*). Scurlock / Andersen, 2005: 210–211, s.v. *RISÛTU* thought that *rišútu* "redness" may encourage continual scratching of the affected area. Precise identification of this disease remains difficult. Kämmerer, 1995: 159 argues that the word *rišítu* (*rišútu*) matched the scarlet exanthem of smallpox and Finkel, 2000: 152 suggests that "an outbreak of eczema or psoriasis" is described with *rišútu*. However, both identifications are criticized by Scurlock / Andersen, 2005: 717nn 15, 17.

No. 6 mentions a disease in Month IX, although fragmentally. Nos. 7 and 9 probably mention a disease (GIG) that spread in Babylonia successively in Months XI and XII. No. 5 reports that dogs became mad and died in Month IX. No. 8 in Month XI seems to be a report of the same kind. Del Monte, 1997: 157 translated the damaged sentence of –107D 'Rev.' 20' as follows: "[... molti cani] furono colti da rabbia e morirono."

Socioeconomic conditions in that year were also abnormal. No. 3 informs us of a lamentation in a city (URU), probably Babylon.⁸ No. 4 mentions that the sale (probably of barley) was interrupted in Babylon. Nos. 3 and 4 were recorded in the barley price reports of Month IX. The recorded barley price, equivalent to one shekel of silver, also indicated a problematic situation. The equivalent of barley on IX.29 and 30 was recorded as 27 qa or liters (–107D 'Obv.' 33'). A comprehensive table of commodity prices in the diaries (van der Spek, 2005) shows some barley equivalents in Month IX from the Arsacid Period, as shown in Table 2.

⁶ Biggs, 1991: 19–20.

⁷ The word appears several times in the diaries: *ri-š*u-*tú* (–567 Obv.' 7; –143A 'Flake' 21'); *ri-š*u-*tu* (–382 'Obv.' 13'); *ri-š*u[*-tú*] (–105A 'Obv.' 46').

⁸ Babylon is sometimes identified as URU "the city" in the diaries (Stevens, 2019: 222: n37).

Table 2: Barley equivalent in Month IX from the Arsacid period.

Year (BC)	Equivalent	Text	Remarks
141/140	117–120 qa	–140C Obv. 30	
138/137	48–51 qa	–137D 'Obv. 6'	
125/124	20–20.5 qa	–124B 'Obv.' 17'	
108/107	27 qa	–107D 'Obv.' 33'	
100/99	120 qa	–99B 'Flake' 13'	very good barley
97/96	44–45 qa	–96C 'Obv.' 2'	
76/75	48.25 qa	–75 'Rev. 4'	It might also be an equivalent in Month X or later.

The date of the value for 76/75 BC is uncertain because the tablet of –75 was severely damaged. However, the other values are certainly from the same Babylonian month. This means that they can be treated as data from approximately the same season. For example, Month IX of 125/124 BC covers December 7/8, 125 BC–January 4/5, 124 BC.⁹ Month IX of 108/107 BC covers November 29/30–December 28/29, 108 BC.¹⁰

Among this data group, the equivalent 27 qa/shekel is a close value to the lowest one, 20–20.5 qa from 125/124 BC (a “low” equivalent means a high price). The table in van der Spek, 2005 and the graph in Pirngruber, 2016: 351, fig. 1 also show a small peak in barley prices from Months IX to XII of 108/107 BC (27–40 qa/shekel). Pirngruber (2014: 178–179) explained that the high price of barley in 108/107 BC was possibly because of the locust invasion in Month II, 109/108 BC (–108A 'Obv.' 27'). The price of barley rose from 109/108 BC and continued to rise in the first half of 108/107 BC,¹¹ but there seems to be a clear difference between the equivalents in Months VII and IX, 108/107 BC (51 against 27 qa / shekel) and the latter is recorded (–107D 'Obv.' 33') after the sale interruption until IX.22 (No. 4). We cannot explain this gap as a result of the locust invasion.

The high barley prices in the 120s BC were synchronized with the threat of Arab-Bedouins (Haruta, 1998: 188, 191 n18) and were probably related to the crisis they caused (Pirngruber, 2016: 350). They were called *Arbāya* in the diaries; they became hostile, plundered, and blocked traffic in Babylonia from the mid-120s to 110s BC or later.¹² The diary of 126/125 BC mentions the wandering of Arabs in the land (–125A Obv. 21). The Arabs surrounded all of Babylonia, and the city gates of Babylon were shut for many days in 123/122 BC (–122D 'Rev.'

⁹ ADART 3: 280.

¹⁰ ADART 3: 376.

¹¹ See van der Spek, 2005 and Pirngruber, 2014: 179, tab. 8.14.

¹² For the Arabs' attestations in the diaries, see Pirngruber, 2016: 348–349, tab. 1.

9'–10'). Inhabitants of Babylon fled from the city after being threatened by the Arabs in 119/118 BC (–118A Obv. 22). Although an (Arsacid) army defeated the Arabs in 112/111 BC (–111B 'Rev.' 11'–12'), they continued to plunder in 109/108 BC (–108B 'Rev. 20'). The crisis ended after 106/105 BC, when a group of Arabs left to Seleucia on the Euphrates (–105A 'Rev. 22'–23').¹³

Since the threat of the Arabs was coming to an end in 108/107 BC, we can say that the health crisis of 108/107 BC was the major cause of the aggravation of economic crisis, which appeared as the small peak of barley price in late 108/107 BC. The economic crisis seemed to have spread at a wider scale at the end of that year. The diary of Month XII (–107C 'Rev. 16'–21') recorded a confiscation in Esangil.¹⁴ A representative of Urōd, the Arsacid *rab kumarī* (chief priest) of the temples, came from Media to Babylon and took away some sacred items, such as the sissou shield from Esangil, and returned to Media. Media is often mentioned as a royal residence in the diaries of the Arsacid Period (–137A 'Rev.' 9'–11'; –136C 'Obv.' 3'; –77A 'Obv. 31'). The “chief priest” probably served near the king and dealt with the financial problems of temples within the Arsacid Empire (Mitsuma, 2005). The Arsacid confiscation in 108/107 BC may reflect some financial difficulties in the Arsacid court. The confiscation recalls the gifts, including a crown of 1000 shekel of gold from Esangil, presented to Antiochus III in Babylon (–187A 'Rev. 8'–10'). Roman Republic charged Antiochus with heavy war indemnities by the Treaty of Apamea in 188 BC, and the gifts may be interpreted in light of his need for money.¹⁵

To understand the relationship between the health and economic crises in 108/107 BC more clearly, I include the price of barley at the end of the 110s and 100s BC in my analysis. Barley equivalents decreased over the long term from 112/111 BC (see Pirngruber, 2016: 351, fig. 1). The barley equivalents in Month II, 112/111 BC, were 192 and 210 qa/shekel, whereas that in Month II, 109/108 BC, was 72–107 qa (see van der Spek, 2005). This may have been caused by the locust invasion that month, and the rising prices until Month VII, 108/107 BC can be interpreted as the result of autocorrelation (Pirngruber, 2014: 178–179). Arab's plunder, which took place in or before Month VII, 109/108 BC (–108B 'Rev. 20'), may also have aggravated the crisis in this stage. However, the gap in the barley equivalents between Months VII and IX (29 and 30), 108/107 BC (51 against 27 qa/shekel), the lamentation and anxiety in the city (of Babylon), and the sale interruption (probably of barley) until Month IX.22 (Nos. 3–4) seem to constitute a striking economic incident. We must remember that the health crisis took place in or before Month VI and made progress toward the end of the year. We can judge

¹³ Seleucia on the Euphrates can be identified with Sippar or Nehardea (Lending, 2020).

¹⁴ My interpretation of the part is shown in Mitsuma, 2009: 166–167.

¹⁵ For the interpretation of the gifts, see Boiy, 2004: 156.

that the health crisis caused the lamentation and buyout of barley (resulting in the sale interruption) in Month IX.¹⁶

The value of 27 qa in Month IX, 108/107 BC, was actually the bottom equivalent in the 100s BC, but the barley equivalents only recovered slowly. The restricted rains and floods that year may have delayed recovery and prolonged the crisis. The barley equivalents in Month II, 106/105 BC, were 60–75 qa/shekel. New barley appeared on the market for 72–107 qa/shekel between the 7th–13th, but did not influence the trend across the month (see van der Spek, 2005). Further, –105A 'Obv.' 46' records *ekketu*¹⁷ and *rišūtu* diseases in the land in Month III and –105A Upper edge 2 records the “counting of the people of all lands” (*ADART* 3: 395) in Month VII of that year. These records may show the prolonged health crisis of 108/107 BC and the reaction of the Arsacid royal court to the accompanying socioeconomic crisis in the empire.

3. Concluding remarks

We can conclude that the major cause of deterioration of the economic crisis, which was abruptly aggravated in Month IX (108/107 BC), was the health crisis from Month VI or earlier in that year.

Along with further analysis of the crisis of 108/107 BC (and later), I will study the descriptions of other health and social crises recorded in the diaries to understand the terms used for diseases more appropriately. A comprehensive analysis of the health crises in the diaries with their socioeconomic and political environments and influences can clarify the characteristics of the diseases in ancient Babylonia and the urban environment in Babylon and the surrounding cities. It can help understand the past of urban civilization and provide some clues for us when considering our present and future attitudes toward health crises.

Abbreviations

- ADART* Sachs, A. J. / Hunger, H., 1988–2022: *Astronomical Diaries and Related Texts from Babylonia*, vols. 1–7. Vienna: Austrian Academy of Sciences Press.
- AHW* von Soden, W., 1965–1981: *Akkadisches Handwörterbuch*, 3 vols. Wiesbaden: Harrassowitz.
- CAD* Oppenheim, A.L. / Reiner, E. *et al.* (eds.): 1956–2010: *The Assyrian Dictionary of the Oriental Institute of the University of Chicago*. Chicago: The Oriental Institute.

¹⁶ I interpret the sale interruption (or its cause) as “buyout” by the suggestion of Bert van der Spek.

¹⁷ The word *ekketu* “literally means ‘scratches’ and refers to severe itching leading to scratching and secondary sores” (Scurlock / Andersen, 2005: 214, s.v. *EKKETU*).

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Yataraya and the Wine

Her Role in the Palace Administration of Mari (1775–1762 BC)

*Luciana Urbano**

1. Introduction

The aim of this presentation is to propose a relational analysis focused on the political and administrative practices of the elite women of the Mari palace during the reign of Zimri-Lim (1775–1762 BC, Tell Hariri, Syria), based on the scheme of spheres of influence. It is considered that this will allow us to visualize from a different point of view the dynamics of power relations and the prominent role of royal women in the administration of the state, especially the role of Yataraya, wife of the king of Mari, in relation to the dispensations of wine and food for the royal table.

The royal women of Mari have captured the attention of scholars for their practices in relation to power that have been recorded in the Old Babylonian sources of Mari.¹ The eclipsing action of some of them, such as the queen Šiptu and the queen mother Addu-dûrî, has left others in the shadows. Such is the case of Yataraya. Nevertheless, the richness of the sources never ceases to surprise us, and new editions and points of view introduce valuable contributions that invite us to continue investigating.

Zimri-Lim will be related by marriage with two of the great kingdoms of the time in search of political and military support. On the one hand, he reused in his favor the alliance celebrated by Yasmah-Addu with Qatna incorporating Dâm-hurâši as his main queen after the seizure of power and the women of the house of the vanquished.² Likewise, Aleppo will be the privileged ally of Zimri-Lim supporting him in the seizure of power. In the year ZL 2[1'] the marriage with the Aleppo's princess Šiptu takes place.³

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¹ We have addressed this issue in previous works; see Urbano, 2013; 2018; Oliver / Urbano, 2018; 2020.

² Durand, 2000: 295–298. On relations with Qatna see Durand, 1987.

³ Charpin / Ziegler, 2003: 191.

On the other hand, Yataraya is present in the oldest documents of the reign of Zimri-Lim of Mari. Her hierarchical position in the oil distribution tablets is seconding Dâm-hurâši until the arrival of Šiptu. She could be a princess originally from the city of Hasor or perhaps from Ugarit,⁴ and mother of several of the princesses who play a leading role in marriage politics, for example Kirû.⁵ The latter idea would be explained by the fact that it is her who intervenes in the marital dissolution of her daughter and her husband the king of Ilân-šûrâ.

The presence of Yataraya in the royal retinue of at least two Zimri-Lim journeys suggests that she fulfilled special functions in her transfers. The publication in 2009 of *Les Archives de vin à Mari* by Grégory Chambon⁶ provides us with a documentary corpus on Yataraya's dealings with wine, mainly destined for the "king's table"⁷ which reveals her prominent role in the handling and administration of one of the most significant and esteemed luxury goods for the king.

As a tentative hypothesis, we believe that we can demonstrate the existence of distributed spheres of power in the administrative and political management of the palace, which shows a planning in the execution of the roles of the women of the elite. Their practices recorded in Mari archives allow us to suggest a much more dynamic power structure than the hierarchical lists of oil and wool distribution. These mark a conservative order that was exceptionally modified, for example, by the death of the queen mothers. However, the particular ways in which the king's wives, queen mothers, daughters and sisters exercised power allowed them to construct strategies that in some cases modified these intra-gender hierarchies.

2. Dâm-hurâši, Šiptu and Yataraya: power-sharing spheres?

The year ZL 5 [4'] is a transitional moment in the hierarchies of the house of women of Zimri-Lim due to the death of the queen mother Addu-dûrî.⁸ She is present in the oldest texts of her son's reign.⁹ In them we see that she played a leading role in political, religious and administrative aspects.¹⁰ Particularly the queen mother took care of the management of the treasure chest,¹¹ something like the box of the domestic economy of the palace that is why her letters are full of references to movements of goods, land and cash.¹² On the other hand, in the political and religious letters there are continuous allusions to the king's military campaigns, which, at that time of the reign, were constant and crucial. The reports

⁴ Villard, 1984: 460.

⁵ See Durand, 1984.

⁶ Chambon, 2009.

⁷ Sasson, 2004.

⁸ Ziegler, 1999: 51. Durand, 2000: 273–275.

⁹ See LAPO 18, 1091.

¹⁰ See Ziegler, 2016: 297–300.

¹¹ See LAPO 18, 1109.

¹² See LAPO 18, 1102 to LAPO 18, 1114.

and recommendations of the queen mother conclude with a call of attention to her son “(...) do not be negligent in front of this message (...)”¹³

Jean-Marie Durand has inferred that her importance in the affairs of the kingdom was reinforced by the absence of a strong personality among the king’s wives.¹⁴ He argues that Dâm-hurâši would have had a blur in politics and administration more concerned with “palace intrigues”,¹⁵ and on the other hand at the beginning of the reign a young and newly arrived Šiptu seems not to have been able to take the place of chief queen. For this reason the death of Addu-dûri opens a transition in the hierarchies of the house of women. In particular the functions of the queen mother are divided between Šiptu and the priestess of the god Addu, Inibšina, daughter of Yahdun-Lim and cousin of Zimri-Lim.¹⁶ For the young Šiptu this moment would be undoubtedly the beginning of her fortune.

If we analyze the salutation formulas with which the letters of our queens begin, we can see how they denote the different spheres of their influences.¹⁷ Dâm-hurâši had an important presence within the women’s household, especially in the care of the king’s daughters who were not of marriageable age. She also had a very active presence in religious affairs.¹⁸ Her letters from the middle of the reign have led Jean-Marie Durand to think that she resided in Terqa as a priestess of the god Dagan.¹⁹ In such a line of hypothetical reflection the displacement of Dâm-hurâši to Terqa would coincide with the moment when Šiptu takes greater control over state matters. As we see in her form of salutation, her influences go beyond the intimacy of the palace including the matters of government of the city of Mari, those functions inherited upon the death of the queen mother. Šiptu took charge of an important variety of activities, from keeping the king informed on his travels about the functioning of the palace, to aspects of economic, political and military relevance. In addition to this we know that Šiptu gave at least two children to Zimri-Lim, maternity that reinforced her position in the palace.

Although the ranks in the lists of oil distribution remained unchanged, the letters let us glimpse that through alternative channels of circulation of goods the intra-gender hierarchies are fluctuating. In a text from the end of the period where the queens deliver the tribute-*igisûm* for Mari and Terqa, Šiptu delivers 100 units

¹³ LAPO 18, 1108.

¹⁴ Durand, 2000: 275.

¹⁵ Durand posits this in relation to the letters the queen exchanges with Partum. This view is considered to be highly connoted. See Urbano, 2019.

¹⁶ This woman is at the top of the female hierarchy on the oil ration delivery tablets, denoting her importance. See Ziegler, 1999: 46–50; Durand, 2000: 402–407.

¹⁷ See LAPO 18, 1126 and LAPO 18, 1118.

¹⁸ The letters of Dâm-hurâši are few and in themselves brief (LAPO 18 1116 to LAPO 18 1125). Many are only greetings to the king repeating the formula of the letter cited or reports of omens.

¹⁹ Durand, 2000: 298.

(sheep) as opposed to 40 of Dâm-hurâši.²⁰ In other unpublished letters the situation is similar; Šiptu receives greater quantity and quality of goods than Dâm-hurâši.²¹ This also has its correlate in the field of interstate relations: during the second half of the reign the weight of Aleppo was decisive in the relations of Mari with the west, surpassing even Qatna.²²

For her part, Yataraya shows a clear mobility accompanying her husband on official journeys. In the year ZL 5 [4'] she is attested in Razamâ,²³ and between the years ZL 9 [8'] and ZL 10 [9'] she is part of the royal retinue that will reach the shores of the Mediterranean. The journey of Zimri-Lim to the Mediterranean coasts of Ugarit has been the subject of different interpretations since the publication of the sources in 1984 by Pierre Villard. The stay of the king of Mari in Ugarit was quite long, at least one month, and the whole journey was almost five months.²⁴ The magnitude of such a journey led Jack Sasson to call it the “Grand Tour”.²⁵ More recently, Dominique Charpin has systematized the interpretations of the motives for this royal journey, among which are military, diplomatic and commercial.²⁶

Yataraya was the king's companion, fulfilling diplomatic and administrative functions. After a first stay in Aleppo they will continue together with Yarim-Lim to Ugarit, where the queen remains for some time even when the Mari's king leaves the city of and sets out for Qatna.²⁷ The letter *ARM XXIII 539* gives an account of her receiving in Ugarit a first-rate dress as a gift, which confirms her presence in that city.

Villard wonders why Yataraya visited Ugarit. On the basis of the hypothesis of her possible western origin – that is, from the regions west of Mari – he proposes that perhaps she took advantage of her husband's expedition to the west and the longer stay of the king of Aleppo in Ugarit to return for a certain period to the paternal house, in the same way as the daughters of Zimri-Lim did.²⁸ However, the explanation could rather lie in her administrative functions.

²⁰ Ziegler, 1999: 224.

²¹ Ziegler, 1999: 55, n. 349.

²² A.482, unpublished. Cited in Charpin / Ziegler, 2003: 206, n. 330. See also in Sasson, 2015: 82.

²³ Ziegler, 1999: 57, n. 370.

²⁴ Villard, 1986: 393.

²⁵ Sasson, 1984: 246–251.

²⁶ Charpin, 2017: 638–639. In this text Charpin contributes to the understanding of the only letter that refers to the king of Ugarit (A.186), whose name we do not know. See also Charpin, 2021.

²⁷ Villard, 1986: 387–412.

²⁸ Villard, 1984: 475; Ziegler 2009: 56–57.

3. Yataraya and wine management

Yataraya is involved in the palace economy. She is mentioned in many administrative texts referring to wool, textiles, oil, meat, honey and wine.²⁹ We are interested in the sources related to this last product. Wine is a luxury product, a “symbolically dense object”,³⁰ in the “king’s table” (*paššur šarrim*). Zimri-Lim was a true connoisseur and through the analysis of the sources referring to its handling, published in FM XI, we can know its various varieties, qualities and origins, the different blends made with honey, essences and spices.³¹ The wine destined for the “king’s table” was of course the best quality, called *sâmun*, a term that could designate a grape variety, the premium quality or simply its terroir.³² The palace was the center of wine management, with rooms and furniture specially designed for its storage and conservation.³³

His presence at the king’s table denoted his control over a large region and his contacts with the main production sites. It also represented the organizational capacity to acquire, transfer, preserve and even cool the royal beverage. Moreover, if the origin of the wine was the exchange of gifts between courts, as was often the case, it denoted their political alliances. On the other hand, the quantity and quality of the wine offered to the officials invited to the king’s table was proof of the abundance and wealth of the kingdom.³⁴

Yataraya was a key figure in the management of wine. She was in charge of controlling the wine reserves, preparing the service for the “king’s table”, and was also in charge of receiving, registering and preparing the jugs for the festivities.³⁵ The reserves were highly organized, which allowed for product traceability. This was important both for the quality of the wine and to avoid possible adulteration of the beverages destined for the king. Perhaps for this reason the king chose someone from his inner circle to manage such an important and strategic product. If so, it is possible to think that her presence in the king’s travels was because she was responsible for providing the king’s table even when he was traveling. A

²⁹ LAPO 18, 1172; 1173. T. 108 (MARI 2); ARMT XXII 181; ARM 23 574 [M.11697]; M.9790 (ARM XXX, p. 328–329); M. 11353; M.12017; M.15099; ARM XXIV 617; M.15157; ARM XXIV 180; ARMT XXI 81; ARM XXI 345; M.11983.M.9790; M.10764 (ARM XXXII, p. 285); ARMT XXV 617. FM 11 62 [M.6521+M.8574]; FM 11 83 [M.5287]; FM 11 90 [M.11922]; FM 11 99 [M.12818]; FM 11 113 [M.11937]; FM 11 141 [M.8595].

³⁰ Weiner, 1994: 398.

³¹ Bonneterre, 2013: 625–634.

³² Chambon, 2009: 4.

³³ Chambon, 2009: 21–37.

³⁴ Chambon, 2009: 16–21.

³⁵ Chambon, 2009: 30–31.

letter that Yataraya sends to Šiptu during the royal journey to Hušlâ may give us some clues:³⁶

LAPO 18, 1172 [ARM X, 115]. ARCHIBAB: T8692³⁷

Say to my queen: thus says Yataraya, your servant.

My Lord is in good health; the army and the household are in good health. May the Lady of the palace make my queen live the cycle of years, for the love of me! May the new health news of my queen be continued with me! I am very attentive to the new health news of my queen!

I will send to my queen the news that I will learn after I send you this tablet.

On the day I send you this tablet, the king has given tribute to my Lord; he has freed the Palace of Ilan-šura.

The heading of this letter, highlighting the health of the king's servants during the trip makes us think that the presence of Yataraya in the royal retinues was due to the fact that she was in charge of managing and coordinating the food and beverage services.³⁸ That is to say, an extension of the functions she performed in the palace. The queen's duties were not limited to wine. She was also involved in the management of other significant goods and food for the royal table. This is why Grégory Chambon proposes the hypothesis that Yataraya could have succeeded the queen Ama-duga, mother of Yasmah-Addu, integrated into the house of the women of Zimri-Lim.³⁹

Ama-duga was in charge of a group of female cooks in the palace of Zimri-Lim called *abarakkatum*, term translated as "économome" by Ziegler⁴⁰ and *housekeeper* in CAD.⁴¹ Upon her death, Yataraya would have succeeded Ama-duga in her functions. In this way, she would have had jurisdiction over both the drinking and the eating of the king. Thus, in this sort of spheres of control distributed among the wives of Zimri-Lim, Yataraya would occupy an important place, as in charge of the management of the king's wine and food, both in Mari's palace and during his travels.

In this framework it is considered that the category of "consumption of cultural goods" developed by sociologist Pierre Bourdieu for the consumption of art in modern society can, with certain nuances, be useful to reflect the meaning of wine consumption by the elite. Bourdieu states that cultural consumption is a moment

³⁶ Durand, 2000: 356.

³⁷ Translation from French into English by the author from the ARCHIBAB version.

³⁸ I thank Prof. Jack Sasson for suggesting this idea to me in personal communication.

³⁹ Chambon, 2009: 31.

⁴⁰ Ziegler, 1999: 100.

⁴¹ According to Chicago Assyrian Dictionary (CAD, vol 1, A part 1) "referring to a female supervisor of the household servants" (1964: 31–32).

within a process of communication, that is, an act of deciphering, of decoding, which implies the practical or explicit mastery of a code. This code would be given by the *habitus* and belonging to a sphere in which the consumption of symbolic or cultural goods grants prestige. Likewise, in his work he speaks of the “social sense of taste”, that taste is not a natural talent, but the result of a process of hierarchization mediated by class belonging. That is to say, in this area there is a social belief that one must consume certain products that provide prestige, and that possessing certain goods provides recognition by others, a status.⁴²

We could suggest that the presence of Yataraya in the management of this “object symbolically dense”, denotes a prestige “by transference” on herself. In addition to the officials in charge of the task, the king chose someone from his personal circle for the management of such an important and strategic product. The king’s dispensation to get involved in the management of goods with a strong symbolic charge is an act of hierarchization, which contemporaries must have understood very clearly and which is presented to us in an elusive way through the administrative sources.

4. Final thoughts

This brief tour through the Royal Archives of Mari allows us to propose the existence of shared spheres of power among the wives of Zimri-Lim and a system of relay of functions at the death of the queen mothers. The intra-gender hierarchies that occurred among elite women pivoted on elements such as religion, motherhood, honor and the possibility of participation in state affairs, whether political or administrative. Šiptu, who upon her arrival had to live with the honorific position of Dâm-hurâši, found in the death of her mother-in-law the opportunity to participate in political affairs and thus become necessary for her husband.

For her part, Yataraya was in charge of the administration of wine, a “symbolically dense object”, a prestige good that gave hierarchy not only to the king of Mari but also to those who supported his dispensation for daily meals and special festivities. These functions extended beyond the royal palace, since it was essential to be able to sustain the level of comfort of the king during his travels and also to organize the feeding of all his companions. While it is true that the fact that Šiptu remained in the palace during the king’s absences is a maximum sign of hierarchy, since she along with the trusted officials were in charge, Yataraya’s occupations were not at all negligible and cannot be explained (only) because the king liked her company as Jean-Marie Durand suggests.⁴³ Perhaps, our hypothesis explains in a more unprejudiced way the presence of Yataraya in the king’s travels.

⁴² Bourdieu, 1979.

⁴³ Durand, 2000: 356.

The networks of relationships that political activity builds allowed both Šiptu and Yataraya to dominate significant spaces of power. This analysis leads us to propose that as a result of the power dynamics reflected in the letters and administrative texts, the intra-gender hierarchies were more fluctuating than what is conveyed by the lists of oil and wool distribution, hierarchies that mark a conservative order and that was modified only exceptionally.

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4.

Rituality, Banquet and Commensality

The Vessels of the Assyrian Royal Banquet

An Archaeological and Iconographic Approach

Adonice-A. Baaklini / Margaux Spruyt***

1. Introduction

Whether to celebrate a military victory, a successful hunt or to honour the gods, the king or his dignitaries, the Assyrians regularly held festive banquets. These were an opportunity to present high quality tableware that displayed the prestige of the banqueters. It is therefore possible, through iconographic sources and archaeological remains, to question the tableware used during banquets. What are these objects? Does their utilisation or the material from which they are made convey a specific symbolism? Do these objects bear witness to a social hierarchy between the different banqueters? These are questions we will attempt to answer through a study based on the examination of objects uncovered during excavations and their iconographic depiction in the Neo-Assyrian period. We will first present the objects whose use during banquets is positively attested, then we will focus on the objects which, although visual attestation is lacking, may have been used. Finally, we will examine the symbolic dimensions of the objects and question the prestige associated with them.

2. What we know ...

The carinated bowls are without a doubt one of the best-known containers used for royal banquets. They are depicted in the famous ‘Banquet Scene’ of Ashurbanipal (BM 124920) in the hands of both the king and the queen (Fig. 1), and we have many archaeological attestations of them, either in ceramic or in precious metal (Fig. 4: 1–9).¹ The ceramic carinated bowls are in very fine ware and mainly attested in palatial context; therefore, they are known among specialists as “Palace

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¹ For the typology of the ceramic specimens, see Anastasio, 2010: 41–42, pl. 107 and Hausleiter, 2010: 291–292, 360–361, pl. 5; for the typology of the metal specimens, see Howes Smith 1986: 48–55, fig. 4. See also, for other examples unearthed after the typology of Howes Smith: Fadhil, 1990, pl. 39; Damerji, 1991; Curtis, 2013.

ware” and “Eggshell ware”.² There are also exceptional glass specimens, like the one unearthed from the tumulus P (8th–7th century BCE) at Gordion.³ Beside the specimens found in the different rooms of the Assyrian palaces, many of them, and especially the metal ones, were unearthed from royal and high-status tombs in Nimrud and Assur.⁴ These kinds of bowls spread all around the Near East, in the provincial capitals, but also among the local autochthones, elites, sub-elites, and even the commoners.⁵ They are characterised by a rounded base, a shallow semi-elliptical body, and a sharp carreen between the body and the everted rim. Several of them are, especially the ones in metal, very well decorated with gadroons and omphalos. Some were engraved with the name of their owner, either a royal figure, like the queen, a governor, or an indigenous vassal.⁶ The iconography of the ‘banquet’ in the Linear Style Neo-Assyrian cylinder-seals gives many examples of royal figures – or maybe sometime high officials – standing up or sitting in front of a banqueting table. Sometimes, these figures hold in one of their hands a little container in front of their faces, which could be a depiction of a carinated bowl (Fig. 2).⁷ Those bowls were most probably used to drink wine⁸ during royal banquets, but also to perform libation during ceremonies, as attested by iconographic sources.⁹ It is worth noting that these bowls were linked to the figure of the king¹⁰ and have a strong symbolic meaning of loyalty to the Assyrian Empire while some of them were probably given by the king to his high-status personnel or vassals.¹¹ In the Achaemenid period for instance, royal banquets were one of the most important occasions for the king to offer these bowls in different materials: gold and other precious metals for the higher status officials,

² Lines, 1954; Rawson, 1954; Oates, 1959.

³ Rodney, 1981: pl. 15. (for a color modern picture, see (<https://www.penn.museum/sites/gordion/articles/artefactual-evidence/glass-at-gordion/>)).

⁴ See, for example, Curtis, 2013: pl. XXXVI: 508; pl. XXXVII (at the exception of number 514); pl. XXXVIII; pl. XXXIX, 501–502, 506. See also Oates / Oates. 2001: pl. 8b.

⁵ Baaklini, 2021: 247.

⁶ For example, the ones inscribed with names of Assyrian queens (Oates / Oates, 2001, pl. 8b); a bowl with the name of the *turtanu* (generalissimo) Shamshi-ilu (Fadhil, 1990: pl. 39); a bowl with the name of an eponymous official, Assur-Taklak (VAR: VA 5134); a bowl with the name a high official of the Assyrian province of Arpad (Hunt, 2015: 190.), and the one inscribed with the name of a probable autochthon ruler (probably vassal of Assyria) from Western Iran (Radner, 1999–2001: 17–19, 23, fig. 1).

⁷ See, for example, Collon, 2001: pl. IX–XII.

⁸ Baaklini, 2016.

⁹ See, for example, the relief BM 124886–7 or the glazed tile ME 90859 (both at the British Museum).

¹⁰ Nylander, 1999.

¹¹ Hunt, 2015: 186; Radner, 1999–2001: 21.

and pottery for the inferior officials.¹² A similar practice may have been implemented in Assyria.

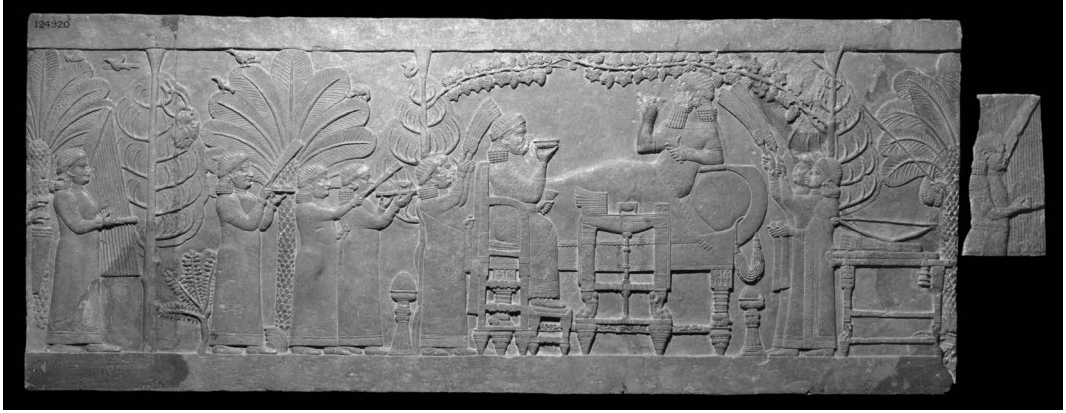


Fig. 1: The ‘Banquet Scene’ of Ashurbanipal, c. 645–635 BCE. North Palace of Ashurbanipal. (Nineveh), room S. Gypsum, 58.42 × 139.7 × 15.24 cm. British Museum, BM 124920.



Fig. 2: Neo-Assyrian cylinder seal (imprint). Brownish Chalcedony, 2.7 × 1.2 cm. PM 776 (www.themorgan.org).

¹² Sancisi-Weerdenburg, 1989: 133–134.

After the carinated bowls, we can cite the tripod bowl (Fig. 4: 10) displayed on the table, between the royal couple, in the ‘Banquet Scene’. That kind of pottery is well attested in the Neo-Assyrian ceramic,¹³ and, as shown by iconographic representations, but also by its shape – especially the tripod base – it was most probably used to display foods.

Some other vessels, used to serve beverages, are depicted in the relief showing the preparation of a royal banquet in Khorsabad,¹⁴ the ancient Dur-Sharrukin (Fig. 3). This relief, from the reign of Sargon II, displays two elements: the zoomorphic rhyta (Fig. 4: 12), and the huge cauldrons (Fig. 4: 13). One specimen of this kind of rhyta, characterised by a cylindrical body sculpted in the form of a lion which can be held by a semi-circular fine handle, was found in pottery from the territory of Neo-Assyrian Empire.¹⁵ But it is highly probable that the pottery specimen was copied from containers in precious metal, like the ones found in the Midas Tomb (mound MM form Gordion).¹⁶ The cauldrons were absent from the archaeological record of the Assyrian heartland, but similar ones were unearthed, again from the tomb of Midas.¹⁷

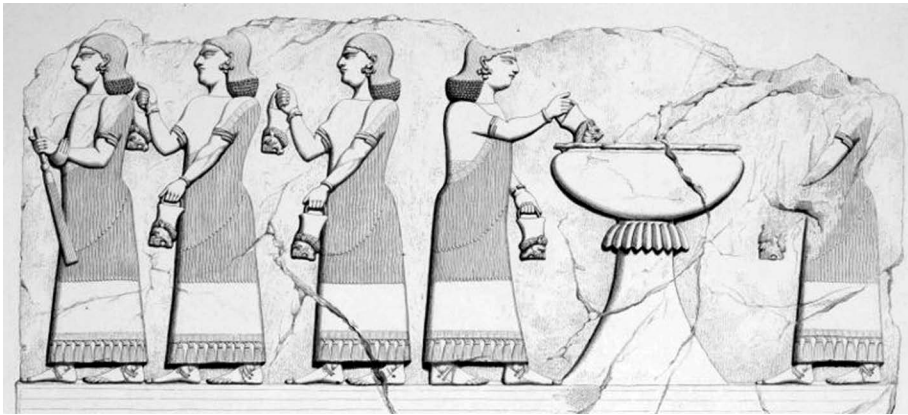


Fig. 3: Relief showing the preparation of a royal banquet from the palace of Sargon II. Khorsabad (Botta / Flandin, 1849: pl. 76).

¹³ They correspond to the category TR_02 in the study of S. Anastasio (Anastasio, 2010: 43–44, pl. 17: 2–4) and SH 2 in the study of A. Hausleiter (Hausleiter, 2010: 293–294, 362, pl. 76).

¹⁴ Botta / Flandin, 1849: vol. 1, pl. 76.

¹⁵ It corresponds to the category RH of S. Anastasio (2010: 55, pl. 14: 7).

¹⁶ Rodney, 1981: pl. 62, C–F.

¹⁷ Rodney, 1981: pl. 46.

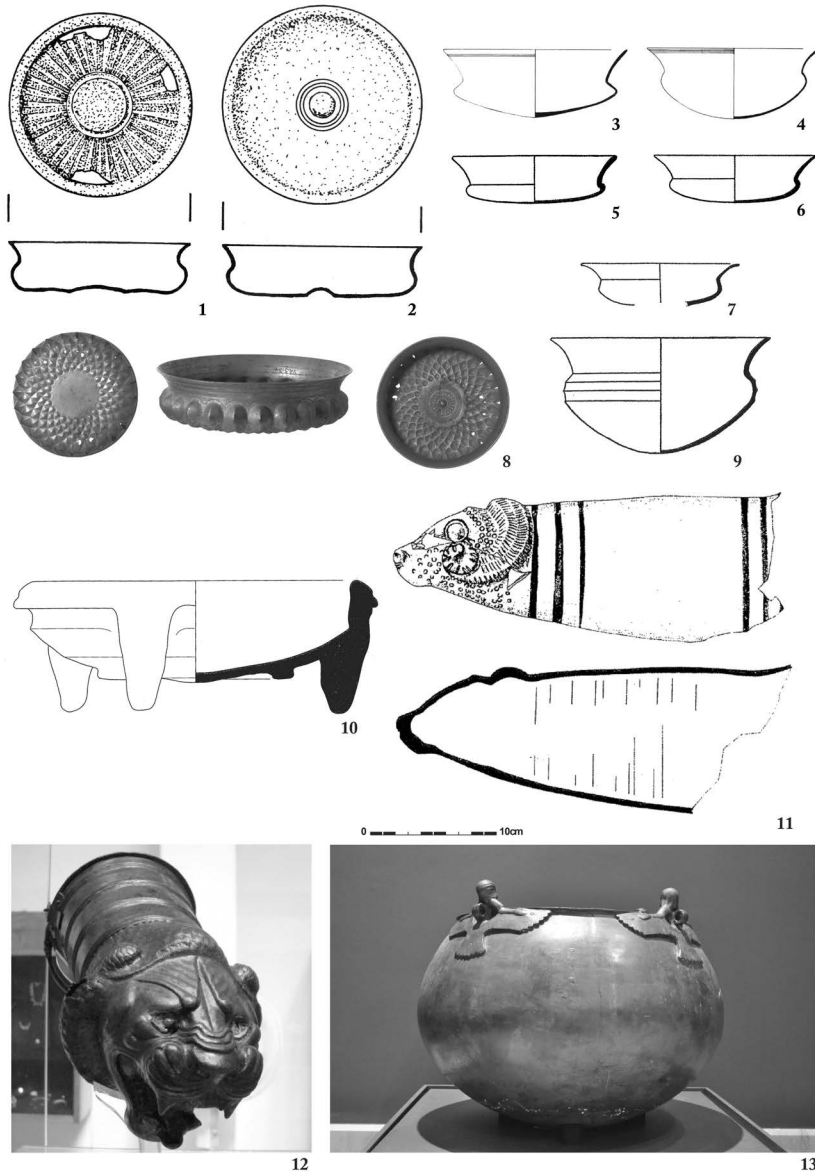


Fig. 4: Assyrian vessels used during royal banquets. 1–2: Bronze bowls from Ashur (Curtis, 2013: pl. 37: 511–512). 3–7, 9: Earthen ware carinated bowls from Nimrud (Hausleiter, 2010: pl. 75; SD 4.1–4). 8: Gold bowl engraved with the name of Assur-Taklak, found in Ashur (<http://www.smb-digital.de>); 10: Earthen ware tripod bowl from Nimrud (Anastasio, 2010: pl. 17: 2). 11: Earthen ware rhyton from Khirbat Katuniyah (Anastasio, 2010: pl. 40: 7). 12: Bronze rhyton from Gordion, Tumulus MM (so called ‘Midas’ tomb) (<http://gunce.marsyas.gen.tr>). 13: Reproduction of Bronze cauldron from Gordion, same provenance as 12 (https://www.penn.museum/collections/object_images.php?irn=410640).

3. ... And what we can guess

Beside the material clearly shown on relief, and also on the cylinder seals, other vessels, found during excavations, could also have been used during the royal banquet.

For instance, “Dimpled ware” – little goblets, mostly decorated with digital imprints put in a row – are, with the carinated bowls, one of the most famous ‘Palace ware’ specimens in Assyria (Fig. 6: 1–5).¹⁸ Also found in palatial context, they share the same very fine fabric as the bowls. And, as it is the case for carinated bowls, “Dimpled ware” can also be produced in metal.¹⁹ Therefore, notably due to their shared characteristics, it is highly probable that the goblets were also used during royal banquets. There may even be some iconographic representations of these goblets, characterised by a very schematic closed form with an ovoid body and a narrow high neck on cylinder seals (Fig. 5).²⁰ As we can see on the cylinder’s depictions, they were used for two categories of banquets-related events: 1) ‘regular’ banquets, where they were put on a table between two sitting banqueters – then, they may have been used to pour wine in bowls or smaller goblets, or, to be used by the two banqueters as a shared ‘bottle’; 2) ceremonies where the king is represented with a bow and a cup in front of a servant with a fan. In such cases, the large goblet on the table may have a symbolic function related to the libation process, or act as an evocation of the future banquet about to take place.

Furthermore, painted ware may have been used in royal banquets, as it is one of the finest and most precious ceramics of Assyria (Fig. 6: 6–7).²¹ Its cultic use is attested by archaeology: a specimen was found in the temple XVI of Tell Tayinat (Fig. 6: 6).²² It is worth noting that, as we have seen for the carinated bowls – which appear on banquet and libation scenes –, cultic and banqueting functions seem to be strongly linked.

Finally, a last form of ceramic is the beaker (Fig. 6: 8–12, 14), well known in Assyria,²³ and in peripheric territories. This ceramic is not considered to be “Palace ware”, but it is very similar to Neo-Babylonian beakers found in Uruk inside

¹⁸ They correspond to the category BT_01 (48–49; pl. 27), BT_02 (48–49, pl. 28) and BT_03 (48–49; pl. 28) of S. Anastasio (2010); BD 1 (308–309, 378–379, pl. 86), BD 2 (379–380, 309–310, pl. 87) and BD 3 (310, 380; pl. 87) of A. Hausleiter (2010); and B1 (49–53, fig. 3.12), B2 (49–53, fig. 3.13) and B3 (49–53, fig. 3.14) of A. Hunt (2015).

¹⁹ Curtis, 2013: pl. XXXIX, 509.

²⁰ For example, see in Collon, 2001: pl. IX, 104–109, 113–117.

²¹ See, for example, Anastasio, 2010: pl. 60, and especially 60, 4, which is very similar to the piece found in a palace of Tell Tayinat/Kunula.

²² Harrison / Osborne, 2012: 136, fig. 7: 9.

²³ They correspond to the BK main type of S. Anastasio (Anastasio, 2010: 58, pl. 47, 3–20).

of high-status tombs.²⁴ They were placed in the hand of the deceased to recall the drinking gesture, which may indicate that beakers were used during banquets in Babylonia in a time not far from the Neo-Assyrian period. Indeed, the Neo-Assyrian empire had a strong influence on the banqueting customs of the area, and the cultural proximity between the Assyrians and the Babylonians let us believe that the Assyrian pottery beakers, that have a similar shape as the Babylonian ones, were also used during banquets, and maybe even royal ones in the Neo-Assyrian period.

Regarding the serving ware, it is highly probable that some kind of bronze buckets and strainers, found in Assyrian royal palaces, were used, similarly to the rhyta we studied in the last paragraph, for serving beverages, especially wine (Fig. 6: 13).²⁵



Fig. 5: Neo-Assyrian cylinder seal (imprint). Chalcedony, 2.3 × 1.1 cm. VA 7976. (Klengel-Brandt, 2014: n° 152 = Moortgat, 1940: n° 665).

4. A hierarchised material

In the Banquet scene relief, it is interesting to note that Ashurbanipal's and his queen's faces but also the king's bowl – probably a carinated bowl if the image of the queen's bowl, which remains untouched, is anything to go by – were hammered out after the fall of Nineveh. While it is easy to understand why the faces of the king and queen were erased due to their position of power, the motives for hammering the royal bowl are more intriguing.

²⁴ Salje, 1996: 446.

²⁵ See the two published examples in Curtis, 2013: pl. XL, 522; pl. XLI, 524.

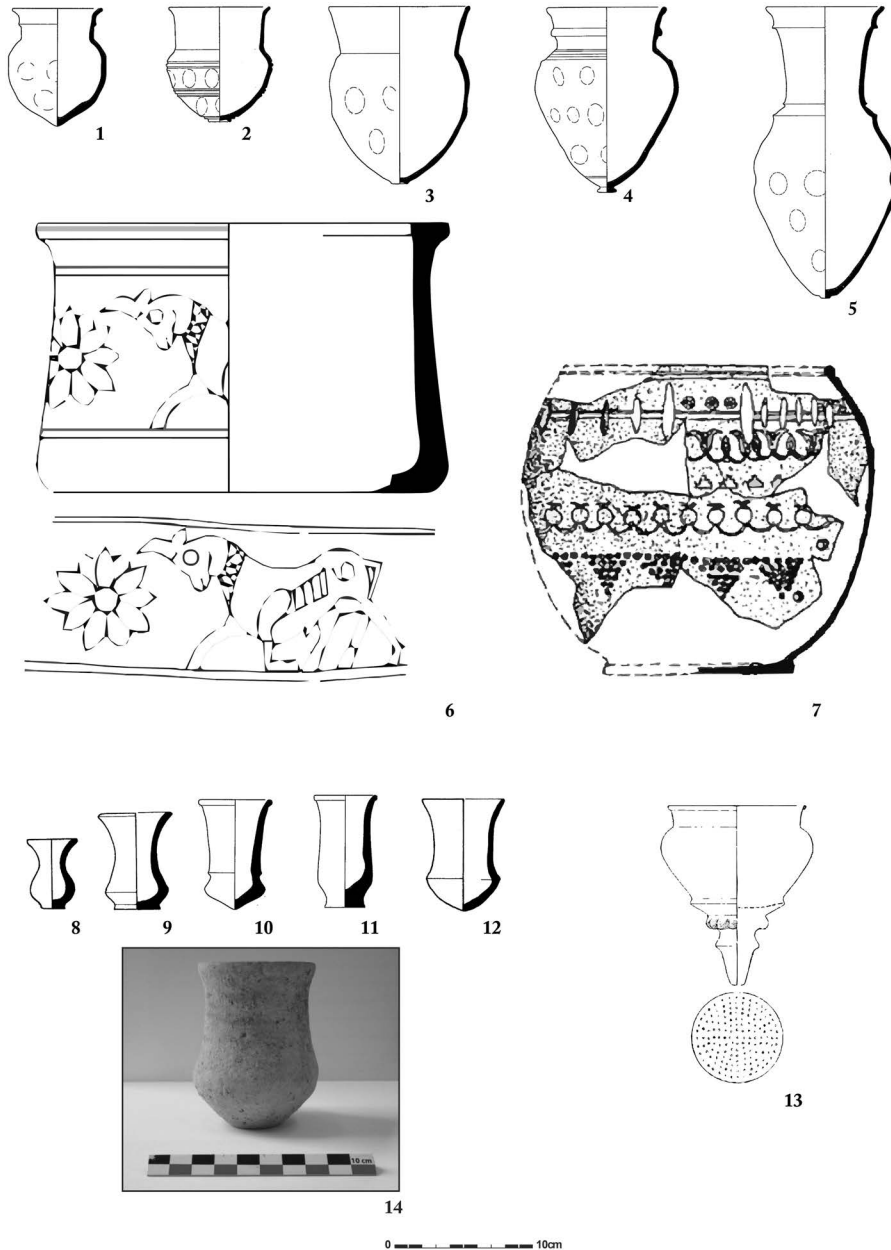


Fig. 6: 1: Assyrian vessels probably used during royal banquets. Dimpled ware (pottery) from Assur, Anastasio, 2010: pl. 27: 11. 2–4: Dimpled ware (pottery) from Nimrud (1–2) and Ashur (4), Anastasio, 2010: pl. 28: 1–3. 5: Dimpled ware (pottery) from Ziyarete Tepe, Anastasio, 2010: pl. 28: 10. 6: Painted pot from Temple XVI of Tell Tatinat/Kunulua. Redrawn from Harrison, Osborne, 2012: fig. 7: 9, p; 136. 7: Painted pot from Ashur. Redrawn from Hausleiter, 2010: pl. 126. 8: Earthen ware beaker from Nimrud, Hausleiter, 2010: pl. 81: BE 4.1. 9: Earthen ware beaker, Hausleiter, 2010: pl. 81: BE 4.3. 10: Earthen

ware beaker from Nimrud, Anastasio, 2010: pl. 27: 6. 11: Earthen ware beaker from Nimrud, Anastasio, 2010: pl. 27: 2. 12: Earthen ware beaker from Nimrud, Hausleiter, 2010: pl. 80: BE 2.3. 13: Bronze strainer from Nimrud, Curtis, 2013: pl. XLI: 524. 14: Earthen ware beaker from Rasm el-Tanjara (Syria), held at the AUB Archaeological Museum. Photo: A.-A. Baaklini.

Numerous carinated bowls were found in archaeological excavations. Produced in ceramic or metal, they are objects which, by the material used, reflect a certain prestige. This is further reinforced by the presence of inscriptions with the names of their owners. Indeed, inscribing the bowls with the name of their owners makes it possible to distinguish these bowls – which have become unique because nominative – from the rest of the objects used at banquets. Thus, a personal and symbolic value seems to be attached to these specific bowls. And if the bowls of the high dignitaries were inscribed with their names, it is possible to think that the king's bowl was also inscribed with his name although the archaeological excavations have not yet revealed any. It is therefore possible to understand the hammering of the king's bowl on the Banquet scene as an act that refers to the practice of *damnatio memoriae* in the ancient Near East, as is the case for the many reliefs where royal insignia are erased.²⁶ The carinated bowls used by the king, and probably bearing an inscription with his name, must have carried a powerful symbolic charge, closely linked to the king's image.²⁷ A hierarchy thus seems to emerge between the bowls, on the one hand, according to the material in which they were produced, and, on the other hand, according to their owners.

Furthermore, it is possible that this individuation of certain containers – whether they belonged to the king or to dignitaries – is in fact at the origin of the hierarchy that can be seen in the iconographic sources. The success of carinated bowls, especially in ceramic, found throughout the Near East²⁸ can be explained by the importance of this form.

Other small containers, such as beakers and “Dimpled ware”, could also have been of some importance, as they are individual containers although they do not seem to have been closely associated with particular individuals.

Finally, it seems clear that the tableware used for the service, shared by all the banqueters, or used to present the food, did not carry any particular symbolic charge and could only be prestigious due to their material and financial value.

A hierarchy thus emerges and seems to be a typical element of the royal banquet, as it is a particular type of banquet, as its main objective is to establish the domination and superiority of the king: the “Patron-role feast” according to

²⁶ May, 2012.

²⁷ Nylander, 1999.

²⁸ Baaklini, 2021: 247–249; Adachi, 1997.

Dietler's typology.²⁹ It would be interesting to know how this material was used in aristocratic banquets, which might have more closely resembled the Greek symposium with its relative "equality" among the guests,³⁰ or relate to the "Empowering feast".³¹ It should be noted that the two functions of the banquet are not contradictory, as the royal banquet also serves to create an identity for the imperial elite. In this context, it is clear that the material used, and particularly the tableware – especially in the case of the carinated bowls given as gifts – plays a major role.

Conclusion

The study presented here focuses mostly on the ware visible in the reliefs; however, it is likely that other types of wares were used at these events. Furthermore, it is also possible to extend the typological spectrum of certain forms, notably the carinated bowls, since many of them, notably the metal specimens from Nimrud and Ashur, have not yet been published.³² And it should be remembered that the banquet was probably not limited to drinking and eating from tableware, but that certain ceremonies could also have been taking place and require specific tableware. For instance, in Athens in the classical period, guests had to make libations by pouring wine from their cups into larger vessels,³³ or played certain games, such as drinking one after the other from a disproportionate cup without spilling any liquid.³⁴ This opens up new possibilities for the identification of new types of tableware, but it also requires further research into the Assyrian banquet and its various stages – which is rather difficult because of the lack of clear references in textual sources.

Abbreviations

PNA = Baker, H. / Parpola, S. / Radner, K. (eds.) 1998–2011: *The Prosopography of the Neo-Assyrian Empire*. Helsinki.

RIMA 2 = Grayson, A. K., 1991: *The Royal Inscriptions of Mesopotamia. Assyrian Periods. Volume 2, Assyrian Rulers of the Early First Millennium B. C., 1114–859 B. C.* Toronto, Buffalo, London.

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²⁹ Dietler, 2001: 82–84.

³⁰ On greek symposium, see, Wecowski, 2014

³¹ Dietler, 2001: 76–80.

³² Curtis, 2013: p. 70.

³³ Wecowski, 2014: 38.

³⁴ Wecowski, 2014: 42–43.

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What Fine Ceramics Can Tell Us About Social Drinking in Iron Age Iran

Trudy Kawami

“They are very fond of wine, and drink it in large quantities.”
Herodotus, *Histories* Book 1 (133).

This was just one among many ancient references to Persian social drinking, and the assumption has been that the Achaemenids were the initiators of this practice. However, this social activity was not begun by the Achaemenids. It was part of a very long tradition rooted in northwestern and western Iran.

Wine has a long history in Iran, of course, as exemplified by a ceramic pot from Hajji Firuz containing residue consistent with wine fermentation dating to approximately 5400–5000 BCE.¹ The practice of social drinking may be illustrated by the proliferation in Iron Age II–III of elaborately beak-spouted vessels in western and central Iran (Fig. 1). These vessels are fine ceramics, that is they are well-potted, frequently thin-walled and often burnished or painted. They have exaggerated beak spouts. For the purpose of this discussion, I do not distinguish between beak-spouted vessels and bridge-spouted vessels.² Pots with either type of beak-spout are not kitchenware; and the spouts are too vulnerable to breakage for everyday use. These pots were clearly made for special occasions by skilled craftspeople.

Beak-spouted vessels first occur in graves of the latter 2nd millennium BCE in northwestern Iran at Dinkha Tepe,³ Geoy Tepe,⁴ Hajji Firuz⁵ and Hasanlu,⁶ sites in the vicinity of Lake Urmiah. By the first millennium BCE examples in both metal and ceramic appear in graves over a wide area, occurring both north and south of Lake Urmiah, and are especially notable at Hasanlu. Other examples have

¹ McGovern, 2003: 66–70, pl. 3; Balatti, 2021.

² For the general chronological distinctions between the two types see Danti, 2013: 343–344, 348, 351, fig. 17.10, 355, fig. 17.11, 360–361.

³ Danti, 2013: 180–181, 222–223, 230, 254–255, figs. 4.18T, 4.36a, E, 4.40P, 4.52.

⁴ Danti, 2013: 192, 198, figs. 4.22b:D, 4.25G.

⁵ Danti, 2013: 222–223, 300, figs. 4.36B, 5.15.

⁶ Danti, 2013: 202–203, fig. 4.27FF, 7 pl. 5.9.

been excavated in the western Caspian watershed at sites like Ghalekuti I⁷ and Marlik,⁸ and at Khurvin on the southern side of the Elborz.⁹ Most of these vessels are monochrome with a carefully polished surface that evokes metal. On some examples the burnishing produces patterns that radiate across the surface. Additional examples, many elaborately painted, are found eastward on the plateau at Kara Tepe,¹⁰ Tepe Giyan¹¹ and Tepe Sialk¹² and to the south of Sialk at Shamshirgah near Qom.¹³ Less wealthy sites to the south like War Kabud,¹⁴ Chiga Sabz¹⁵ and Tepe Guran¹⁶ in the Pusht-e Kuh, the western chain of the Zagros uplift, show the wide occurrence of these dramatically beaked vessels (Fig. 2). The absence of elongated beak-spouts in vessels from the Elamite lowlands of Khuzistan is notable.

The same exaggerated spouts appear on metal vessels, both copper alloys and more precious materials, throughout the same area. Two copper-alloy vessel one from a hoard at Sangtarašan, Lorestan¹⁷ (Fig. 3), and the other from Marlik¹⁸ (Fig. 4) in the Caspian watershed demonstrate the similarities.

Early well-known examples come from Iron II–III graves at Tepe Sialk followed by discoveries in the cemeteries at Hasanlu and environs, at Masjid-e Kabud¹⁹ farther north near Tabriz and at several sites well to the south in Lorestan. But beak-spouted vessels are not specifically funeral; they also occur in “public” buildings. At least 36 exemplars in both ceramic and metal come from the Burned Buildings on the Hasanlu citadel.²⁰ Others are known from Nush-e Jan²¹ near Malayer and at the shrine at Surkh Dum²² in the Pish-e Kuh, and at Shamshirgah

⁷ Egami *et al.*, 1965: pl. XXV:1; Kawami, 1992: 26, fig. 31.

⁸ Negahban, 1996: figs. 6, 25, 30, pls., XX, D; XXX, C, D; pls. 22, 16; 23, 17; 24, 21; 27, 45; 29, 55; 109, 572–575; 110, 576–579.

⁹ Vanden Berghe, 1964: 6–12 and pls. I–IV.

¹⁰ Matthews *et al.*, 2022: 429, fig. 11.49.

¹¹ Contenau / Ghirshman, 1935: pl. XVI, 18, 39.

¹² Ghirshman, 1939: frontispiece, pls. IX–XII, XL, XLV, XLVII, LXIV, LIII–LIV, LX, LXXX–LXXXVII; Seipel, 2000: 91–94, nos. 15–16. For the dating of these vessels see Curtis, 2019: 4; Nashli / Nokandeh, 2019: 10–11; Danti, 2019: 29–31.

¹³ Fahimi, 2010: 169, 181, fig. 114 (central right).

¹⁴ Haerinck / Overlaet, 2004: pl. XVII, pl. 64, 99.

¹⁵ Schmidt / van Loon / Curvers, 1989: pl. 135a, b, 139a.

¹⁶ Thrane, 2001: 93–100, pls. 38:4, 65:16.

¹⁷ Hashemi, 2018. Also <https://whitelevy.fas.harvard.edu/luristan-excavation-documents-sangtarashan-iron-age-site-pish-kuh> Accessed May 31, 2022.

¹⁸ Negahban, 1996: fig. 6, no. 45 and pl. 27, no. 45, from Tomb 52.

¹⁹ Azarnoush / Helwing, 2005: 220.

²⁰ I am grateful to Megan Cifarelli for this information.

²¹ Stronach, 1978: 20, fig. 9:14.

²² Schmidt / van Loon / Curvers, 1989: pl. 191, a. Field no. Sor 963.

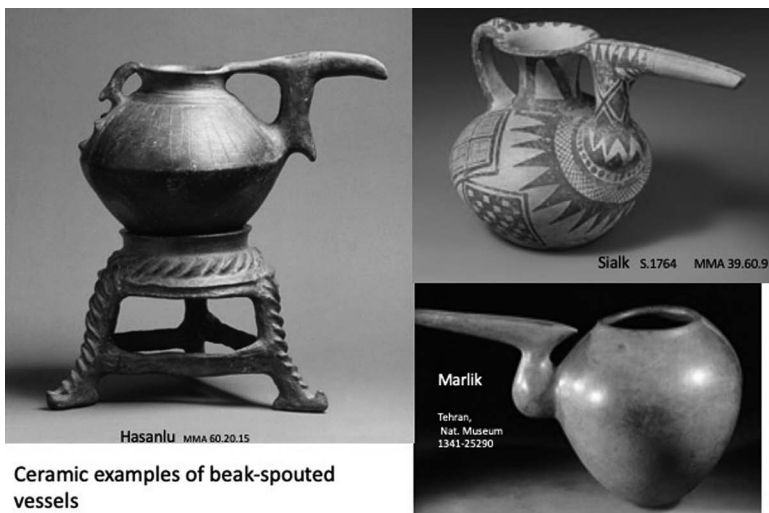


Fig. 1: Beak-spouted vessels from Hasanlu (left), Tepe Sialk (upper right), and Marlik (lower right). Photos of the Hasanlu and Sialk vessels are courtesy of the Metropolitan Museum of Art, acc. nos. 60.20.15 and 39.60.9 respectively. The photo of the Marlik vessel, field no. 1102 M, is after Seipel 2000, courtesy of the National Museum Tehran, acc. no. 1341-25290.



Fig. 2: Map of Iran showing the general distribution of beak-spouted vessels. Map courtesy of Freeworldmaps.net with modifications by the author.



Fig. 3: Bronze hoard with beak-spouted vessel from Sangarāšan, Lorestan.
Photos courtesy of Sangtarashan Archaeological Mission (ICHTO).



Fig. 4: Bronze beak-spouted vessel from Marlik, Tomb 52.
Photo after Negahban 1996, pl. 27, no, 45.

south of Sialk.²³ Even the Assyrian-influenced Manaeen site of Qala'ichi (ancient Izirtu) has produced beak-spouted vessels from occupational levels.²⁴ The beak-spouted vessel appears in both funeral and non-funeral or “public” contexts in the same regions.

All of which raises the question: how do vessels with these exaggerated spouts function as pouring vessels? If one looks at spouted vessels in general, one can see that the length of the spout controls the arc of the fluid poured (Fig. 5). A longer spout allows the fluid to be poured farther from the vessel and often with

²³ Fahimi, 2010: 167–168.

²⁴ Mollazadeh, 2008: 109–111, and pls. 1, lower right; 7:20–21.

a dramatic arc. I personally experienced this decades ago when emptying a Sialk-style spouted pot that had been soaking in distilled de-ionized water as part of a conservation and restoration process. The long, graceful arc of water that the spout produced surprised me. Alas, at the time I did not think to document it with photos. Currently I know of no museum that would allow me to fill one of their pots and pour it out just for a photograph.

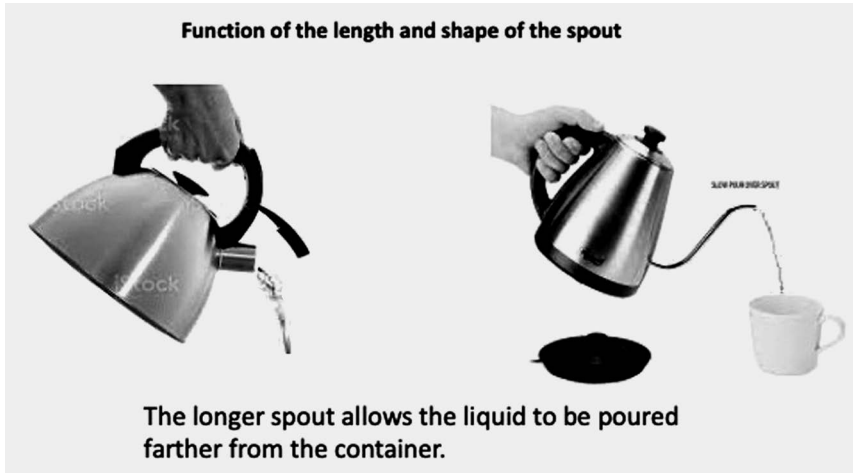


Fig. 5: Length of spout images. Photos courtesy of iStock by Getty images.

Using a vessel from Sialk (Fig. 6) now in the National Museum, Tehran, one can easily see how to pour. One hand, probably the right, controls the angle of the spout via the strap handle opposite the spout. The other hand, probably the left, supports the base just below the spout. Handless beak-spouted pots usually have tapered bodies rather than spherical ones and were probably served with a hand at each lower side cupping the vessel's body. Thus, we can now envision how the bearers of these vessels could dramatically pour out a long thin stream of wine, presumably, while standing at some distance from the recipient.

A look at the décor, especially that of the painted vessels, suggests the position of the recipient. The lower portion of the body of the vessel, an aspect that is not directly seen by the bearer, and less visible to bystanders, is often ornamented with elaborate patterns and sometimes inhabited by animated animals (Fig. 7). Furthermore, the bases of these vessels are usually painted with two crossed lines one of which forms an axis linking the spout and the strap handle (Fig. 8). This is even the case with less elegant pots. The base is also delineated with a painted edge and often has ornamental dots along the perimeter. You can see how carefully the décor was organized on the Sialk pot S.202 (Fig. 9). All parts of the radiating patterns are carefully placed to relate to the bands above and below. Monochrome burnished vessels often have a pattern-burnished on their bases as well. The effort put into decorating the portions of the vessel that are least visible

implies that there are observers who are below the vessel looking upward. Thus, the recipients of the poured fluid were likely seated, probably on cushions, on the floor.

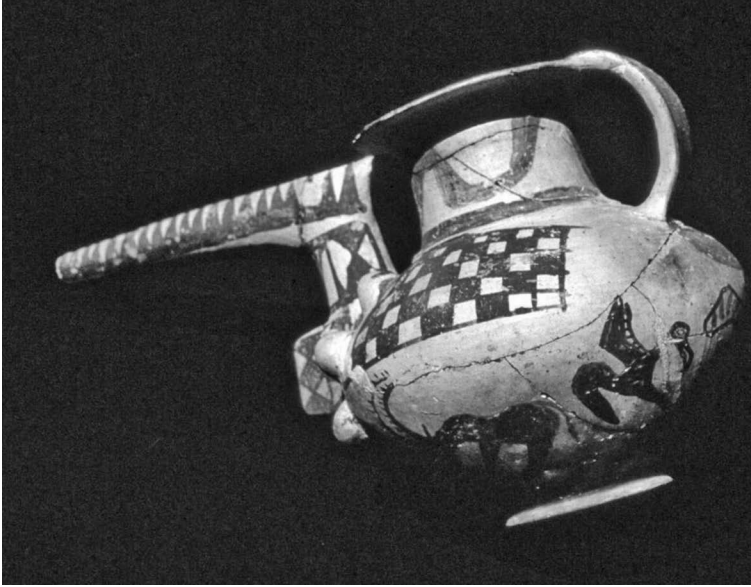


Fig. 6: Ceramic vessel from Tepe Sialk positioned as if pouring.

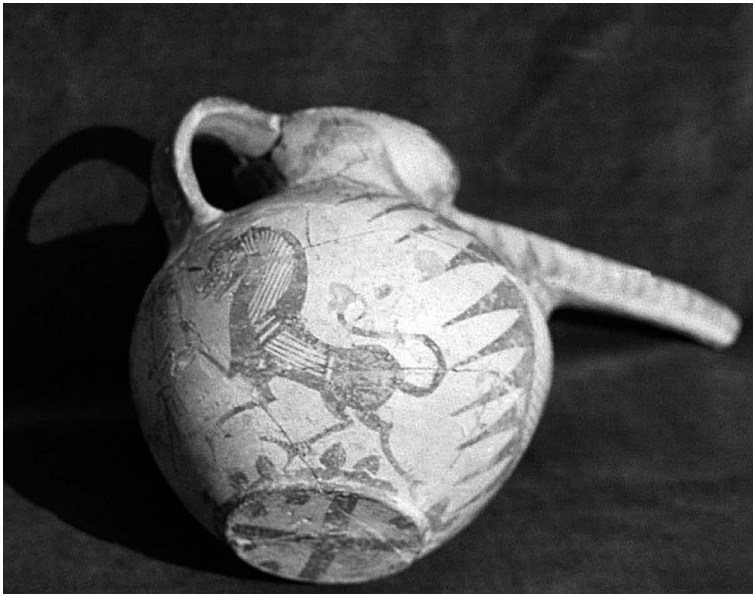


Fig. 7: Sialk-style ceramic vessel, ex coll. A. Godard, showing bottom décor.

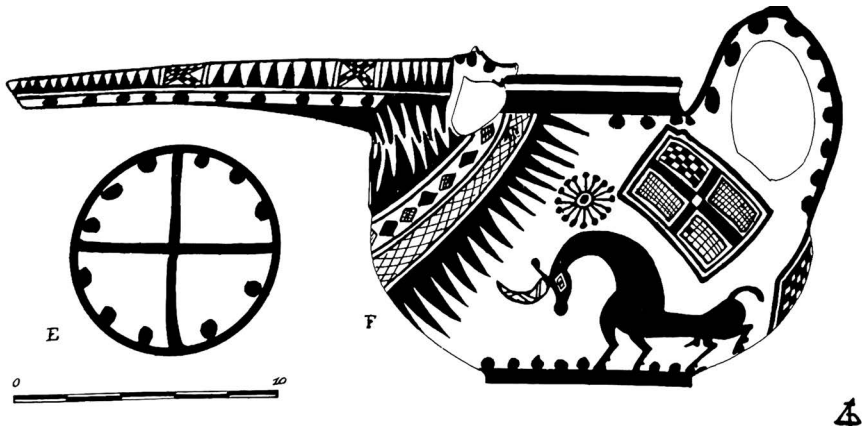


Fig. 8: Ceramic vessel from Tepe Sialk, Cemetery B, Tomb 15, field no.S.814. After Ghirshman 1939, pl. LXXX, e-f.

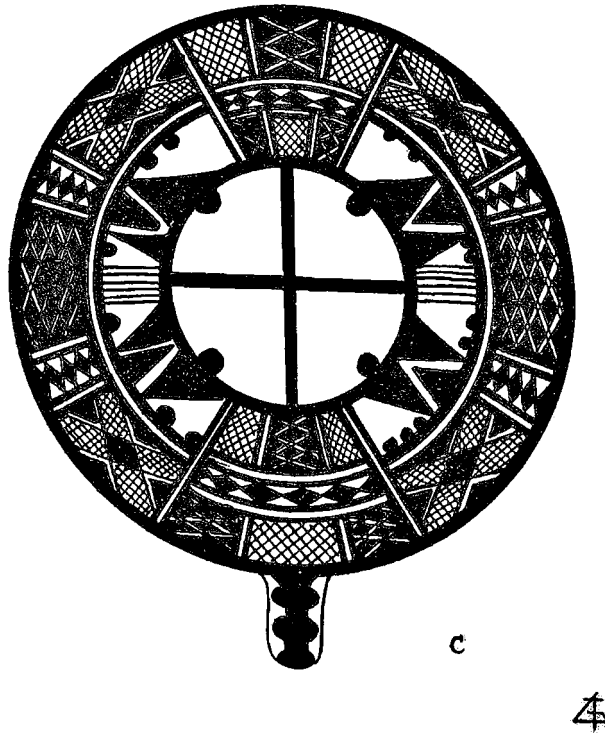


Fig. 9: Base of ceramic vessel from Tepe Sialk, Cemetery B, field no. S.202, showing alignment of bottom décor with handle. After Ghirshman 1939, pl. LXXXIII, c.

To envision what the “service” of these vessels might have looked like, I employ the contemporary parallel of the ceremonial serving of coffee at social occasions in the countries along the Gulf (Fig. 10). To quote Abdullah Khalfan Al Hamour, a heritage specialist in Dubai:²⁵

“After preparing the coffee, it is served in small cups to the guests. The person serving the coffee to the guests or family members (the *muqahwi*) must be a mature one, at least 15 years and above and not a child so he’s able to speak well with the guests and not risk spilling coffee onto the clothes of guests as he serves them. The *muqahwi* should hold the *dallah* (coffee pot) in his left hand and about three small cups with no handle on the right” al Hamour said.

“He should serve the coffee starting from the person sitting on the right of the *majlis* (gathering) and should not skip anyone. If there is a very important person in the *majlis*, like a sheikh or a religious scholar, he should be served first. The *muqahwi* should then serve others starting with the person on his right.” After drinking, the guest gently shakes the small cup to show the *muqahwi* that he’s done. The *muqahwi* always remains standing until all guests have finished drinking the coffee. And it is prohibited to serve coffee while people are eating food.”



Fig. 10: Heritage specialist Abdullah Khalfan al-Hamour. Photo by Ryan Lim courtesy of the editors of the Khaleej Times.

While not an absolute parallel to the presentation of the beak-spouted vessels, the Gulf coffee protocol serves as a reminder that position, posture, and procedure are important in a ceremonial social occasion. And of course, these elements are not directly found in the archaeological record.

²⁵ *Khaleej Times*, May 11, 2017. See <https://www.khaleejtimes.com/uae/this-is-the-proper-traditional-way-to-drink-arabic-coffee> Accessed Nov. 28, 2022.

So what else can the beak-spouted vessels tell us about the societies in which they were used? It is a commonplace that ceramics reflect the society that produced them, though in the past attempts to link ceramic types to linguistic or ethnic groups have proved problematic to say the least.²⁶ Pots do not equal people! But if we look at the fine ceramics of a culture or region we can see some things of interest.

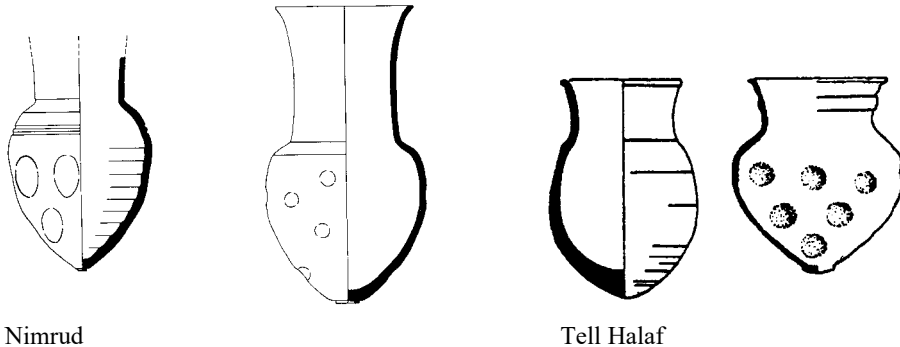


Fig. 11: Assyrian dimple ware from Nimrud and Tell Halaf, Syria. Nimrud: Mallowan, 1966, p. 51; Tell Halaf: Akkermans/Schwartz, 2003, p. 365.

A consideration of the fine ceramics of the Assyrian Empire, particularly palace ware²⁷ and dimple ware,²⁸ finds both in far-flung administrative centers as well as in official complexes in Nimrud, Nineveh and Assur. Palace ware and dimple ware are diagnostic ceramic types for Assyrian political, and often military, presence. Dimple ware examples from Nimrud and from Tell Halaf in Syria are virtually identical. (Fig. 11) They have been found in large quantities, as many as 100 pieces, in situ in official residences.²⁹ In contrast the Iranian fine wares, whether pattern-burnish or painted, display generally similar forms but have a wide variety of proportions, ornament and details of rim, neck, handle and base. An assemblage of Sialk pots from an Iranian website (Fig. 12) illustrates this diversity. The Iranian pots are usually found singly, though some rich graves may contain two or three, and at Hasanlu, Room 2 in Burned Building V held six pots.³⁰

²⁶ Lamberg-Karlovsky, 2002: 75.

²⁷ Hunt, 2014; Mallowan, 1966: 178–180, 190.

²⁸ Ohtsu, 1991; Akkermans / Schwartz, 2003: 365, fig. 11.4j.

²⁹ Oates / Oates, 2001: 46–47, 134; Mallowan, 1966: 178–180, 190.

³⁰ I am indebted to Megan Cifarelli for help with the Hasanlu ceramics.

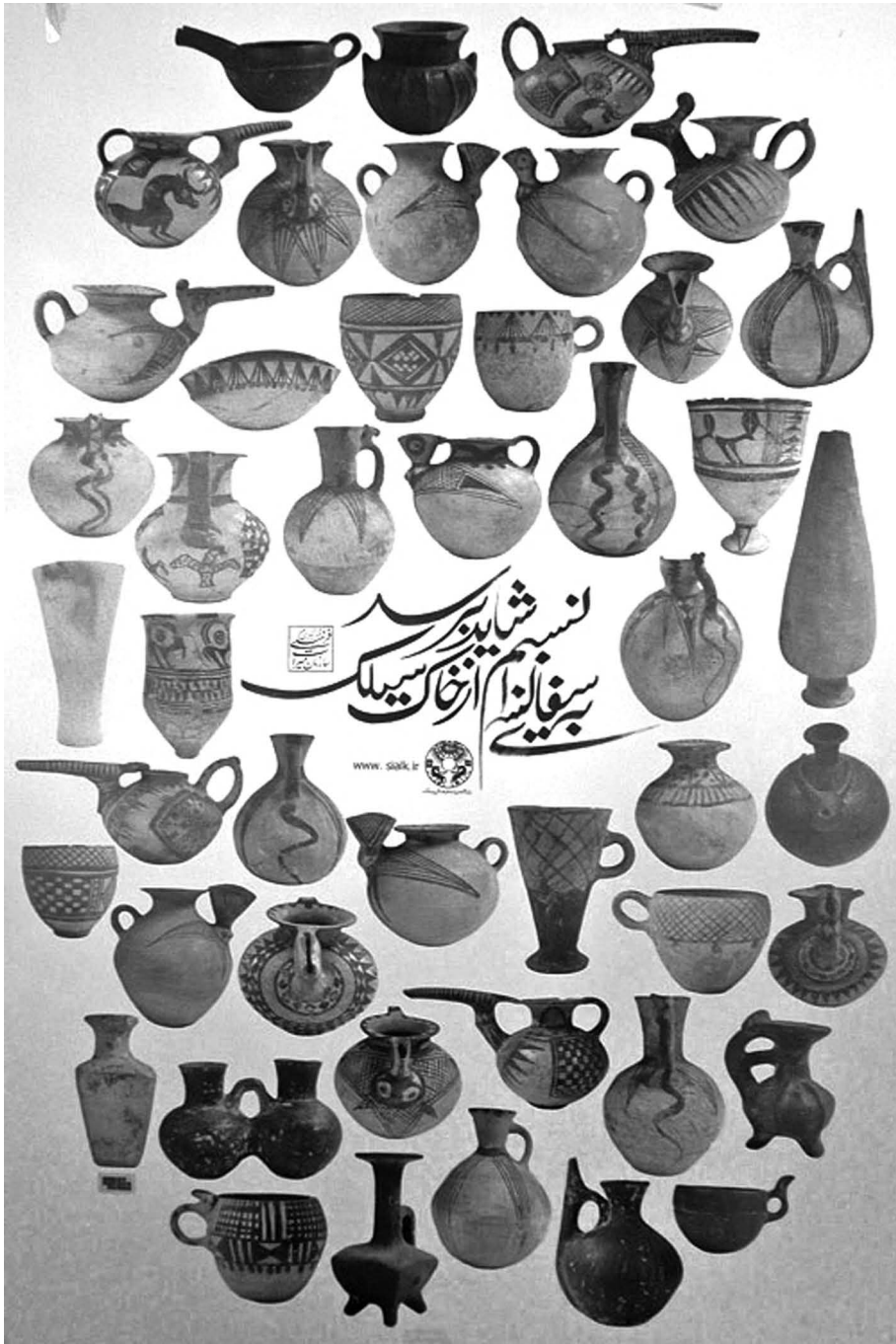


Fig. 12: Poster showing Iron Age Iranian ceramics photographed at Tepe Sialk in 2009. Courtesy of www.the-persians.co.uk.

The Assyrian Empire was hierarchically organized, that is power ascended vertically. Assyrian fine wares, that is palace ware and dimple ware, are intimately associated with that Empire, and reflect controlled production and distribution. In contrast, the polities of northwestern Iran, the Zagros, and the plateau appear to have been heterarchically organized,³¹ that is they were linked generally as equals in a more or less horizontal format. We know from the Assyrian records that there were different ethnicities in this region,³² though it is difficult to tell how these various tribes or “houses” differed and if they shared kin-systems or belief systems in addition to similar lifeways. The Assyrians, after all, were not anthropologists.

So how would these dramatic beak-spouted vessels have functioned in a heterarchical culture? With Herodotus’ description of Achaemenid social drinking in the background, it is possible to see the Iron Age beak-spouted vessels used in a performative way during communal gatherings or feasts. While these ceremonies could be part of the burial rites of important people, they were clearly used in non-funerary contexts as well. Communal feasts are not just celebrations, they are a powerful means of building alliances or solidifying social groups that are approximately equal in power or prestige.³³ Unlike the Assyrian royal feasts that reinforced the centrality of the king and his power,³⁴ the Iranian equivalents, whether cooperative (reciprocal)³⁵ or competitive³⁶ feasts, would have reinforced the cohesion of the smaller entities in the face of pressure from both Assyria and Elam. Thus the beak-spouted vessels suggest a wide-spread practice of communal activities featuring the ceremonial pouring of liquids to seated recipients without a clear hierarchy.

The ceremonial sharing of drink, probably but not necessarily wine, in an elaborate ceremonial or ritual situation could be a means of knitting together the disparate groups of northwestern Iran, the Zagros and the plateau. The Achaemenid use of this practice was merely the continuation of a long-established social activity, one re-oriented to focus on the person of the king and his court. The social or political identity of the drinkers, especially in the more distant regions of the Achaemenid Empire, bound them to the center of power as well as to each other.³⁷

³¹ Balatti, 2017: 86, 91–96; Svärd, 2015: 153–158, 161–173.

³² Balatti, 2017: 80–83, 86–106.

³³ Kassabaum, 2019.

³⁴ Ermidoro, 2015: 11, 23, 55, 98; Fu / Altman, 2014, 14–16; Renette, 2014. For the complex administration of the royal supplies see Grob, 2015.

³⁵ Renette, 2014: 74, n. 40.

³⁶ Hayden, 2020: 795–797.

³⁷ Dusinger, 1999; Colburn, 2020: 201–219; 2022, 54–63.

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Toasting with the Dead

Funerary Drinking Vessels in Early and Middle Bronze Age Upper Mesopotamian Burials

Juliette Mas

1. Introduction

Early and Middle Bronze Age Mesopotamian graves were usually furnished with numerous funerary offerings. They often included different kinds of objects such as jewels, weapons, and almost always pottery vessels. Indeed, the majority of Mesopotamian tombs yielded ceramics, sometimes tens of pots, even in the case of ordinary burials. This article focuses on the funerary material from the site of Chagar Bazar, located in the Syrian Jezirah. Chagar Bazar ordinary burials dated to the Early Bronze Age and to the Middle Bronze Age have been extensively studied,¹ and their characteristics – notably concerning the pottery vessels they yielded – have been compared to the material from some other contemporary sites of the region.

The vessels uncovered within the Upper Mesopotamian funerary assemblages dating to the Early and Middle Bronze Ages generally correspond to tableware: i.e. vessels linked to food consumption or drinking. These ceramics may have been connected to funerary banquets, to the will to insure eating and drinking for the dead during their journey to the netherworld, or as offerings for the infernal deities.² The pottery funerary sets mostly contained daily-use vessels also attested in an occupational context (domestic or official). In fact, no specific funerary vessels or fabrics have been identified in the burial assemblages in the Jezirah region from the Early Bronze Age or the Middle Bronze Age.³

¹ Information regarding all aspects of Early Bronze and Middle Bronze Ages ordinary burials from Chagar Bazar were published in 2018 in a series of monographs. Concerning the archaeological description of the tombs, see notably Tunca / Baghdo / Léon, 2018 and concerning the pottery, see Tunca / Mas, 2018.

² See notably Scurlock, 1995: 1884 and Lion, 2015: 315–316.

³ An exception to this lack of specific funerary vessels may be made of the EJZ 2 Jezirah Bichrome Ware stands. However, these are very poorly attested (see Lebeau, 2003; Valentini, 2003; Rova, 2011: 70).

2. Pottery vessels in Early Bronze Age graves

The Early Bronze Age ordinary graves from Chagar Bazar, excavated by the Syro-Belgian archaeological mission, can be attributed to two main periods: the EJZ 2 period (corresponding to the end of the so-called Ninevite 5 period) and the EJZ 3a period.⁴ 101 pots were discovered in Early Bronze Age graves at Chagar Bazar.⁵ 29% of these pottery vessels correspond to open shapes, and more than two thirds of the funerary assemblages that included pottery vessels count at least one open shape. Among the uncovered open shapes, pointed base Ninevite 5, hemispheric, S-Shaped, wide-open beaded-rimmed, cyma-recta, and incised/excised carinated bowls are represented (Fig. 1). These bowls and cups might correspond to drinking vessels.

The open shapes attested in Chagar Bazar graves correspond to typical vessels discovered in the Jezirah during the late Ninevite 5 period (i.e. the EJZ 2 period) and during the EJZ 3 period. Indeed, these types are notably well represented in 3rd millennium graves at Tell Mohammed Diyab,⁶ Tell Arbid,⁷ Tell Beydar⁸ and Tell Melebiya.⁹ We should also point out that these funerary assemblages count at least one open vessel. No specific funerary fabric or shape was identified.¹⁰ In addition, we can note that the wealthy graves were not furnished with specific vessels but only with a larger quantity of pots.

Some of the closed shapes might also have been used for drinking. Nevertheless, the majority of the Early Bronze Age small jars and bottles from the Chagar Bazar burials – which are mainly made of Metallic Ware¹¹ – do not seem to have been suitable for the consumption of beverages. It is also likely that specific large jars were used for the collective drinking of beer. Beer was commonly involved in festival cults and feasting events in Bronze Age Mesopotamia.¹² We know from the textual evidence that beer had a privileged place in funerary ceremonies.¹³ We know, notably from iconography, that people drank from large pots with long reed straws, probably with metal strainers at their end.¹⁴ In fact, it is well acknowledged by the community of scholars that metal strainers were used to

⁴ Tunca / Mas, 2018: 49–67, 89–96.

⁵ Tunca / Mas, 2018: 45–68, Pls. 2–17.

⁶ Nicolle, 2006.

⁷ See notably Ławecka, 2006; Bieliński, 2007.

⁸ See notably Bretschneider, 1997; Van der Stede, 2007.

⁹ Lebeau, 1993: 229–254.

¹⁰ Cf. note 3.

¹¹ Tunca / Mas, 2018: Pl.10.

¹² On this topic, see notably Sallaberger, 2015.

¹³ Notably Scurlock, 1995: 1888; Lion, 2015: 316–317.

¹⁴ For glyptic examples, see notably Woolley, 1934: pl. 200. 102; Frankfort, 1955; Paulette, 2021: fig. 4. The beverage of beer has been widely studied through textual and iconographic evidence (Hartman / Oppenheim 1950).

drink unfiltered beer.¹⁵ Strainers are – although quite rarely – documented across the Near East during the Middle Bronze Age and the Iron Age.¹⁶ No metal strainer was discovered in Chagar Bazar Early Bronze Age burials; therefore, it is difficult to determine whether or not large closed vessels from these graves were used for the collective drinking of beer.

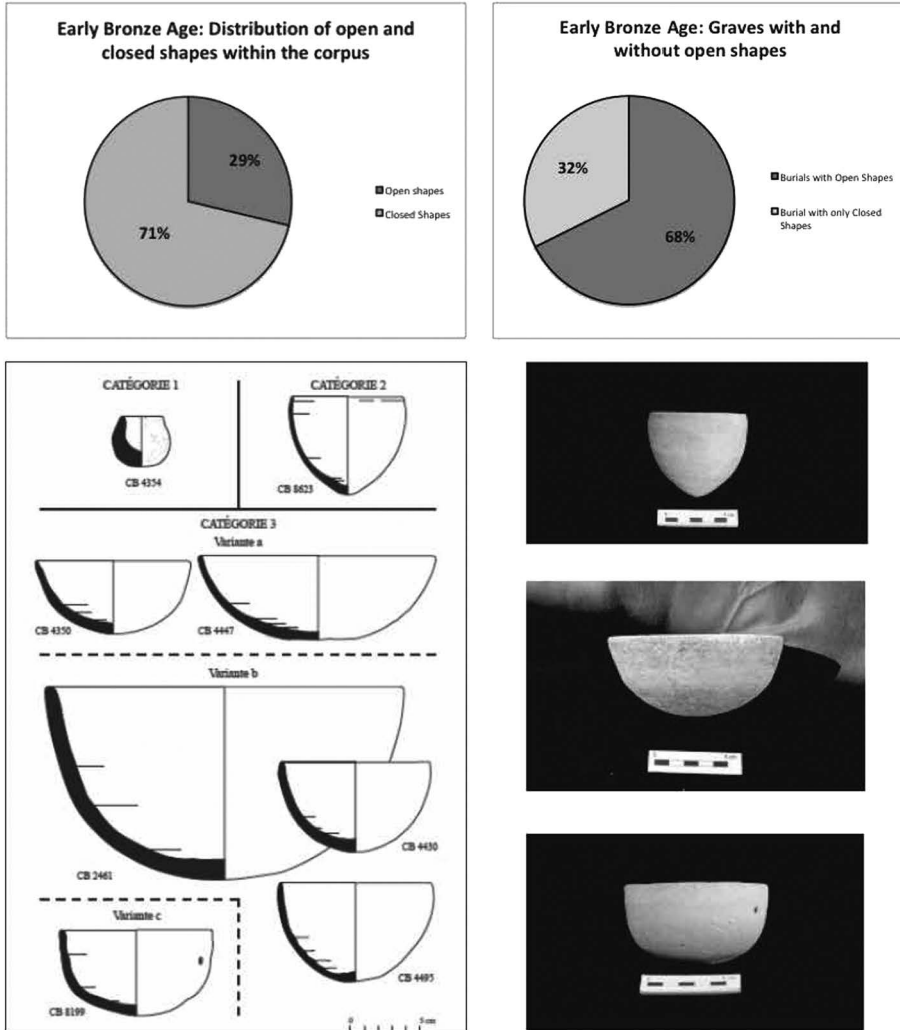


Fig. 1: Chagar Bazar. Distribution and examples of open vessels from Early Bronze Age graves. Drawings and pictures after Tunca / Mas, 2018: pl. 2.

¹⁵ Maier, 1992; Homan, 2004; Faivre, 2009: 173. Furthermore, according to Michel, an Old-Assyrian text documents the payment of straws for beer jars, Michel, 2009: 209.

¹⁶ See notably Maier, 1992: table 9.1, concerning the attestations across the Near East.

3. Pottery vessels in Middle Bronze Age graves

The majority of the ordinary graves excavated at Chagar Bazar are dated to the MB II.¹⁷ This period corresponds to the spread of the so-called Habur Ware, which is largely attested in the tombs. 65 of the burials dated to the Middle Bronze Age yielded pottery vessels within the funerary assemblages.¹⁸ We can note that, in opposition to the Early Bronze Age burials, the open shapes are very poorly represented within the funerary ceramic collections. In fact, only 6% of the pottery vessels within the graves correspond to open shapes (Fig. 2).

Furthermore, only 7 out of 65 burials with pottery vessels were furnished with open shapes.¹⁹ Therefore, we can state that open vessels were not a usual marker of the funerary assemblages of the Chagar Bazar Middle Bronze Age burials. Does this imply that drinks were not a common funerary offering during the Middle Bronze Age? Probably not. Instead, we can speculate that the small open pots such as cups, bowls or beakers were not the predominant drinking vessels used in a funerary context during the Middle Bronze Age.

Indeed, Habur and Grey Ware bottles, medium-sized globular jars, and so-called grain measures – constituting the majority of the Middle Bronze Age funerary sets²⁰ – could be interpreted as drinking vessels (Fig. 3). We tend to think that these types of pots were probably not used to drink water or wine but likely beer. These vessels, contrary to what is depicted in Early Bronze Age iconography, were probably used for the individual drinking of beer.

The hypothetical identification of these pots as beer vessels was confirmed by chemical analysis carried out on three jars by Zarnkow, the results of which showed that these jars likely contained beer.²¹ Even though not all of the Habur Ware bottles, medium-sized jars and grain measures revealed strainers, it is probable that many of them would have contained beer.

In fact, at Chagar Bazar 30 bronze strainers were found in 29 Middle Bronze Age tombs (i.e. in almost 45% of the MB tombs that yielded pottery vessels).²² Almost all the strainers were discovered inside a pottery vessel: Habur Ware and Grey Ware bottles, Standard Ware medium sized globular jars and small bottles, Habur Ware or Standard Ware grain measures, or Habur Ware barrels (Fig. 4). Although poorly attested in tombs – except at Chagar Bazar – metal strainers have

¹⁷ Tunca / Mas, 2018: 68–87, 96.

¹⁸ Tunca / Mas, 2018: Annexe 2.

¹⁹ Tunca / Mas, 2018: 68–70, pl. 18.

²⁰ Tunca / Mas, 2018: 70–85, pl. 20–37.

²¹ Zarnkow, 2018.

²² Léon, 2018a.

been discovered in a funerary context at Tell Arbid,²³ at Baghouz²⁴ and at Nippur.²⁵

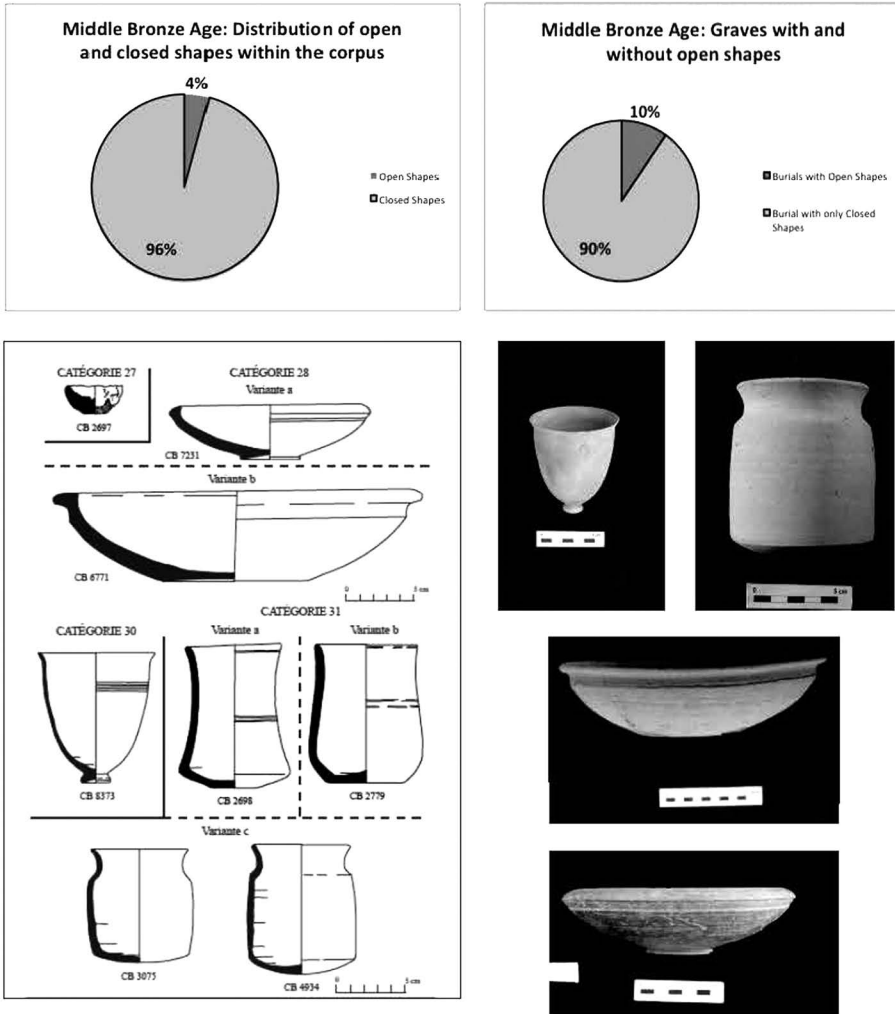


Fig. 2: Chagar Bazar. Distribution and examples of open vessels from Middle Bronze Age graves. Drawings and pictures after Tunca / Mas, 2018: pl. 18.

²³ Wygnańska, 2014: 44–45.

²⁴ Mesnil du Buisson, 1948: 51–52.

²⁵ McMahon, 2006: pl. 152.

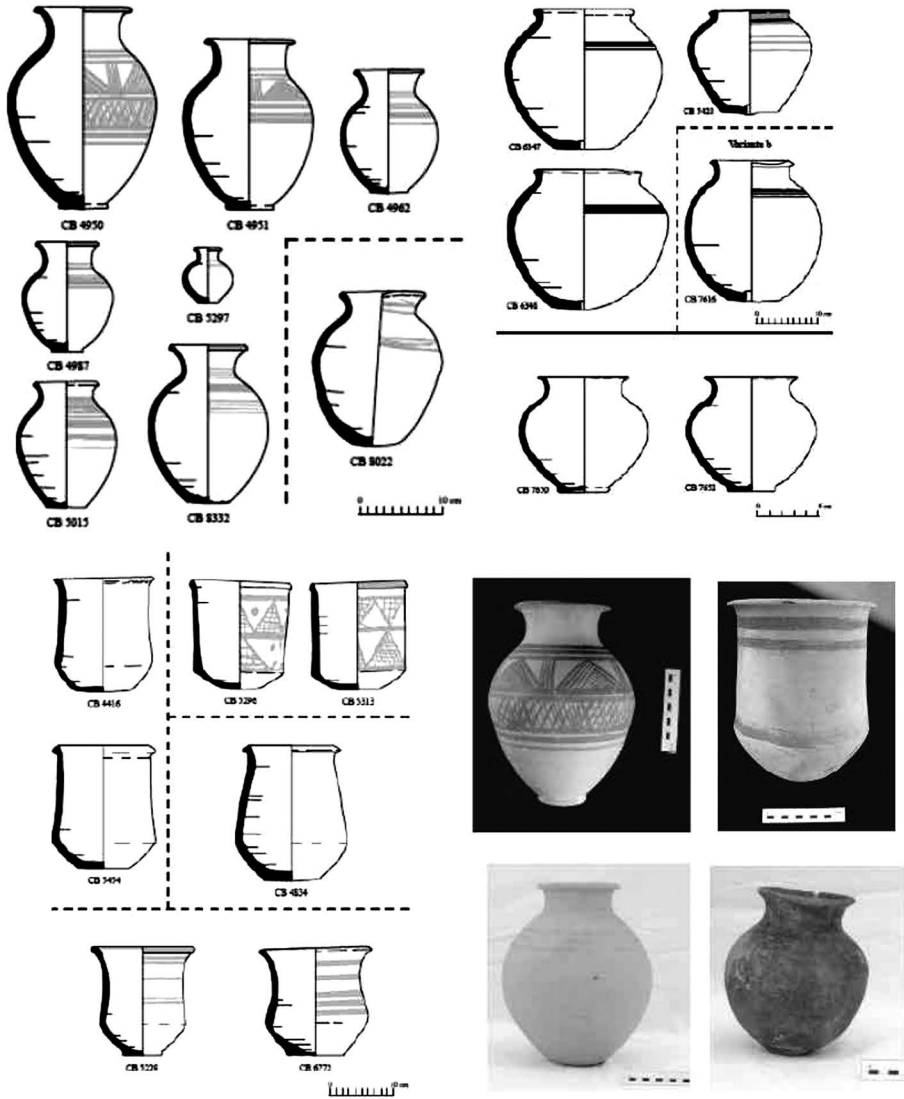


Fig. 3: Chagar Bazar. Possible beer vessel types from Middle Bronze Age graves. Drawings and pictures after Tunca / Mas, 2018: pl. 21, 27, 29.²⁶

²⁶ For a complete view of possible beer vessels types, see Tunca / Mas, 2018: 71–85, pl. 19–37.

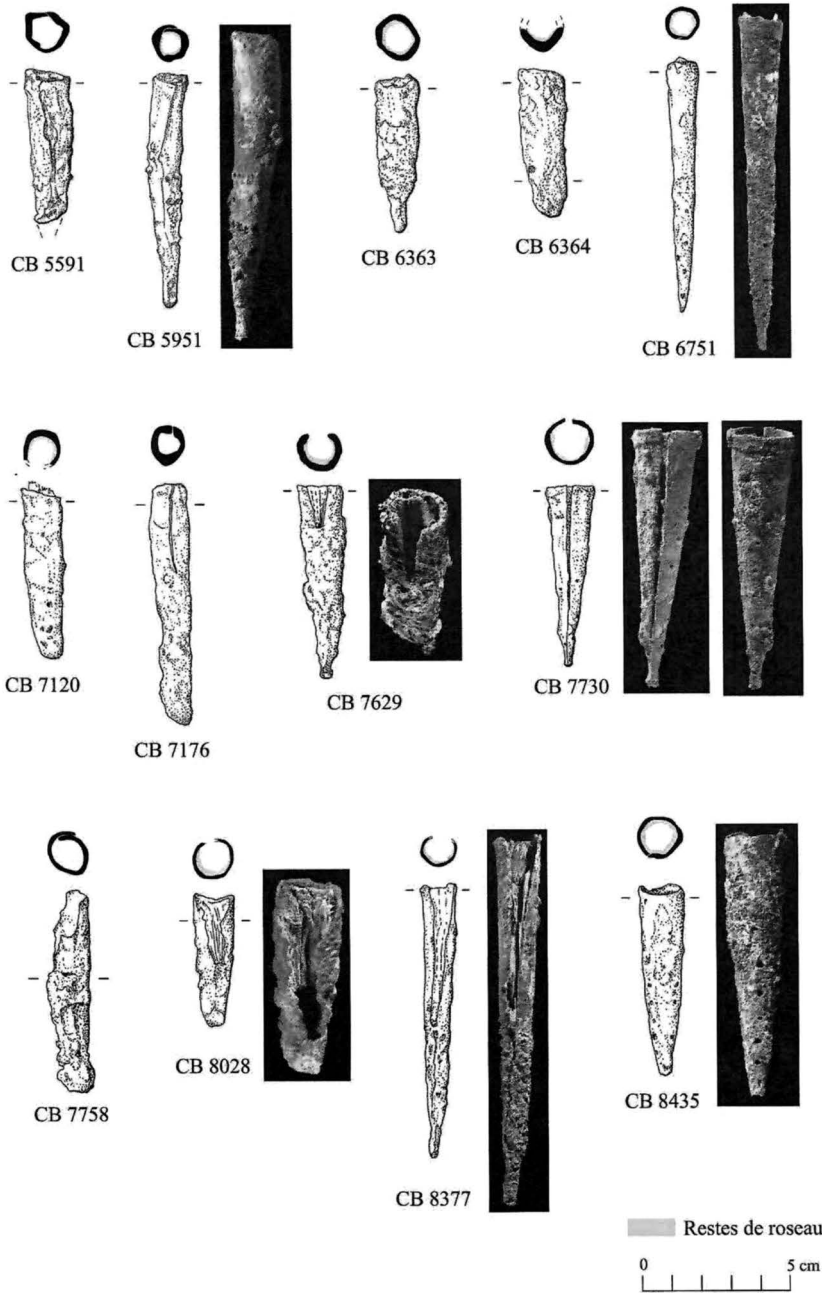


Figure 4: Chagar Bazar. Bronze strainers from Middle Bronze Age graves, after Léon, 2018a: pl. 47.

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The other sites of the region, notably Tell Arbid,³² Tell Barri,³³ Tell Leilan,³⁴ Tell Mohammed Diyab³⁵ and Tell Mozan³⁶ have also largely yielded Habur Ware vessels in a funerary context, which might correspond to beer vessels. Nevertheless, we should point out that open vessels, although rare, seem to be a bit more frequent in Middle Bronze Age graves at other Jezirah sites. As for the Early Bronze Age, no specific funerary fabric or shape has been identified. The funerary assemblages are pretty modest and highly standardized across the region, even in the case of elaborated tombs such as vaults.³⁷

4. Patterns in the distribution of the drinking vessels in the Chagar Bazar graves

The Chagar Bazar burials yielded several classes of objects, which are often discovered in the graves of the region: beads, jewels, pins, perfume burners, figurines, weapons, and stone and metal vessels, as well as food offerings.³⁸ The analysis of the Chagar Bazar funerary assemblage did not allow any trend to be determined in association with any type of object being buried (or specifically not buried) with the drinking vessels. It is also impossible to relate the presence of

²⁷ Zarnkow, 2018.

²⁸ Léon, 2018a.

²⁹ Wygnańska, 2014: 44–45.

³⁰ Mesnil du Buisson, 1948: 51–52.

³¹ McMahon, 2006: pl. 152.

³² Bieliński, 1999; Bieliński, 2005; Koliński, 2008; Wygnańska, 2014.

³³ Pecorella, 1999: 53; Valentini, 2016: fig. 10.

³⁴ Weiss *et al.*, 1990.

³⁵ Nicolle, 2006.

³⁶ Dohmann-Pfälzner / Pfälzner, 2001: abb. 6.

³⁷ See notably Nicolle, 2006; Valentini, 2016.

³⁸ Léon, 2018b; Cordy, 2018.

drinking vessels with wealthy offerings. These two points are recognizable both in the Early Bronze Age and in the Middle Bronze Age burials.

The identified drinking vessels from the Early Bronze Age and possible beer vessels dated to the Middle Bronze Age were uncovered in the graves of infants, women and male adults without any clear discrimination. We should nevertheless point out that the Middle Bronze Age beer pots with bronze strainers were not uncovered in the tombs of infants below the age of one year, but that Early Bronze Age small open vessels were uncovered in new-born graves.

We can observe a very different picture between the Early Bronze Age and the Middle Bronze Age funerary assemblages at Chagar Bazar concerning the drinking vessels. Specifically, we observe that the small open vessels are widely attested within the Early Bronze Age, while they are almost absent in Middle Bronze Age burials. As we have seen, the drinking vessels in the Middle Bronze Age graves are mostly bottles and jars that can likely be associated with the beverage of beer. It does not mean that beer vessels are absent within the Early Bronze Age burials, but we have no clue enabling us to identify them. It is also possible that Early Bronze Age Chagar Bazar burials were furnished with vessels linked to the collective drinking of beer, while the Middle Bronze Age ones were connected to an individual beer drinking practice.

Small cups and beakers were probably not used for the drinking of beer. They may have been used to drink water, wine, milk or other liquids. Bottles, medium-sized jars or grain measures may also have contained these kinds of beverages.

We can note that medium jars, both in Early Bronze Age and Middle Bronze Age graves, sometimes contained smaller vessels (i.e. beakers, bowls or small bottles and goblets). These small pots were probably used to take liquid from the jars. Therefore, we can assume that these jars contained liquids or beverage offerings.

We should note that the Middle Bronze Age assemblages from the other Mesopotamian regions (i.e. Syrian Euphrates, Central and Southern Mesopotamia) reveal a higher proportion of small open vessels such as bowls, cups, and beakers in the funerary assemblages. Additionally, the so-called four part beer sets of pottery are well attested in funerary assemblages at different sites in Central and Southern Mesopotamia during the second part of the Early Bronze Age, as pointed out by Zingarello.³⁹ These beer sets are, however, not attested in the Upper Mesopotamian graves. As a result, can we postulate a shift in the funerary practices concerning beverage offerings throughout the Bronze Age? It is possible that beer became the common beverage offering during the Middle Bronze Age in the Jezirah region, or that at least the practice in drinking beer changed. This change of practice seems to have been restricted to the Syrian Jezirah.

³⁹ Zingarello, 2020.

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Representing Banquets in Ancient Mesopotamia

A Public Affair?

Davide Nadali

Celebration of feasts are public occasions that occurred in public spaces (e.g., temples) with the involvement of several characters who had a specific role and function in ancient Mesopotamian society. As a consequence, the figurative theme of banqueting is well represented in visual art, showing the attendees while eating and drinking, assistants and servants bringing food and serving the banqueters with food and drinks, and musicians accompanying the event. Starting from the representation of Mesopotamia in third millennium BC, the present paper tackles the nature and shape of the visual documents focusing on the reason for choosing relatively small objects (seals, plaques, inlays) and the effective public diffusion of this political iconography which was so important for the formation of the ruling class in the Early Dynastic Period.

*

In ancient Mesopotamian art, banqueting is a recurrent figurative theme: in particular, during the third millennium BC, in the Early Dynastic Period, banqueting is not only recurrent, but it acquires a significant function within the production of images.¹ Can banqueting be considered as a symbolic image? Surely, the different representations contain several symbols that allude to diverse messages and spheres of influences, having different levels of interpretations and intentions: a first, very basic, level, is that a banquet is intended to exactly represent people while feasting with actions of eating and drinking; a second level, that can be more properly labelled as symbolic, the representation of banqueting stands for something else with implied political, cultural, and religious meanings that go beyond the simple acts of eating and drinking. In this respect, rather than symbolic, I prefer to say that banquets are metaphorical images that refer to and remind us of other connotations and implications: in particular, looking at the banquet scenes of the third millennium BC, one can suggest that political implications are specifically intended, and I think that these are clearly emphasised and fostered when the couple of banqueteers (usually a woman and a man) or named characters (that

¹ Marchesi / Marchetti, 2011: 203–207.

can be identified thanks to the presence of the cuneiform caption) are represented and when the context of both the image (where banquet is carved) and the finding (where the object has been found) are taken into account.

On one hand, it is true that, if not properly a banquet, single people feasting or ritual drinking (sometimes associated with other actions such as dancing or fighting) have been known since the Neolithic period;² on the other, the third millennium BC surely represents the peak of the diffusion and use of the banquet as the unique or surely the main figurative theme in art works (pottery, cylinder seals, plaques, and steles): starting from the analysis of the percentage of the presence of banquets in the iconography of the Early Dynastic Period and the considerations that this depends on their meaningful importance, I want to focus on the nature of objects and the importance of this iconography as an element of political discourse of the ancient Mesopotamian societies of the third millennium BC: in particular, I think it is important to point out, and consequently to distinguish, how, when, and why the theme of the banquet has been so widely represented and how this large diffusion has been conceived. Indeed, while ancient written sources document the existence of banquets that were organised by the central authority on the occasion of religious festivals and other kinds of ceremonies,³ it seems to me that the great emphasis given to banquets, at least from an iconographical point of view, largely depends on the nature of the evidence, that is the recovery of several representations of banquets, in an almost-canonical pattern with slight differences (such as the composition or number of people) on different types of objects (steles,⁴ cylinder seals, plaques), persuaded scholars to postulate and infer that the action of feasting was central and surely conveyed a symbolic meaning for the audience.⁵ I do not want to *contest* the importance of the banquet and the reality of data (the numbers of iconographic examples and the existence of organised, regular, and official feasting), but I wish to *contextualise* the use and presence of this iconography trying to reconstruct how and if banquet was in fact a public meeting, a shared moment and, if so, who was directly involved (either active participants and therefore portrayed in the scene, or generic beholders who did not share the real moment of feasting but were supposed to share the idea and meaning implied by the observation of people drinking and eating).

² Stein, 2021: 444–447.

³ See Maekawa, 1973–74; Sallaberger, 2018.

⁴ Indeed one stele, see Rashid, 1975 and Romano, 2011.

⁵ Moreover, compared to the information provided by texts on the organization and celebrations of banquets, the iconographic evidence is rather small, with a higher percentage of banquet scenes on cylinder seals (Stein, 2020: 176–177).



Fig. 1: Cylinder seal of A-bar-gi from Ur (U. 10448A) from PG 800, University of Pennsylvania Museum, B16727 (<http://www.ur-online.org/subject/10165/>, CC BY-NC-SA 4.0).

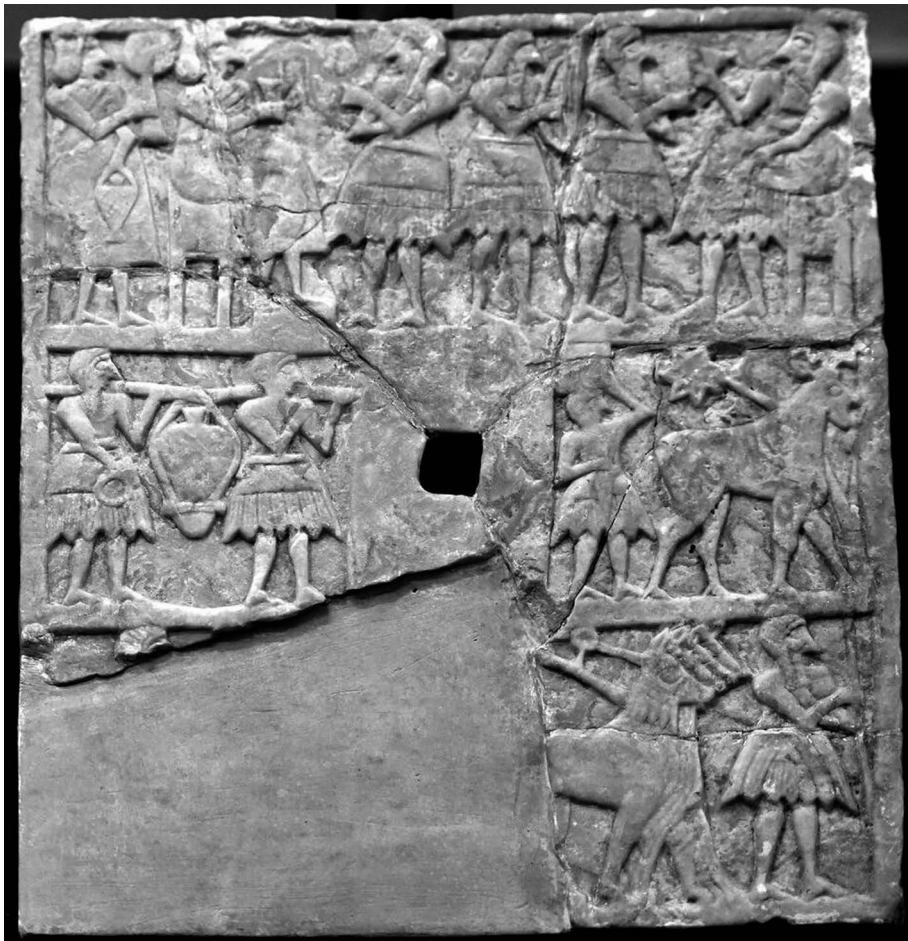


Fig. 2: Plaque from the Oval Temple, House D, Khafajah (Osama Shukir Muhammed Amin FRCP [Glasg], CC BY-SA 4.0, via Wikimedia Commons).

Looking at the images of third millennium Mesopotamia, banquets are usually (even frequently) represented on cylinder seals and plaques (Figs. 1–2): one can thus immediately perceive the lack of monumentality with a more targeted degree of visibility and therefore reception. Compared to the epigraphic evidence, if the importance of such a figurative theme cannot be denied, archaeology and iconography seem however to tell a different story: the representations of banquets occupy the top register of any figurative work, in a prominent position, but they are all characterised by a small-scale dimension, a feature that, for example, does not belong to and mark the monuments celebrating a military victory.⁶ It is as if representations of banquets are confined to portable objects that belong more to a personal and intimate dimension, as indeed cylinder seals more manifestly suggest, but I would also include in this category other works, such as the Standard of Ur that was found among the funerary goods of a tomb in the Royal Cemetery of Ur and, to a certain extent, even the plaques. I think that this choice is not casual if compared to other themes also present in the iconographic repertoire of Mesopotamia in the third millennium BC: warfare is for example well documented in several artworks, from cylinder seals to inlays and bas-reliefs and it is particularly interesting to single out this progression towards the creation of larger monuments which were supposed to be placed in public spaces and buildings, mostly temples.⁷ Indeed, this progression can also be reversed, that is the representations of wars and victory on larger steles inspired the creation of miniature images on cylinder seals, plaques, and inlays via a process of direct reference to the major work that reveals the practice of quoting a single motif, a gesture, a body position:⁸ can we infer that this mechanism can be also applied to the theme of banquet? As previously said, no steles (with a very rare exception)⁹ are known showing a banqueting scene and therefore one can conclude that the influential reference and quotation cannot be recognised for banqueting that was specifically addressed to selected objects and consequently contexts. In the Mesopotamian tradition, not only in the third millennium BC, victory steles were in fact conceived to be placed either in open areas (squares, city gates, on the geographical and political border of two city-states) or in temples: Early Dynastic and Akkadian victory steles commemorate the outcome of the king in front of the deity or, conversely, the approval of the military success of the king by the deity. The presence of gods or goddesses on the relief strongly connotes the monument, not only for the content (the king faces and meets the deity) but also for the context (the monument is supposed to

⁶ The small-scale dimension is of course determined by the small dimension of the objects (seals, plaques) if compared to victory steles that had a larger surface to be sculpted.

⁷ Pinnock, 1994: 16; Nadali, 2007; Renette, 2014: 63–68; Suter, 2018: 142–143.

⁸ Nadali, 2019; 2020.

⁹ See fn. 4.

celebrate the royal victory in front of the deity, both in the narrative of the relief and in the concrete location of the stele within the sacred precinct of the temple).

Banquet scenes do not envisage the presence of gods, neither physically (in anthropomorphic shape) nor symbolically: the question is exclusively human and, for that reason, although feasting might have a religious connotation and function, the representation of banquets seems indeed to exclusively enter the sphere of human relationships and political communication. While victory monuments have a celebratory nature – they are purposely created to celebrate a military event – banquets are not celebrations, but they actually point to the representation of common shared moments where selected participants are involved, on one hand, and targeted people assisting or looking at the represented scene are secondarily addressed, on the other.¹⁰ For the presence of gods, it is interesting to point out that, at the end of the Early Dynastic Period and the passage into the Akkadian period, representations of banquets decreased and contextually changed:¹¹ gods start to be involved as the main protagonist, but in this respect the new code introduced does not share anything with the previous scenes of banquets; indeed, the label “banquet” is no longer appropriate because we are dealing with the so-called presentation scene where a person is introduced to the seated god or king holding a cup in one hand; this is the only feature that actually recalls the action of drinking but the relationship that is established is strictly private, between the presented person and the receiving god or king.

The nature and purpose of banquet scenes are not celebratory, at least not in their immediate and first meaning: generally speaking, thanks to the written sources that prove the existence of the organization of festivals for the gods which also encompass the consumption of food and drinks in community feastings, banquet scenes could be rightly intended as public celebrations. However, we have no evidence or possibility of precisely linking any of the Early Dynastic representations of banquets to a precise public divine festival. As previously said, references to the divine world are absent and the iconography of the banquet, on all artworks, is quite schematic and canonical, having few exceptions and differences that mostly depend on the role of the banqueteers and the destination of the carved object.¹² If we wish to consider banquet scenes as moments of celebration, this actually concerns the protagonists involved and the political message that is conveyed; the banquet is more of a social and political marker that is purposely introduced and used in the time of the third millennium BC, more precisely in the time of formation and development of the political power that finally led to the creation of the structure of the kingship and, consequently, of the figure of the king.

¹⁰ Stein, 2020: 178.

¹¹ Pinnock, 1994: 16; Renette, 2014: 63–68; Suter, 2018: 142–143.

¹² Pollock, 2003: 25; Renette, 2014: 79; Stein, 2020: 178.

I think that banquet scenes might have a distributive nature and function: what does this imply? What does the distributive quality mean? The denotative definition of banquet scenes as distributive directly points to the general organization and management of a banquet: food and drink are distributed. On the other hand, the connotative implication of the distributive quality of banquet scenes metaphorically involves both the people who are represented as taking part in and attending the banquet and the people who, having the object, e.g. the seal, carved with the banquet motif and looking at the scene, are also part of the banquet. In this respect, they are not concretely receiving food and drinks, but they are nevertheless part of that distributive range of action that is emanated by the protagonists (and maybe the promoters) of the banquet: so, if not food and drink, what is being distributed in this extension of meaning? It has been correctly argued that banquet scenes in the art of the Early Dynastic Period of Mesopotamia have a political meaning and, moreover, they convey a political message:¹³ from the very beginning of the third millennium BC, ancient Sumerian society progressively started a process of transformation that, to the end of the period, was completed with the first manifestation of palaces as the building and seat of the kingship and personal residence of the king.¹⁴ The banquet, differently from the celebration of a victory, is not a solitary activity but it rather involves other people who,¹⁵ by virtue of either being part of the banquet itself or being the addressees of one of the objects carved with the banquet motif – indeed they could be both at the same time; feeling part of a system, they share common values and ideas, thus supporting a growing political power that eventually is fixed in the king. The representation of the seated couple in the top register of seals and plaques is the emblematic portrayal of this royal power which, once it becomes properly stable, no longer needs to continue propagating this iconography and fostering its distributive power. Banqueting is an instrument for the achievement of power: the real distribution and consumption of goods in community occasions and the metaphorical distribution enhanced by the imagery of banquet contributed to the reinforcement of ties: when the power is definitely settled, only the king holds the cup (Fig. 3) and the community around him is either part of his family or it is made up of those members whom, in the end, we can see in the cylinder seals of the Royal Cemetery of Ur and, more precisely, in the bodies buried in the tombs of the Cemetery of Ur.¹⁶

Archaeological evidence also points to this distributive action: it is interesting to notice the presence and increase of what, although improperly, can be defined

¹³ Pollock, 2003; Renette, 2014.

¹⁴ Marchesi / Marchetti, 2011: 97–113.

¹⁵ At least in central and southern Mesopotamia (if one takes into account the examples from the Royal Cemetery of Ur). See Stein, 2020: 178; 2021; Romano, 2015.

¹⁶ Pollock, 2003: 26. See also Marchesi / Marchetti, 2011: 205.

as an eating and drinking set of pots (bowls and beakers).¹⁷ Already in the Early Dynastic I, the diffusion of solid-footed goblets in different contexts marks the common practice of consumption that, on certain occasions, was a collective and community situation:¹⁸ we should recognise in these moments (festivals, private and public celebrations such as weddings, funerals) the need and search for the establishment of socio-political and economic strategies in a growing and developing society; in particular, those moments marked the occasion for the formation or reinforcement of kinship groups with the progressive elaboration of a system which led to the identification of a leading group of people (a household) and a group of people that depends on and works for the former.



Fig. 3: Plaque of Ur-Nanshe (Louvre, AO 2344; <https://collections.louvre.fr/en/ark:/53355/cl010121762>).

Again, cylinder seals are distributive objects (Fig. 4): they are distributed to the people and personnel who, on behalf of the central authority, are charged with administrative and economic duties; their impressions are not only the result of these activities but they themselves contribute to the distribution and diffusion of

¹⁷ Pollock, 2003: 28–32.

¹⁸ Benati, 2019.

the message they contain. Looking at the cylinder seals showing banquet scenes, we could thus argue that those objects are the physical distribution of power (the seal) that is also based on and built upon ties of kinship and relationships created and/or reinforced by common consumption (the banquet). Perhaps, as already said, the same owner of the seal may also be a participant in the banquet carved onto the seal itself; at the same time, the ownership of a seal with a banquet carved upon it could work as referential, that is a recognisable and shared reference to a focal iconographic motif in the Sumerian society of the third millennium BC.



Fig. 4: Modern impression of cylinder seal with banquet scene with seated figures drinking a liquid through straw, The Metropolitan Museum of Art, 56.157.1 (Open Access, Public Domain).

This contribution does not pretend to clarify the several meanings that banqueting might have within the complexity of iconography and in the context of images: I believe that the centrality of banqueting and consumption of food and drink needs to be re-contextualised in the light of additional archaeological, probably more than epigraphic, evidence in order to frame the iconographic phenomenon of the increase of banquet scenes or images of people drinking in the art of the third millennium BC. As seen, it is not just a question of style and fashion: the imagery is strictly linked to the socio-political and economic needs of ancient Sumerian societies, in a phase of political formation and establishment of powers, within the traditional temple-estate organisation of Sumer. In this respect, festivals, the public consumption of food and drinks, occurred in temples and on the occasion of cultic festivities in honour of the gods: however, no image can be

properly linked and associated to any of these known festivals, but I believe that this generic and anonymous representation points more towards the political function of these redistributions to establish new and strengthen old kinship ties.

What can we say about the plaques, largely found in temple contexts? The function of these objects is still matter of debate: personally, I do not believe they were part of the closing system of doors, the central hole is supposed to host the wooden pivot. Even the sacred nature is not so clear: some plaques represent gods, but the ones with representation of the banquet in the top register are more enigmatic. Whether the banquet in this case and because of the temple context refers to cultic festivities is impossible to ascertain: perhaps these plaques reinforced the role of the temple as centre of redistribution of goods and owner of the arable lands not only on the occasion of cultic festivals, and indicated the temple as the place where this action took place in a time when palaces were not already created and fully developed.¹⁹ More than on cylinder seals, sculpted plaques depict the couple in the top register while drinking from a common shared jar or personal beakers: if cylinder seals had an outward distributive action – to the people who were thus linked and affiliated to the household – plaques in temples had an inward distributive action – to the gods who guaranteed the success of the socio-political operation.

In conclusion, is the representation of banqueting in ancient third millennium Mesopotamia a public affair? Yes, it is: a banquet concerns the sphere of public relations and ties and it is a political instrument to shape socio-political and economic groups with the creation of an emerging elite. No, it is not: the representation does not have a celebratory nature, so it is not intended to be publicly displayed for a large audience. Rather, it works within a system of inner references, sometimes even closed if we think of the presence of banquet scenes onto the seals and the Standard of Ur in the tombs of the Cemetery of Ur.

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¹⁹ Renette, 2014: 83; Nadali, 2021: 66–67.

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Food and Drinks in Ancient Diaeuhi and Colchis

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1. Introduction

Food and drinks are two aspects of everyday life which are quite difficult to study for the history of ancient Diaeuhi and Colchis/Kolkha.¹ Diaeuhi (Diauhi, Daiaeni, later Taokhi) was a tribal union² or an early state³ in northeastern Anatolia,⁴ specifically in the region to the north of present day Erzerum. Narrative sources about Diaeuhi and Colchis are very few. The main reason for this is that these early states did not have their own narratives and we only know about them from the texts of their neighbors – Assyrians as well as Urartians. We have important information about the food which was consumed on the territory of ancient Diaeuhi and Colchis from the annals of Tiglath-Pileser I (1114–1076 BC), inscriptions of Ishpuini (828–810 BC) and Menua (810–785 BC), Argishti I (785–763 BC), Sarduri II (763–735 BC). Additionally, some classical authors also give us interesting, albeit small accounts, for example Aristotle (4th c. BC). Since food consumption culture does not change dramatically overnight or even over the centuries, we can use the information from classical authors to study food consumption in the region in earlier times, however the novelties brought by the Greeks in Colchis should be ignored if we intend to reconstruct what was used as a food before them.

Recent palynological studies about well-known archaeological sites in ancient Colchis can also be very helpful for the study of eating and drinking habits. Palynological material coming from well preserved archaeological sites and specifically from closed contexts is very precise information and remains of food and drinks discovered in vessels for storage help us to reconstruct the history of diet quite accurately – we do know what was consumed, however palynological material has one limitation – specific recipes are hard to reconstruct based on such

¹ The name Kolkha/Kulkha is usually referred to an early state which existed from 11th–8th c. BC until the Cimmerian invasions. This tribal union or an early state was devastated by Cimmerians and Scythians later however the inhabitants of the region managed to reorganize and created the kingdom of Colchis in the 6th c. BC.

² Suny, 1994: 6.

³ Koranashvili, 1978: 259.

⁴ Taffet / Yakar, 1998: 141.

remains. Additionally, visual sources, mostly zoomorphic statues, can give us hints about what kind of meat was consumed, or what was the culture of drinking, however visual sources should be used very carefully for the reconstruction of the history of diet, since not every animal depicted on different artifacts could be used for consumption. However, culture of drinking can be reconstructed better based on visual sources.

To what extent agriculture was developed in ancient Colchis is also very interesting to overview in order to understand the general situation about the availability of some food. Agricultural tools are discovered on archaeological sites dated back to the Late Bronze – Early Iron Age,⁵ as well as on archaeological sites of the classical period. The territory of Ancient Colchis in terms of the discovery of Bronze Age hoes can be divided into two parts – left and right embankment of river Enguri, which today roughly divides two regions of Western Georgia – Abkhazia and Samegrelo – while on the right embankment there are very few hoes discovered and all of them are found near the Enguri river, the left embankment of the river reveal more of them, therefore it is suggested that agriculture was not developed on the territory of modern Abkhazia while it was developed on the territory of the rest of Western Georgia.⁶ The earlier (8th – 6th c. BC) layers of Pichvnari and other sites from Western Georgia also revealed evidence of hoes.⁷ Additionally, one fragment of Tiglath-Pileser mentions that he received from Nairi kings draught horses as a gift, which is an indirect indication of the development of agriculture.⁸

In the following, we will discuss food based on its nutritional function and then we will overview the beverages and drinking culture.

2. Food

First of all, we will discuss the sources of proteins – these are mostly animals and some vegetables.

2.1 Meat

The Annals of Tiglath-Pileser I mentions how he defeated the kings of Nairi and what tribute he demanded from them. Location of Nairi is debated; however as mentioned by A. E. Redgate, the southern point of Nairi was Tumme, while the northern one Daiaeni.⁹ Since the northern regions of Nairi seem to include ancient

⁵ Late Bronze Age and Early Iron Age archaeological sites are hard to differentiate, usually the same sites reveal late Bronze Age developments alongside with Early Iron age technology, that is why we refer them as Late Bronze Age – Early Iron Age archaeological sites.

⁶ Jibladze, 1985: 69.

⁷ Apakidze, 1985: 60.

⁸ RIMA 2, A.0.87.3, fragment 5a.

⁹ Redgate, 2000: 27.

Diaeuhi also, we will take into consideration this account: Nairi kings had to pay 1200 horses and 2000 cows.¹⁰ It should be mentioned that, while horses were not used for food supposedly, cows definitely were as it is attested in other sources regarding this region.¹¹ Also, despite the fact that the numbers in Assyrian royal inscription may be exaggerated as it is believed now,¹² the content is not, so the existence and possible consumption of these animals on these specific territories should not be doubted. As for Colchis, inscriptions of Ishpuini and Menua (820–810 BC) mention the tribute paid by Uiterukhi (Byzeres in classical sources),¹³ Lusha (ancestors of the Lazi tribe, at those time living presumably in the highlands of Adjara),¹⁴ Katarza (tribe living in Klarjeti, near historical Diaeuhi, in modern Turkey)¹⁵ and Etiukhi (?) kings: 13 540 cows, and 20 785 sheep.¹⁶ An inscription of Argishti I (785–763, or 756?, BC) mentions the gift of the king of Diaeuhi: 2300 cows, 1000 small livestock (sheep and goat?) and also, subsequent tribute he had to pay: bulls, 100 cows, 500 sheep, 300 horses among other tribute.¹⁷ Sarduri II in the description describing his campaign in Kulkha and Uiterukhi mentions the booty taken – 1500 horses, 17300 cows, and 31600 small livestock.¹⁸

Cows are mentioned by Aristotle and he has a quite interesting note: “Small cows are bred in Phasis (Ancient Colchis), whose milk yield is high”.¹⁹ The specific breed of cows should be the so-called Georgian Mountain Cattle, which is 15th in the list of the so-called world dwarf breed of cows. Average milking of this cow in wild conditions, without giving fodder crops, is 800–900 kg for 6–7 months in case of Eastern Georgian highlands,²⁰ but pasture is better in Western Georgia, as a result of higher rainfall and milder climate, thus lactation might increase to 1400 kg in 270 days, which is more than 5 kg in a day in average.

During the classical age, we have quite interesting information from the archaeological site of Pichvnari, an archaeological site located near Kobuleti (Adjara, Georgia). This archaeological site revealed material starting from Late Bronze Age.²¹ Several other sites are revealed also nearby, including the cemetery of Greek colonists. Several hundred Greek burials are unearthed in Pichvnari as a result of British-Georgian archaeological excavations alongside with approxi-

¹⁰ RIMA 2, A.0.87.1. IV, 43.

¹¹ Arist. Hist. an., III, 21.

¹² Odorico, 1995.

¹³ Melikishvili, 1970, 382–383.

¹⁴ Melikishvili, 1970, 383.

¹⁵ Melikishvili, 1970, 378.

¹⁶ eCUT, A 03–04.

¹⁷ Melikishvili, 1953a: 128 B1.

¹⁸ Melikishvili, 1953b: 155 D.

¹⁹ Arist. Hist. an., III, 21.

²⁰ Gogoli, 2021.

²¹ Kakhidze / Vickers, 2004: 15.

mately the same quantity of Colchian burials. Greeks first came here in the 6th c. BC. It seems that the inhabitants of Pichvnari, who were mostly merchants, consumed fish and some other sea food, as well as pigs, and that they did not practice hunting unlike the inhabitants of Vani, the city in hinterland. Since Pichvnari was located on the seaside, the use of fish as a source for food is not unexpected. Weights used for fishing were discovered in archaeological layers of the site; some of them are of quite large size, which might indicate the development of fishing in the open sea.²²

In contrast to this, Colchian aristocracy was more concerned about hunting. Kingdom of Colchis starting from the 6th c. BC is considered to be protofeudal society.²³ Since in such societies hunting is a part of military education of the political elite, the opinion about the development of hunting can be substantiated by the evidence found in the burial of a warrior in Vani – hunting weapons, mostly arrow-heads and spearheads²⁴ have been discovered in the burials of warriors seems to hint to this²⁵. Remains of animal bones, namely two boar fangs,²⁶ is an evidence of this. They were found in the burial #11, the so-called warrior's burial alongside with other animal bones – sheep, goat and cow.²⁷ Also, boars are depicted on dishes and on jewelry.²⁸ Boar is depicted on one bronze situla found in the same grave and on a couple of gold bracelets which have open endings in the form of boar. These bracelets are also discovered also in the same burial. Although, these depictions are not part of a hunting scenes, all the evidences from burial #11 together (weapons, animal bones, depiction of animals) should indicate on popularity of hunting among elites. Boars were also part of a decoration of diadems, which were wore by the skeptukhs, state officials, heads of administrative units of Colchis.²⁹ However, hunting was not the major source of food of the population; in fact, mostly Vani aristocrats were fond of it since it seems to be the part of their training.

Archaeological sites from Colchis dated back to the 3rd–2nd millennia in general, reveal osteological remnants of different domestic animals – cows, pigs, sheep, alongside with remnants of wild animals – wild boar, deer, wild goat.³⁰ Cows or pigs are prevalent in Ochkhomuri site of late Bronze Age, while sheep and domestic goat are rare.³¹ 25 bronze figures of bull are also found on 8th–7th c.

²² Kakhidze / Vickers, 2004: 141–142.

²³ Dundua, 2009: 8.

²⁴ Lordkipanidze *et al.*, 1972: 202.

²⁵ Lordkipanidze, 1976: 176.

²⁶ Tsitsishvili, 1972: 243.

²⁷ Tsitsishvili, 1972: 243–250.

²⁸ Lordkipanidze 1972, table 225, 230, 230a, 231.

²⁹ Lordkipanidze 1972, table 226.

³⁰ Jibladze, 2007: 88; Vachadze, 2018: 30, 52.

³¹ Vachadze, 2018: 30.

BC sites;³² however, bull is mostly considered to be a cult animal, which was worshipped as a god of fertility. This is argued based on its visual aspect, specifically on the fact that he is depicted with well-defined genitals.³³ Also, the bull seems to be connected with the moon god³⁴ and with the cult of dead persons.³⁵ The cult of bulls can be traced also on coins struck in Phasis, namely didrachms and drachms.³⁶ Thus it is not yet clear to what extent it was used as food.

Palynological evidence suggests the use of fodder crops which may serve as an indirect evidence of their use as a food for animals. Grains of their pollen were discovered in archaeological sites and the specialists assumed that they should have been used to feed animals. For example, the archaeological site of Vani revealed evidence of clover (*Trifolium*) in dwelling places.³⁷ Also, based on palynological analysis, some plants which could serve as a source of food for pigs, have been found at Ispani II (near Kobuleti, Adjara, Georgia) in 4th–3rd c. BC layers.³⁸ This site is closely related to Pichvnari, a well-known cemetery of Greek colonists in Ancient Colchis, and pig bones are attested in Pichvnari also according to archaeological evidence.³⁹ The site of Nokalakevi revealed some other grass, including *Echinichloa cruss-galii*, which could be used as fodder crops.⁴⁰

2.2 Vegetables

Remains of sorrel (*Rumex*) and celery (*Apium*) were found in Vani, in layers dated to the 8th–1st c. BC⁴¹ Also, fat-hen (*Chenopodium album* L.), found in Nokalakevi⁴² could have been used as food, since its use is attested ethnographically even today.

2.3 Grains and grass

Remains of different grains and grass are found in major ancient archaeological sites in Western Georgia – in Vani and in Nokalakevi. This material was studied by palynologists and they assumed that millet, foxtail (Italian) millet, pea (*Pisum Sativum*), and lentil were found in Hellenistic layers at Vani,⁴³ while pea also was

³² Vachadze, 2018: 35.

³³ Vachadze, 2018: 94, plate IX, 5 and plate X, 5.

³⁴ Dundua *et al.*, 2013: II type hemidrachm.

³⁵ Vachadze, 2018: 80.

³⁶ Dundua *et al.*, 2013: drachm.

³⁷ Chichinadze *et al.*, 2019: 26.

³⁸ Connor / Kvavadze / Thomas, 2007: 27.

³⁹ Kakhidze / Vickers, 2004: 142–143.

⁴⁰ Bokeria, 2014: 107.

⁴¹ Chichinadze *et al.*, 2019: 26.

⁴² Bokeria, 2010: 28.

⁴³ Bokeria, 2010: 27.

found at Nokalakevi.⁴⁴ Wheat is found in the layers of the 2nd–1st c. BC⁴⁵ in Vani. Wheat, especially naked wheat is attested in Vani and Nokalakevi, while millet is also quite common discovery on both sites.⁴⁶ The Hellenistic layers in Vani revealed even more species of wheat: einkorn (*Triticum monococcum*), spelt (*Tr. spelta*), timopheevi wheat, however einkorn wheat and timopheevi wheat are less common, while Emmer wheat and naked wheat (*triticum aestivum* s.l.) is more common.⁴⁷ These two sorts of wheat were found in 6th c. BC layers of Nokalakevi also⁴⁸ alongside with Italian (foxtail) millet.⁴⁹ Ethnographical evidence suggests that Italian millet was everyday meal in western Georgia until it was replaced by maize after Columbian exchange, i.e. after its introduction from America. Einkorn (*Tr. monococcum* L.), Emmer (*Tr. dococum*) and naked wheat (*Tr. aestivum* s.l.) are also known from carbonized materials of Eshera (6th c. BC), in Abkhazia, western Georgia.⁵⁰ Pollen of foxtail millet (*setaria italica*), broomcorn (*proso*) millet (*panicum miliaceum*) are also found in Eshera.⁵¹

Millet seems to have been used not only as food, but as sacrificial offer. 23 big vessels, found in Vani in front of the temple, are considered to represent sacrifices to gods/goddesses. Two of them were in fact full of millet.⁵²

2.4 Nuts

Chestnut and walnut were found in Vani,⁵³ while 8th–6th c. BC. layers of Nokalakevi revealed remains of walnut and hazelnut.⁵⁴

2.5 Fruits

Sources of monosaccharides, fructose as well as glucose, are also attested in ancient Colchis according to palynological data. Remains of grapes are found in the layers of the 6th c. BC in Nokalakevi.⁵⁵ Fossilized remains of vine grape, recovered from settlements in Colchis, including Eshera, Dablagomi, Sokhumi, Gynos, Ergeta, Bichvinta, Tchkhoroetskhu, and Nosiri indicate that grape was widely cultivated in the classical period.⁵⁶ The discovery of seeds of *V. vinifera* ssp.

⁴⁴ Bokeria / Amman / Kebuladze, 2009: 142.

⁴⁵ Bokeria, 2010: 27.

⁴⁶ Bokeria, 2010: 27.

⁴⁷ Bokeria, 2014: 2.

⁴⁸ Bokeria *et al.*, 2009: 142.

⁴⁹ Bokeria *et al.*, 2009: 142.

⁵⁰ Bokeria *et al.*, 2009: 143.

⁵¹ Bokeria *et al.*, 2009: 143.

⁵² Lordkipanidze, 1972: 29.

⁵³ Chichinadze *et al.*, 2019: 26; Chichinadze / Kvavadze / Martkoplshvili, 2017: 113.

⁵⁴ Bokeria, 2010: 26.

⁵⁵ Bokeria *et al.*, 2009: 143.

⁵⁶ Bokeria *et al.*, 2009: 144.

sativa and *V. vinifera* ssp. *sylvestris* are linked by some authors to viticulture and wine making.⁵⁷ Grapevine was also found in Vani.⁵⁸ One remain of fig was also found in Nokalakevi, which is considered to be imported here⁵⁹ since this is the only sample from Western Georgian archaeological sites associated with the history of Colchis.

2.6 Honey

The use of honey is quite well attested in ancient Colchis. Its trace was found in Vani⁶⁰ alongside with the remnants of melliferous plants. As outlined by M. Chichinadze, “their good state of preservation and high concentration represent a solid argument in favour of the existence of honey and its products in the palynological spectrum”.⁶¹ Also, honey was found in a 4th c. BC vessel from Vani, and “the discovery of hairs, claws and epidermis of bees in the sample of the oenochoe, as well as honey-bearing plants, proved existence of honey in this vessel”.⁶² The use of honey is well attested even at much earlier sites in Georgia, for instance at Kodiani, dated back to the 27th–25th c. BC.⁶³ While Kodiani is located in Eastern Georgia, the fact itself is still interesting for the study of the region. Honey was used not only as a food, but also to mellify human bodies,⁶⁴ which might indicate on abundance of this product in the region.

3. Drinks and beverages consumption culture

The use of mead in Vani is suggested by palynological analysis of the layers of the 8th–1st c. BC: “Mead retained in burial vessels, as a rule, is discovered by means of palynological analysis. Traces of mead, based only on the presence of melliferous pollen grains, were discovered by examining coprolites of the deceased”.⁶⁵

However, the use of wine is much more important in ancient Colchis. A large number of Colchian and Greek vessels for wine were discovered in Vani, including some Attic wine ceramic containers.⁶⁶ Wine production seems to have been regular long before the arrival of the Greeks.⁶⁷ The archaeological site of Vani

⁵⁷ Maghradze *et al.*, 2016: 4.

⁵⁸ Chichinadze *et al.*, 2019: 26; Chichinadze / Kvavadze / Martkopilishvili 2017: 113.

⁵⁹ Bokeria, 2010: 26.

⁶⁰ Chichinadze *et al.*, 2019: 29.

⁶¹ Chichinadze *et al.*, 2019: 29.

⁶² Chichinadze / Kvavadze / Martkopilishvili, 2017: 114.

⁶³ Kvavadze, 2006: S595.

⁶⁴ Chichinadze *et al.*, 2019: 32.

⁶⁵ Chichinadze *et al.*, 2019: 29.

⁶⁶ Puturidze, 1976: 79.

⁶⁷ McGovern, *et al.*, 2017.

revealed a lot of vessels connected with wine production, including *kvevri*, *dergi*,⁶⁸ and wine filters.⁶⁹

Direct narratives about wine consumptions are not known from the region we are dealing with; however, there is some archaeological evidence, namely artifacts found in Colchian sites dated back to the 8th–7th c. BC. These artifacts include two statues of equestrian women. In both cases the women are sitting sidesaddle on a horse. In each of the statues the woman holds a baby in one hand and a wine vessel, rhyton or bowl in the other raised hand.⁷⁰ The pose of the equestrian woman reminds the modern form of toasting. Usually toasts are proposed by the members of the *supra* (Georgian party) with raising hand and standing.

The Greek colonists introduced expensive wines to the region, however mostly political elite was their customer – Vani archaeological site reveals a lot of vessels used for wine transportation.⁷¹ Lower classes, especially in hinterland possibly mostly consumed local wine, since there are no sites discovered in hinterland of western Georgia except for Vani which could be associated with the very strong Greek influence. Vani itself served as an administrative and religious center and mostly political elite lived there, therefore their taste towards expensive Greek wines seems not to be shared by local lower classes.

4. Conclusion

This evidence gives us the opportunity to discuss to what extent the diet in this region was balanced. It appears that it was indeed rich and balanced. The main sources of energy (carbohydrates) were grain – millet, foxtail millet, and wheat. Millet and foxtail millet were presumably produced in Colchis, while wheat possibly from Diauehi since we have indication to bulls taken as a tribute from here and this may serve as an indirect indication to this. Fruits and honey were other sources of carbohydrates. Legumes were also an important part of the diet, which could serve as a source of both carbohydrates and proteins. Major animal protein sources were dairy products, also beef, pork alongside with sheep and goat, which were used to a smaller extent. Nuts – hazelnut, walnut and chestnut – were sources of healthy fats. Flax seeds and nuts contain a lot of plant-based omega 3 while fish served as a source of both healthy fat and animal proteins. Sources of natural sugar were fruits and honey, which also served as major sources for all essential minerals and vitamins. Thus, the diet in this region was balanced to a higher extent

⁶⁸ *kvevri* and *dergi* both are conical clay vessels for wine, *kvevri* is smaller one while *dergi* refers to bigger one, some of them (*dergi*) were so big that they were even used to bury the dead.

⁶⁹ Lordkipanidze *et al.*, 1981: 60–74.

⁷⁰ Vachadze, 2018: 159.

⁷¹ Puturidze, 1976: 79–90.

– people living here had all necessary nutrients. Additionally, their diet was enriched with drinks, for example, wine.

Abbreviations

RIMA 2: Grayson, A., 1991: *Assyrian Rulers of the Early First Millennium BC II (1114–859 BC)*. Toronto: University of Toronto Press.

eCUT: *Electronic Corpus of Urartian Texts*. Available at: <http://oracc.museum.upenn.edu/ecut/>

Arist. Hist. an.: Aristotle, *Historia Animalium*. Translated by D’Arcy Wentworth Thompson. Available at: http://classics.mit.edu/Aristotle/history_anim.html

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The Iconography of the “Banquet Scene” among the Figurative Documentation from the Second and Third Millennium Levels at Tell Ashara / Terqa (Syria)

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The “banquet scene”, in its different variants, is one of the most popular iconographies in Ancient Near East figurative documentation. The depiction is mainly related to supports connected with local authorities, such as the palace and the temple, especially during the Early Dynastic and Akkadian periods. Among the material found at Tell Ashara / Terqa, situated on the right bank of the lower Middle Euphrates, the French team, directed by O. Rouault, had brought to light some objects with the depiction of the “banquet scene”. The material, presented here, consists of cylinder seals and a bone pendent, possibly a stamp seal, dated back to the third millennium; and terracotta plaquettes and a cylinder seal dated back to the first half of the second millennium B.C. The “banquet scene” that recurs on Terqa artefacts has some peculiarities: the material from the third millennium does not necessarily appear on official documents; the findings from the second millennium are varied in their supports, attesting a certain importance of the image at the site even during this period.

The aim of this contribution is a reconsideration of all the material, on with the depiction of the “banquet scene” recurs, discovered at Terqa in the light of the most recent interpretations that consider the image to be an important source that helps to understand the social dynamics that developed within the site where they were found. Therefore, an examination of the iconographic transformation of the motif and of the different supports on which it is represented, from the second to the third millennium, can provide information on the very change in the meaning of the image and its value within Terqa society.

1. Introduction on the site of Tell Ashara / Terqa

The ancient site of Terqa, modern (Tell) Ashara, is situated along the banks of the Syrian Middle-Euphrates River, in the region south of the Khabur valley and of the dry-farming plains of Northern Mesopotamia; it is 70 km north of Tell Hariri,

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the ancient Mari, with which its culture and history have been connected for a long time.

The toponym Terqa was already known at the beginning of the 20th century, thanks to the publication by F. Thureau-Dangin of cuneiform texts from the site. Already identified as an important site for research in ancient Syrian and Mesopotamian studies by E. Herzeld, in 1923 F. Thureau-Dangin and E. Dhorme (Thureau-Dangin / Dhorme, 1924) carried out a first sounding at Ashara, collecting some information about the history of Terqa. However, after the discovery of Mari at Tell Hariri, the first regular archaeological investigations started much later, in 1976, when an American mission directed by G. Buccellati (UCLA) undertook excavations at the site that lasted until 1985. After that, further archaeological research was carried out by the French Archaeological Mission of Tell Ashara / Terqa, directed by O. Rouault (University of Lyons) until 2010, when the rise of the war in Syria made it impossible to work there.

While this segment of the Euphrates valley has been settled since the Chalcolithic period, archaeological investigations at the urban site of Terqa have revealed the presence of important levels of occupation since the beginning of the middle of the third millennium BC.

The most ancient levels date back to the Early Bronze Age I. A domestic quarter and tombs equipped with rich grave goods belong to the phase attributed to the Early Bronze Age III–IVa (ca. 2550–2150 BC). At the end of the third millennium, Terqa, integrated into the Mari state, was governed by the *Shakkanakku*, the title of the kings of Mari in that period, and shared its culture. Later during the Middle Bronze II, in the Amorite period, Terqa was under the political control of Mari, until the destruction of the capital by Hammurabi of Babylon. Terqa however escaped the same fate, probably because of its religious importance, as a temple of the regional god Dagan was situated there. Terqa then became the capital of the area called the “Land of Hana”, which lasted until the end of Late Bronze Age.¹

2. The “banquet scene” iconography

It is well known that the label “banquet scene” refers to “a figurative motif, where one or more personages are represented sitting and drinking, sometimes in the presence of loaded tables, or, more often, they hold a cup in one hand” (Pinnock,

¹ For the tablets found at Terqa, see Rouault, 1984 and more recently Rouault, 2011. The publication of an important archive from the Public Building of Area E is in preparation (see Rouault, 1992). For an introduction on the site of Terqa and the more recent excavations, see Rouault, 1998; 2000; 2001. See also the reports published in *Athenaeum – Studi di Letteratura e Storia del’Antichità, Università di Pavia*, every year from 2001 to 2009, and in the series ‘*Akh Purattim – Les Rives de l’Euphrate*’, *Publications de la Maison de l’Orient et de la Méditerranée et du Ministère des Affaires Etrangères et Européennes français*, 1 (2007), 2 (2007) and 3 (*in press*).

1994: 15).² A variant shows only two drinkers in front of a big jar, while they drink through tubes from the jar.

The “banquet scene”, in general, is a popular subject in third millennium iconographic documentation. The general assumption is that this scene appeared in Mesopotamia during the Early Dynastic II period, reaching its maximum level of diffusion during the Early Dynastic III and the Akkadian periods.³ Recently, D. Stein has pointed out that the theme is much more ancient, and not restricted to Mesopotamian culture: beyond the PPNB cases, similar representations recur on vessels or cups dated back to the sixth millennium BC.⁴ Some examples are painted on Halaf recipients, several on Ubaid stamp seals, and Uruk glyptic art. Insisting on the evidence concerning the consumption of alcohol or other substances that alter the consciousness, she interprets the motif as a symbolic representation of a specific ritual act, involving the communication with the gods, or with the world of the dead. Moreover, the particular importance of this iconographic motif is probably shown by the materials used for some of the seals. It has been pointed out that most of the cylinder seals with “banquet scenes” found in the Royal Cemetery of Ur are made in lapis lazuli (Selz, 1983: 461; Pittman, 1998: 76; Stein, 2021: 451).

It is in the renewed contexts of research on the motif, mentioned above, that it is interesting to look at the evidence from Terqa, on which the “banquet scene” recurs. This iconography is associated with different types of materials, showing in its evolution a continuity between the late Early-Bronze Age and the Amorite period and culture.

3. Documentation from the third millennium levels

The most ancient item is a lapis lazuli cylinder seal brought to light by F. Thureau-Dangin and Dhorme’s excavations in 1923, now conserved at the Louvre Museum (Fig. 1).

² As the “banquet scene” is one of the most popular representations in Ancient Near East documentation, it has been the object of different methodological studies. For the bibliography relating to the meaning of the iconography of the banquet scene, see Pinnock, 1994: 18–21; Romano, 2015: 289. For a reconsideration of the bibliography on the subject and a review of the most important arguments for a revised interpretation of the scene see Stein, 2021: 441–444.

³ The subject of the banquet with two drinkers through tubes also occurs in the glyptic documentation of the so-called Dilmun culture. For few examples see Beyer, 1986: nn 167–168; Kjaerum, 1983: nn. 170–179; more recently Crawford, 2001: n. 4741; Højlund, 2007: n.1. According to L. Peyronel (2000:187, note 49) the motif would be of Mesopotamian origin and would have been assimilated by the Dilmun culture in the Akkadian period. On the iconographic relations between the Arabian Gulf and Mesopotamia see Peyronel, 2008. For a recent overview of the Dilmun Glyptic see Laursen, 2018.

⁴ Stein, 2020: 178; 2021: 444.



Fig. 1: Cylinder seal AO11785, <https://collections.louvre.fr/ark:/53355/cl010136515>.

The representation is arranged on two registers. Above: an eagle and fighting animals are identifiable. Below: two characters are seated, facing each other, with a table, maybe an altar between them. The representation is engraved in a very stylised and schematic way. According to the report, the seal was part of the funerary equipment of a grave. It has been dated by M. Pic (1997b: 167, 177) to the Early Dynastic II–III (2600–2340) period.⁵

More recently, the French mission has discovered another cylinder seal (TQ25 236) in white stone, which is probably calcite (Fig. 2). Even though the representation is poorly preserved, it is possible to reconstruct its basic structure on the base of a few parallels⁶ (Fig. 3). The representation is again on two registers.

Above: two seated personages, wearing long *kaunakes* (the classic cloak of wool flocks), in front of each other. The best preserved character is depicted with his arm bent forwards and he is possibly holding a cup in his hand.

Below: thin traces suggest that an eagle and two animals (probably goats) were originally represented. The item can be attributed to the same period as the previous seal: the Early Dynastic II–III.

⁵ Pic, 1997b: 167, 177, fig. 24.

⁶ Amiet, 1980: nn. 1172, 1175, 1177, 1178, pl. 89.



Fig. 2: Cylinder seal TQ 25 236 from the archive of the mission.



Fig. 3: Cylinder seal design n. 1178, after Amiet, 1989: Pl. 89.

Among the evidence brought to light at Terqa, the “banquet scene” is not only represented on cylinder seals. This is the case of an artifact (TQ 25 168) rarer in its form, finding less punctual parallels (Figs. 4–5).⁷ It was found in a fill attributed to the phase Terqa IV.0, dated around 2500–2450 BC.⁸ The object is a small piece of animal bone, rectangular in shape; one side is flat, while the opposite side is slightly curved. It is pierced longitudinally and engraved on both sides: the figurative representation of the particular banquet scene is reproduced on the curved side.

⁷ Poli, 2007: 428, 431–432, fig. 14; 2014; 2019.

⁸ For the stratigraphy of this area of this area of the excavation see Rouault, 2008; 2009; Rouault / al Showan, 2015a; 2015b.



Figs. 4–5: Bone pendant TQ 25 168, side with banquet and geometric motif, from the archaeological mission.

On the main side, there is a well-preserved depiction of the “banquet scene” in the variant showing two personages represented, both sitting on stools – marked by small columns or vertical elements – and drinking through straws from a common jar, placed between them.⁹ The recipient, with a round base, is standing on a structure shaped like two circles, which may be interpreted as a kind of pedestal. As for the human figures, they are facing each other, possibly with one arm raised behind their heads: the quality of the incision on the bone does not allow precision in the rendering of the posture. They seem not to be wearing the *kaunakes*, but at least one of them has a high headdress on his head. In the field above the vessel and between the two straws, there is an oval-shaped symbol or filling motif.

The scene is carved in a crude style, but peculiar aspects of the artefact, both of an iconographic and morphological nature make the object original, uncommon in the range of the figurative evidence of the banquet scene, to which the sitting position of the drinkers is connected. The arm raised behind the head of the characters is certainly an anomalous position in a “banquet” situation, and it could possibly correspond to a ritual act; most of the other scenes represent drinking personages with their arms in front of them bent at the breast. This peculiar organisation of the iconography has no immediate parallels.

On the other side of the object, an abstract or geometric decoration is engraved, evoking a vegetal motif and a snake.¹⁰

⁹ The liquid drunk by the two characters is generally understood as a type of beer called KAŠ₂-SU-RA (strained beer). See Selz, 1983: 447–448; Romano, 2012: 273.

¹⁰ These very schematic representations could be interpreted as visual elements that, according to D. Stein, compare on many cylinder seals with the “banquet scene”. These representations relate to the imagery of the ceremony. During funerary and sacrificial drinking rites, in fact, the assumption of alcohol and possibly drugs had the function to help the subject to loosen his consciousness and to reach altered states. On this topic see Stein, 2017.

The particular form of the artefact does not help us to identify its real function. It can be suggested that it was a stamp seal, but it would certainly have only been used on particular occasions as the fragility of the material would not have allowed for its everyday use without breaking it.

On the other hand, beyond the possibility that it could be a sealing device, it can also be proposed that this bone artefact was a personal ornament. The longitudinal hole suggests that, in any case, the artefact could be suspended and, as is also true for the seals, used as jewellery. H. Pittman argues that seals were suspended from pendants, pins, and belts, or worn at the wrist. (Pittman, 1998: 77). In this position, the side of the object with this specific version of the “banquet scene” was easily visible and identifiable. The display of a such an image and symbol was intentional and obviously meaningful.

The reason why an engraved object with a significant representation was made on animal bone, a fragile material, certainly more common and less prestigious than other materials, remains unclear, at least for the moment.

3.1 Observations on the “banquet scene” in third millennium documentation

The evidence depicting reproductions of the “banquet scene” that was brought to light at Terqa, already at the end of the Early Bronze Age, shows that it appears on two kinds of objects, possibly with different functions: one typology, corresponding to the two cylinder seals, reflects a strong link with the international Mesopotamian iconography and taste, while the other, represented by the bone pendent, could show local traits, both in the iconography of the scene and in the function of the object.

The “banquet scene” is, in itself, a rich source of information relating to the social and political aspects of the elite’s life in ancient Mesopotamia. S. Pollock has argued that the Early Dynastic “feast promoted distinction among classes, since feasting was limited to a small elite group” (Pollock, 2003: 25). Therefore, the representation of the “banquet scene” was the symbol of a successful integration into an elite and the owner of an object reproducing such an important and meaningful image, affirmed in this way his association to a higher level of a social class, or a closed, reserved group.¹¹

4. Old Babylonian documentation

The “banquet scene” frequently recurs in the Early Dynastic and Akkadian period all over Mesopotamia. Later, it became a less popular motif in Southern Mesopotamian cities, but it kept its interest in the North and in Syria. There is evidence of the image on Syrian and Mittanian seals from the early second millennium until

¹¹ On this topic see Pollock, 2003; Cohen, 2005 especially chap. 5. See also Stein, 2021: 442: note 8 for bibliography.

the end of the Late Bronze Age.¹² It is a common motif on cylinder seals of the Old Syrian Popular Style, on which a single sitting personage is represented, drinking from a recipient with long straw (Otto, 2019: 711–712). The same motif recurs on a terracotta basin from Tall Bazi.¹³

At Terqa, the “banquet scene”, in the variant marked by the presence of two personages around a jar, is well attested during the Middle Bronze Age. Four terracotta plaquettes have been found in Old Babylonian levels, as well as one mould used for their production, showing a much more common, even popular use and circulation of this kind of objects during this period. The iconography represented is the same, but with some changes: two personages, now standing up (no longer seated), are drinking using two long straws from the same vessel, placed between them. The recipient has a different form and capacity, and it stands either directly on the ground, or elevated, on a support. Notwithstanding the modifications, the general structure of the iconography is the same, allowing for an easy identification of the scene: a ceremonial act closely related to the consumption of beer.

The two figures are always identical and symmetrical, as if in a mirror. However, the plaquettes show a deliberate taste and interest in differentiating their aspect, changing for example the representation of their dress, headdresses, and other iconographic details. Moreover, the scene is delimited now by the limits of the plaquette, sometimes marked by a frame, which, in the lower part, is in a case incised with scales, to represent a mountain landscape.

On the plaquettes TQ21 031, TQ21 037 (Figs. 6–7), produced from the same mould, two bearded figures are wearing a high headdress, a short skirt with a central fringe, and they are grasping a weapon, possibly an axe (?) in one hand.¹⁴ These two objects were part of the equipment found in a grave.

On the plaquette fragment TQ 18 055 (Fig. 8), it is possible to identify a bearded personage wearing a long tunic, open in the front. He grasps another kind of weapon: may be a “Harpé”, a curved sword (?). The object is similar to the weapon that the gods hold on contemporary cylinder seals. The entire scene is framed by a decorative motif.

On the mould Deir ez-Zor 4841 (Fig. 9) the representation is close to the plaquettes TQ21 037 and 021.¹⁵ The scene differs mainly for the presence of the mountain motif under the two personages, and for the frame around it, marked by parallel, inclined lines, separating the surface where the personages and the jar are standing from the mountain.

¹² On the evolution from the banquet to the presentation scene, see Zajdowski, 2013.

¹³ Otto, 2019: fig. 6.

¹⁴ See Poli, 2001: 640–641, fig. 13.

¹⁵ The mould was found on the surface during American excavations.



Figs. 6–7: Terracotta plaquettes; TQ21 031 (left), TQ21 037 (right); from the archive of the archaeological mission.



Figs. 8–9: (Left) terracotta plaquette TQ 18 055, from the archive of the archaeological mission; (right) mould, Deir ez-Zor 4841, from Weygand, 2016: 516, fig. 9, b.



Fig. 10: Terracotta plaquette TQ12 10041, from Pic, 1997a: 145, fig.49.

On the plaquette TQ12 10041 (Fig. 10) the two personages are quite different from the usual representations. They look proportionally bigger, and they are closer each other; they are wearing a long and possibly decorated tunic, and a *ronde-hat* (*polos*); they are not armed.

Obviously, the Terqa tradition is not isolated. Similar objects have been discovered in the Middle Euphrates region: some plaquettes come from Mari,¹⁶ others from Haradum.¹⁷ An example has been found at Sfiré,¹⁸ near Aleppo. Therefore, it is clear that this kind of object and its representation was common and probably popular at the beginning of the second millennium, in various Syrian geographic areas, especially west of the Euphrates.

As we cannot exactly define the religious or mythologic references of this drinking scene, it is difficult to establish the function of these objects, and the context of their use. Using clay, they are made with a mould, probably in every ceramic workshop. It is evident that the important symbolic meaning of the image of the “banquet scene”, strictly linked with the palace and the temple (and their ceremonials) during the third millennium, was then lost, but other meanings of the image may have survived and been reinterpreted and adapted to new religious needs and rituals.

According to I. Weygand,¹⁹ who has very recently written a contribution on the same material, the armed personages can be tentatively interpreted as warriors, the others, in long tunics, as dignitaries. She also suggests that the armed personages were dressed in parade suits, representing the dancers and the acrobats who, according to the written sources, animated city and palace feasts and celebrations.

From the discoveries at Terqa, the archaeological context in which two identical plaquettes were found seems an important information to advance: they were part of the material found in a burial. The ceremony represented on the two objects can be linked with a funerary celebration, or in any case, to ceremonials aiding the communication with, or even the passage to, the world of the dead. On the other hand, we should not forget that the Syrian Euphrates (from Tuttul to Terqa) and the regions to the west were considered as the land under the authority of the god Dagan. This god had a definite chthonian nature – he was called the “great mountain” at Ugarit – and was connected to cereal production. Beer itself is the result of the fermentation of cereals, and, besides the effects of alcohol consumption, it could open a way to enter his world.

¹⁶ Two plaquettes have been found at Mari: M.1506 (Parrot, 1959: XXIX/1506; 75; Badre, 1980: pl. XXIX/67) and TH07.34 (Weygand, 2016: 517, fig.10/a-c). According to Weygand the two plaquettes from Mari are produced from the same mould (Weygand, 2016: 517, note 25).

¹⁷ Kempinski-Lecomte, 1992: 414.

¹⁸ Beyer, 1996: 23, fig. 1–2.

¹⁹ Weygand, 2016.

While some aspects are different, a scene related with these themes also recurs on the cylinder seal TQ24 032 (Fig. 11), found at Terqa.



Fig. 11: Cylinder seal TQ24 032, from the archive of the archaeological mission.

It was discovered in a pit and is dated to the Old Babylonian period.²⁰ It shows two nude, standing male figures drinking, with long straws, from a big vessel situated between them. They wear a polos-hat. Similar human figures, but in a different scene, recur on other seals dated to the same period. According to E. Porada²¹ they are worshippers. The ritual scene is completed by the presence of a fantastical creature, presenting horse hooves and a human head.

5. General conclusions

To conclude, it is important to point out that the information presented here is only a preliminary work on this specific iconographic motif, the first step of the research, starting from a specific archaeological context and culture. This contribution stresses the continuity of the scene over a long period, its evolution and the diffusion beyond its original users – the elite class. It was appreciated and exploited by a larger part of the urban population, who kept the memory of its value and of its meaning, even though they used it in other contexts.

In order to better define this traditional, ancestral meaning, a recent contribution by D. Stein should be quoted (Stein, 2021: 594). She underlines ways of using alcohol in antiquity, during ceremonies and its effect on feast participants. She

²⁰ Poli, 2005: 678–679, fig. 10.

²¹ Porada, 1948: nn. 542–553.

writes: “The ritual consumption of alcohol helped to facilitate the journey of the deceased and to establish contact with the spiritual world. Both these objectives lie at the heart of Sumerian funerary rituals, which were meant to liberate the soul from body and take care of the corpse. Traces of similar funerary practices are encountered throughout the ancient Near East”.

The documentation from Terqa, presented in this contribution, represents some “traces” of funerary rites, but also a way to relate with the world of nature, where life and death have the same weight. At this stage of the research, it is impossible to advance further conclusions.

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The Assyrian Royal Banquet

A Sociological and Anthropological Approach

Ludovico Portuese*

This paper explores the Assyrian royal banquet through a sociological and anthropological analysis of the extant visual evidence from the first millennium BCE. It focuses specifically on the immaterial aspects of commensality (hierarchies, positions, gestures, etiquette, proxemic, hygiene), the study of which reveals that these contributed to the integrity of a culture and the evolutionary success of the group.

1. Introduction

As observed by Georg Simmel, eating and drinking are primitive, individual, and egotistical physiological facts. Further, as such they are shared by virtue of being essentially common activities. Commensality, or the practice of eating and drinking together, and its sociological structure is thus a spontaneous and direct fact of nature; an act of selfishness, primitiveness, and universal material interest is turned into an occasion of “immeasurable sociological significance”.¹ In a nutshell, the very naturalness and primitiveness of eating and drinking is what makes it so fundamentally social.

Although studied throughout anthropology and sociology, as well as in the social sciences and the humanities, the social functions of commensality, as a cross-cultural and transhistorical phenomenon, vary greatly from culture to culture.² The etymological history of the word suggests its complexity: commensality may imply the sharing of food and drink (*com-mensalis*), but also the sharing of a table, a place, or a moment (*com-mensa*), or alternatively the costs of a meal

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¹ Simmel, 1997: 130.

² For an examination of the importance of commensality, with a specific view on the ancient Near East, see the contributions in Pollock, 2012 and, with a special focus on Mesopotamia in the first millennium BCE, see Ermidoro, 2015: 39–43.

(*commensalia*).³ Either way, the word commensality always recalls a material dimension, above all the table (*mensa*), the utensils of the meal, the spatial context where the food and drink are consumed, and the financial contribution to the meal. However, commensality also involves some immaterial aspects which are directly linked to the participants, the way in which they interact with each other, the setting (both physical and psychological), the food and the drink, and in turn the ways that material aspects influence and are influenced by immaterial ones. Commensality is an example of the existence of behavioural rules, of prescribed gestures and manners that regulate the consumption of the repast or the content of conversations, and that govern the hierarchical organization of banqueters and their movements. Although the immaterial dimensions of commensality may be hidden or not stated explicitly, they are fundamental 1) in creating and reinforcing social bonds, and 2) in generating a sense of belonging to the same community in order to preserve it. It is exactly these two aspects that I would like to outline in this paper through the analysis of some immaterial dimensions which the representation of first-millennium Assyrian royal banquets, I believe, strives to display, and which sociology and anthropology may help to reveal.⁴

Artists in the Assyrian period elevate an event of physiological primitiveness into the sphere of social interaction. Being represented with specific inner artistic organizations, the external act of feeding and drinking becomes a sociological matter and, to quote Simmel, “arranges itself in a more aesthetic, stylized and supra-individually regulated form”.⁵ The best visual evidence of a banquet at the court of the Assyrian king comes from an Assyrian ivory plaque from Fort Shalmaneser at Kalhu (Fig. 1) and the reliefs of rooms 2 and 7 (Fig. 2) in the royal palace of Sargon II at Dur-Sharrukin.⁶ In the main scene, the Assyrian royal banquet is basically portrayed through groups of seated banqueters who face each other across a table with foodstuff, raise beakers to drink or make a toast, and who are surrounded by standing attendants.⁷ The king is apparently absent from the palace reliefs, although he must have been represented somewhere, as in the ivory plaque from Kalhu.⁸

³ Jönsson *et al.*, 2021: 1–2.

⁴ For an anthropological approach to banquet in Assyria, see Ermidoro, 2015.

⁵ Simmel, 1997: 131.

⁶ For the entire sequence of reliefs from Sargon II’s royal palace, see Botta / Flandin, 1849: pls. 52–76, 107–114.

⁷ There seems to be no foodstuff on the tables of the ivory plaque. Moreover, one person is depicted in the act of receiving an object (food? handkerchief?) from an attendant and is not drinking. For a detailed description of these images, see Albenda, 1986: 80–82. For an analysis of the scenes and their significance, see Matthiae, 2012; Winter, 2016; Ermidoro, 2015: 227–228; Portuese, 2020: 81–86, 175–176.

⁸ Reade, 1979: 81; Winter, 2016: 43.

As already pointed out, these banquet scenes, perhaps including the ivory plaque, must probably be considered as a direct and positive consequence of specific activities, such as the war and the hunt depicted in the lower registers of rooms 2 and 7.⁹ Thus, they probably do not represent daily meals, but exceptional episodes which were likely organized in the royal palace to celebrate and commemorate a specific event. Now, as observed by Claude Grignon, commensality is a manifestation of pre-existing social groups, whose differences and classifications can be based on age, gender, and ethnic identity, or on voluntary associations of a political and/or religious nature.¹⁰

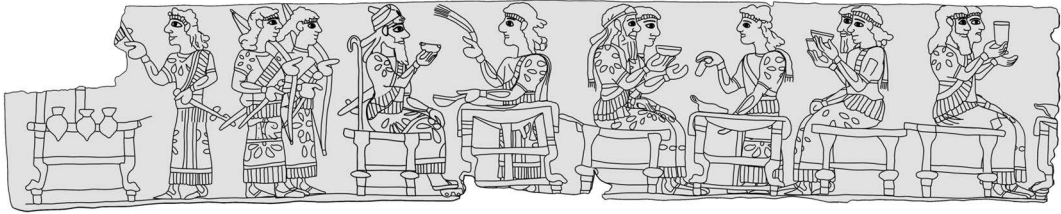


Fig. 1: Assyrian ivory plaque, Kalhu, Fort Shalmaneser (Metropolitan Museum of Art, New York 59.107.22; Drawing by Steve K. Simons – Panoply Vase Animation Project for GALATEO project).

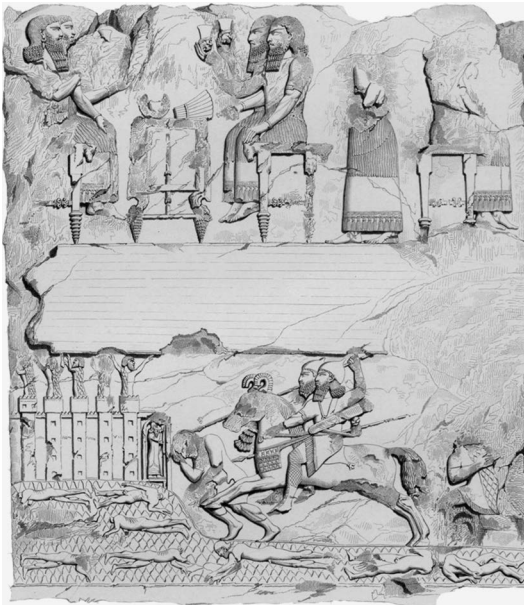


Fig. 2: Relief 17, Room 2, Sargon II's Royal Palace, Dur-Sharrukin (Botta / Flandin, 1849: pl. 64).

⁹ Matthiae, 2012: 482–483; Winter, 2016.

¹⁰ Grignon, 2001: 24.

To borrow Grignon's terminology, the type of commensality which is discussed in this scene can be described, first, as *exceptional*, because it celebrates a memorable event (war, hunt) that did not take place each day, and, second, as *institutional*, because of its hierarchical nature and the presence of a ruler of the institution, the Assyrian king, who sponsored the banquet.¹¹ Since access to the royal building and to particular inner spaces where banquets probably took place was regularly controlled and those who maintained access to such places were carefully selected, the banqueters depicted as sharing the king's table must have been selected and privileged guests.¹² In this regard, I am tempted to define the representation of the Assyrian royal banquet according to what Grignon calls *segregative* commensality. This term denotes a further expression of institutional commensality which is usually found in hierarchised societies to set up or restore the group by closing it, thereby strengthening a "We" by pointing out and rejecting, as symbols of otherness, the "not We".¹³ The immaterial dimensions "depicted" on the Assyrian royal banquet scenes comply with a commensality that was exceptional, institutional and segregative in essence.

2. Setting the tables

Furthermore, the arrangement of tables and the position of the banqueters is not accidental but complies with specific social needs which are dictated by the above-described type of commensality. In this regard, it should be noted that semi-fixed features, such as chairs and tables, are not already laid out in the room but are brought into a room which appears empty at the moment of the repast. This is confirmed not only by the reliefs of the façade of room 2 at Dur-Sharukin,¹⁴ but also by an Assyrian banquet protocol which describes how, at the beginning of the dinner, when the king enters the room with his magnates, "the table and] the couch for the king [are place]d opposite the doorway". Also, at the end of the dinner the magnates "rise and remain standing. The tables of the crown prince and of the magnates are lifted up. The table of the crown prince and the table before the king are *set in motion*."¹⁵ This suggests that there may have been a hierarchical order in which both the furniture and banqueters were arranged. Moreover, such use of moveable furniture allowed protocol-holders to lay out the tables and chairs according to special and new needs deriving from political and social changes. In this connection, the notion that the king was not of equal status with the other participants is reinforced visually on the Kalhu ivory plaque, where

¹¹ Grignon, 2001: 26.

¹² Portuese, 2020.

¹³ Grignon, 2001: 28–29.

¹⁴ Botta / Flandin, 1849: pls. 10–23; see also pl. 30.

¹⁵ SAA 20 33: i 2 – i 3, r i 50 – r i 52. For an-in-depth examination of this text, see Ermidoro, 2015: 161–189.

he is seated apart and is distinguished by his high-backed seat, dress, size, and paraphernalia. Similarly, on the same plaque the figure immediately in front of the king is visually differentiated by his position and the diadem he wears, which has ribbons attached to it and is a marker of the crown prince.¹⁶ This suggests that tables closer to the king's table were occupied by the most important and trusted persons by the king: the closer that one was to the king's table, the more important was his position within the Assyrian court hierarchy. Moreover, it is likely that each table represented a specific rank of officials. Notwithstanding such a hierarchical organization, a remarkable cohesiveness can be highlighted from the position and arrangement of the banqueters.

From an anthropological perspective, we are informed that a setting can offer many types of behavioural opportunities which may facilitate or hinder social behaviour. The design of a space and its semi-fixed features can dramatically alter these social affordances relative to the occupants who are disposed to use it. In this respect, the terms *sociopetal* and *sociofugal* are environmental psychological concepts used to denote such designs.¹⁷ The basic difference between them lies in the fact that these contrasting social settings facilitate (*sociopetal*) or inhibit (*sociofugal*) social interaction. Thus, a sociopetal room tends to bring people together and affords interaction by orienting occupants toward each other, whereas a sociofugal space may have boundary walls and seats which face away from each other and it tends to discourage meetings or conversations between individuals, thereby inhibiting interaction (Fig. 3).

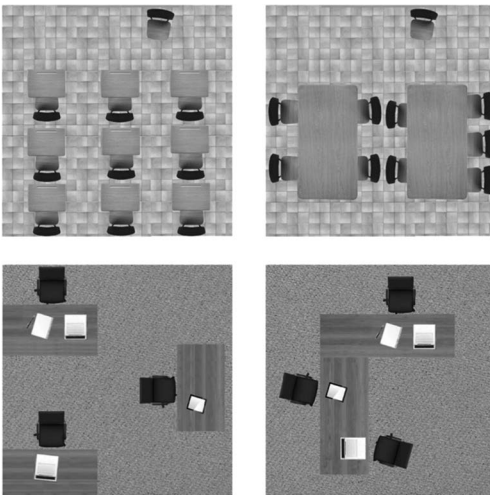


Fig. 3: An example of a sociofugal (left) and sociopetal (right) setting, respectively (Meagher / Marsh, 2017: fig. 1).

¹⁶ Winter, 2016: 52; Portuese, 2020: 71.

¹⁷ Osmond, 1957; Sommer, 1967. See also Hall, 1966: 108–111. More recently, see Meagher / Marsh, 2017.

The proportion of the room length to width, the furniture arrangement, and the furniture density all constitute the primary variables which affect social interaction and reflect the operational definition of sociopetality and sociofugality. The physical setting of the Assyrian banquet imagery is unknown, but it is likely that room 2 and similar oblong rooms may have been the physical venue for such meetings.¹⁸ Tables could be set in line along this room, but they could have been also placed side by side. In either case, what we see in the banquet scenes is a setting closer to a sociopetal arrangement (Fig. 4), the aim being to facilitate and promote interaction between banqueters.

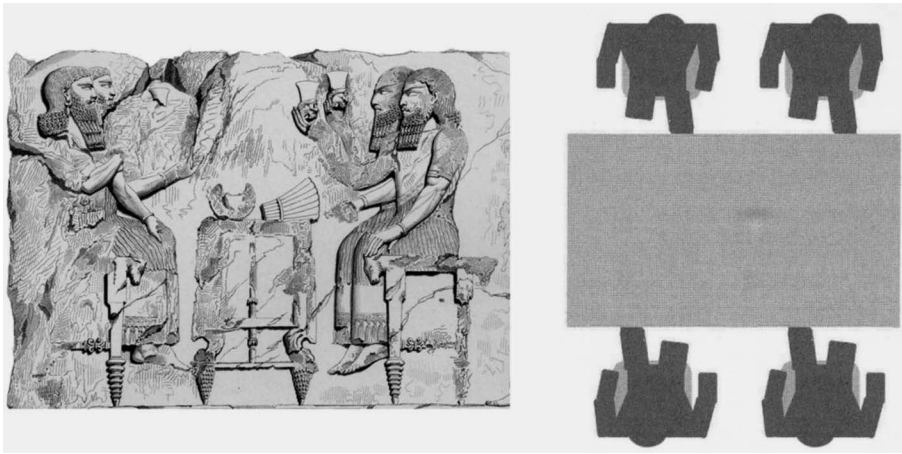


Fig. 4: The sociopetal setting of the Assyrian royal banquet (Botta / Flandin, 1849: pl. 64; drawing by author).

Such a sociopetal space greatly impacts on a number of sensorial inputs and aspects that cannot be explained by reliefs or texts. Sight, olfaction, sound, smell, and one's feel of one's neighbours' breath all combine to signal unmistakable involvement with another body. This arrangement allows the sensation of warmth from the body of the nearby banqueter to create an intimate space. We can imagine that the smell of freshly washed hair and the blurring of another person's features seen close up combine with the sensation of warmth to create intimacy. Thighs and elbows are brought into contact, hands can reach and grasp extremities, and so one is able to hold or grasp the other person. All these aspects were created deliberately by the arrangement of the furniture, with the distance between banqueters perhaps ranging between intimate (0–50 cm) and personal (0.5–1.2 m), according to Edward Hall's categorisations.¹⁹ Personal distance, in particular, is the limit of physical domination in a very real sense. Beyond it, a person cannot

¹⁸ For the floorplan, see Portuese, 2020: fig. 11.

¹⁹ Hall, 1966: 113–129.

easily “get his hands on” someone else.²⁰ Such an intimacy between banqueters and their arrangement in units of four individuals per table suggests that this was a way to activate and tighten internal solidarity within specific micro-groups. Instead, it is likely that the king was seated at a social distance (1.2–3.5 m), where intimate visual details in the face were not perceived, and nobody could touch the king unless some special effort was taken. At this distance, nonetheless, voice level may be normal, and conversations could be conducted at a normal level.

3. Etiquette and hygiene

The strong feeling of closeness and intimacy also seems to be expressed through minute instances of etiquette, whose regulation is a result of the socialization of the meal. All the banqueters, including the king, are equated by posture and gesture. The erect posture, which seems conventional for Assyrians according to the Assyrian visual evidence, was considered to carry positive connotations of appearing agreeable, while holding the head high indicated correctness and dignity.²¹ Moreover, this posture was an element which expressed reciprocity because it implied direct eye-contact between banqueters. One gesture which both banqueters and the king himself perform is the raising of their beakers. We don't actually know why the act of drinking was chosen to “freeze” the repast and thus whether it stood for a subset or extension of food.²² In any event, what emerges is that such a gesture diminishes the differences between banqueters, since raising beakers may have meant that men are toasting one other and this very scene of *conviviality* made the partakers similar in status.²³ Moreover, it is interesting to note that each banqueter balances a bowl or beaker in one hand, making use of all his fingertips. In this respect, one may suspect that a toasting etiquette may have existed – as is described in Xenophon's *Cyropaedia* in referring to the Medes – but was perhaps known only to higher-status guests.²⁴ In this connection, special mention needs to be made of Sargon II's reliefs, whose material dimension of commensality is represented by the lion-headed cups (called in texts *kaqqad nēšē* and probably made of silver, bronze, or even gold) which all banqueters held to drink wine.²⁵ This particular beaker is also attested in divine banquets and rituals

²⁰ Hall, 1966: 120.

²¹ Cifarelli, 1998: 215; Portuese, 2020: 111.

²² For a selection of reasons from earlier studies on why the drinking act metonymically stands for the banquet itself, see Portuese / Scalisi, 2021: 137–142. For an anthropological approach to drinking alcoholic beverages, see Dietler, 1990.

²³ The term *conviviality* further complicates or enriches the notion of commensality, since it focuses on the friendly and enjoyable aspect of being together (Jönsson *et al.*, 2021: 2).

²⁴ Portuese / Scalisi, 2021: 140–141.

²⁵ Gaspa, 2014: 25–33.

performed within temples, which is a further indicator of its special status.²⁶ This implies that, by being involved in a lay banquet and being proffered to guests, the object was highly significant, marking the event as very exceptional and, since it was held by all banqueters, an egalitarian symbol. Although it is expected that in similar circumstances the king proffered to his guests delicate kinds of vessels and fine pieces of furniture, the lion-headed cup held in the hands of the banqueters turns the event into a very special occasion. In fact, the use of special objects together with the presence of music (on relief 21, room 2) leads me to adopt another term from anthropology to describe the Sargonid banquets, namely the notion of *feast*. The feast is defined as an event that involves “some combination of elements including exotic foods often prepared and served in special vessels”, that “may be held in special locations” and involves “symbolically charged practices that differentiate and privilege feasting from other meals”.²⁷ This term expands and adds value to the definition of commensality, and can be used in this context for other aspects as well. In fact, Sargon II’s feasting is made unique not only by special or splendid meals or dining objects or the location, but also by the presence of splendid company: those different Assyrian high-ranking officials (themselves distinguished by garments) whom the king eats with is as important as what he eats and what he eats on and from. But the uniqueness of the event does not imply that feasting was itself a rare phenomenon. As noted by Joan M. Gero, feasting should rather be seen “as a regularly occurring social practice, one that is involved and evoked at many points in the intensification of power relations between rulers and ruled. Feasts generally seek to accomplish the shared participation of persons of different ranks, and these persons are brought together in a single setting that intensifies the very socio-political divides that it also bridges and subverts”.²⁸ This means that the feasts which we see celebrated on Sargon II’s reliefs were powerful tools, both in reality and as visual messages, which were used by the king to define relationships and boundaries, and thereby unite and divide at the same time. Social distinctions were thus affirmed through the performance of feasts.²⁹

Finally, although I do not wish to venture into a debate that would require a focused analysis, I would like to point out that the rules of appropriate behaviour may be justified by their basis in commonly held moral principles and ideals, perhaps deriving from a military context.³⁰ Conventions which govern the act of drinking or the stances which are maintained at the king’s table should not be

²⁶ Gaspa, 2014: 29; Ermidoro, 2015: 228. On the provenance and related meaning of the lion-headed cups depicted on Sargon II’s reliefs, see Stronach, 1996: 186–191; Gaspa, 2014: 30–33; Gunter, 2020: 149–156, and earlier bibliography in Portuese, 2020: 76.

²⁷ Joyce, 2010: 225.

²⁸ Gero, 2003: 286.

²⁹ Dietler, 2001: 77–78.

³⁰ Cifarelli, 1998: 215.

considered as colourless formal aspects which are represented passively by the artist. Rather, I suspect that these conventions reflected rules, practices, and norms for behaviour that bonded participants to behave in certain ways and created a structure in which banqueters could collectively participate in potentially morally transformative activities. In a nutshell, I assume that there must have been a strict correlation, as already asserted by some philosophers, between what we today call manners/etiquette rules and morality, which perhaps derived from a basically martial context.³¹

In association with these aspects and the system of a minutely codified etiquette, at least in its most ceremonious and official aspects, this process of formal selection and the cohesiveness of banqueters is complemented by another immaterial dimension, that of hygiene. By hygiene I refer to the basic dictionary definition, which is understood as the “conditions or practices (as of cleanliness) conducive to health”.³² Such a definition applies naturally to the Assyrian world, where there seems to have been great awareness of good hygiene practices and their role in reducing the spread of disease. The already-quoted Assyrian banquet protocol text reveals the high levels of hygiene which existed in the banquet environment in its reference to the frequent proffering of napkins and handkerchiefs,³³ and especially to the container of hand-water (*hašbu ša mē*), which was constantly supervised by a special lackey.³⁴ In such a context, the use of water should not be conceived as a means to reach cultic purity but to prevent the spread of diseases. In fact, a correlation between illness and clean water is often emphasised in Assyrian letters.³⁵ In addition, it seems that the proffering of good water even to deportees reflected a kind of attention and care of the king towards his people.³⁶ By contrast, the inaccessibility to good and clean water led to a lack of good hygiene and implied a kind of social ostracism.³⁷ Not having access to good water and cleanliness meant becoming ill. This in turn was probably perceived as the loss of the king’s support. This aspect complies with the typical forms of segregative commensality, where there is a remarkable necessity for the group’s individuals (“We”) to preserve their “purity” by protecting their bodies and the food they consume from the stain and untoward pollutions which others (“not We”) may inflict.

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³¹ See, in particular, Buss, 1999; Stohr, 2012; 2018.

³² <https://www.merriam-webster.com/dictionary/hygiene>.

³³ SAA 20 33: ii 16 – ii 19.

³⁴ SAA 20 33: ii 20 – ii 21.

³⁵ SAA 10 318; SAA 19 22: r 16 – r 22.

³⁶ SAA 1 247.

³⁷ SAA 18 181: 19–22.

In conclusion, what emerges from this brief analysis of the immaterial aspects of commensality is that, both in reality and in iconography, there was an effort to implement and represent those strategies that were carefully chosen to preserve the integrity of a very small group of people. These strategies contributed towards the evolutionary success of that group. Through the primitive origins of commensality, a society is somehow formed and held together: sharing and incorporating food implies the incorporation of the partaker into the community and simultaneously defines his or her place within it. In this regard, Pasi Falk highlights the bidirectional value of the eating mouth, both in incorporating the food of the community into one's body and "being eaten into the community".³⁸ This bond is created primarily by sharing. However, I would emphasise that, especially within an institutional and segregative form of commensality which exists to celebrate a common success or exceptional event, more immaterial aspects work in tandem with the material ones in order to incorporate or "eat" partakers into the community and thereby forge, reinforce, and protect the integrity of a single group, at the same time defining the place occupied by each individual within the same group. Socially speaking, the members of Assyrian royal society were what they ate.

Abbreviations

- SAA 1 see Parpola, 1987.
 SAA 10 see Parpola, 1993.
 SAA 18 see Reynolds, 2003.
 SAA 19 see Luukko, 2012.
 SAA 20 see Parpola, 2017.

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³⁸ Falk, 1994: 20.

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Marzeah in Mesopotamia

JoAnn Scurlock

As we now know, grapes originated in the Caucasus and spread westward across the Levant to Europe. What is less well known is that the culture of wine involving gatherings of men engaged in drinking contests spread with the grapes, and can be picked up in textual evidence as far away as ancient Greece.¹ Unsurprisingly, similar customs appear at Ugarit in association with the fall after-the-harvest wine festival.² But what about Mesopotamia? This is beer country, Germany, not France. And yet, the answer is actually yes, there was such a custom in Mesopotamia. This is where archaeological evidence comes into play. Not just the wine jars – those could be part of a wedding, but, fortunately for us, the fall wine harvest festival was accompanied by a very peculiar set of tapas that have been recovered in excavation at Lagaš. And this, in turn, allows us to recount the tale of mass male inebriation in Mesopotamia.

Lagaš might seem the last place anybody would look for wine. However, a careful examination of the cultic calendar, which will have begun at the Sumerian vernal equinox in Ayyaru (April/May),³ reveals that wine was actually being produced there. Ningišzida was wine's patron saint who wept red tears when the grapes were pressed out.⁴ Whenever the statue of Ningišzida went out for a tour or he got a festival, some activity associated with viticulture was afoot.

In Du'ūzu (June/July), Ningišzida took part in the Lisi Festival during which he received funerary offerings. This was the culmination of a two month circuit round the walls accompanied by lamentations.⁵ This corresponded to the coming out of the grapes followed by the thinning of table grapes in early Summer.⁶ At grape harvest time, Ningišzida's temple got a new coat of plaster. The month name Mesandu-Falls-in-the-Barley (Araḥšamna = October/November)⁷ is a ref-

¹ See Scurlock, 2013: 307–308.

² See Scurlock, 2013.

³ See Scurlock, 2019b: 165.

⁴ See Wiggermann, 2000: 370.

⁵ See Cohen, 2015: 63.

⁶ See Ency.Brit., 1961 10: 641–642.

⁷ This is misplaced in Cohen, 2015: 56–57 as may be seen from pp. 60–61 (correcting the beginning of the year to Ayyaru) where the month in question is replaced with the festival

erence to the after-harvest pruning of the vines into the cover crop. Finally, In Addaru (ŠE.KIN.KUD = February/March) there was a Festival of Ú.ŠIM of Ningišzida.⁸ The harvest in question was of the cover crop which had been planted round the vines to keep the weeds from stealing their moisture during the rainy season.⁹

It is the grape harvest festival in which we are interested here. In Donald Hansen's excavations at Tell Al-Hibba, an administrative building was discovered in Area C.¹⁰ Apart from evidence of copper and lapis that suggested industrial activity, there was an archive to the West of the North courtyard with administrative texts dealing with fish, reeds, wool and flour. To the east of the same courtyard, there was evidence for the administration of grain and a large number of figurines, furniture and miniature vessels. The areas abutting the southern courtyard were full of plaster, jar sealings and bones. Curiously, the building seems to have had multiple large entrances along the east side, suggesting the presence of a large walled courtyard in that direction.

What all of this suggests is that feasting activity of some sort was orchestrated from this building. Tables will have been set up in the neighboring courtyard to accommodate the opened jars of wine and platters of prepared food. The remains of the day will have then returned to the building to be ultimately disposed of in a fosse. It is to be noted in this connection that one of the numerous jar sealings discovered in the building shows feasting in progress.¹¹

And what of the bones? A curious set indeed: sheep/goats, cattle, pigs, dogs, horses and/ or onagers or wild asses, gazelles, deer, 4 types of fish, 2 ocean and 2 fresh water, spoonbill, flamingo, 2 types of ducks, gull and rail (a marsh bird) and both fresh water and marine shells.¹² What is interesting about these offerings is that they come in pairs. You have small cattle and large cattle, omnivorous and carnivorous scavengers, wild and tame varieties of equid, steppe dwelling and mountain game, ocean and fresh water fish, birds with flat vs long bills, ocean and marsh birds; some of these at least also specifically sort with seasons. Sheep lamb in spring and summer; cattle drop their calves in winter. Gazelles are hunted in spring; deer in fall. In view of this, it is hard not to see the seasons in the four varieties of fish.

A very similar set of offerings, including a similarly wide variety of birds and fish, were discovered in excavation at 1st millennium BCE Ramat Rahel in Israel. There, analysis of the bones indicated that the sheep were actually 3–6 month old

of Dumuzi.

⁸ See Cohen, 2015: 67–68, 69.

⁹ See Ency.Brit., 1961 10: 642.

¹⁰ As reported in Webb, 2020.

¹¹ Webb, 2020.

¹² For bones at Lagash, see Mudar, 1982.

lamb, an indication that the fall was the season for this feasting activity.¹³ This makes perfect sense for the Lagaš material since Tašrītu, September/October in our calendar or grape harvest season, is referred to in ancient Mesopotamian texts as the ZAG.MU or turn of the year,¹⁴ to which all the pairings and seasonal references in the offerings would naturally refer.¹⁵

The Festival at Lagaš? It was a quite elaborate affair, known locally as the Malt Eating Festival of Nanše. The administrative texts found in the building in Tell Al-Hibbah Area C inform us that the Malt Eating Festival of Nanše did indeed involve deliveries of malt beer to the palace of Lugalanda, as well as offerings of stone bowls, chalices and crowns to Nanše and friends.¹⁶ This would cover the administrative building's many workshops and the deliveries of grain presumably arriving in time for the beer in question to be made.

The festival began on the 25th of Ulūlu (August/September) with a three day pilgrimage led by governor Lugalanda's wife with statues transported to the canal by chariot. From that point, transport was to be by boat of which there were four, one for (astral) Dumuzi (Lady Sprinkled with Charm), Nanše's boat (Shining Lady), Nindara's boat (The Shrine of Abundance) and another Nanše boat loaded with torches. The first day, the boats were oiled and the statues got a ritual bath. The second day there was a visit to the other sites round Lagaš with Dumuzi's boat to dock at Lazawi Field and Nanše's at the Apple Orchard. Apples were picked in Ulūlu, the reason for the timing for this festival, which was also her exaltation as the planet Venus.¹⁷

Nanše's main shrine was in Nigin (Tell Zurghul), which is in the process of being excavated by David Nadali and Andrea Polcaro. In addition to the temple platform in Nigin (Area D), there was an administrative building (Area A) that had facilities for making malt and housed large stacks of vessels containing residue of lentils, emmer and barley.¹⁸ We may gather from these remains that the necessarily small group of participants in this festival performed the rite of "malt eating" that gave the festival its name.

But we are just getting started. Like most festivals of this early period, you begin your festival at the end of one month and lap it over into the next month. For the fall, this will have been Ulūlu into Tašrītu. In Tašrītu, when grapes were harvested, there was the opportunity for a more general public feasting that in-

¹³ For references, see Scurlock, 2019a: 45, 46.

¹⁴ For Nippur, see Cohen, 2015: 58.

¹⁵ At Lagaš, the ZAG.MU is Kislīmu representing a much earlier calendar that began the year at the then Vernal Equinox in Simānu.

¹⁶ See Cohen, 2015: 40–41.

¹⁷ See Cohen, 2015: 64–66.

¹⁸ Nadali / Polcaro, 2018: 28–30, 34; cf. Nadali / Pocaro, 2021.

volved all those vats of “mountain” (wild, so barely fermented and still foaming) wine¹⁹ stored in Entemena’s “Shrine in which Pots are Arranged”.²⁰

Besides the new wine, the festival prominently featured one administrative headache orchestrated from our Area C building. We know that the fish to be consumed at this festival came in at the time of the AB.BA.È festival a month or two earlier, presumably to be fattened.²¹ These must have been kept in ponds, such as the one at Ramat Rahel or, closer to home, the fish pond bizarrely situated in the top of an artificial mound two meters above the flood plain, apparently once with an associated garden, that was discovered by Elizabeth Stone and Paul Zimansky in a suburb of Ur.²² The particular festival for which these fish will have been intended is the *akītu*-festival known from late 3rd millennium administrative texts from Ur.²³ We know that it was the custom to eat ocean fish at the Vernal Equinox *akītu*-festival at Ur.²⁴ This pond was presumably designed to hold both these and ocean and river fish for the Autumnal Equinox *akītu* celebration.²⁵ The latter, as might have been guessed, echoes the Lagaš Malt-eating festival of Nanše with its journeys by barge,²⁶ in this case out to the *akītu*-house of the moon god Nanna²⁷ and back again in triumphal return to Ur on the third day of the festival to determine the city’s fate.. Required as offerings, alongside the more conventional sacrifices, were lambs and reed-fed pigs²⁸ and the provision of ghee, oil, pea flour and farina for cakes as well as dates and cheese.²⁹ One text includes a duck, 2 [...] birds, 5 turtle-doves and two lambs and specifies that the reed-fed pig is to be roasted.³⁰ And yes, there was to be a banquet.³¹ Early 3rd millennium texts from Ur mention figs, apples, wine/grapes and some sort of fish product.³²

The beverage here was not grape wine but what is described as “black beer poured into bowls”.³³ This was not what we would call black beer, since Meso-

¹⁹ Uruinimgina 6 ii 6–7 (Frayne, 2008 [RIME 1]: 280).

²⁰ Entemena 4 ii 1–3 (Frayne, 2008 [RIME 1]: 203); Entemena 12 ii 6–iii 1 (Frayne, 2008 [RIME 1]: 214); Entemena 16: 9–10 (Frayne, 2008 [RIME 1]: 219); Entemena 17: i 17–19 (Frayne, 2008 [RIME 1]: 220).

²¹ See Cohen, 2015: 48.

²² Zimansky, 2021.

²³ Zimansky, 2021: 525–526.

²⁴ See Cohen, 2015: 74–75.

²⁵ Cf. Scurlock, 2019a: 57.

²⁶ See Cohen, 2015: 102, 104.

²⁷ See Cohen, 2015: 100.

²⁸ See Cohen, 2015: 105, 107.

²⁹ See Cohen, 2015: 104, 105.

³⁰ See Cohen, 2015: 105; cf. 107.

³¹ See Cohen, 2015: 106.

³² Steinkeller, 2002: 252.

³³ See Cohen, 2015: 105.

potamian beer had floaters on top that had to be avoided by putting the beverage into a pot and drinking from a straw. Wine, by contrast, has dregs which the spouted pouring vessels were supposed to leave behind with the residual bit hopefully safely in the bottom of your drinking cup. Therefore, the “black beer” is wine and, to judge from the color, date wine, that other alcoholic substance specifically forbidden to Muslims.

So there must have been fish ponds or some equivalent thereof at Lagaš. As to where, a hint is provided by the presence in badly dug early excavations at Nigin of the complete skeleton of a shark.³⁴ Nanše, as we know from other texts, had a special relationship with rivers, canals and the ocean. She also was associated with fish and various types of birds.³⁵ It is hard not to think that the boats returned to Lagaš from their pilgrimage to Nigin with fish and birds for the coming feast in Nanše’s honor. Indeed, the excavators of Tell Zurghul discovered a building in “sacred context” in Area B that was apparently used to orchestrate fishing activities, to judge from the many fishing net clay weights, river and sea shells, fish vertebrae, and even some preserved fish skins from several different types of fish.³⁶

Apart from the fish, several other oddities administered or discovered in building C at Tell Al-Hibba were also needed for the festival. There was the whitewash for a new coating for all the major temples including the nearby Ebagara of Ningirsu, shrines of Nanše, Dumuzi, Ningišzida, and Šulpae. In addition there was flour for Meslamtaea.³⁷

We can know from later manifestations of this festival that it is no accident that reverence is being paid to Šulpae (Jupiter)³⁸ and Meslamtaea (Mercury). These planets were supposed to have had a simultaneous solstice point in Tašritu in the first year ever, meaning that the divinities who controlled them had a battle.³⁹ The reeds that were also administered in the building in Area C were used in many a Mesopotamian ritual to symbolically enact battles.

So much for the ritual bits. The fun was contained in all those jars of the local wine. These will have been opened in the building in Area C where the jar sealings were discovered.⁴⁰ The food was presumably also prepared there. Out it went to the tables and the leftovers, being sacred, came back and got dumped temporarily, eventually to be cleaned out into a proper fosse. Last but by no means least, the building in Area C also contained figurines and miniature vessels and furniture

³⁴ Nadali / Polcaro, 2021.

³⁵ Heimpel, 1998: 152–154.

³⁶ Nadali / Polcaro, 2018: 36–38; cf. http://www.tellsurghul.org/Area_B.html consulted May 21.

³⁷ See Cohen, 2015: 66–66.

³⁸ See Delnero, 2012: 285–286.

³⁹ For details, see Scurlock, 2019a: 60–65; cf. Scurlock, 2019b.

⁴⁰ Webb, 2020.

that we may imagine as for sale by the sanctuary.⁴¹ For what purpose? To note that many similar figurines turn up in actual graves. In combination with the miniature tables and vessels, this might have actually gotten you that feasting afterlife that was the privilege of the rich and famous.

So far, we have uncovered archaeological and textual evidence for mass drinking accompanied by some seasonally themed tapas. We are missing the actual word *marzeah* and some indication that the Georgian custom of deliberate inebriation travelled across from the Caucasus along with the grapes and the cups in which to drink, in short whether there was a culture of wine drinking that travelled with the wine.

For this, we need to turn to 2nd millennium Ugarit and 1st millennium Greece and Palmyra. From Ugarit and Palmyra we have the word itself, which refers, as the Ugaritic evidence makes clear, to sort of clubs of young men who were involved in the accumulation of the prodigious amounts of wine required.⁴² In view of this fact, we may dispense with the folk etymologies proposed for the Palmyrene material and understand that this is *mar zeah*, “son(s) of the *zeah*-offering.” From Palmyra, we learn that the wine of these offerings was consumed at four different occasions during the year and, from the Ugaritic fall *marzeah* and the Athenian Anthesterion, that getting blind drunk was an actual feature of the involved festivals.⁴³

The prominent *marzeah* at Ugarit was our fall festival. And this reveals another feature of the season, which was a deciding of destinies and an opportunity to extend one’s life.⁴⁴ This is particularly evident in the every-eighth-year celebration of the Fall festival which winds the after-harvest pruning of the vines and symbolic defeat of death that this represents into a request for seven more years of life.⁴⁵ This more than suggests that the *zeah*-offering was intended to be propitiatory if not expiatory. And this brings us to 2nd Millennium Mari and its *pudû*-offerings. These were, as has been argued on philological grounds, intended to be expiatory.⁴⁶

An examination of the Mari material, as I have argued in my contribution to the *What Difference Does Time Make* volume, reveals that the local calendar, and indeed all the Amorite calendars, began in Šabātu (January/February).⁴⁷ Armed with this knowledge, it is apparent that these offerings appear four times a year, specifically at the change of seasons, so Addaru and Nisannu for Spring,⁴⁸ Du’ūzu

⁴¹ Webb, 2020.

⁴² For details, see Scurlock, 2013: 285–287.

⁴³ For details, see Scurlock, 2013: 297, 301, 306–308.

⁴⁴ See Scurlock, 2019a: 47–48, 66.

⁴⁵ For details, see Scurlock, 2012.

⁴⁶ Jacquet, 2010: 59.

⁴⁷ See Scurlock, 2019a: 52, 68–70.

⁴⁸ Jacquet, 2010: 58 [FM 11:21:12–14] dated 1 Mari 2 (Addaru) 10 jars of wine for a

for Summer,⁴⁹ Tašrītu and Araḥšamna for Fall⁵⁰ and Kislīmu and Ṭebētu for Winter.⁵¹ The most prominent of these were the offerings of Addaru, also prominent at Palmyra, and, sure enough, there were sons of the *pudū*-offerings at Mari, whose main job it was to accumulate the vast quantities of wine to be consumed at these festivals.⁵² And it was no ordinary wine. Believe it or not, they mixed it, and not just with water; to be more precise, the king was presented with jars of red wine, jars of honey and jars of aromatic oils that were to be mixed to his taste.⁵³

We can be absolutely sure of this since Eric Cline discovered in his 2nd millennium site of Tel Kabri what was apparently a manufacturing center for precisely this type of wine. You had your choice of pre-mixed or separately to be mixed yourself. The analysis of residues in the numerous wine jars revealed the recipe for the royal wine which must, according to the analyst have tasted something like retsina mixed with cough syrup. It contained, in addition to the red wine, honey, storax resin, terebinth resin, cedar oil, Cyperus, juniper, and possibly mint, myrtle or cinnamon. It was suggested that the intent was not merely to preserve the beverage but to produce psychotropic effects.⁵⁴ If so, the object of the exercise will have been to produce the requisite state of blind drunkenness with mini-

pudū-offering of Išar-baḥli; Jacquet, 2010: 57 [M 5901: 3–4] dated 16 Mari 3 (Nisannu) 1 ram, sacrifice when there is a *pudū*-offering for Išar-baḥli.

⁴⁹ Jacquet, 2010: 57 [ARM XXIV 19: 1'–2'], dated 6 Mari 6 (Du'uzu): barley for *pudū*-offering for the temple of Itur-mer.

⁵⁰ Jacquet, 2010: 57 [ARM XXV 17 r. 1–3] dated 16 Mari 9 (Tašrītu): 1 linen garment when there is a *pudū*-offering for Išar-baḥli; Jacquet, 2010: 57; cf. 217 [M 10636: 1–11] dated 29 Mari 9 (Tašrītu) 1 ox rib, 2 ox breasts, 1 ox shoulder, 1 ox neck, 1 quarter and 2 *mešretu*'s of beef, 3 quarters of sheep; total 6 quarters, 2 *mešretu* of beef and 6 quarters of sheep when the king gave a *pudū*-offering; Jacquet, 2010: 57 [M 7147: 2] dated 4 Mari 10 (Araḥšamna) barley for a *pudū*-offering of the king; Jacquet, 2010: 57 [M 11270: 5–6] dated 13 Mari 10 (Araḥšamna): 1 fat-tailed sheep and 1 lamb, sacrifice for Išar-baḥli when there is a *pudū*-offering.

⁵¹ Jacquet, 2010: 57 [M 9879: 2–3; cf. Jacquet, 2010: 130] dated 12 Mari 11 (Kislīmu) *ḥazannu*-garlic for a *pudū*-offering of the king in the temple of Annunitum; Jacquet, 2010: 57 [ARM XXIII 462: 12–13] dated 4 Mari 12 (Ṭebētu): beerwort when there is a *pudū*-offering for Itur-mer; Jacquet, 2010: 58 [TH 84.50] dated 21 Mari 12 (Ṭebētu) bread for a *pudū*-offering for Šalaš/Ninḫursag.

⁵² Jacquet, 2010: 58 [ARM XXIII 494: 6], dated 3 Mari 2 (Addaru) 25 jars of wine of the sons of the *pudū*-offering; Jacquet, 2010: 58 = Chambon, 2009: 124 [FM XI 85: 2–4] dated 6 Mari 2 (Addaru) [22] jars of wine of the sons of the *pudū*-offering for the [communal meal] which the Hanneans had in the courtyard of the painted building; Jacquet, 2010: 58 [ARM XXIII 436; cf. Jacquet, 2010: 225]: 14 sons of the *pudū*-offering who are bound to the worship of Itur-mer – one of them is assigned to each month beginning with Mari 5, going round once and ending in Mari 6.

⁵³ As, for example, Chambon, 2009: 102–103 [FM XI 62].

⁵⁴ Koh / Yasur-Landau / Kline, 2014.

mal amounts of this expensive and barely alcoholic wine. We know from first millennium BCE evidence that the psychotropic properties of certain plant additives to drink was fully appreciated.⁵⁵

The Fall festival at Mari, as may be reconstructed from texts and cylinder seals, was imagined as a renewal of kingship in which there was a sacred marriage between the king and the goddess Ištar celebrated by a meal prominently involving fish, immediately after which the goddess was allowed to go off to other divine partners, creating an indirect relationship between the king and the great gods of the imperial pantheon.⁵⁶ Later iterations of this festival which survived in Assyria and Babylonia without the wine reveal another benefit. Consummation of the relationship with Ištar by sleeping with one's wife was sure to produce that all important son and heir.⁵⁷

That was the droopy part for those other than the Mariot king and queen; the fun was the drinking and the tapas. As we know, again from the texts, tables were set up in the countryside and liberal amounts of royal wine were dispensed. This was accompanied, in addition to liberal quantities of meat, with large quantities of birds and fish as, for example, in a distribution that mentions 102 of three types of birds and 516 of three types of fish.⁵⁸

And it was not only at Mari that such festivals were held in the Old Babylonian period. Frantic letters from frazzled administrators moan and groan about the difficulties of rounding up 600 garlic cloves, 600 onions, 300 fresh water fish (*šarbūt*) and 300 turtledoves (TU.GUR₄) of the 2 shekel size for the *pudû*-offerings of the yearly brazier festival of Marduk at Sippar.⁵⁹ This particular festival was probably timed to coincide with the planet Jupiter's exaltation in Țebētu (December/January). Note in this connection that although birds and fish feature, there is only one kind of each. Also of interest from the Sippar material was the fact that private persons also organized *pudû*-offerings in connection with these festivals,⁶⁰ providing a means of survival of such customs in periods of political decline and eclipse such as the one that occurred at the end of the 2nd millennium.

So far, we have located a series of season-themed calendric festivals that involved the consumption of large amounts of wine as an important component. In addition, we have located a distinctive set of foods that were consumed as accompaniments to the drink. Indeed, so frequently do these birds and fishes occur with these drink fests, that we begin to suspect that whenever these rather unusual foods appear, mass drinking cannot be far behind.

⁵⁵ Scurlock / Andersen, 2005: 361.

⁵⁶ For details, see Scurlock, 2019a: 48–50, 53, 56–57, 58–60.

⁵⁷ See Scurlock, 2019a: 65–66; cf. 55–56, 57.

⁵⁸ ARM XXI 92 (Scurlock, 2019a: 74).

⁵⁹ AbB 7 159.

⁶⁰ AbB 1 108. For more details, see Scurlock, 2019a: 51 with nn. 63–64.

Evidence for the public celebrations of mass inebriation in the first millennium appears, as already mentioned, in the excavations at Ramat Rahel, where it appears as a reintroduction/revival under kings Hezekiah or Manasseh.⁶¹ The inspiration was Assyrian for the droopy yet all important kingship part⁶² but the season, and the fact that Judah was a wine producing region, allowed for reconnection with the publicly celebrated *marzeah* as well. In addition to the very unusual set of consumed offerings, that included both ocean and river fish,⁶³ the site produced hundreds of sherds of broken wine jars marked *lmlk*.⁶⁴ We may imagine tables set up outside the restricted confines of the garden palace where celebrants were free to help themselves to, dare we suggest it, royal wine?

And there is more. On the eastern side of Mesopotamia at Kuh-i-Farah in the Elamite highlands we have 1st millennium depictions of a Fall festival that involved, to judge from the rock carvings that represent it, not only the playing of harps and the consumption of wine stored in rows of jars⁶⁵ but also sacrifices that explicitly reference the turn of the year from its beginning in the Spring (represented by a Zebu) to its midpoint (represented by wild sheep).⁶⁶

The administrative texts from Persepolis that concern this festival, locally known as the *lan* festival, reveal that, as might have been expected, the requisites for the 8th month celebration which gave that month its name, *lankelli*, required assembly throughout the year.⁶⁷ As for what is to be distributed, the texts mention wine supplied by the king, sheep and goats and grain products but also figs and dates (harvested in Spring and Fall).⁶⁸ Texts also mention wine storehouses and paradise gardens in connection with it.⁶⁹ Based on Akkadian equivalents, the word *lan* means essentially “precious metals”⁷⁰ hinting that the presentation or dispensation of gold and silver items was a distinguishing characteristic of this festival.

Meanwhile at Ramat Rahel, the Judean palace had been replaced by a Persian satrap’s residence that continued the tradition of banquets buried under the floor

⁶¹ See Scurlock, 2019a: 46.

⁶² For details, see Scurlock, 2019a: 46, 47–53.

⁶³ See Scurlock, 2019a: 57.

⁶⁴ These have been studied in a number of articles as, for example, Lipshitz / Vanderhoof 2020.

⁶⁵ See the illustrations in Álvarez-Mon, 2019: plates 28, 37.

⁶⁶ See the illustrations in Álvarez-Mon, 2019: plates 53–54. This represents what would appear to be a three year bash with one *zebû* and six sheep per year.

⁶⁷ All this is very confusing if you have no idea what you are looking at, which is unfortunately the case with Shahrokh Razmjou. The information provided is, however still useful. For the 8th month, see Razmjou, 2004: 103. For the numerous records from various months, see Razmjou, 2004: 105.

⁶⁸ Razmjou, 2004: 105–106.

⁶⁹ Razmjou, 2004: 109.

⁷⁰ Razmjou, 2004: 103.

of an enclosed garden.

The garden in question was a Paradise garden as marked by the presence of a pool and botanical evidence of what was planted there, namely plants representing the four quarters of the earth: olives and Lebanon cedar from the west, birch from the north, grapes, myrtle, poplar, willow, fig, and Persian walnut from the center and south, and lemons from the east. The animal remains in the sacrificial pits were equally varied, representing the cultivated land (pigs and dogs), the desert (camel), the steppe (gazelle) and the mountains (ibex).⁷¹

The bones found at Persian Period Ramat Rahel connect directly with those of Enrico Foietta's Hatra Building A, a house with three courtyards belonging to the attendant of the temple of Ša'iru.⁷² Much of the building was dedicated to food production (storage jars, grinding stones, multiple hearths and tons of ash). There were facilities for dutch-oven style cooking, and an installation possibly for grinding very large amounts of grain. There was also a shrine with an altar and two fancy rooms, S15 and S19 where they found lots of glass sherds, presumably for the appreciation of the color of the wine being imbibed. Decorations including hunting scenes and the gazelle and deer horns that we have come to recognize as indicative of the turn of the year. The faunal remains? Arranged in pairs, there were sheep and cattle, goats (omnivorous) and camels (vegetarian), gazelles and deer; equids (unspecified but probably horses and wild asses), wild boar and domesticated pigs, dogs and wolves, (wild birds) and hens, mustelids (omnivorous mammals like beavers and weasels) and hares (vegetarians).

More possible evidence for our Fall festival was provided by Roberta Menegazzi and Carlo Lippolis.⁷³ This is in the form of the terracotta miniatures that were found in Parthian Seleucia on the Tigris. Those in secure context were discovered in a small temple attached to the W wall of the theatre, a structure associated with Dionysus, the Greek god of wine, or in domestic or funerary context.

There were mould-made and crudely finished tiny (15cm) grapes and pomegranates painted red plus bunches of dates.; there were miniature baskets filled with grapes and cakes. There were also plates with cakes on them and moulds for actual cakes that look like those found in 2nd millennium Mesopotamia in whose texts are mentioned date and pomegranate cakes. Other plates have grapes, figs, dates, cucumbers(gourds) and cakes, and one has a lone fish.

Of particular interest are miniature tables with breads and fruit that have direct parallels from 2nd millennium Susa. One Susa example has 2 fish, 2 birds, a lamb and five breads with a rosette in the middle of the table; another has 2 fish and 5 breads and yet another has just a plate with cakes.

⁷¹ For details, see Scurlock, 2019a: 44–45.

⁷² Foietta, 2021.

⁷³ Menegazzi / Lippolis, 2021.

Last but by no means least, in the 1st millennium CE, we have the Sassanian Fall festival of Mihragan. Like its distant ancestor, this was explicitly a ritual renewal of kingship lubricated by very generous quantities of royal wine (*khusra-wānī*).⁷⁴ It was also a time for the giving of the “Gifts of Mihragan”, items of gold and silver but also weapons, (silk) clothing, spices, even poems, all of which were met with an appropriate counter-gifts.⁷⁵ Recorded from Central Asia are fantastic works of art: two pavilions, or possibly fortress models, made of gold and silver not to mention silk brocade and a gold ball.⁷⁶ These are, alas, long gone. Surviving however, are the less elaborate, but also very beautiful, Sassanian plates and ewers that, I would argue, were used as dishes for the feast and then given to take away as counter-gifts for the more valuable offerings. For this festival, these would specifically be the plates adorned with the king as Bahram hunting wild sheep or stags and the ewers with Mithra dominating a wild sheep.⁷⁷

And the tapas? There were the niblies in themes of seven to mark the original seventh month of the festival: seven flat moon cakes made from seven different grains enlivened with white sugar, Indian walnuts, and dates soaked in cows’ milk. Branches of olive, quince and pomegranate also make an appearance.⁷⁸ To judge from the administrative seals of the *mogh* charged with assembling the necessary food stuffs, besides more substantive meat dishes, a large variety of birds and fish were on offer.⁷⁹

We have come very far from our original 3rd millennium festival to this point. Or have we? The Gutians ruled a good bit of the Mesopotamian flood plain for the better part of a century with a capital at Adab strategically located in the border zone between the Northern and Southern halves of the alluvium.⁸⁰ They have long been a cipher. That is, until now. Juris Zarins argues that Gutians may be recognized in archaeological context by the grey flint bifacial willow projectile points that have been discovered at Ur and Lagash along with Ešnunna, Uruk, Kiš and Adab as well as Susa.⁸¹

To judge from their graves of which more or less intact examples were discovered in the cemetery at Ur, these Gutians, who were buried *en famille* in shaft graves that included as many as 70 persons of all ages and social groups,⁸² had

⁷⁴ Haug, 2019: 39–40.

⁷⁵ See Haug, 2019: 33, 38, 42.

⁷⁶ See Haug, 2019: 40 with n. 51. In favor of the fortresses are the images of Median tributaries bearing little fortresses in their hands, essentially the ancient equivalent of keys to the city.

⁷⁷ Scurlock, 2021.

⁷⁸ See Haug, 2019: 33.

⁷⁹ Scurlock, 2021.

⁸⁰ See Frayne, 2008 (RIME 1): 12.

⁸¹ See Zarins, 2020: 11, 25–32, 36.

⁸² See Zarins. 2020: 11–12.

literally gold to bury. There were gold fillets/ diadems some with dot-repoussé, gold hair ribbons, gold hair-locks, gold earrings, gold finger rings and gold bracelets.⁸³ There were also multi-stranded necklaces heavy with imported carnelian and lapis beads mixed with shell and delicately formed gold ones.⁸⁴ These people loved to drink, and the spouted vessel wine sets revealed which beverage they preferred.⁸⁵ Similar, less well preserved, communal graves with similar gold jewelry, imported stone beads and wine sets have been discovered in Kiš, Adab, Nippur and Assur with similar fillets from as far away as Gonur Tepe in Turkmenistan.⁸⁶

And where did all this gold come from? Chemical analysis of the Akkadian gold objects from the Ur Cemetery indicates a possible origin in Takab in Iran or Samti in Afghanistan.⁸⁷ This gold, apparently already alloyed, will have travelled to Mesopotamia along the trade routes that linked Iran across Mesopotamia and Syria to Greece in one direction and to Central Asia and the Indus Valley on the other.

So, did the Gutians import gold into Mesopotamia themselves? Apparently not.⁸⁸ They were warriors, not merchants, and the city of Lagaš in particular was an old hand at managing trade networks. Sensibly, they let Gudea, who seems to have been their tributary,⁸⁹ orchestrate the long-distance trade of which he boasts so loudly,⁹⁰ and to help himself to some of the human booty acquired on joint campaigns.⁹¹ Obviously, tribute was expected to be paid annually, or else.

According to currently unpublished Lagash II administrative texts to which Zarins was given access, Lagash was graced by periodic visits of Gudea's overlords, plausibly Gutian kings and queens desirous of collecting said tribute.⁹² Dutiful Gudea presented them with large numbers of gold and silver objects along with bows in colorful leather cases.⁹³ There was also feasting with a menu of the usual oxen, goats and sheep but also seven different types of fish along with ghee, honey, dates, cheese, apples, grapes, mu-tum fruit and figs.⁹⁴

⁸³ See Zarins, 2020: 12.

⁸⁴ See Zarins, 2020: 12.

⁸⁵ See Zarins, 2020: 13.

⁸⁶ See Zarins, 2020: 11, 13–14.

⁸⁷ See Jansen *et al.*, 2021: 288.

⁸⁸ See Zarins, 2020: 19–20.

⁸⁹ See Zarins, 2020: 13, 19. *Pace* Zarins, 2000: 32–35 Gudea was never a Gutian king himself. These gentlemen wore braids fastened with the numerous hair locks found in their graves; Gudea was rather alternatively tonsured.

⁹⁰ See Steinkeller, 2013: 301–302; cf. Zarins, 2020: 36.

⁹¹ For the campaigns and the prisoners, see Steinkeller, 2013: 298–299.

⁹² See Zarins, 2020: 19–20.

⁹³ See Zarins, 2020: 19.

⁹⁴ See Zarins, 2020: 20.

What is more, the Sargonic seals from the Ur Cemetary graves (and from other sites known to have Gutian presence including Lagaš and Ešnunna) are strikingly different from their Early Dynastic counterparts. Both show banquet scenes, but the ubiquitous Germanic beer has been replaced by French wine. Last, but by no means least, these seals are replete with scenes clearly marked as Fall by the presence of ploughs and even scenes of ploughing. These show feasting with wine supplied from potstands and large vats and food on the hoof (sheep and goats) plus little flat cakes sitting on a table.⁹⁵

From this evidence, I think we can recognize that we are looking at yet another iteration of what began as a celebration of Nanše at Lagash in the Early Dynastic period and found final form in Iran and Turkmenistan as the Sassanian festival of Mihragan. If so, we may imagine that the Gutian king supplied the wine and received in return the gold and silver “Gifts of Mihragan”, bringing us round full circle to where we began.

In summary, yes, there was wine culture in beer-soaked Mesopotamia. Not only that, but we have uncovered a Fall festival with distinctive features that celebrated wine but also honored the change of seasons with exotic foods, and that persisted for millennia in one iteration or another. In view of the antiquity of the custom (dating back to the 3rd millennium), it seems appropriate to link it with that vast trade network that connected Mesopotamia to Greece in the West and India in the East and to add finding a good excuse for getting drunk to the many ideas that flowed back and forth across the region.

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⁹⁵ Boehmer, 1965: nos. 693–696 (Ešnunna), 698 (Girsu), 701, 702 (Ur), 703a.

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From Intention to Accomplishment

Secular and Cultic Feasts Provided by the Neo-Assyrian King

Zozan Tarhan

This paper presents the feasts which were provided by the Neo-Assyrian king. The secular and cultic characters are discussed in the course of the study. Written and iconographic sources are examined and analysed. Regarding the written ones the research uses the following types of sources: royal inscriptions, explaining different occurrences of feasts; correspondence between the king and his officials, concerning the supplying and distribution of the necessary products; ritual and cultic texts, presenting the preparation of the environment for both occasions, and the ritual performance itself. The iconographic group comprises the scenes coming especially from the palace and residential reliefs, as well as cylinder seals.

Both feasts and occasions in which they were provided are distinguished. The reasons for organizing a secular or a cultic commensality are marked. The political benefits behind them are taken into consideration. An explanation is given as to why and how the king actively conducted some steps in the performance. Some new considerations and conclusions based on the research are made in the text.

1. Occasions for secular and cultic feasts

The regular daily meals were prepared for the king and his surroundings by his servants, but the festive meals were provided by the Assyrian king himself, and sometimes he even participated in the preparatory process. One of the main roles of feasts was to gather the participants together around the table, but they were more than simply consuming drinks and dishes. They were also considered a way of creating social communication or expressing relations of power. In this course of thought, it is not hard for Assyrian kings to create or find occasion for providing feasts. The firm feasts were prepared as part of the regular cultic events, respectively the cultic feasts. The secular feasts could have been provided by the Neo-Assyrian king again during some fixed event, but to some extent one expects that they were more “flexible” than the cultic ones. Occasions for organizing the latter ones were, for example, a visit by political leaders and representatives in the court of the Assyrian king; a celebration of some victory and conquest attained in the

foreign lands, or another achievement.¹ But one must be aware that cultic feasts were also expected to happen after military or other achievements. There are several passages conveying all the types of such occurrences attested in the Assyrian royal inscriptions, which are presented in Table 1.

Table 1: Feasts and similar events attested in the Neo-Assyrian royal inscriptions.

King	Source	Occasion	Event
Ashurnasirpal II	RIMA 2, A.0.101.1: 82	Conquest of the city Aribua of the Patinean ruler Lubarna	<i>"I staged a banquet in his palace."</i>
Ashurnasirpal II	RIMA 2, A.0.101.30	Completion of the NW palace in Kalḫu	10-days banquet in Kalḫu
Shalmaneser III	RIMA 3, A.0.102.5: vi 4 RIMA 3, A.0.102.14: 70–71	Military acquisitions in Babylonia	<i>"... he established protection and freedom under the great gods at a banquet."</i>
Shalmaneser III	RIMA 3, A.0.102.14: 70–71 RIMA 3, A.0.102.16: 41–42	Military acquisitions in Til-Abni	<i>"I made sacrifices to my gods, (and) put on a joyful banquet."</i>
Sargon II	RINAP 2, no. 12: 44–45	Completion of the palace in Dūr-Šarrukīn	<i>"I had them sit down for a banquet and held a festival."</i>
Sennacherib	RINAP 3/2, no. 167: 15 RINAP 3/2, no. 168: 25 RINAP 3/2, no. 173: 8–9 RINAP 3/2, no. 174: 3–4	Regular cultic event – the <i>akītu</i> -festival	<i>"The festival of the feast of the king of the gods, Assur ..."</i>
Esarhaddon	RINAP 4, no. 1: vi 44–53 RINAP 4, no. 2: vi 10–24 RINAP 4, no. 19: 2'–8'	Completion of the palace in Nineveh	<i>"... festive tables, ceremonial meals, and banquets ..."</i>
Esarhaddon	RINAP 4, no. 54: r. 30–32	Regular cultic event/offerings	A divine meal inside the <i>akītu</i> -house
Ashurbanipal	RINAP 5/1, no. 11: iii 90–91	Audience with Šamaš-šuma-ukīn's people	<i>"I convened those citizens of Babylon at a carefully prepared table ..."</i>
Šîn-šarra-iškun	RINAP 5/2, no. 16: 9–10 RINAP 5 Online ²	Regular cultic event/offerings	Preparing and placing meals before Tašmētu

¹ Additionally about that see Ermidoro, 2015: 90–91; Villard, 2013: 219–224.

² <http://oracc.museum.upenn.edu/rinap/rinap5/pager> (January 23rd 2023).

King	Source	Occasion	Event
Sîn-šarra-iškun	RINAP 5/2, no. 17: 6–8 RINAP 5 Online	Regular cultic event/offerings	Preparing and placing meals before Antu
Sîn-šarra-iškun	RINAP 5/2, no. 18: 10–11 RINAP 5 Online	Regular cultic event/offerings	Preparing and placing meals before Šala

Already aforementioned, cultic feasts are also expected to happen after some military success. In regard to this aspect one should admit that sometimes it is challenging to define whether the feast is organized in a cultic or in a strictly secular way. To illustrate what I mean, I will give separate examples. After successful military interventions, one often reads that the Assyrian rulers took away their enemies' (palace) property, or phrases such as: *"I regarded his palace(s) like mine."*³ Ashurnasirpal II did not make an exception. Moreover, concerning his conquest of the city Aribua achieved in the land Patinu over the local ruler Lubarna he even announced: *"I staged a banquet in his palace."*⁴ In this case the king did not implicate the personality of Aššur or anybody else of the great gods and stemming from this point one can define the event as a secular one.

The other instances, that involve the great gods in the context of feasts as a result of military acquisitions, come from the royal inscriptions of Shalmaneser III. The first example is related to the king's achievements in Babylonia and sounds like this: *"... he established protection and freedom under the great gods at a banquet."*⁵ The next passage is referred to Shalmaneser's conquest of the city Til-Abni: *"I washed the weapon of Aššur therein, I made sacrifices to my gods, (and) put on a joyful banquet."*⁶ Even though the passages do not concern some cultic event they disclose that the achievements were devoted to the great gods. The Assyrian kings were under their protection and respectively Shalmaneser (also his predecessors and heirs) owed the victory to the gods. Moreover, conquest policy of the Assyrian rulers was conceived, or rather presented, as a commitment made by the great gods. This is how those military campaigns that the kings claimed to have been conducted by the command (*ina qibūt* ^dPN and *ina siqir/ina siqiri* ^dPN)⁷ or with the support (*ina tukulti* ^dPN)⁸ of the great gods can be considered. In other words, Assyrian kings did not miss the opportunity to involve the great gods as a justification for their conquest goals.⁹ One of the most suitable

³ For example, RIMA 2, A.0.99.2: 47.

⁴ RIMA 2, A.0.101.1: 82.

⁵ RIMA 3, A.0.102.5: vi 4; RIMA 3, A.0.102.14: 70–71. The used term for a banquet here is *qerītu/qerētu*.

⁶ RIMA 3, A.0.102.14: 70–71; RIMA 3, A.0.102.16: 40–42. The used Akkadian words for *"a joyful banquet"* are *naptan hudūtu*.

⁷ More observation and concrete examples see Tarhan, 2022: 244–246, 248.

⁸ More about that and the concrete examples see Tarhan, 2022: 247–248.

⁹ Additionally see Oded, 1992: 15–18.

ways to commemorate the success and to give the gods what they deserve is to celebrate together by means of commensality. There are a couple of sources mentioning the same development – weapons being washed in a large body of water around the conquered lands, sacrifices being made to the great gods, but without completing the sentence with a banquet. This ritualization of the conquests is evident from the time of the Old Akkadian king Sargon I (RIME 2, E2.1.1.1: 50–52 (Sum), 56–58 (Akk); RIME 2, E2.1.1.2: 59–61) and it is practiced also by Ashurnasirpal II (RIMA 2, A.0.101.1: iii 84–85). Even Shalmaneser III reported that after defeating the Urartian king Aramu in the city of Sugunia he washed his weapons in Tâmtu Na'iri (modern Lake Van) and made sacrifices (RIMA 3, A.0.102.1: 33–35). The moment is also registered on the upper scene of a bronze band BM 124662 from the gates of Shalmaneser's residence in Imgur-Ellil (modern Balawat).¹⁰ The sacrificial oxen and rams are depicted and the king is represented during the ritual performance, whose role here is not only that of a ruler and conqueror but also of a priest. More about Assyrian kings' priestly role will be noted in the section called *Preparation and Performance*.

Passages from the Assyrian royal inscriptions notify feasts and similar that arise as a result of completion a specific royal palace in the relevant (new) capital city. Examples of the inscriptions of Ashurnasirpal II, Esarhaddon and Sargon II are shown in Table 1. The most significant case among them is for sure the celebration after the final steps of the accomplishment of the Northwest palace in the new capital city of Kalḫu. Ashurnasirpal II narrated his decision to move the capital in Kalḫu, which is connected to an active building process within the citadel (RIMA 2, A.0.101.30: 53; Frahm, 2017: 169; Grayson, 1982: 258). There are a couple of sources but the most detailed are the so-called *Annals of Ashurnasirpal* (RIMA 2, A.0.101.1) and *The Banquet Stela* (RIMA 2, A.0.101.30) as the latter conveys an narration about the 10-days banquet in the city (RIMA 2, A.0.101.1: ii 131–135; RIMA 2, A.0.101.30: 20–33, 151).¹¹ According to A.0.101.30 the king's officials, vassal rulers, representatives and other guests were invited to the celebration, a total of 69 574 people (RIMA 2, A.0.101.30: 149–151). Aside from the “the earthly guests” the king invited the great gods, and so the “earthly” and the “heavenly” were bound through the festival and commensality. The same manner is attested in the inscriptions of the other Neo-Assyrian kings in the context of those occasions.

An example of a secular feast, which is related to a visit, comes from Ashurbanipal's inscription. Revealing the intentions of the Babylonian ruler Šamaš-

¹⁰ https://www.britishmuseum.org/collection/object/W_Rm-1042 (May 21st 2021).

¹¹ For more about the planning and architecture see Kertai, 2015: 18–54; Oates / Oates, 2001: 26–70; Russell, 1999: 9–30; Tarhan, 2022: 112–115, 263–267. Additionally on Ashurnasirpal II's *Banquet Stela* and the relevant banquet see Marti, 2011: 505–520; Winter, 2013: 292–294.

šuma-ukīn, his “*unfaithful brother*” who “*sought out evil (deeds)*” the Assyrian king also reported that he had received a visit by Babylonian citizens and convened them at *paššūr taknê* – a *carefully prepared table* (RINAP 5/1 no. 11: iii 70–91).¹² The next passages disclose that while these Babylonians awaited Ashurbanipal’s decisions, Šamaš-šuma-ukīn broke off the treaty with Assyria and set in motion his rebellious plan (RINAP 5/1 no. 11: iii 93–100). Even though the Assyrian ruler had been advised about the potential conspiracy he treated the Babylonian representatives in a propitious way, setting them at a dining table and probably trying to turn the development of the events in his favour.¹³ This case indicates that feasts are proper practice in the Neo-Assyrian policy not only during celebrations but also during visits and even negotiations.

Some appropriate examples for cultic feasts that are part of a certain cultic event shown in Table 1, are those delivered by Sennacherib’s and Esarhaddon’s inscriptions concerning the *akītu*-festival.¹⁴ The last three examples, which are referred to smaller cultic events in their performance and exuberance, inform us about three individual occurrences where Šin-šarra-iškun prepares and places meals before different goddesses.¹⁵ The latter instances sound much more like regular divine offerings but they are suitable patterns to illustrate the apprehension that the Assyrian king stays behind the preparation and provision of some meals.

2. Supplying the drinks and foodstuffs

There is no doubt that agriculture, livestock breeding and trade had major merit in supplying the drinks and foodstuffs required for any meal. Agriculture and livestock breeding especially (and afterwards the trade) played such an important role in the development of humankind and the civilization itself that the Mesopotamian literary texts preserved narratives for their beginning.¹⁶ In addition, we find interpretations in various omens created during the Neo-Assyrian period concerning the harvest of the land.¹⁷ In some cases Neo-Assyrian kings narrated that they had provided fields with appropriate conditions for farming and growing products destined for their meals or those for the gods. A suitable instance for that is the narration coming from an inscription of Sargon II:¹⁸

¹² In RINAP 5/1 *paššūr taknê* is translated like “*a sumptuous banquet*”, but I would rather prefer to translate it “*a carefully prepared table*”. For *paššūru* see CAD P, p. 259, *paššūru*; for *taknû* see CAD T, p. 84 a, *taknû*.

¹³ More about that development and the fall of the Neo-Assyrian Empire in Frahm, 2017: 189–193; Oates, 1991: 166–180.

¹⁴ On the New Year’s festival and *akītu* in Assyria see Ambos, 2013: 129–130.

¹⁵ More about the Assyrian royal custom of preparing meals for the gods specifically in the age of Sargonids see Gaspa, 2012a: 34.

¹⁶ More about that in Ermidoro, 2015: 68–69.

¹⁷ Such an example is the interpretation of the astrological report in SAA 8 325: 4 – r. 3.

¹⁸ RINAP 2, no. 43: 39–43. Another document part of the reign of Sargon II concerning in

“In order to provide the wide land of Assyria with fully sufficient nourishment, with well-being, (and) with tillenû befitting a king, (through) making their canals flow with water, (and) to save humanity from famine (and) want, so that the destitute will not collapse at the bringing in of the grape (harvest), that there will be no interruption in what is desired by the sick, that oil – the pride of mankind that makes (tired) muscles relax – does not become expensive in my land, and that sesame might be purchased on the market as (cheaply as) barley, *in order to provide lavish meal(s) fit for the table of god and king*, to ... the land, (and) to make the fields around it reach (their) full value, day and night I planned to build this city.”

The passages of an inscription of Aššur-etel-ilāni provide a piece of information in a similar course:¹⁹

“For future days he cleaned this entire wall (in order to make its water as pure) as (that of) the Tigris and <Euphrates> Rivers, and *he established its water for the meals of the great gods. That water should be brought every day in good time for (their) meals.*”

As it is clear from the cited sources, such extensive planted areas needed serious care, workers and draught animals. Both the workers, even if they were deportees, and the animals required other cares and rations of food.²⁰ Except for the farming work itself, sometimes the fields caused additional care – for example, due to a poor crop the field had to be purified by an exorcist (*āšipu*).²¹ Considering all of that and adding all the regular and potential events with sumptuous meals, the Assyrian rulers did not rely only on cultivating plants, growing animals (and trade), but they found another way of distributing products – through fixed tributes and booties. After conquering new lands they often notified that they reaped the harvest of the conquered land, as Adad-nērārī II did: “*I entered the city Iaridu. I reaped the harvest of his land. I regarded the city Saraku as mine (and) heaped up the barley and straw therein.*”²² Or, as Ashurnasirpal II mentioned he stored the grain: “*I reaped the harvest of their land (and) stored the barley and straw in the city Tušha.*”²³ Of course, not all of it was allocated for feasts, but for sure it

particular providing offerings for Aššur is a renewed land grant of Adad-nērārī III – SAA 12 019.

¹⁹ RINAP 5/2, no. 4: 4–5.

²⁰ The correspondence between the kings and their magnates casts light on the topic regarding the arrival, wellness and/or nourishment of deportees and pack animals – SAA 1 219.

²¹ SAA 10 069.

²² RIMA 2, A.0.99.2: 43–44.

²³ RIMA 2, A.0.101.1: ii 117–118.

would have come into use, as Esarhaddon pointed out:²⁴ “... *sixty thousand fattened choice oxen (destined for) [his] lord[ly] banquets, [...] countless [...], sheep with tails of oxen ...*”

Thanks to the four canals of supplying the necessary products (agriculture and livestock breeding; trade; tributes; plunder) the Neo-Assyrian kings could provide splendid secular and cultic feasts. The administrative records of food offerings further affirm this opinion,²⁵ the consignments as well.²⁶ Thanks to the various kinds of sources it is even possible to distinguish the staff that took care of food supply and management.²⁷ Iconographic and written sources related to the accomplishment of the feasts partly cover the topic of getting the drinks and foodstuffs, but they are more appreciable in the topic of the preparation and performance of the ceremonial events.

3. Preparation and performance

Feasts, be it secular or cultic, organized by the king, required long and complex preparation of the environment, tables and any other composite part of them. Regarding the feast in Kalḫu staged by Ashurnasirpal II, the so-called *Banquet stela* confirmed that statement by disclosing the number of the guests and the provided foodstuffs and drinks (RIMA 2, A.0.101.30: 102–154). However, there is nothing mentioned about the ceremonial steps and etiquette that went after, but for sure there were some official patterns to be followed in such events.²⁸ A reason for that statement is a clay tablet K 8669 published at first by K. Fr. Müller calling it *Dienstanweisung* (Müller, 1937: 84). Nowadays the text is much more known as *Protocol for the Royal Banquet* (Ermidoro, 2015: 161) or *Protocol for the Royal Dinner* as well (SAA 20 33). The tablet presents the main ceremonial steps which the king, his magnates, the crown prince and other participants had to go through, exactly like a protocol. One should admit that the text does not indicate the exact occasion on which the described steps have been performed. Regarding its nature, Van Driel describes the occasion as “*wholly secular*” (Van Driel, 1969: 159–160). However, S. Ermidoro states that: “*the gestures described are common to many other religious and civil festivities – therefore, a limiting, one-sided classification of K.8669 as ‘secular’ does not reflect the complexity and the various facets of the text.*”²⁹ Despite the latter opinion, I would rather confirm Van Driel’s statement. Although the royal magnates participated in some religious rituals, a

²⁴ RINAP 4, no. 1019: r. 32–33.

²⁵ Examples of that are SAA 7 161; SAA 7 162; SAA 7 192.

²⁶ For instance, SAA 7 166; SAA 7 167.

²⁷ For additional information see Groß, 2015: 23–37.

²⁸ On the organization and protocol in banquets and similar events see Villard, 2013: 225–229.

²⁹ Ermidoro, 2015: 161–162.

fact which is evident from other sources, the text of K 8669 itself does not comprise data that we could relate to a religious event.³⁰

Regarding cultic feasts provided by the Neo-Assyrian king I must say that the topic is closely connected to his priestly role. In Assyria the king is a high priest, which is evident from various sources. The royal inscriptions especially preserve different narratives which attest the king's function as a priest – the establishment of his priesthood (*šangûtu*), the gods who love his priesthood and the king holding different priestly titles.³¹ As a priest, the Neo-Assyrian king conducted many cultic performances, part of which were to make a sacrifice to the gods and provide them and all participants with a meal.³² This side of king's role was already discussed in regard to the sacrifices after military acquisitions, which were attested in the written sources and on the bronze band from Imgur-Ellil. Moreover, the king revealed his role as a priest in regular cultic events such as *tākultu* for example.³³ The following excerpt of a cultic text regarding rituals in the Equ House also visualizes it very clear:³⁴

“The k[in]g appears. He goes and loads the brazier, returns and provides hot cooked meal. He comes back and increases the heat of the brazier. He swings the pur[ifi]cation device, performs libations on the brazier, and sacrifices two bulls. From one of them, they push its heart back inside it for the soup, [fr]om the other he provides cooked meat. [The ki]ng put[s on] the jewellery in the side room, bur[ns] female kids, leaves [...] aside, throws balussu. He finishes his [liba]tions ...”

Aside from the written sources, palace reliefs and cylinder seals preserved some scenes of secular banquets. The most famous among them is undoubtedly the banquet scene of Ashurbanipal.³⁵ There are another type of scenes which attained popularity from the time of Ashurnasirpal II on – such as that on the stone slab from the Northwest palace in Kalḫu (Fig. 1)³⁶ or that of a cylinder seal MS 0776 (Fig. 2).³⁷

³⁰ For further discussion see Gaspa, 2012b: 205.

³¹ More about that – Karlsson, 2016: 92–103; Pongratz-Leisten, 2015: 202–205; Tarhan, 2022: 228–240, 341–342, Table 1.

³² More about the connection between the Assyrian king's priesthood and his duty to provide the great gods with meals see Gaspa, 2012a: 25.

³³ More about *tākultu* see Frankena, 1954; Pongratz-Leisten, 2015: 392–407. Additionally on the role of the king as a provider of meals for the gods in other cultic events see Gaspa, 2012a: 8, 12.

³⁴ SAA 20 16: r. iv 2–10.

³⁵ https://www.britishmuseum.org/collection/object/W_1856-0909-53 (May 25th 2021).

³⁶ https://www.britishmuseum.org/collection/object/W_1850-1228-9 (May 25th 2021).

³⁷ <https://www.themorgan.org/seals-and-tablets/84398> (May 26th 2021).



Fig. 1: Set of BM 124564–124566 (© The Trustees of the British Museum).



Fig. 2: MS 0776 (The Morgan Library and Museum, Collection Online).

In both scenes the king lightly extends his right hand while holding a bowl in it.³⁸ Sometimes this representation of the king is confused with he is making libations. Since the ruler is depicted sitting on a chair and not staying, be it above sacrificial animals, staying around an altar, or not, I would reject the idea of libations. I would rather suggest that the king proposes a toast. The context of this act is uncertain. However, in the scene of the stone slab there are shown officials and winged deities or genii which obviously are taking part in the purification ritual and giving blessings.³⁹ On the scene of the cylinder seal there are depicted also divine symbols. Because of that I would assume that both scenes does not repre-

³⁸ Additionally on the motif of the king holding a bowl and another opinion about the context of consumption of wine see Gaspa, 2012a: 239–240.

³⁹ Arguments defending the statement that officials holding such objects and having this type of representation (like both persons before and behind the king) conducted purification rituals and gave blessings see Tarhan, 2022: 235–237.

sent truly a secular feast, but they represent either a cultic event, or a feast or an event which was planned for secular aims but have involved the divine personalities.

4. Concluding remarks

Written and iconographic sources comprise various kinds of feasts being part of secular celebrations and cultic events. Aside from the fixed or regular celebrations, occasions for organizing feasts, were political and military achievements in the foreign lands, as well as building activities. Feasts were also proper practice in the Neo-Assyrian policy not only during celebrations but also during visits by political leaders or representatives and even negotiations. Thereby, the act of feasting or banqueting was a way of creating social communication and expressing power. In this course of thought, the secular and cultic feast could be considered working in favour of the Neo-Assyrian royal ideology and propaganda.

Specifically concerning the feasts prepared for official visits aiming at negotiations or similar I would define them as secular. Stemming from situations as the described one during Ashurbanipal's reign, the king should express his acts of kindness, honour his visitors, invite them at a *carefully prepared table* and find a solution for the forthcoming problems and troubles. In such particularly cases the gods were not mentioned to be invited at the table. This actually make sense, because the king was not supposed to reveal his role of a worshipper, priest or the earthly king chosen by the great gods; he was expected to present himself as an attentive host and act as a king who is not only concerned about the balance and prosperity of the Empire, but also worried about his people.

During events regarding cultic festivals, celebration of political and military success, or accomplishment of building programs the king could express his relations of power, both earthly and heavenly, and present the various roles he possessed. The Assyrian kings used a skillful move to build a close connection between the otherwise incompatible in human experience earthly/secular/palace and heavenly/religious/temple (Tarhan, 2022: 220, 335–336). The desire to unite them under one authority is also evident from Assyrian king's investiture by the great gods and especially Aššur, as well as from the communication of the ruler with the gods, and particularly much through his priestly role. Celebrating his political acquisitions and conquests the king emerged not only as a political actor, conqueror and warrior, but he also exposed all those persuasions of the royal ideology. Due to the persuasion that the conquest policy was directed by the command or with the support of the great gods the apprehension that Assyrian kings owed their military achievements to the gods' will was also evident. One of the most suitable ways to commemorate the success and to give the gods what they deserve was to celebrate together at a *joyful banquet*. On account of that, the earthly feasts turned into cultic activities. Performing rituals, such as making purifications, sacrifices and providing gods and all participants with meals during cultic events the

king revealed to the public his priestly role and the connection with the gods what he was supposed to have.

Abbreviations

CAD	Gelb <i>et al.</i> , 1956–2010.
RIMA 2	Grayson, 1991.
RIMA 3	Grayson, 1996.
RIME 2	Frayne, 1993.
RINAP 2	Frame, 2021.
RINAP 3/2	Grayson / Novotny, 2014.
RINAP 4	Leichty, 2011.
RINAP 5/1	Novotny / Jeffers, 2018.
RINAP 5/2	Jeffers / Novotny, 2023.
SAA 1	Parpola, 1987.
SAA 7	Fales / Postgate, 1997.
SAA 8	Hunger, 1992.
SAA 10	Parpola, 1993.
SAA 12	Kataja / Whiting, 1995.
SAA 20	Parpola, 2017.

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5.

Medicine and Literature

Desire and Hunger; Women and Food

The Earliest Example of a Universal Conceptual Metaphor in the Sumerian “Love Songs”^{*}

Christie Carr^{**}

1. Desire and hunger

Food, eating, and drinking are well-known metaphors for sexual acts, desire, pleasure and the body in both ancient and modern erotic literature.¹ In the biblical Song of Songs, the sweet ‘taste’ of the lovers’ fruit (Cant II.3) is entwined with layers of sensual food and fruit imagery for the body (for example, Cant VII.8), whilst in the Sanskrit *Gītagovinda*, a poem concerning the union of the god Kṛṣṇa and the goddess Rādhā, kissing is repeatedly depicted as drinking the liquid of the lower lip, ‘give me a drink of the mead from the lotus of your mouth!’ (*Gītagovinda* X.2, Trans. Siegel 1978: 273). In a Love Sonnet of Chilean poet Pablo Neruda, the speaker wants to consume the person he desires, ‘I crave your mouth, your voice, your hair. Silent and starving, I prowl through the streets. Bread does not nourish me, dawn disrupts me, all day...I hunger for your sleek laugh...I want to eat your skin like a whole almond’ (Neruda, Love Sonnet XI).²

Not only in poetry but in everyday language and thought, we find food and eating as sexual metaphor. In his study *Metaphor and Emotion*, Kövecses showed that English speakers conceptualise lust using two principal metaphors: fire/heat

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¹ For further examples of this metaphor in the ancient Near Eastern context, see Brenner, 1999: 107; Veenker, 1999–2000: 62ff; Paul, 2002: 495; Brownsmith, 2020. The metaphor is not only restricted to poetry but can be found, for example, in contemporary pop culture (Parasecoli, 2007; Spang, 2011).

² Consumption of a lover as metaphor for love was discussed by the French bishop and theologian Jaques Benigne Bousset; ‘in the ecstasy of human love, who is unaware that we eat and devour each other, that we long to become part of each other in every way ...’ (in Siegel, 1978: 44).

and hunger/eating.³ The examples associated with hunger/eating that the author provides from everyday speech particularly emphasise lust as a feeling of primal need: “she’s sex-starved”, “he prepared to *satisfy* their sexual *hunger*”. This is because eating and sexual intercourse share basic, embodied features that lead to their conceptual and metaphorical relationship. These are the entering of external substances into the body and penetration; both hunger and sexual drive are considered instinctual; both eating and sex create social relationships and both, of course, include the stimulation of the senses.⁴

The Sumerian “Love Songs”,⁵ an Old Babylonian literary ‘corpus’ which depicts the relationship of the goddess Inanna and her lover Dumuzi,⁶ use rich and multi-valent metaphorical erotic language, including a plethora of food imagery.⁷ In *Toward the Image of Tammuz*, Thorkild Jacobsen observed that the basic experience of Dumuzi was through the phenomena of food, namely dates, grain, beer and milk, and likened the ‘attraction and enticement in response to Tammuz’ to the experience and rapture of enjoying pleasurable food.⁸ He reasoned that the connection between the ‘undemanding pleasure in the sheer being of the beloved Dumuzi’ and the tastiness of food was due to the ‘universal use of metaphors from the realm of eating and tasting for love, ranging from sexual “appetite” and “hunger” to the lover’s desire to “eat” his beloved, and to his use of terms like sweet, delicious, honey’.⁹ Jacobsen noted the universality of this metaphor, but only considered it in relation to experiencing the powers of Dumuzi, without exploring how the metaphor also manifests in depicting the sexual encounters of the lovers in the Sumerian “Love Songs”. This paper explores the ways in which the ‘universal’ sex, food, and eating metaphors can be detected in the world’s oldest erotic literary texts.

³ Kövecses, 2010: 30

⁴ Counihan, 1999: 9

⁵ Sefati, 1998. This corpus usually includes Inanna-Dumuzi A-F1 (ETCSL 4.08), and Šu-Suen A, B, C (ETCSL 2.4.4.1–3). I also include Inanna G, H (ETCSL 4.07.7–8), the Manchester Tammuz (Alster 1992), and Šulgi Z (ETCSL 2.4.2.26).

⁶ Some texts also depict the erotic relationship of Inanna and the king Šu-Suen (A, B, C), and those that feature unnamed female and male lovers, for example Inanna-Dumuzi D, E, G, Y, F1.

⁷ The metaphorical language of the Sumerian “Love Songs” has often been compared with other love and erotic poetry of the ancient Near East (Lambert, 1987; Goodnick-Westenholz, 1991; Paul, 1996; 2002). Agricultural and plant metaphor in erotic Sumerian and Akkadian literature, within and outside the “Love Songs” corpus, has most recently been treated by Couto-Ferreira, 2017; Bertolini, 2020; Zisa, 2021. The application of conceptual metaphor theory (see below) in analysing what metaphor in the Sumerian “Love Songs” can tell us about cultural constructs of sexuality, desire, and pleasure is the topic of my DPhil research (University of Oxford).

⁸ Jacobsen, 1970: 74–80.

⁹ Jacobsen, 1970: 79–80.

2. Women and food

This paper also discusses whether the role of gender in the metaphorical relationship between food and sex plays a part in the figurative language of the Sumerian “Love Songs”. Significantly, it is most often women who are conceptualised as food to be consumed by her male lover.¹⁰

Often this serves to objectify the female body. Carol Adams likened the consumption of meat to the metaphorical consumption of the female subject positioned as food.¹¹ Both involve a process that leads to the ‘fulfilment of oppression’: ‘A subject [i.e., a woman] first is viewed, or objectified, through metaphor. Through fragmentation the object is severed from its ontological meaning. Finally, consumed, it exists only through what it represents. The consumption of the referent reiterates its annihilation as a subject of importance in itself’.¹²

Perhaps this metaphorical relationship is rooted in the fact that food and eating are often thought of as ‘emblematic’ activities for women, not least because the preparation of food is universally considered a female domain, but also because in relation to child-rearing women are literally the food of the unborn and young child.¹³ Breastfeeding and domestic food preparation likely also forged a conceptual link between women and food in ancient Mesopotamia.¹⁴

However, in the context of marriage, it was the bridegroom who brought foodstuffs to the bride’s family,¹⁵ a relationship that is reflected in the Sumerian “Love Songs”, where Inanna is frequently provided with food by Dumuzi (see examples below). This male to female orientation of giving food produce is ubiquitous amongst the “Love Songs”, a reflection not only of Inanna’s divine and sometimes bridal status,¹⁶ but also of the texts’ focus on the female sexual experience – the

¹⁰ In the Song of Songs, the ‘male lover “eats” and “drinks” the female lover’ (Brenner, 1999: 107). See Brownsmith, 2020: 31ff for this construction, particularly in biblical texts. In Old Babylonian Akkadian similes, Wasserman identified that it is mostly women who are compared to fruit or domestic plants (Wasserman, 1999: 193). Crespo-Fernández, 2015 has identified the misogynistic trend of referring to woman as foodstuffs in internet forums (Crespo-Fernández, 2015: 153ff).

¹¹ Adams, 1990; see also Brownsmith, 2020.

¹² Adams, 1990: 73.

¹³ Counihan, 1999: 63.

¹⁴ Archival documents across periods for large households and palaces suggest, however, that food preparation and production roles were shared amongst men and women. See essays in Lion / Michel, 2016.

¹⁵ In the Ur III period, bride wealth gifts were given exclusively by the groom to the family of the bride (Greengus, 1990).

¹⁶ This motif in which it is Dumuzi that is associated with the food/produce brought to Inanna could also be indicative of the fact that Inanna was perhaps not originally nor solely a fertility/mother goddess (perhaps worshipped in archaic Uruk in her astral aspect, see Szarzynska 1993: 8. A lengthy passage from Inanna C (ETCSL 4.07.3, lines 115ff) exemplifies the numerous domains associated with Inanna). As a reflection of Inanna’s special

god gives the goddess abundant produce and gifts just as he gives her pleasure.¹⁷

3. Conceptual metaphor and the Sumerian “Love Songs”

This paper treats metaphor as ‘conceptual’. In the 1980s, Lakoff and Johnson’s now seminal work *Metaphors We Live By* proposed a conceptual theory of metaphor, which argued that many everyday concepts are constructed metaphorically from embodied experiences which are then projected onto abstract domains of experience in order for them to be understood.¹⁸ Significantly, it is argued that our physical interaction with the world is what shapes our understanding.¹⁹ The embodied experience therefore helps to structure an experience that is often abstract, such as emotions,²⁰ and this is a metaphorical process. Metaphors ‘map’ between a ‘source’ domain and a ‘target’ domain.²¹ The source domain is physical and experienced bodily, whilst the target domain is often abstract. For example, in relation to this paper, the source domains under discussion are hunger, eating, and food (embodied experiences and objects) and the target domains are (abstract) sexual desire, pleasure and the body.

The study of conceptual metaphor is an important tool in the study of culture because the creation of metaphors stems from the human embodied experience, but it has also been shown that conceptual metaphors display cultural variation. Metaphor can inform us, then, about socio-cultural constructs, and this extends to the study of ancient cultures.²² Applying conceptual metaphor theory to the metaphorical language in the Sumerian “Love Songs” can be used to understand cultural constructs surrounding the conceptualisation of the human body, sexuality, pleasure, and desire.

4. *ḫi-li*: pleasure and appetite

Whilst in the Sumerian “Love Songs”, the conceptualisation of desire as hunger might not be as explicit as in Neruda’s sonnet XI, there are inferences which sug-

divine status, see col. iv, lines 1ff of Inanna-Dumuzi C1; a fragmentary passage which Sefati interprets as Dumuzi promising his new wife that she will not have to do the work of a typical housewife (Sefati, 1998: 294).

¹⁷ Evident in Inanna-Dumuzi D, lines 5–6: *ša₃ ki-ig-ga aḡ₂ ḫi-li aḡ₂ ku₇-ku₇-dam/ku₃ ga-ša-an-na-ḡ₁₀ aḡ₂-še₃ ma-ra-an-ba*, ‘A beloved heart and sexual pleasure are the sweetest things / My Inanna, to you he gave them as a gift’.

¹⁸ Lakoff / Johnson, 1980; 1999.

¹⁹ Lakoff / Johnson, 1980: 25; Lakoff / Johnson, 1999: 45; Gibbs, 2005: 66; Kövecses, 2006: 117–118.

²⁰ Lakoff / Johnson, 1980: 25; Kövecses, 2010.

²¹ Kövecses, 2006: 64.

²² For example, Short, 2018a and 2018b. The application of conceptual metaphor theory to the ancient Mesopotamian world has been particularly prosperous in analysing medical literature (Steinert, 2017; Salin, 2018; Al-Rashid, 2021).

gest that food and sex, pleasure and appetite had a metaphorical relationship.

The first indication of this is tied up with the concept of *ḥi-li*, which appears frequently within the corpus, either as an attribute of or syntactically parallel to images such as flax, barley, and honey, which map onto sexual target domains.²³ *ḥi-li* as a concept covers several semantic fields. Lexically and contextually, it is equated with the Akkadian noun *kuzbu*, and can express luxuriance, abundance, attractiveness, charm, pleasure, and joy.²⁴ In the “Love Songs”, we also find the semantically associated terms *la-la* and *ma-az*,²⁵ whose Akkadian equivalents indicate similar semantic fields of rejoicing, but also swelling and flourishing (*elēšum*, *ḥitbušu*, *šebû*, *elšiš*, *ulšum*).²⁶ That there are also sexual connotations to these terms is evident by the noun *ulšum*, which with the verb *epēšum* can mean to experience sexual pleasure. Akkadian *šebû*, meaning both ‘to become sated (with food)’ and ‘to enjoy fully’,²⁷ seemingly bridges a gap between the state of being full of a substance, the human body being full of food, and the experience of joy, sexual pleasure, and satisfaction.

The nuance of sexual desire and pleasure as a feeling of fullness and satiation can be detected in the composition Inanna-Dumuzi E,²⁸ where *ḥi-li* helps construct barley as a conceptual metaphor for the vulva and the female body:²⁹

3 še ab-sin₂-ba ḥi-li-a sa₅- ḡu₁₀ ḥi-is^{sar}-am₃ a ba-an-du₁₁

My barley in its furrow, filled with sexual allure, it is the lettuce he watered!

The barley in the furrow, an opening in the earth in which to plant seed and pour water,³⁰ also mimics the conceptual shape of the female genitals as a vessel for containing liquids, and thus as something that can be filled and emptied.³¹ That

²³ For example, marking barley as the vulva in Inanna-Dumuzi A, line 5, *še ab-sin₂-na ḥi-li ma-az dirig-ga*, ‘the barley in the furrow, overflowing with allure and lust!’.

²⁴ Jaques, 2006: 251ff; CAD K: 614. The semantic range is also connected to its meaning as a wig, presumably aiding in the attractiveness of the wearer; see the inscribed stone wig from the reign of Šulgi with the dedication: *ḥi-li nam-munus-ka-ni/mu-na-dim₂*, ‘he fashioned for her a wig of womanliness’ (Frame, 1997: 216; CDLI P226717).

²⁵ For example, in Inanna-Dumuzi A, line 5, and perhaps Inanna-Dumuzi Q, line 8 (Klein/Sefati, 2012).

²⁶ Jaques, 2006: 251 n.519.

²⁷ CAD Š2: 251ff.

²⁸ See this same construction in Inanna-Dumuzi A, line 5.

²⁹ Assante, 2002: 35.

³⁰ Sefati and Couto-Ferreira significantly point to a first millennium lexical list which equates *ab-sin₂* with the Akkadian word for womb, *ša₃-sur-rum* (Antagal B 88; Sefati, 1998: 215; Couto-Ferreira, 2017: 64).

³¹ An iteration of the BODY IS A CONTAINER metaphor; the body in many Mesopotamian sources is conceptualised as a vessel for containing liquids. The metaphor is often used to conceptualise the female reproductive body (Steinert, 2017). This is also expressed in other Sumerian literary texts; for example, where semen is depicted as being poured

the body can be filled with *hi-li*, allure and desire, in Inanna-Dumuzi E, also mirrors the feeling of fullness upon being satiated with food, and so we can observe a variation of the ‘universal’ metaphor that connects eating with sexual desire and pleasure.

5. The conceptualisation of the female body in the Sumerian “Love Songs”

The metaphors used for the female body in the Sumerian “Love Songs” mostly use source domains related to crops, plants, and agriculture – all pertaining in some way to foodstuffs and the realm of eating. Flax, barley,³² lettuce,³³ apple trees,³⁴ red berries,³⁵ honey,³⁶ and fields³⁷ all metaphorically map as metaphors for the female genitals.³⁸

In Šu-Suen A, the vulva is also metaphorised as beer:

19 AN x x x x-*ĝu*₁₀ za-bi-tum-ma/ kaš-a-ni ze₂-ba-am₃
 20 kaš-a-ni-gin₇ gal₄-la-ni ze₂-ba-am₃/ kaš-a-ni ze₂-ba-am₃
 21 ka-ka-a-ni-gin₇ gal₄-la-ni ze₂-ba-am₃/ kaš-a-ni ze₂-ba-am₃
 22 A.SU₃-a-ni kaš-a-ni ze₂-ba-am₃
 My ... of the brewer – her beer is sweet!
 Like her beer, her vulva is sweet – her beer is sweet!
 Like her mouth, her vulva is sweet – her beer is sweet!
 Her *kašbir*-beer, her beer is sweet!

The metaphorical construction in these lines is partly determined by the equative marker, -gin₇, in lines 20 and 21; the vulva is likened to sweet beer, as well as to the mouth, which specifically draws a visual and conceptual connection between the sexual body and the domain of eating.³⁹ The sweetness of the beer likened to

into the womb in Enki and Ninḫursaĝa (ETCSL 1.1.1), line 73: ^dnin-ḫur-saĝ-*ĝa*₂-ke₄ a ša₃-ga ba-ni-in-ri.

³² Inanna-Dumuzi A, lines 3–5.

³³ In Inanna-Dumuzi E, lines 1–5, and Šu-Suen C, lines 1–2.

³⁴ Inanna-Dumuzi E, line 4 (see Leick, 1994: 123). The lettuce has previously been interpreted as a metaphor for the penis (Alster, 1993: 21).

³⁵ Sumerian *girin*; Inanna-Dumuzi F, lines 1–8.

³⁶ Prominent in Inanna-Dumuzi B.

³⁷ Inanna-Dumuzi P, col. ii. lines 24ff and Inanna H, lines 22–25.

³⁸ See author’s forthcoming PhD thesis.

³⁹ I treat simile, and other mechanisms such as metonymy, on a spectrum of metaphoricity. The difference between simile and metaphor is only linguistic: ‘This attempt to define metaphor in terms of syntactic form misses entirely what metaphor is about: the understanding of one concept in terms of another. Statements of both forms can employ conceptual metaphor. The kind called a simile simply makes a weaker claim ... the syntactic form of an utterance has little, if anything, to do with whether metaphor is involved in comprehending it’ (Lakoff / Turner, 1989: 133).

the female body implies that to drink her is enjoyable, giving us the target domain of sexual pleasure, the enjoyment of a thing.⁴⁰ The conceptual metaphor is not limited only to the resemblance of taste, but also incorporates the wetness of the aroused female genitals, mouth, and beer, and the cultural construction of the female body as a vessel that can exude liquids. In Šu-Suen A, the female body is therefore positioned as a liquid to be drunk by her admiring male beloved.

6. Food and the female sexual experience

The metaphorisation of the female body as food in the Sumerian “Love Songs” might indicate an objectification of the female subject. However, there are several variations of the metaphor that occur, where food also metaphorises the desire and pleasure of the female characters. In Inanna-Dumuzi P, the female body is not metaphorised as food, but is situated as the fertile earth which will *produce* the food. Once Dumuzi has ‘ploughed’ Inanna (col. ii lines 24ff) and she is sexually satisfied, fruit, flax and barley rise with her in an image that both emotes the positive effects on the prosperity of the land, but also the target domain of Inanna’s abundant pleasure:

Col. iii

9 ur₂ lugal-la-ta zi-ga-ni-ta

10 gu mu-un-da-zi še mu-un-da-zi

After rising from the lap of the king,

Flax rose with her; barley rose with her!

Not only is the female body itself forged metaphorically through source domains of foodstuff, but so is the female sexual experience itself. The motif of the male lover bringing food to the female metaphorically reflects his ability to bring her pleasure; for example, in Inanna-Dumuzi C1, Inanna wishes to be treated to butter and milk that Dumuzi later brings to her:

Col. i.

11 [lu₂][?] su₈-ba-še₃ mu-lu da-an-gi₄-gi₄

12 [i₃] saḡ [ga] saḡ mi₂ [de₃]-[ḡa₂]-[ab]-be₂

[li-ka]-an-ni-a-am

Let me send a man to the shepherd,

And may he pleasure me⁴¹ with top butter and top milk!

⁴⁰ The three main abstract target domains present in the Sumerian “Love Songs” are semantically and conceptually linked, often appearing together, and can therefore be difficult to categorise. The basic criteria of which emotion is being expressed has been decided on the following basis: sexual desire = the want of a thing; sexual allure = state of attractiveness; sexual pleasure = enjoyment of a thing.

⁴¹ The verb mi₂-du₁₁ is used in an explicitly sexual context in Šulgi X (ETCSL 2.4.2.24), lines 34–35.

Food is also used as a metaphor for female desire.⁴² For example, where we saw the vulva likened to sweet beer in Šu-Suen A, in Šu-Suen B, the female speaker's own desire for her lover is expressed through the emphasis on his sweetness and the desirability of tasting (his) honey:

4 ḥi-li-zu aḡ₂ ze₂-ba-am₃ la₁₃-am₃ ku₇-ku₇-da
Your allure is a sweet thing, it is the sweetest honey!

The frequent food, plant, and animal imagery across the corpus also metaphorises a sought-after abundance and prosperity of the land, often caused by the sexual union of Inanna and Dumuzi. In Inanna-Dumuzi D1, for example, Inanna desires productive fields, fish, flax, barley, birds, sheep, goats, honey, wine, lettuce, and other plants that Dumuzi will again bring to her once she has bestowed kingship upon him (lines 47–59). Because many of these source domains also map onto target domains of female desire and pleasure, abundance of food produce in the Sumerian “Love Songs” forges an eroticism that is sensed through Inanna's desire to have plentiful foodstuffs, plants, and fruit to consume, mimicking a (female) hunger for sexual pleasure.

7. Conclusions

We can therefore observe some variations on the seemingly universal conceptual metaphors, desire is hunger, women are food, which as shown above are present in the world's oldest erotic literary texts. Sexual desire and pleasure as a hunger and eating are not explicit, but implicitly built into the semantic fields associated with the key concept of ḥi-li, and the way the female body is metaphorically constructed primarily through source domains of food, plants or produce.

However, there are several nuances of the metaphor in the Sumerian “Love Songs”. Whilst the female body is situated as consumable food or domesticable land, food is brought *to* her; the female figures of the “Love Songs” desire the taste of honey; her arousal is represented as sweet beer; and her pleasure as the rising of barley and flax. Food is not only the female body for the male to consume, but it also participates metaphorically in the construction of the female sexual experience of her own pleasure and desire.

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⁴² Interestingly, *not* being able to eat is a symptom of a woman's lovesickness in the Akkadian love literature (A 7478, Wasserman, 2016: 34–35).

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“Eat and drink, but do not look at my, the king’s, eyes!”

On a Metaphorical Expression in Old Hittite

Paola Dardano

1. In Hittite the verbs for eating and drinking, together with their synonyms, are attested in some locutions where they have lost their literal value having assumed a metaphorical one.¹ Based on examples from Old Hittite historical and legal texts, this paper aims to elucidate some metaphorical expressions comprising the verbs *ed-/ad-* ‘to eat’ and *eku-/aku-* ‘to drink’. It is suggested that in the interaction between members of the royal family and/or officials, these expressions served a number of different communicative goals: they had an emphatic purpose, and their use was closely linked to the pragmatic context of interaction as well as to the role of the interlocutor.

Phraseological units are fixed expressions (of two or more words) that are idiomatic.² Fixedness is a crucial notion, which, together with non-compositionality and semantic opacity, has long been considered the defining feature of phraseological units. A lexical item is said to be non-compositional if its global meaning is different from the sum of its individual parts. Moreover, a given sequence is said to be opaque if, from the meaning of the elements that comprise it, one cannot reconstruct its global meaning. In this respect, an expression such as *to bite the dust* must be viewed as an idiom, a fixed and non-compositional semantic unit. It is important to consider both the literal and the figurative readings of a phraseme: even if one understands all of the words that make up the expression *tirer le diable par la queue* (lit. ‘pull the devil’s tail’), it is not enough to make it comprehensible. That figurative idioms have a figurative meaning is beyond a doubt. What is important is the role played by metaphor (and metonymy) in the creation and extension of the figurative meaning.

2. In the so-called Political Testament of Ḫattušili I, when the king adopted his grandson Muršili and asked the dignitaries gathered in Kuššara to recognise him

¹ I am indebted to the anonymous referee for very helpful comments and criticism that helped me improve this paper. I of course remain solely responsible for the contents.

² See Burger *et al.*, 2007; Granger / Meunier, 2008.

as the legal heir to the throne, the king's purpose was to guarantee the prosperity of the royal family and thus of the Hittite state. The king says "If you keep the father's word, you will [eat bread] and drink water", i.e. "you will be healthy, prosperous":

KUB 1.16+ III 28–32 – CTH 6

- 28 ... *ma-a-an at-ta-aš ut-tar pa-aḥ-ḥa-aš₁-ta*
 29 [NINDA-an e-ez-za-a]š-ši wa-a-tar-ra e-ku-uš-ši ma-a-an^{LÜ}ma-ya-a[n-
 d]a-ta[r]
 30 [kar-di-it-ti nu-za UD-an II-ŠU III-ŠU e-it nu-za a-ar-š[i-i-ya-a]ḥ-ḥu¹-ut
 31 [ma-a-an(-ma ?)^{LÜ}]ŠU.GI-tar-ra kar-di-it-ti nu-za ni-in-ki-iḥ-ḥ[u-ut]
 32 [Ú-UL (?) at-ta-aš-š]a ut-tar pé-e-eš-ši-ya

If you keep your father's word, you [will eat bread] and drink water. When the prime of young adulthood is [within] you, then eat two or three times a day, and tr[ea]t yourself. [But when] old age is within you, drink your fill, [do not] set aside [(your) father's] word!³

A little later in the same text we read the fixed phrase 'to eat bread (and) drink water'. The dignitaries were repeatedly urged to respect what the king said; if they ignored his words, they would perish:

KUB 1.16+ III 46–49 – CTH 6

- 46 [š_u-me-eš-ma la-]ba²-ar-na-aš LUGAL.GAL ud-da-a-ar-me-et pa-aḥ-
 ḥa-aš-nu-ut-te-en
 47 [ma-a-na-a]t pa-aḥ-ḥa-aš-du-ma nu^{URU}Ḥa-at-tu-ša-aš ša-ra-a ar-ta
 KUR-še-me-et-ta
 48 [wa-ar-a]š-nu-ut-te-ni NINDA-an az-za-aš-te-ni wa-a-tar-ra e-ku-ut-
 te-ni ma-a-an
 49 [Ú-UL-m]a pa-aḥ-ḥa-aš-du-ma KUR-e-še-me-et ta-me-u-ma-an ki-i-
 ša-ri

[You] (my subjects) must keep my words, those of [L]abarna, the Great King. [As long as] you keep [them], Ḥattuša will stand tall, and you will set your land [at peace]. You will eat bread and drink water. But if you [do not] keep them, your land will fall under foreign control.⁴

The formula 'to eat bread (and) drink water' is also attested in the Old Hittite text KUB 36.110. It should be stressed that only in this passage do the direct objects in the accusative show the enclitic possessive pronouns (-š_{an} and -š_{et}, respec-

³ Both here and in the subsequent passages of the Testament, Beckman (2003: 81) interprets the formula as exhorting a "Spartan lifestyle", and translates: "You must eat (only) bread and drink (only) water". I do not agree with this interpretation, but prefer to read it as 'to be safe and sound'. On the 'Political Testament' of Ḥattušili I, see also Goedegebuure, 2006.

⁴ See also KUB 1.16+ III 33–39.

and [...], he will not be permitted to come up (again), but [shall remain on his own estate] (Beckman, 2003: 79–80).

In the same text, there is a good example of the use of *azzikke-* and *akkuške-* as opposed to ‘eat bread (and) drink water’ shortly after. Ḫattušili’s daughter had also turned against her father, but Ḫattušili managed to assert his power over her. He has banished her and prohibits her from returning to court.⁶ He has assigned her a property in the countryside and forbids her to enter Ḫattuša with the words, “A house has been allotted to her in the country, now she shall eat and drink!”:

KUB 1.16+ III 16–25 – CTH 6

- 16 []_x *at-ta-aš ut-tar pé-e-eš-ši-i-e-et*
 17 [*nu A-NA DUMU*^{MEŠ} ^{URU}*ḪA-AT-TI e-eš-ḫ*]*ar-ši-mi-it e-ku-ut-ta ki-nu-na-aš*
 18 [*URU-az kat-ta u-i-ya-an-za ma-*]₁*na-aš pá-r-nam-ma ú-iz-zi nu-kán É-ir-me-et*
 19 [*wa-aḫ-nu-uz-zi ma-a-na-aš* ^{UR}]_U*Ḫa-ḫat¹-tu-ši-ma ú-iz-zi*
 20 [*nu a-pu-u-un da-a-an e-d*]_i² *na-a-i ut-ne-e-še*
 21 [*É-it tá-g-ga-aš-š*]*a-an nu az-zi-ik-ki-id-du*
 22 [*ak-ku-uš-ki-id-*]*du*

- 23 [*š-u-me-eš-ma-an i-da-a-lu le-*]*e i-ya-at-te-ni a-pa-a-aš i-da-a-lu i-e-et*
 24 [*ú-uk i-da-a-lu EGIR-*]*pa*² *Ú-UL i-ya-am-mi a-pa-a-aš-mu-za at-ta-an*
 25 [*Ú-UL ḫal-za-iš*] *ú-ga-an-za DUMU.MUNUS*^{TI} *Ú-UL ḫal-zi-iḫ-ḫi*

She has rejected (her) father’s word and has drunk [their blood, i.e. of the citizens of Ḫattuša]. Now she [has been banished from the city]. If she were to come to my household, [she would surely disrupt] my household. [If she] were to come to Ḫattuša, she would cause [it] to revolt [once more. A house has been allotted(?) to her in the country – now (she shall stay there, and) she shall eat (and) [drink]. (§) [You] shall not do [her any harm]. She did (me) harm, but I shall not do (her) [harm in return]. She [would not call] me father, so I shall not call her daughter (Beckman, 2003: 81).

The ‘eat (and) drink’ formula is also found in other texts of the Old Hittite tradition. A very similar passage occurs in an annalistic text dated to Muršili I that illustrates a military campaign against the Hurrians in eastern and southern Anatolia.⁷ Although the text is corrupt, the king is probably speaking to his subjects:

KUB 31.64 (+) 64a + KBo 3.55 II 18’–20’ – CTH 12

- 18’ *ḫal-ma-aš-š*[*u-it-ti-mi*] *LUGAL-aš a-aš-š-u-me-et* []
 19’ [*me-e*]*k-ki ki-it-ta a*[*z-zi-ik-ki-it-te-en ak-*]*ku-uš-ki-ṭe-en* []

⁶ On this episode see Gilan, 2020.

⁷ See de Martino, 2003: 168–171.

20’ [DAM]^{MEŠ}-*KU-NU DUMU^{MEŠ}-KU-NU* ḥ[*u-uš-nu-ut-te-en ...*]
 ... [on/in] my throne [] my, the king’s, wealth lies [in ab]undance. E[at
 (and) d]rink! K[ee]p alive] your [wife] (and) your children!

Shortly after, the same wording is repeated:

KUB 31.64 (+) 64a + KBo 3.55 II 27’–29’ – CTH 12
 27’ ... LUGAL-*aš a-aš-šu-me-et*]
 28’ *me-ek-ki ki-₁it₁-ta az-zi-ik-ki-it-te-en ak-ku-uš-ki₉-te-en* DAM^{MEŠ}-
KU-NU DUMU^{MEŠ}-KU-NU]
 29’ ḥ*u-uš-nu-ut-tén*
 [My, the king’s,] wealth lies in abundance. Eat (and) drink! K[ee]p alive
 your wife (and) your children!]

It is also interesting to compare a passage from an Old Hittite legal text. In the Telipinu Edict we read that Ḫuzziya became king, but he had a brother-in-law, Telipinu, whom he feared as a rival and so planned to kill once he – Ḫuzziya – was on the throne. Telipinu learned of the plot, drove off the would-be murderers, and ascended the throne himself. He then felt that he had to be rid of Ḫuzziya’s five brothers. According to the usual practice, they were sent away from court and were confined to houses that Telipinu had given them:

KBo 3.1++ II 13–15 – CTH 19
 13 V Š[E]^{MEŠ}-*ŠU nu-uš-ma-aš É^{MEŠ} tág-ga-aš-ta pa-a-an-du-wa-az a-
 ša-an-du*
 14 *nu-wa-[z] a az-zi-ik-kán-du ak-ku-uš-kán-du i-da-a-lu-ma-aš-ma-aš-
 kán le-e ku[-iš-ki]*
 15 *tág-ga-aš-ši nu tar-ši-ki-mi a-pé-e-wa-mu i-da-lu i-e-ir ú-ga-wa-ru-uš*
 ḪUL-lu¹ [Ú-UL *i-ya-mi*]

Five (were) his (i.e., Ḫuzziya’s) br[ot]hers and he assigned houses to them (saying): “Let them go (and) live! Let them each eat (and) drink! May nob[ody] do harm them!”. And I declare: “They did evil to me, but I [will not do] evil to them”.

The formula ‘eat (and) drink’ probably denotes the banishment of Ḫuzziya and his brothers. They are not condemned to death, but a certain location (unknown to us) is assigned to them as punishment. The same episode is described in the annalistic text KBo 12.8 (with the parallel KBo 12.9), which offers a first-person account of Telipinu. Here the “eat (and) drink” formula does not occur, but there is little doubt that *parnaš=šmaš tarnā-* ‘leave in their homes’ conveys the same meaning:

KBo 12.8 Vo IV 20’–23’ – CTH 20.A
 20’ ^m*Ḫu-uz-zi-ya-aš-š[a-an]’ Ú ŠEŠ^{MEŠ}-ŠU’*
 21’ *pár-na-aš-ma-aš tar-na-aḥ[-ḫu-un pa-an-du-wa-az]*
 22’ *a-ša-an-du ḪUL-l[(u-ma-w)a-aš-ma-aš-kán le-e]*

23' *ku-iš-ki ták-ki*[-e-eš-zi]

Ḫuzziya [and his brothers] I lea[ve] in their homes: “[They should go] (and they should stay (lit. be) (there), but [no] one should h[(arm)] them”.

It is worth noting that the formula, together with the prohibition to look at the king's eyes (i.e., not to visit the king), occurs in a royal edict and probably refers to the banishment of Ḫattušili's daughter. A woman called the daughter is sent away from the capital Ḫattuša, and it is a mark of the king's leniency that she is merely banished. She is given fields and herds so that she can support herself, but she is forbidden from returning to court:

KBo 3.24+KBo 53.275+ Ro 10'–18'

10' *ṽTa-wa-n*[a-an-na

11' *at-ta-aš-š*[a(-)

12' *ut-ni-ya-an-d*[a-

13' *ú-ga* DUMU.MUNUS^{TI}[

14' *da-aḫ-ḫu-un* DUMU.M[UNUS[?]

15' *ša-na-aš-ta* ^{URU}*Ḫa-a*[t-tu-

16' *ú-ṽe¹-em¹-ya na-at-ta* x[

17' ***az-zi-ki-i ak-ku-uš-ki-ya*** ^{URU}*Ḫa-a*[t-tu-ši-ma LUGAL-wa-aš (?)]

18' *ša-a-ku-wa le-e a-ṽú¹-u*[t-ti

10' Tawana[nna

11' [an]d [the words] of the father

12' [the] population [

13' and I (my) daughter [

14' I took. [The dau]ghter [

15' and them [in] Ḫa[ttuša

16' find! Not... [

17' “Eat and drink! In Ḫa[ttuša

18' do not look at the eyes [of the king]!

This fragment probably refers to the preventive measures that Ḫattušili made regarding his daughter in the Testament.⁸ The daughter was banished from court, but her personal safety and well-being were guaranteed. She was provided with a small estate stocked with cattle and sheep outside the capital, but she was not allowed to return to Ḫattuša. This was done in a spirit of reconciliation that Ḫattušili wanted to encourage all his subjects to adopt.

This text is an old Hittite decree, which has been handed down in a New Hittite copy, but probably goes back to the time of Muršili I.⁹ In the same text the author anecdotally describes an episode at the royal court in which he himself took part.

⁸ See above, KUB 1.16+ III 16–25.

⁹ On the new joins see Marazzi, 2019–2020.

The prince of the city of Puruṣhanda rebelled against Ḫattuša and was – as is figuratively described – “put into the hand (of the Hittite king)” by the gods (KBo 3.28 II 6’–7’), i.e., was defeated. We do not know anything about his fate or punishment, but the family of the rebellious prince was treated with mercy and was not harmed. His wife and sisters were spared, and the king addressed them with the solemn formula: “Go, eat and drink, but do not look at my, the king’s, eyes!”. In this passage, the expression ‘eat (and) drink’ can be read as a formula of banishment: the female relatives of the rebellious prince are not put to death, but cannot be admitted into the king’s presence, i.e., they cannot ‘look at the king’s eyes’:¹⁰

KBo 3.28++ II 6’–9’– CTH 9.6

6’ ... šu-mu DINGIR^{DIDL} DUMU^{URU} Pu-r[u-uš-ḫa-an-du-um-na-an]

7’ ki-iš-ri-mi da-i-ir LUGAL-uš A-NA DAM-ŠU ne-ga-aš-š[a]-aš-ša

8’ i-it-te-en az-zi-ki₉-te-en ak-ku-uš-ki₉-te-en LUGAL-wa-ša

9’ ša-a-ku¹-wa-me-et le-e uš-te-ni

The gods put the prince of Pur[ušhanda] into my hand and I, the king, said to his wife and his sisters: “Go, eat and drink, but do not look at my, the king’s, eyes!”

From this it can be concluded that the victorious ruler pardoned the female relatives of the prince, but banished them as their presence could no longer be tolerated. This text strengthens the hypothesis that the phrase ‘eat (and) drink’ is a formula for banishment. The wife and sisters of the rebellious prince are allowed to live, but they are abandoned to their fate and can no longer take part in the life of the court.

4. Our results can be tentatively summarised as follows. The phraseme ‘eat (and) drink’ has a twofold purpose. When the two verbs take the suffix *-ške-*, are in the imperative form and are absolute (that is, they are not accompanied by any direct object, but refer solely to the subject), we have a banishment formula. The king is solemnly speaking to high dignitaries or members of the royal family: ‘eat and drink’ thus means ‘you are alive, your life is saved’, i.e., ‘you are not sentenced to death, but you are banished from court’. On the other hand, if the two verbs have an object in the accusative, i.e., ‘eat bread’ and ‘drink water’, the expression should be taken more literally: it means ‘to stay alive, be safe and sound’. We can therefore conclude that it is not the lexical choice, but the morphosyntactic structure that allows us to distinguish between the two formulas. As shown in Table 1, there is conclusive evidence that the metaphorical use ‘eat (and) drink’ is distinct from the non-metaphorical ‘eat bread (and) drink water’:

¹⁰ On *šakuwa auš-* as a loan translation from Akk. *ēn(ē) X amāru(m)* ‘to visit’, lit. ‘to see the eyes (of someone)’, see Dardano, 2010.

Table 1

	imperative	-ške-suffix	no direct object	
KBo 3.1++ II 14	+	+	+	metaphorical use <i>azzikke- akkuške-</i>
KBo 3.28 II 8'	+	+	+	
KUB 1.16+ II 33	+	+	+	
KUB 1.16+ III 21–22	+	+	+	
KUB 31.64++ II 19'	+	+	+	
KBo 3.24+ Ro 17'	+	+	+	
KUB 1.16+ III 29	–	–	–	non-metaphor- ical use NINDA <i>ed-</i> + <i>watar eku-</i>
KUB 1.16+ III 34	–	–	–	
KUB 1.16+ III 48	–	–	–	
KUB 36.100 Vo 5'–6'	–	–	–	

5. This analysis has demonstrated the varied phraseology associated with verbs for eating and drinking. In particular, it has highlighted the major role played by metaphor in the creation and extension of new phrasal patterns. What makes these idioms stand out from other phrasemes is their high degree of idiomaticity, which manifests itself in semantic opacity in addition to a distinct figurative element.

It is clear from these remarks that phraseology can be a springboard for stimulating further study. Indeed, there is a close connection between culture and phraseology. This is best revealed by proverbs and fully idiomatic set phrases, as they tend to rely heavily on images, traditions and habits that are characteristic of a given culture. Phraseology can be seen as the linguistic repository of a number of culturally specific traditions.

Phrasemes revealing cultural models that belong to a group provide information about the values that that culture upholds. In doing so, they also express the rules that govern social behaviour in a specific culture. This demonstrates the importance of studying conventional figurative language, not only to reveal its cultural content, but also to explore fully the link between figurative language and culture.

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The Potion in the 1st Millennium Assyro-Babylonian Medicine

Kiril Mladenov*

“Like any *mašqītu*-potion that my lord drinks, you put three drops into the libation bowl with the tip of a stylus and drink it before the bread. (SAA 10 336 o. 1 – r. 2)”¹

1. Introductory notes

One of the most often prescribed cure against internal diseases in the Assyro-Babylonian medicine is potion (Akk. *mašqītu*).² The goal of the paper is to analyse its preparation and use in the Stomach treatise of the Nineveh medical encyclopedia (henceforth NME).³ It bears the title *šumma amēlu suālu maruṣ ana kīs libbi itâr* (“If a man is sick with *suālu*-cough (which) turns into intestinal disease”) and consists of five serialized manuscripts.⁴ The text includes *bulṭu* recipes, medical

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¹ *ki-i¹ maš-qit me-me-[ni] ša be-lí i-šat-tu-u-ni 03-šú ina pi-i ša qar-ṭup-pi ¹ina¹ mu-naq-qi-te ¹ta¹-kar-ra-ar pa-na-at NINDA.MEŠ ta-šá-at-ti.*

² The word *mašqītu* is found in medical texts as well as in royal letters (there is a diversity of specified potions, see CAD m: 383). It derives from the verb *šaqu* “to pour a drink, to give to drink”. *Mašqītu* could also be used in reference to enemas (see CAD m: 384, Steinert with Panayotov / Geller / Schmidtchen / Johnson, 2018: 276).

³ See BAMTU 9 and <http://oracc.museum.upenn.edu/asbp/ninmed/> (visited 04.2022). I use the transliterations and translations provided by NinMed project on Oracc site, Cadelli’s French edition of *suālu* and Scurlock’s Handbook. See <http://oracc.museum.upenn.edu/asbp/ninmed/>, Cadelli, 2000; Scurlock, 2014.

⁴ See Cadelli, 2000, <http://oracc.museum.upenn.edu/asbp/ninmed/> and Panayotov, 2018b: 102f. The best preserved tablets are BAM 574 (Tablet 1 of the series), BAM 575 (Tablet 2), BAM 578 (Tablet 3) and BAM 579 (Tablet 5). The central theme of Tablet 1 is *kīs libbi* (gastric constriction). Tablet 2 deals with different *libbu* problems. BAM 578 is mostly concerned with *martu* bile and BAM 579 with internal heat.

incantations and rituals. Common terms designating the stomach area are “insides” (*libbu*) and its components (*karšu* “stomach”, *irrû* “intestines”).⁵

Assyro-Babylonian beliefs about the internal structure and functioning of the human body are hard to grasp. Yet, they are allegorically visualised in medical incantations.⁶ We may assume that most of the knowledge about the insides of the belly came from seeing battle wounds and especially divination with animals.⁷

2. Preparation of a potion

A potion can have healing, magical or poisonous properties. As summarised by Goltz in her study of Babylonian and Greek medicine production: “Der Trank ist die häufigste und zugleich einfachste Arzneiform. Die Formel *ina šikari išatti*, „ein Bier trinke er“, könnte fast als Charakteristikum der babylonischen Medizin gelten.”⁸ It is usually drunk on empty stomach (*balu, lā patan*). In prescriptions like BAM 575 ii 17–18 drinking is described by the adverb “continually.”⁹ Sometimes, further instructions are given about timing the potion, BAM 579 i 10:

“He drinks them once, twice, three times on an empty stomach.”¹⁰

Traditional medicines reveal diverse techniques for potions – *decoction* (produced by soaking and boiling the ingredients in a solvent), *infusion* (soaking the ingredients in solvent over time), *tincture* (dissolving in alcohol) etc. The *bulṭu* recipes however often lack specificity about the process of potion making and drinking. Goltz writes: „muss angenommen werden, dass die Drogen zusammen mit der Flüssigkeit geschluckt wurden“.¹¹ This is however doubtful in recipes where ingredients are not pounded (*sâku*) or crushed (*hašālu*). Probably, sometimes phases of the potion production were not mentioned because they were well known to the physicians. Such an example is found in BAM 575 i 47:

“Alternatively, he drinks *atā’išu*-plant in beer and he will vomit. He drinks white plant in oil and he will vomit.”¹²

⁵ See Cadelli, 2000: 289–312.

⁶ For data and analysis of Babylonian medical incantations see the dissertation of Collins, 1999 and Geller, 2007.

⁷ The ancient Greek verb *anatome* “to cut the whole into parts” refers back to the practice of dissection. True anatomy was supposedly not developed until the time of the famed Alexandrian physicians in IV–III BCE. See Geller, 2010: 3f.; Nutton, 2012: 130f.

⁸ Goltz, 1974: 60.

⁹ This instruction is often found in the prescriptions. It is usually expressed by putting the verb in plural: NAG.MEŠ.

¹⁰ NU *pa-tan* 1-*šu*₂ 2-*šu*₂ 3-*šu*₂ NAG.

¹¹ Goltz, 1974: 60.

¹² [*ana*] ¹KI MIN¹ ^uKUR.KUR *ina* KAŠ NAG-*ma* *i-ar*₂-*ru*₃ U₂ BABBAR *ina* I₃.GIŠ NAG-*ma* *i-ar*₂-*ru*₃.

When pounded, the ingredients could be consumed together with the liquid. They were also mashed and simply drunk with no added liquids, see BAM 578 iii 16:

“You heat (*sekēru* “to heat in an oven”) root of *ēru*-tree (and) root of pomegranate in an oven, you keep mashing their liquids, you let them cool, he drinks them, and then he will improve.”¹³

2.1 Solvents

Different liquids are used as solvents – beer, wine, water, milk, juice, oil etc. The choice of the solvent might have been determined by different factors like: 1. solubility (some ingredients are soluble in alcohol); 2. availability; 3. taste (avoiding or provoking a specific flavor); 4. age of the patient. Since the identification of the ingredients is problematic, it is not certain to what degree the choice was crucial for the recipe, or rather was a question of availability and personal taste. For example, BAM 574 i 17–18 – a recipe against gastric constriction reads:

“You pound root of male *pillû*-mandrake, root of *šūšu*-liquorice, *imḥur-līm*-plant, *imḥur-ešrā*-plant, *tarmuš*-lupin, *maštakal*-plant (and) *lišān kalbi*-“dog’s tongue” plant (and) he drinks them either in water or beer.”¹⁴

BAM 574 ii 1 mentions more possibilities:

“If a man’s belly hurts him: you pound salted *ḥašû*-thyme, you put it in water or beer or wine, (and) he drinks it.”¹⁵

In many recipes only one specific solvent is prescribed. Water is used in BAM 574 ii 10. An interesting case is BAM 578 iii 8–24 – simple prescriptions against *amurriqānu*. At the beginning of the text the solvent for eight ingredients is beer (iii 8–11):

“You pound *burāšu*-juniper, (and) he drinks it in beer. (iii 8)”¹⁶

Lines iii 11–12 contain four of the same ingredients but the solvent is milk. One of them, *namruqqu* could also be consumed in water (iii 11).

“You pound *burāšu*-juniper, (and) he drinks it in milk.”¹⁷

Probably the missing *pillû*, *murrānu*, *kurkanû*, and *imḥur-līm* were to be drunk in alcohol. Other recipes in Stomach suggest beer to be the preferred solvent for the

¹³ SUḤUŠ^{gis}MA.NU SUḤUŠ^{gis}NU.UR₂¹.MA ina¹ NINDU¹ UŠ₂-er A.MEŠ-šu-nu-ti₃ tu-sak₆ tu-kaš₃-ša NAG-ma ina-eš.

¹⁴ SUḤUŠ^{gis}NAM.TAR NITA₂ SUḤUŠ^{gis}šu-šum^{u₂}IGI-lim¹ IGI¹-NIŠ^{u₂}tar-muš¹IN.NU¹.UŠ^{u₂}EME UR.GI₇ SUD₂ lu ina A lu¹ ina KAŠ¹ NAG.

¹⁵ [DIŠ NA ŠA₃]-[š₂u¹ GU₇-š₂u^{u₂} HAR.HAR MUN SUD₂ lu¹ ina¹ [A] lu¹ ina KAŠ lu ina GEŠTIN <<EN₂>> ana ŠA₃ ŠUB-di NAG.

¹⁶ šim^{LI} SUD₂ ina KAŠ NAG.

¹⁷ šim^{LI} SUD₂ ina GA NAG (BAM 578 iii 11).

above-mentioned plants. The rarest of them seem to be *kurkanû*, mentioned only in a few recipes (see BAM 578 iv 36). In some cases, change of the solvent is essential, see BAM 574 i 33–34:

“Alternatively, you pound together parched grain flour, *ḥarūbu*-carob flour (and) the *diktu* form of dates, he continually drinks them in beer on an empty stomach for two days, (and) [for two?] days? he continually drinks them in water on an empty stomach, (then) you sprinkle his epigastrium with water, and then he will recover.”¹⁸

2.2 Measurements

Measurements (SILA₃ “litre”, KISAL “measure”, GIN₂ “shekel”) are present in some recipes, see BAM 574 i 19–20:

“If a man’s belly keeps throbbing up against him: you pound ten measures of [x x x] x (and) ten measures of *marišmalû*-plant, you mix (*balālu*) them [x x x x]; then he will recover.”¹⁹

In BAM 575 there are further examples with measurements of salt, honey, *šunû* tree (BAM 575 ii 56), date juice, sap of *kasû*-tamarind, *ninû*-mint (BAM 575 iv 43–44) etc. The shekel is also sometimes used as a measure in BAM 578 ii 57–ii 66. It is interesting to note that the solvent is measured as well.²⁰

BAM 579 iv 43 – a potion against binding epigastrium and flatulence is defined as *šaqlutu* “weighed” but no exact measures of the ingredients are recorded.²¹ The instruction *ta-ḥi-as-su* (*ḥâtu* “to portion”) in BAM 579 iv 42 refers that the mixture is portioned.²²

¹⁸ [ana KI MIN] 'ZI₃ ŠE¹.SA.A ZI₃ ḥa-ru-be 'di¹-ik-ta ZU₂.LUM.MA TEŠ₂.BI SUD₂ ina KAŠ NU pa-tan '2 UD¹-[me] [NAG.MEŠ 2'] 'UD-me¹ ina A.MEŠ NU pa-tan NAG.MEŠ A.MEŠ SAG ŠA₃-š_{u2} 'tu-sa¹-[lah₂-ma TI].

¹⁹ DIŠ NA ŠA₃-š_{u2} 'it¹-te-net-ba-aš-šum 10 SILA_x(KISAL) 'u²:1[x x x] x 10 SILA (KISAL) u².MA₂.ERIS₄.MA₂. 'LA₂-e¹ SUD₂ ḤI.ḤI [x x x x] 'TI¹.

Stadhouders and Johnson use the definition “infrastructural compendia” for library versions of recipes, which systematically omit exact measures (Stadhouders / Johnson, 2018: 564–565).

²⁰ See BAM 578 ii 58 – ii 66.

²¹ The connection of the description *maš-qi-tu an-ni-tu* URU₃-ti LUGAL-ti *šaḳ-lu-tu* to the text of the prescription is problematic. The text describes the ingredients as “drugs for a bandage” (BAM 579 iv 39: U₂ an-nu-ti₃-ma ana mar-kas₃-te) and further instructions in reference of use are not given. See *markastu* (CAD m1: 282) and *rakāsu* (CAD r: 91).

²² See CAD h: 162. The instruction “you portion it” is written also in some other recipes in BAM 579 in a clear relation to a *tahittu* dose (see CAD t: 50, BAM 579 i 59–65).

2.3 Cooking

Recipes contain information about boiling, heating and filtering the potions. Boiling is described with two verbs, *bašālu* and *salāqu*:

“Alternatively, you boil (*salāqu*) *dadānu*-plant with wide leaves like *laptu*-turnip, he continually drinks it, (and then) he will recover (BAM 574 i 48).”²³

More prescriptions use the verb *bašālu* (“to prepare medication by boiling”).²⁴ However, it is predominantly found in descriptions of enemas, washes and band-ages. *Bašālu* for internal potion see in BAM 575 iii 19, iii 34 and iv 50:

“You boil it, filter it, cool it and keep it covered afterwards, he drinks it.” (BAM 575 iv 50)²⁵

Potions are often cooled (*kašū*) probably mostly for pragmatic reasons, in order not to burn the patient. Presumably a drink could remove the heat in the body, see BAM 575 iv 10:

“He drinks them in beer, (and thereby) you remove the heat from his belly, and then he will recover.”²⁶

Information for filtering (*šaḥālu*) a potion is sporadically found. Such a recipe is BAM 575 iii 30 – a prescription against flatulence and fever where the mixture is prepared through maceration (immersing ingredients in a liquid for specific time) and filtering. The initial process of maceration is often followed by instruction to leave the remedy under the Goat star. This action has magical and symbolic meanings since this star is a manifestation of the healing goddess Gula.²⁷ Maceration is sometimes described with different verbs, depending presumably on the nature of *materia medica*: *rasānu* “to steep” (see BAM 574 ii 14), *labāku* “to soften” (see BAM 575 i 14), and *ramāku* “to soak” (BAM 575 i 17). Particular days were more favorable (UD ŠE.GA) for taking a potion as shown in BAM 578

²³ ^rana¹ KI MIN ^kIŠI¹⁶.ḪAB¹ ša² PA.MEŠ-šu² DAGAL.MEŠ GIM LU.UB² ^rsar ta¹-salaq ^rNAG.MEŠ TI¹.

This place is however problematic. See the edition in Cadelli, 2000: 74. Because of the corruption in the text it is not certain what is done with the medication. From recipes in Hamstring Treatise of NME, it is known that plant leaves were boiled (*salāqu*) and then poured (*tabāku*) over lesions (AMT 73/1 ii 50–52). See <http://oracc.museum.upenn.edu/asbp/ninmed/pager#P393740.121> (visited 04.22).

²⁴ See CAD b: 135 (*bašālu* 6). Although not frequently, heated substances and heating as a process are written in Stomach with the verb *emēmu* (BAM 575 i 49).

²⁵ ^rŠEG⁶-šal ta-ša²-ḫal ŠED⁷ ina ŠA³ taḥ-ta-na-su EGIR-šu² NAG.

²⁶ ina KAŠ NAG um-mi ša² ŠA³-šu² ta-ša²-ḫaṭ-ma TI. See also BAM 579 i 22 and i 34.

²⁷ See BAM 578 i 38–41. For the Goat star which corresponds to the constellation Lyra as a manifestation of Gula see Böck, 2014: 181.

i 38–41. A unique detail there is the warning that before having a positive effect on the patient, worsening (*salā'u*) of the condition is expected.

2.4 Testing

Although not specifically mentioned in Stomach we know from other medical texts and from the royal correspondence that sometimes potions were tested, like in the royal letter SAA 10 191 o. 11 – r. 1:

“Let us make those slaves drink first, and let the crown prince drink only afterwards.”²⁸

A variety of cures were specified as *latku* “tested, tried, proven”, pointing to the empirical experimentations in the Assyro-Babylonian medicine.²⁹

3. Treatment

The healing acted simultaneously on two levels – through therapy and through incantations and ritual actions. The *bulṭu* recipes often instruct that potions should provoke vomiting or bowel movement. In this way they could be used as emetics, laxatives and antifatulents. Rituals on the other hand, transfer healing powers into the *materia medica* (BAM 574 ii 66).³⁰

Medicine and magic often work together in traditional medicines. A glance at Bulgarian traditional medicine might serve as a comparative point. An incantation against floated stomach reads:

“*Izdam* (*izdat* – a personification of the bloated stomach), brother, go to the empty woods, where cat does not go, where dog does not go, where cock does not go!”³¹

It is accompanied with a ritual, threatening the disease with a knife. At the end of the incantation the knife is stuck in the ground, close to the patient. Then it is taken out and the procedure is repeated 4–5 times.

²⁸ LÚ.GÁL.MEŠ *am-mu-te ni-ḥar-ru-up ni-šá-aq-qi ḥa-ra-me-ma* DUMU–LUGAL *li-is-si*.

²⁹ See Steinert, 2015.

³⁰ See Bácskay, 2009 and Panayotov, 2018a. Incantation texts often contain allusions to the conducted therapy. For example, BAM 574 ii 26–27 – incantation against a stomach disease reads: “Belch and feel better, young man! May the wind either come out through (your) anus, or may a belch come out from (your) throat.” See also BAM 574 iv 17–22 and BAM 574 iv 27–29.

³¹ Todorova-Pirgova, 2019: 447. The english translation is mine. My research on the topic is ongoing. Typical malevolent powers in the texts are fairies (*самодиви* – *samodivi*), demons and saints which reflects the amalgam of pagan and Christian tradition similarly to Sumero-Akkadian cultural layers in Babylonian medicine.

3.1 Emetics

One of the desired effects of a healing potion was to encourage cleansing through vomiting. There are different Akkadian verbs for this action (*arû*, *parû*, *mâ'u*), depending probably on whether the person vomits blood or bile, etc.³² List of plants mentions *šammī arê* – “herbs for vomiting” in BAM 579 i 38. Vomiting could be both a symptom and a therapy. In both cases, the properties of the substance are used for the diagnosis.³³ When used as therapy vomiting could be induced with a feather (BAM 575 iii 30–36 uses *parû*).

The number of the potion ingredients varies greatly.³⁴ BAM 575 i 44 contains *simplicia* prescriptions:

“Alternatively, he drinks white juniper seeds in beer, and then he will vomit (*arû*). He drinks root of male *pillû*-mandrake in beer, and then he will vomit.”³⁵

Simplicia for vomiting were in many cases supposedly cheaper and probably more popular. Recipes with more than one ingredient however are also well known from the texts. Ingredients could be prepared separately (*aḥennā*) or together (*mithāriš*) – see BAM 575 ii 38–40:

“You pound separately (*aḥennā*) *imḥur-līm*-plant, *imḥur-ešrā*-plant (and) root of *pillû*-mandrake, you have him drink them in beer so he will vomit and, after this, you have him drink pressed oil and beer.”³⁶

A potion is often only a part of a complex therapy. In the last example (prescription BAM 575 ii 38–ii 42) it is accompanied by washing and a paste with a bandage.

Sometimes vomiting is induced with a feather (*ina Á*) – see BAM 575 iii 30–36 – a recipe against variety of symptoms including flatulence, chest pain and fever. The prescribed in the text potion therapy is executed in several stages. First, nine herbs are pounded and soaked in wine and beer for the night. Then the mixture is boiled, filtered and cooled. And finally, two other ingredients are added, *errû*-colocynth shoot and *anzahḥu*-frit. The potion is drunk before sunrise. After that a vomiting is induced. The remark in the end of the recipe (iii 36) that the mixture could be used as an enema “if you have not seen any improvement” prob-

³² Scurlock / Andersen, 2005: 122f. In recipes in Stomach the most often used verb is *āru*. See CAD a: 316, CAD p: 208, CAD m: 437.

³³ See Schmidtchen, 2021: 669 (*arû*), 684 (*parû*).

³⁴ Lists of medical ingredients against internal diseases could be found in the so called Botanical Vademecum BAM 1. See Attia / Buisson, 2012; Geller, 2020.

³⁵ *ana* KI MIN ^{šim}ŠE.LI BABBAR *ina* KAŠ ʾNAG¹-ma ʾi¹-ar²-ru³ SUḪUŠ ^{giš}NAM.TAR NITA² *ina* KAŠ NAG-*ma i-ar²-ru*.

³⁶ ^{u₂}IGI-*lim* ^{u₂}IGI.NIŠ SUḪUŠ ^{giš}ʾNAM¹.[TAR] ʾa¹-ḥe-nu-u² SUD² *ina* KAŠ NAG-*šu₂ i-par-ru-ma* EGIR *an-ne₂-e* I₃ ḥal-*ša* u KAŠ NAG-*šu₂*.

ably shows that the manner in which the medicine enters the body is not important.³⁷ As far as I know this is the only occurrence of the expression *šum₄-ma DU₁₀. GA NU IGI-mur* in Stomach. The typical prognosis is rather “he will improve” (*ina-eš*) or “he will recover” (*TI-uṭ*).

3.2 Laxatives

Potions are evidently also used as laxatives. Bowel movement (*ešēru*) is sometimes achieved through complex therapy. BAM 575 ii 60–62 includes potion, enema and a bandage. Healing potion could sometimes be accompanied with a prescription for a diet, like eating warm or fatty foods (BAM 575 i 54).

In the Neo-Assyrian court letter SAA 10 217 the physician narrates that a royal baby vomited bile, and this was not favorable. But after purging the baby from his mouth and his anus and after sweating for two days it recovered.³⁸ The expression for cleansing is attested in Stomach (BAM 574 i 30):

“He will void from his mouth and from his anus, you rub him down (*serū*); then he will recover”.³⁹

The verb *SI.SA₂* (*ešēru*) refers to cleansing from anus and sometimes also through mouth.⁴⁰ In some prescriptions like BAM 579 iv 11 it is clearly connected to enemas.

3.3 Antiflatulents

A distended belly or “insides” seems to point to excessive intestinal gas in the body. It is caused by “wind” (*šāru*), resulting in bloating.⁴¹ A potion which act together with an enema is prescribed in BAM 575 ii 20–21:

“If a man’s “insides” (*qerbūšu*) are swollen (*napāḫu*) (and) continually have cramps, flatulence (lit. wind) circulates (and) rumbles in his belly. You pound *šūmū*-garlic (and) black cumin, (and) he continually drinks them in beer.”⁴²

³⁷ Similarly, in BAM 574 i 23 – a recipe against gastric constriction and swollen internal organs after it is used for a drinking potion, the same liquid but boiled and filtered is used for a cleansing enema.

³⁸ SAA 10 217 r.3–5.

³⁹ *ina KA-š_{u2} u DUR₂-š_{u2} SI.SA₂ tu-ser-š_{u2}-ma TI-uṭ*.

The prescription is against *kis libbi* and vomiting. The instruction *tuseršūma* as far as I know is not found in other tablets of Stomach in reference to “voiding from the anus.” See BAM 575 i 13 — a prescription against sick belly (*ina DUR₂-š_{u2}¹ SI.SA₂-ma TI*).

⁴⁰ See Cadelli, 2000: 352f.

⁴¹ See Steinert with Panayotov / Geller / Schmidtchen / Johnson, 2018: 238.

⁴² *DIŠ NA ŠA₃.MEŠ-š_{u2} MU₂.MU₂ it-te-ne₂-bi-ṭu IM ina ŠA₃-š_{u2} NIGIN-ur i-le-bu u₂SUM^{sar} u₂zi-ba-a SUD₂ ina KAŠ NAG.MEŠ*.

4. Conclusion

In Stomach treatise of the NME the potion is used predominantly as an emetic, laxative and antifatulent, and mostly prescribed to be drunk on an empty stomach. Some prescriptions suggest that it also could have cooling features against internal heat. It is important to note that the potion therapy was often only a part of a more complex treatment, including washes, bandages and other cures.

The healing potion is prepared through different techniques, described with a variety of specific Akkadian verbs (*bašālu*, *kašû*, *labāku*, *ramāku*, *rasānu*, *salāqu*, *sekēru*, *šaḥālu*). Plenty of solvents could be used. Problems with identification of the ingredients often hinder us from understanding more about the logic of their choice or guess the chemical properties of the potion. In some recipes measurements are used for describing the medical ingredients and sometimes the solvent itself. Clues about testing (*latku*) ingredients and medicines demonstrate the empirical dimensions of a potion in Mesopotamian healing.

Online resources and dictionaries

Nineveh medical encyclopedia (NME): <http://oracc.museum.upenn.edu/asbp/ninmed/pager> (visited 05.22)

State Archives of Assyria (SAA): <http://oracc.museum.upenn.edu/saa/corpus> (visited 05.22)

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The Use of Eggs in Mesopotamian Medicine and beyond

Jan Tavernier

1. Introduction¹

This study will discuss the use of eggs in Mesopotamian medicine and beyond. The first part deals with the attestations of eggs in Mesopotamia medicinal texts: where are they used for, what kind of eggs occur in the source material, etc. The second part will focus on eggs in classical and even medieval and modern medicine and investigate whether eggs were used and, if so, whether they were employed for the same reasons as in Mesopotamia.

The Sumerogram for “egg” is NUNUZ (Fig. 1), which already appears in the very beginning of writing, i.e. in the archaic administrative and lexical texts from Uruk.² From then on, the sign NUNUZ was continually in use until the latest phase of cuneiform writing.³ The latest attestations of NUNUZ appear in texts dated to the Hellenistic period.⁴

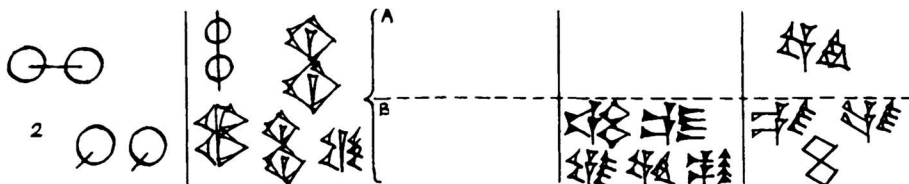


Fig. 1: The sign NUNUZ, from left to right: archaic forms, Ur III forms, Middle Babylonian forms and Neo-Assyrian/Neo-Babylonian forms (Labat / Malbran-Labat, 1994: 180).

The first and most widespread meaning of NUNUZ is ‘egg’, its Akkadian equivalent being *pelû* (rarely *palû*). The Mesopotamian lexical material, dating from the Early Dynastic to the Hellenistic period, nicely corroborates the equation of

¹ Abbreviations are cited from the lists in the *Chicago Assyrian Dictionary* and in the *Cuneiform Digital Library Initiative* (CDLI; <http://cdli.ucla.edu>).

² Deimel, 1922: 39 no. 364, 69 no. 798 and 70 no. 813; Green / Nissen, 1987: 261 no. 423.

³ Deimel, 1932: 761–763 no. 394; Deimel / Gössmann, 1947: 695 no. 701; Salonen, 1973: 334; Labat / Malbran-Labat, 1994: 180–181 no. 394; Borger, 2004: 167 no. 614.

⁴ A copy of the lexical composition *ḪAR-ra* = *hubullu* Tablet XVI (TCL 6 36 obv. i 49, rev. i 42) and SpTU 3 112, another lexical text.

NUNUZ and Akkadian *pelû/palû*:⁵

- a) ^{nu-ú}NUNUZ = *pe-e-[lu-ú-um]* (MSL 2 142 g 3).
 b) ^{nu-nu-uz}NUNUZ = *pe-lu-u* (CT 19 43 iii 8; MSL 3 147:295).
 c) ^{nu-ú}NUNUZ = *pe-[lu-u]* (MSL 14 512:133).
 d) NUNUZ = *pe-lu-ú* (Civil, 1994: 205 [BM 23331:7]).
 e) NUNUZ GA-NU₁₁^{mušen} = *pe-el lu-ur-mu* ‘ostrich egg’ (MSL 8/2 144:307).
 f) ^{duḡ}ŠAGAN NUNUZ GA-NU₁₁^{mušen} = *pe-el lu-ur-mu* ‘ostrich egg’ (MSL 7 82:110).
 g) ^{na4}BUR NUNUZ GA-NU₁₁^{mušen} = *šá pe-el lu-ur-me* (MSL 10 12:280). Both texts (f and g) speak of recipients in the shape of an ostrich egg (Fig. 2).⁶
 h) NUNUZ NÍG-BÚN-NA = *pe-el še-lep-pu-ú* ‘egg of the *šeleppu*-turtle’ (MSL 8/2 25:218; cf. also MSL 8/2 102:24).
 i) NUNUZ BAL-GI = *pe-el raq-qí* ‘egg of the *raqqu*-turtle’ (MSL 8/2 25:221; cf. also MSL 8/2 118:110).
 j) [NUNUZ] KU₆ = *pe-l[u-u]* (MSL 8/2 120:137).
 k) NUNUZ MUŠEN = *pa-lu-ú* (MSL 8/2 155:380).
 l) [NUNUZ ANZUD^{mušen}] = *pé-el an-ze-e* ‘eagle egg’ (MSL 8/2 159 ii 2’;⁷ cf. also MSL 8/2 123:158).
 m) NUNUZ = MIN *ša* MUŠE[N] (MSL 17 156:175). MIN ‘ditto’ refers to *pe-lu-u* (line 173).
 n) [NUNUZ UZ-TUR^{mušen}] = [*pe-el pa-as-pa-si*] ‘duck egg’ (MSL 8/2 131:202).

Expectedly, eggs occur also in monolingual lexical lists,⁸ e.g. NUNUZ ANZUD ‘eagle egg’ (OB Nippur Ura 04:411), NUNUZ BÀN-BÀN-UZ^{mušen} ‘domestic duck egg’ (JNES 64 57:11’), an Alalakh fragment of a Middle Babylonian forerunner to the 18th tablet of Ur₅-ra),⁹ [NUNUZ] TI-GI-LÁ^{mušen} ‘egg of the *tigila*-bird’,¹⁰ (CT 06, Pl. 14 iii 6).

⁵ Salonen, 1973: 333–335; AHW 564, 853–854; CAD, P: 320; CDA 272.

⁶ Mesopotamian texts regularly mention recipients made from ostrich eggs. Some exemplars have even been unearthed.

⁷ Attested in a Middle Babylonian version from the Hittite capital Hattusa, hence the use of the sign BI for *pé*.

⁸ The examples are drawn from the Electronic Pennsylvania Sumerian Dictionary, 2nd edition (ePSD2: <http://oracc.museum.upenn.edu/epsd2/sux>) and the *Digital Corpus of Cuneiform Lexical Texts* (http://oracc.museum.upenn.edu/dcclt/intro/lexical_intro.html). Both sites, consulted on 05/06/2020, contain more examples.

⁹ Lauinger, 2005: 54.

¹⁰ On this bird, see Salonen, 1973: 270.

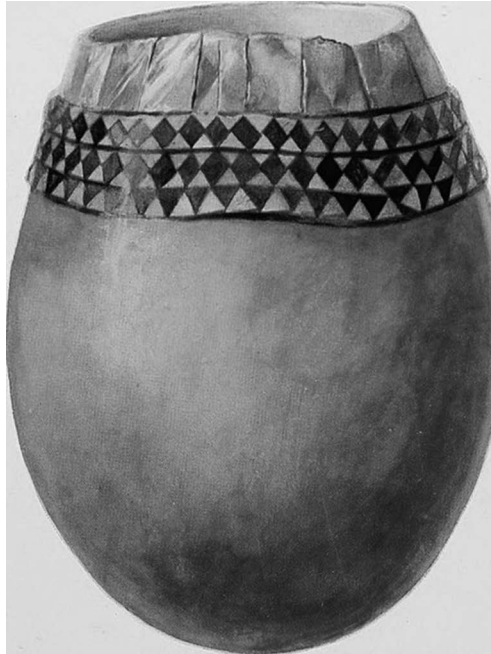


Fig. 2: Ostrich egg as recipient from Ur, dated to about 2550 BCE ([https://commons.wikimedia.org/wiki/File:Ostrich_shell_with_mosaic_incrustation,_Ur_excavations_\(1900\).jpg](https://commons.wikimedia.org/wiki/File:Ostrich_shell_with_mosaic_incrustation,_Ur_excavations_(1900).jpg)).

2. NUNUZ “egg” in Mesopotamian medicine

2.1 Sumerian

The Sumerian medical textual corpus is unfortunately very limited with only three published texts,¹¹ all dated to the Ur III period. It does not have any attestations of eggs in medicinal use. This does not mean that Sumerian medicine did not make use of eggs. Two reasons suggest they actually did: 1) as eggs contained the beginning of a new life, it is likely that the Sumerians believed them to be very healthy; 2) The Akkadians probably adopted the medicinal use of eggs from the Sumerians.

It may, however, be noted that the eggs of two specific birds, occurring in Akkadian medicinal and pharmaceutical texts, also appear in some Sumerian texts:

¹¹ CBS 14221 (Civil, 1960; Kramer, 1963: 93–98), HS 1357 (Civil, 1961: 94; van Dijk / Geller, 2003: 75) and HS 1359 (Civil, 1961; Kramer, 1963: 98–99; van Dijk / Geller, 2003: 76). Nonetheless, Scurlock talks of “largely unpublished therapeutic texts from the Ur III (2112–2004 BCE) and Isin–Larsa (2017–1763 BCE) periods” (Scurlock, 2005: 325). The oldest medical text whatsoever comes from Ebla and dates to about 2400 BCE (Fronzaroli, 1998).

- 1) Raven (NUNUZ A₁₂-RÁ-BU^{mušen}; Fig. 3)
 A₁₂-RÁ-BU^{mušen} A₁₂-RÁ-BU^{mušen} NUNUZ-ZU DADAG-GA-ÀM MUŠEN A₁₂-RÁ-BU^{mušen} NUNUZ-ZU DADAG-GA-ÀM NUNUZ-ZU KUG-GA-ÀM NUNUZ-ZU [X (X)]-RA-ÀM LÚ ME-A BA-AN-TÙM “Raven, raven, your eggs are shining bright! Raven bird, your eggs are shining bright! Where do people carry off your holy eggs, your [...] eggs to?” (*Nanše and the birds* / *Nanše C, Segment A* 43–45 [ETCSL c.4.14.3]).
- 2) Ostrich eggs (NUNUZ GA-NU₁₁^{mušen}; up to 8 eggs in documentary texts; Fig. 4)
- a) GA-NU₁₁^{mušen} ĤUR-SAG-ĜA₂ NUNUZ NAM-MA-AB-X X “The ostrich her eggs on the hillside. She receives those eggs as something to carry” (*Nanše and the birds* / *Nanše C, Segment A* 46–47 [ETCSL c.4.14.3]).
- b) Old Akkadian documentary texts: CUSAS 27 177 obv. i 1; RTC 229 obv. iii 2'. The latter text refers to a recipient in the shape of an ostrich egg: 1 NUNUZ GA-NU₁₁^{mušen} DAR-A KÙ.GE GAR-RA ‘a colourful ostrich egg covered with gold’.¹²
- c) Ur III documentary texts: Ur III: ITT 5 8221:2; Lafont, 1985 18:1. In these two texts the spelling ^{mušen}KA-AN is an unorthographical writing for GA-NU₁₁.¹³ In both texts, the eggs were with the *sukkalmah* in Nippur, which again corroborates an official interest in ostrich eggs.



Fig. 3: Raven egg. (https://commons.wikimedia.org/wiki/File:Eggs_of_British_Birds_Seebohm_1896_Plate55.jpg).

¹² Finet, 1982: 75.

¹³ Durand (*apud* Lafont, 1985: 28).



Fig. 4: Ostrich egg. (https://commons.wikimedia.org/wiki/File:Common_Ostrich_egg_MAV_01.jpg).

2.2 Akkadian

2.2.1 Bird eggs

Bird eggs are frequently attested in the Akkadian textual corpus, but only ostrich eggs occur in both medical and non-medical texts. Non-medical attestations are:

- 1) 2 *pe-li-i ša lu-ur-[m]i-im i-m[u]-ru-nim a-nu-um-ma pe-li-i šu-nu-ti a-na be-lí-ia uš-ta-bi-lam* “They found two ostrich eggs, I have now sent those eggs to my lord” (ARMT 14 86:28–29; Old Babylonian Mari).
- 2) 4 *pe-li-i ša lu-ur-mi-im i-na ba-ma-tim il-qú-nim-ma a-na be-l[i-ia] uš-ta-bi-[lam]* “They gathered four ostrich eggs in the plains and I have sent them to my lord” (ARMT 27 9:31–34; Old Babylonian Mari).
- 3) 1 *pè-el lu-ur-mi ta-al-mu* ‘one large ostrich egg’ (HSS 14 247:106; palace inventory from Nuzi, c. 1400 BC).
- 4) As (royal) offerings¹⁴
 - a) *Úpé-li lu-ur-mi-im*^{mušen} ‘and 7 ostrich eggs’ (Florilegium Marianum 3 229 no. 60:3; Old Babylonian Mari).
 - b) 8 NUNUZ *lu-ur-mu* ‘8 ostrich eggs,’ next to duck eggs (TCL 12 123:5,8,26,32; Neo-Babylonian list of royal offerings to Ištar in the Eanna temple).¹⁵
 - c) 3 NUNUZ GA.NU₁₁^{mušen} ‘3 ostrich eggs,’ next to duck eggs (RAcc 64 rev. 17, 65 rev. 28;¹⁶ Seleucid; offerings in the temple of Anu at Uruk).

¹⁴ Unspecified egg offerings occur in inscriptions of Nebuchadnezzar II and in YBC 5159. One time, however, duck eggs are mentioned (cf. Beaulieu, 1991).

¹⁵ Cf. Finet, 1982: 74 and Beaulieu, 2003: 28 and n. 46.

¹⁶ Cf. Thureau-Dangin, 1921: 78–79, 84–85.

As proven by the two examples from Mari, the community of this city considered ostrich eggs as valuable objects. When people found such eggs, they collected them and sent them to their superiors. This is not all too surprising, since the ostrich was not frequently spotted in the region around Mari. Accordingly, finding ostrich eggs must doubtlessly have been a delightful occasion.¹⁷ Note also the use of ostrich eggs for vases and the trade in (decorated) ostrich eggs.¹⁸ The high value of ostrich eggs is also clear by their occurrence in royal offerings, regularly accompanied by duck eggs (especially in the 1st millennium BCE).

Akkadian physicians and pharmacists extensively made use of eggs as ingredient of medicinal drugs they made. Examples are:

- 1) Unspecified bird eggs (*pelî iššūri*): DIŠ KI.MIN NUNUZ Ú.KI.SÌ.GA.MUŠEN *ša ina KI tab-ku* “Ditto: an egg from a nest fallen on the ground [you shall daub thereon]” (AMT 17,5:2).¹⁹ Against moles or warts (*umšatu*).
- 2) Raven eggs²⁰ (*pelî erēbi*): NUNUZ UG[A^{mušen} SÚD ...] “You grind the egg of a raven” (BAM 515 ii 7 = IGI 2:79’; broken context; from Nineveh).²¹ The grinded egg must be removed before smearing ghee on a bronze knife; later on, the patient’s eye must be daubed with it. This fragmentary prescription appears in a text concerning eye diseases.²² The affliction here is “closed eyes” (DIŠ NA IGI.MIN-ŠÚ DUL-*ma* “If a man’s eyes are closed”). According to Attia,²³ two interpretations of the impossibility to open the eyes are possible: either the eyelids are so swollen or thickened that the eyes remain closed, or the pain is so heavy that it causes a blepharospasm. In both cases, the underlying affliction may very well be an ocular inflammation.
- 3) Eggs of the *summatu*-dove (*pelî summati*; Fig. 5): NUNUZ TU^{mušen} SÚD ^{sig}ÀKA NIGIN *ana ŠÀ.TÙR-ŠÁ GAR-an* MIN “You grind *summatu*-dove egg (and) wrap (it) in a tuft of wool. (If) you insert (it) into her vagina, ditto” (BAM 237 i 34’); used for a vaginal suppository against irregular bleeding.²⁴ In all likelihood, the egg part used is the shell as it has to be grinded. Albumen and yolk may of course also have been included.
- 4) Eggs of the *sukannīnu*-turtledove (*pelî sukannīni*; Fig. 5): NUNUZ TU. KUR^{mušen} SÚD ^{sig}ÀKA NIGIN *ana ŠÀ.TÙR-ŠÁ GAR-an* MIN “You grind

¹⁷ Duponchel, 1997: 233.

¹⁸ Herles, 2013: 213; Stol, 2013: 212.

¹⁹ Cf. Thompson, 1926: 51 no. 52.

²⁰ This is, to my knowledge, the only attestation of raven eggs in an Akkadian text.

²¹ This text is part of the 2nd tablet of the series *Šumma amīlu ināšu maršā* (DIŠ NA IGI.MIN-ŠÚ GIG^{meš}) “When a man’s eyes are ill” (Köcher, 1980: xii; Geller / Panayotov, 2020: 108).

²² Attia, 2015: 41; Geller / Panayotov, 2020: 113 and 129.

²³ Attia, 2015: 26.

²⁴ Scurlock, 2014: 574, 579.

sukanninu-turtledove egg (and) wrap (it) in a tuft of wool. (If) you insert (it) into her vagina, ditto” (BAM 237 i 35’); used for a vaginal suppository against irregular bleeding.²⁵ In all likelihood, the egg part used is the shell as it has to be grinded. Albumen and yolk may of course also have been included.

5) Ostrich eggs (*pelî lurmi*):

- a) NUMUN^{gis} *bi-ni* ^ú *kám-ka-da* ^ú NÍG.GÁN.GÁN ^ú NÍG.GIDRU ŠIKA N[UNUZ GA.NU₁₁^m] ^{ušen} 1-*niš* SÚD *ina* Ì ĤE.ĤE SAG.DU-*su* ŠÉŠ-*aš* “You grind together *bīnu*-tamarisk seed, *kamkadu*, *egemgīru*, *ḥaṭṭi* (*re*’i and) shell of ostrich egg” (BAM 3 ii 16–17 = BAM 480 iii 24–25).²⁶ This treatment is helpful “If a person’s head is feverish and the hair of his head falls out”.²⁷
- b) NUN[UZ G]A.NU₁₁^[mušen] SÚD SÍG ÀKA NIGIN “You grind an ostrich egg (and) wrap (it) in a tuft of wool” (BAM 237 iv 23).²⁸ To be used when a woman is sick with crabs (Fig. 6).²⁹
- c) DIŠ NUNUZ GÁ.NU₁₁^{mušen} SÚD *ina* KAŠ NAG-*ma ina-eš* “Alternatively, you grind shell of ostrich egg. If you have him drink (it mixed) with beer, he will recover” (BAM 578 iv 20).³⁰ This prescription should help if one’s eyes are full of *amurriqānu*, the result of a liver disease (jaundice).³¹
- d) ŠIKA NUNUZ GA.NU₁₁^{m[ušen]} “Shell of an ostrich egg”: in a prescription for someone who “produces a stone from his penis” (BAM 7 1 ii 7’, iii 23).
- e) ŠIKA NUNUZ GÁ.NU₁₁ in lists of ingredients against ‘stricture of the bladder’ (BAM 7 2 i 6). The 16 ingredients mentioned in this prescription should be pounded and put in a reed hut at night. In the morning, before he gets out of bed, the patient must drink the potion in order to get well.

²⁵ Scurlock, 2014: 574, 579.

²⁶ Cf. Worthington, 2005: 12; 2006: 21.

²⁷ Cf. Scurlock, 2014: 314, 325.

²⁸ Cf. Scurlock, 2014: 576, 581.

²⁹ Scurlock / Anderson, 2005: 20 no. 2.25; Scurlock, 2014: 576, 581. Crabs (*Phthirus pubis*) are a type of body parasites, just like lice and fleas, that predominantly live in pubic hair. They are called crabs, because they look like tiny crabs; it is therefore interesting that ancient Mesopotamian physicians also used the term crabs (Akk. *alluttu*) for the *phthirus pubis*. Crabs can affect the human skin and can as such permit bacteria and fungi to penetrate the body and cause serious afflictions and diseases, such as plague and typhus (Scurlock / Anderson, 2005: 20).

³⁰ Cf. Scurlock, 2014: 516, 526.

³¹ Scurlock / Anderson, 2005: 191.

- f) ŠIKA NUNUZ GA.NU₁₁ in lists of ingredients (7, 9 and 14 ingredients) against ‘stricture of the bladder’ (BAM 7 2 i 15, ii 11–12, 13–14).
- g) DIŠ NA *ḥi-niq-ti* BUN GIG ŠIKA NU[NUZ GA.NU₁₁^m]^{mušen} KA.A.AB.BA SÚD *ina* Ì KAŠ [NA]G “If a man suffers from ‘stricture of the bladder’, grind shell of ostrich egg and coral, he drinks it in oil (and) beer” (BAM 7 2 i 16).
- h) ŠIKA NUNUZ GA.NU₁₁ as an ingredient of a potion to be drunk in drawn wine to cure a stricture of the bladder (BAM 7 2 i 26).
- i) A prescription, again against ‘stricture of the bladder’, mentions shell of ostrich eggs as one of the ingredients of a potion that the patient must drink on an empty stomach in beer or wine (BAM 7 2 i 33–34).
- j) ŠIKA NUNUZ GA.NU₁₁ in a list of ingredients for a ‘head bandage’ (BAM 7 2 ii 4–6).³²
- k) ŠIKA NUNUZ GA.NU₁₁ is one of the ingredients of a potion of 7 drugs against ‘stricture of the bladder’ (BAM 7 2 ii 7–8). The patient must drink it in either beer or wine.
- l) ŠIKA NUNUZ GA.NU₁₁ is one of the ingredients of a potion of 14 drugs against ‘stricture of the bladder’ (BAM 7 2 ii 9–10). The patient must drink it in either beer or wine.
- m) DÙ.DÙ.BI ^uIGI-*lim* ^{sim}ŠEŠ ŠIKA NUNUZ GA.NU₁₁ ^{na4}AN.ZÁḤ.GE₆ DIŠ-*niš* SÚD *ina* 3 *u4-me ina* AL.US.SA.KU₆ *ina* 3 *u4-mi ina* GEŠTIN.ŠUR.RA 3 *u4-mi ina* A ^{gis}NU.ÚR.MA NAG.MEŠ-*ma* T[I] “Its ritual: grind together *imḥur-lim*, myrrh, shell of ostrich egg, black frit, for 3 days in fish brine, for 3 days in drawn wine, and for 3 days in pomegranate-juice, he keeps drinking it and he will recover” (BAM 7 2 ii 19–20). Also against a ‘stricture’, most likely of the bladder.
- n) NUMUN ^uGÍR-*uḥ-ḥa-aḥ* PEŠ₄.ANŠE ŠIKA NUNUZ GA.NU₁₁^{mušen} “Seed of *uḥḥahu*-thorn, ‘donkey-vulva’(shell), shell of ostrich egg” (BAM 7 3 iii 10’). The affliction treated here is not clear, but one part of the drug has to be drunk in premium beer on an empty stomach, while the other part must be blown into the urethra through a bronze tube. All this of course points to a renal disease.
- o) In one text (BAM 7 5) various appearances of the urine are described, all pointing to a renal affliction, whose symptoms are stricture of the bladder, kidney stones and discharge. 36 ingredients, among which shell of ostrich egg, must be pounded and sieved. The

³² At first sight, a ‘head bandage’ seems far away from a stricture, although it may have been thought useful anyhow. It is also possible that it is a recipe borrowed from a recipe originally designed for another ailment, since every ailment has side-effects as well, which are not necessarily noted in our texts (Mark Geller, pers. comm., 09/05/2022).

patient must drink the resulting substance in wine, beer or milk in order to recover.

- p) Shell of ostrich egg is one of 20 ingredients, that should be weighed, crushed together, mixed in (pressed) oil or premium beer. The potion should be left overnight facing the Goat-star (= Lyra). In the morning the patient must drink it and keep bathing in hot water. All this must be done to heal the patient from kidney stones (BAM 7 6:5'–9').
- q) DIŠ KI.MIN ^úzi-im-KÙ.BABBAR ^úNUMUN *pu-qut-te* ^úNÍG.BÙR.BÙR ^úNÍG.[S]Ù.SÙ ILLU ^{šim}BULUH ^{na4}PEŠ₄.[ANŠE] ŠIKA NUNUZ GÁ.NU₁₁ ^{mušen} ^{šim}ŠEŠ KA.AB.BA 9 ^úmeš *mu-š[i l]at-ku-ti ina* GEŠTIN NAG.MEŠ “If ditto, ‘silver-lustre’-plant, *puqu^{ttu}* seed, *pallišu*-plant/stone, *sāpinu*, (var. *azallû*-seed), *baluḥḥu*-resin, ‘[donkey]-vulva’(-shell), shell of ostrich egg, myrrh, coral; (total) 9 drugs for discharge, checked, he keeps drinking it in wine” (BAM 7 7 obv. 4–8). Against discharge of the penis.
- r) ^úIGI-*lim* ^{šim}ŠEŠ ŠIKA NUNUZ GA/GÁ.NU₁₁ ^{mušen} ^{na4}AN.ZÁḤ.GE₆ DIŠ-*niš* SÚD *ina* 3 *u₄-me ina* AL.US.SA.K[U₆] 2 *u₄-me ina* GEŠTIN.ŠUR.RA 3 *u₄-me ina* A^{meš} [gi]^š*nu-ur-m[i]-i* NAG.MEŠ-*ma* [*ana ḥi-n*]*iq-tú* ^{UD}.ZAL.SA₉¹ “Grind together *imḥur-lim*, myrrh, shell of ostrich egg, black frit, for 3 days in fish brine, for 2 days in drawn wine, and for 3 days in pomegranate-juice, and he keeps drinking it [for a] stricture of *midday*” (BAM 7 7 rev. 10–14). Against discharge of the penis. Note the variant writing of the Sumerogram for “ostrich” in the various manuscripts: GA.NU₁₁ ^{mušen} in AMT 31,1+ and GÁ.NU₁₁ ^{mušen} in BAM 116.
- s) BAM 7 9 i is an exceptional text, enumerating 90 ingredients to be used against a stricture, probably of the bladder, pointing to a renal affliction. One of the ingredients is shell of ostrich egg. Remarkably the texts also provides us with the amounts of each ingredient, being 2 shekel each time. The soaked drugs must be grinded, mixed in milk and placed at night before the Goat-star (= Lyra). The patient must then drink it mixed in (premium) beer or wine in order to recover.
- t) BAM 7 9 ii obv. 20'–38' is almost identical to BAM 7 5 (cf. supra, sub o).
- u) Shell of ostrich eggs occurs another time in the same composition, but unfortunately in a fragmentary context. It appears in a prescription against discharge, whereby the ingredients must be crushed and

- the potion should be drunk in premium beer or in wine (BAM 7 9 ii 39'–43').³³
- v) Shell of ostrich egg is also attested in a fragmentary prescription (BAM 7 11:6'–8'), next to *pallišu*-stone, 'donkey-vulva'-(shell), coral and acacia seed. These ingredients should be drunk in beer or wine. As the remainder of the text deals with stricture of the bladder, one may assume that this prescription too helps the patient to cure from this symptom.
- w) A much larger prescription, consisting of 93 ingredients, indicated by their quantities, occurs in the same tablet (BAM 7 11:9'–43'). Although the quantities are more varied than in BAM 7 9 (ranging from 0,5 to 2 shekel), again two shekel of shell of ostrich egg is needed. The ingredients must be crushed and sieved.
- x) [DIŠ NA KI.MIN]^{na4}AN.NE.GÍG ŠIKA NUNUZ GA.NU₁₁^{mušen} ŠIM.LI 1-*ni*[š *ta-ra-ak ina*] GEŠTIN.ŠUR.RA NAG-*ma* [TI] “[Ditto], black saltpetre, shell of ostrich egg, juniper together [you will bray], he will drink it [in] drawn wine [and he will recover]” (BAM 7 13:9'–10').³⁴ Against kidney stones.
- y) In BAM 7 14, ostrich egg shell occurs among nine drugs in a broken prescription against stricture of the bladder.
- z) The broken context of BAM 7 16:18'–22' prevents us to reconstruct the affliction. Myrrh, *baluḥḥu*, [], seed of 'dog's tongue', *dadānu* seed, 'donkey-vulva'-(shell) and ostrich-egg shell are to be pounded together, after which the patient must drink it in premium beer on an empty stomach. Finally it has also to be blown into the urethra through a bronze tube, so in all likelihood the ailment treated here is renal.
- aa) ŠIKA NUNUZ GA.NU₁₁^{mušen} (BAM 7 18:23'): this attestation is interesting as it connects ostrich egg shell directly with kidney diseases, for the ingredient occurs in a list of 31 ingredients that are used to cure kidney diseases (31 Ú ÉLLAG GIG *ina* KAŠ.LÚ.TIN.NA NAG).

³³ Cf. Thompson, 1936–1937: 338.

³⁴ Cf. Thompson, 1936–1937: 337–338. Geller (2005: 112–113) has (9') [...ⁿ]^{a4}AN.ZAḤ. GE₆ ŠIKA NUNUZ GA.NU₁₁^{mušen} ŠIM.LI DIŠ-*niš* [SÚD ...] (10') [...] GEŠTIN.ŠUR.RA NAG-*ma* [*ina-eš*] “[Crush ...] black frit, ostrich-egg shell, and juniper, [...], he drinks it in drawn wine and [he will get better]”.



Fig. 5: Dove eggs.
(https://commons.wikimedia.org/wiki/File:Dove_eggs_zenaida.jpg).

The following tables recapitulate the above said, with the implication that eggs were never used autonomously in medicine, but always as one of the ingredients of a certain drug. The tables are arranged according to the textual attestations.

Table 1: Eggs from other birds than ostriches.

Affliction/disease	Text	Bird	Prescription
'Closed eyes'	BAM 515 ii 7	Raven	Shell; grind, daub on the eye
Irregular vaginal bleeding	BAM 237 i 34'	<i>Summatu</i> -dove	Shell; vaginal suppository
	BAM 237 i 35'	<i>Sukannīnu</i> -turtle-dove	Shell; vaginal suppository
Moles/warts	AMT 17,5:2	Unspecified	Daub on the mole/wart

Table 2: Ostrich eggs (here only the egg shell is used).

Affliction/disease	Text	Prescription
Crabs	BAM 237 iv 23	Crush, in a tuft of wool
Discharge	BAM 7 9 ii 36'	Pound, sieve, drink in beer or wine
Discharge; kidney stones	BAM 7 9 ii 42'	Crush, drink in beer or wine
Discharge of the penis	BAM 7 7 obv. 6	Drink in wine
Eyes full of jaundice	BAM 578 iv 20	Crush, drink it mixed with beer
Feverish head; hair loss	BAM 3 ii 16 = BAM 480 iii 25 (a)	Crush, mix with oil, rub on head
Kidney stones	BAM 7 1 ii 7'	Crush, drink in premium beer on an empty stomach; blow into the urethra through a bronze tube

Affliction/disease	Text	Prescription
	BAM 7 1 iii 23	Crush, mix in oil or premium beer, drink in the morning
	BAM 7 13:9'	Crush, drink in drawn wine
	BAM 7 6:6'	Crush, mix in oil or premium beer, set it before the Goat-star drink in the morning
Renal affliction	BAM 7 3 iii 10'	Crush, drink in premium beer on an empty stomach, blow into the urethra through a bronze tube
	BAM 7 16:20'	Pound, drink in premium beer on an empty stomach, blow into urethra through a bronze tube
	BAM 7 18:23'	Drink in wine or beer
Stricture of <i>midday</i>	BAM 7 7 rev. 10'	Crush, drink in various substances (fish brine drawn wine and pomegranate juice)
Stricture of the bladder	BAM 7 2 i 6	Crush, drink in the morning
	BAM 7 2 i 15	Crush, drink in oil and beer
	BAM 7 2 i 16	Crush, drink in oil and beer
	BAM 7 2 i 26	Crush, drink in drawn wine
	BAM 7 2 i 34	Crush, drink in wine or beer on an empty stomach
	BAM 7 2 ii 5	Poultice for the head
	BAM 7 2 ii 7	Drink in wine or beer
	BAM 7 2 ii 9	Drink in wine or beer
	BAM 7 2 ii 12	Not mentioned
	BAM 7 2 ii 14	Not mentioned
	BAM 7 2 ii 19	Crush, drink in various substances (fish brine drawn wine and pomegranate juice)
	BAM 7 9 i 31	Crush, mix in milk and put it before the Goat-star
	BAM 7 11:7'	Pound, sieve, drink in beer or wine
	BAM 7 11:23'	Pound, sieve, drink in beer or wine
	BAM 7 14:12' ³⁵	Not preserved
Stricture of the bladder; kidney stones; discharge	BAM 7 5:18	Pound, sieve, drink in wine, beer or milk

³⁵ See Böck, 2008: 330–331 for another reading of this line.

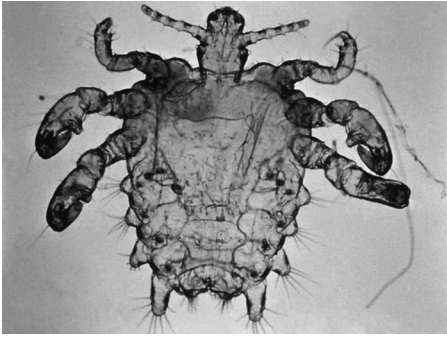


Fig. 6: Pubic louse (*phthirus pubis*)
https://commons.wikimedia.org/wiki/File:Pthirus_pubis_-_crab_lice.jpg.

The tables make clear that the large majority of eggs used in Babylonian medicine are ostrich eggs. Only four texts mention eggs from other birds: two types of doves (*summatu* and *sukannīnu*) and raven are specifically mentioned, whereas one text just mentions bird eggs. The afflictions are diverse too: moles/warts (unspecified), irregular vaginal bleeding (dove eggs) and “closed eyes” (raven eggs).

Of ostrich eggs (30 attestations) only the shell is used, which is mostly crushed together with other ingredients and then drunk by the patient. In some cases the potion must be put at night before the Goat-star (= Lyra) and then drunk in the morning. The means to administer the drug are usually beer or wine, but also milk, pomegranate juice and fish brine. Three times, the prescriptions also advise to have a part of the potion blown into the urethra through a bronze tube, while the other part had to be drunk.

Remarkably, the shell of ostrich egg also occurs nearly exclusively in prescriptions against renal afflictions, of which discharge, stricture and kidney stones may be symptoms. In this context, it is interesting that the ingredient never appears in prescriptions against rectal ailments. Dove eggs, on the other hand, could be used as suppositories (in a tuft of wool) against irregular vaginal bleeding. The two other afflictions are unique as to the use of ostrich egg shell: jaundice in the eyes³⁶ and a feverish head, combined with loss of hair. Yet, these are probably symptoms of an underlying disease or affection.

The affliction called “stricture of the bladder” (Akk. *hīniqti nappaḥti*) is probably a stricture in the male urethra. This stricture can be caused by trauma or can be secondary to an acute gonorrhoeal urethritis.³⁷

2.2.2 Eggs from other animals

For the sake of completeness, there are also two Akkadian sources mentioning eggs from other animals in a medical context. First, red ant eggs (NUNUZ KIŠIḡ-

³⁶ According to Geller / Panayotov, eggs, more particularly the raven egg, are only once attested in prescriptions against eye diseases and ostrich-egg shells are even completely absent in this context (Geller / Panayotov, 2020: 32).

³⁷ Adamson, 1979: 5; Geller, 2005: 43 n. 1.

SA₅; *kulbābi sāmī*) appear in BAM 237 iv 35, a prescription against irregular vaginal bleeding. The eggs are one of the ingredients of a cure. The patient should drink the potion on an empty stomach mixed in beer, which should make the bleeding stop.³⁸

Second, the fragment AMT 32,2:23 mentions [NU]NUZ BURU₅ ÍD-DA ‘eggs of the river-locust’, a hitherto undefined water insect (*erib nāri*), used in a cure for some foot disease. The fragment has been joined to other fragments, resulting in the following translation: “If ditto, *kamkadu*-plant, sumac, tamarisk, daisy, *lidruša*-plant, **Conium maculatum*, eggs of the river locust, you will dry, pound, mix in fine-ground flour, mash in a small copper pan with ghee and beer, spread it on a cloth and bind it on”.³⁹

3. Eggs beyond Mesopotamian medicine

3.1 Greek and Roman medicine

Eggs (Gk. ᾠον, Latin *ovum*) frequently occur in Greek and Roman medicine. Already Hippocrates (c. 460–370 BCE)⁴⁰ mentions them at various instances in his works. Others like Aulus Cornelius Celsus (c. 25 BCE – 50 CE),⁴¹ Scribonius Largus (c. 1–50 CE),⁴² Pliny the Elder (23–79 CE),⁴³ Dioscorides (ca. 40–90 CE)⁴⁴ Rufus of Ephesus (c. 80–150),⁴⁵ Galenus (c. 129–216),⁴⁶ Quintus Serenus

³⁸ Interestingly, Plinius (*Nat. Hist.*, 29.39) and Marcellus Empiricus (*De Med.*, 9.120) mention ant eggs (*ova formicarum*). They are believed to be broken and dropped in the ear as a cure for some ear/hearing affliction.

³⁹ Translation based on Thompson, 1937: 280–281.

⁴⁰ As to the works of Hippocrates, the following editions have been consulted: Potter, 1988 (*Peri diaites oxeôn (notha)*, *Peri nousôn*, *Peri tôn entos pathôn*); Potter, 1995 (*Peri suriggôn*); Potter, 2012 (*Peri gunaikeies phusios*); Potter, 2018 (*Peri gunaikeiôn A*, *Peri gunaikeiôn B*). Cf. also Dierbach, 1824: 8.

⁴¹ The work of Celsus (*De Medicina*) has been edited and translated by Spencer, 1948–1953.

⁴² The work of Scribonius Largus (*Compositiones Medicales*) has been consulted through the edition by Jouanna-Bouchet, 2016.

⁴³ The edition used to cite the work of Pliny the Elder (*Naturalis Historia*) is that of Jones, 1963.

⁴⁴ With regard to the work of Dioscorides (*De Materia Medica*), the editions/translations of Osbaldeston / Wood, 2000 and Beck, 2017 have been consulted. Dioscorides composed his *De Materia Medica* around 64–65 CE (Riddle, 1985: xiii and 13–14; Osbaldeston / Wood, 2000: XX; cf. also Berendes, 1902: 2; Beck, 2017: XV).

⁴⁵ As to the fragments of Rufus of Ephesus, these were edited by Daremberg / Ruelle, 1909.

⁴⁶ The edition and translation of Johnston / Horsley, 2011a and 2011b have been used with regard to the work of Galenus (*Therapeutikes Methodou*).

Sammonicus (c. 200 CE),⁴⁷ Theodorus Priscianus (4th century),⁴⁸ Oribasius (c. 320–403),⁴⁹ Marcellus Empiricus (c. 400 CE),⁵⁰ Cassius Felix (5th century CE),⁵¹ Aetius Amidenus (c. 500),⁵² Alexander of Tralles (c. 525–605)⁵³ and Paulus Aegineta (c. 625–690)⁵⁴ were also conscious of the healing aspects of eggs. In order to facilitate a comparison with the Mesopotamian uses of eggs in medicine, the following overview of attestations of eggs in classical medicine will be arranged according to afflictions. Note, however, that eggs are mostly just one of the ingredients of a certain drug. When used autonomously, this will be indicated. If not indicated otherwise, the eggs are chicken eggs.

- 1) Gastrointestinal afflictions (dysentery, colics, diarrhoea, liver afflictions, etc.)
 - a) Eggs in general: Alexander of Tralles, *Pr.*, 8.2,⁵⁵ 9.3.⁵⁶
 - b) Eggs kneaded into bread: Pliny, *Nat. H.*, 29.11.
 - c) Raw egg: Marcellus Empiricus, *De Med.*, 17.33, 22.4, 26.78, 27.39, 27.57, 27.71, 27.77, 27.114, 28.53.
 - d) Dried rotten eggs: Marcellus Empiricus, *De Med.*, 29.46.
 - e) Boiled egg: Oribasius, *Synopsis*, 9.15; Marcellus Empiricus, *De Med.*, 20.27, 27.119; Alexander of Tralles, *Pr.*, 7.1.⁵⁷
 - f) Soft-boiled eggs: Scribonius Largus, *Comp Med.*, 104.4; Quintus Serenus, *Lib Med.*, 25.489.
 - g) Half-boiled egg: Marcellus Empiricus, *De Med.*, 29.36.

⁴⁷ As to this author, who wrote *Liber Medicinalis*, the editions and translations by Pépin, 1950 and Brodersen, 2017 have been used.

⁴⁸ As to this author, who wrote *Rerum Medicarum*, the translation by Meyer, 1909 has been used.

⁴⁹ As to this author, the editions and translations by Bussemaker / Daremberg, 1854; 1858; 1862; 1873 have been used. The works relevant for this study are *Collectiones Medicae*, *Euporistes* and *Synopsis ad Eustathium*.

⁵⁰ For this author, who wrote *De Medicamentis*, the edition by Helmreich, 1889 has been consulted.

⁵¹ As to this author, who wrote *De Medicina*, the translation by Fraisse, 2002 has been used.

⁵² As to this author, who wrote *Libri Medicinales*, the edition and translation by Oliveiri, 1935 and 1950 have been used. The seventh book has also been edited and translated by Hirschberg, 1899.

⁵³ For this author, who wrote *Practica* and *Peri puretôn*, the edition by Puschmann, 1878 and 1879 have been consulted.

⁵⁴ As to his author, who wrote *Epitome Medica*, the edition by Heiberg, 1924 and translation by Berendes, 1914 have been used.

⁵⁵ See Puschmann, 1879: 372–373.

⁵⁶ See Puschmann, 1879: 420–421.

⁵⁷ See Puschmann, 1879: 250–251.

- h) Fried eggs: Alexander of Tralles, *Pr.*, 9.3.⁵⁸
- i) Crushed egg shell: Quintus Serenus, *Lib. Med.*, 25.477, 28.546.
- j) Albumen: Marcellus Empiricus, *De Med.*, 33.60.
- k) Raw albumen: Celsus, *De Med.*, 4.22.3.
- l) Yolks: Hippocrates, *Peri gunaikeies phusios*, 15; Celsus, *De Med.*, 4.22.3; Marcellus Empiricus, *De Med.*, 27.51, 27.110; Alexander of Tralles, *Pr.*, 8.2.⁵⁹
- m) Raw yolks: Pliny, *Nat. Hist.*, 29.11.
- n) Boiled yolks: Hippocrates, *Peri tôn entos pathôn*, 27; Marcellus Empiricus, *De Med.*, 27.5, 27.51, 27.76.
- o) Fried yolks: Dioscorides, *De Mat. Med.*, 2.50; Oribasius, *Synopsis*, 9.17.
- p) Yolks boiled in vinegar: Scribonius Largus, *Comp. Med.*, 115.1.
- 2) Renal, uterine, vaginal⁶⁰ and rectal afflictions (e.g. inflammation of the anus or the bladder, kidney stones, stinging of the bladder, anal ulcers, dysuria [painful urinating], difficult menses, etc.)
 - a) Eggs in general: Hippocrates, *Peri gunaikeiôn A*, 26, 34, 75.2, 90.8; *Peri gunaikeiôn B*, 68; Hippocrates, *Peri suriggôn*, 7; Alexander of Tralles, *Pr.*, 8.2.⁶¹
 - b) Raw eggs: Pliny, *Nat. Hist.*, 29.11; Oribasius, *Synopsis*, 9.9.
 - c) Raw eggs with their shells: Marcellus Empiricus, *De Med.*, 26.78.
 - d) Medium-fried eggs: Hippocrates, *Peri diaites oxêôn (notha)*, 53.
 - e) Boiled eggs: Pliny, *Nat. Hist.*, 29.11; Alexander of Tralles, *Pr.*, 11.1.⁶²
 - f) Soft-boiled eggs: Rufus of Ephesus, fr. 103;⁶³ Oribasius, *Synopsis*, 9.42, 9.48; Alexander of Tralles, *Pr.*, 11.2,⁶⁴ 11.5.⁶⁵
 - g) Fried eggs: Pliny, *Nat. Hist.*, 29.11.
 - h) Albumen: Hippocrates, *Peri gunaikeiôn B*, 79, 81, 95, 96.13; Pliny, *Nat. Hist.*, 29.11; Dioscorides, *De Mat. Med.*, 2.50; Oribasius, *Coll. Med.*, 22.6.3; Oribasius, *Eup.*, 4.117, 119; Marcellus Empiricus, *De Med.*, 26.53, 33.60; Paulus Aegineta, *Ep.*, 7.3, s.v. Ὀυῖον.
 - i) Yolks: Hippocrates, *Peri gunaikeies phusios*, 32.102; Hippocrates, *Peri gunaikeiôn B*, 49, 52, 62, 96.1; Pliny, *Nat. Hist.*, 29.11;

⁵⁸ See Puschmann, 1879: 424–425.

⁵⁹ See Puschmann, 1879: 366–367.

⁶⁰ Cf. Leven, 2005: 242.

⁶¹ See Puschmann, 1879: 372–373.

⁶² See Puschmann, 1879: 472–473.

⁶³ See Daremberg / Ruelle, 1879: 423.

⁶⁴ See Puschmann, 1879: 484–485.

⁶⁵ See Puschmann, 1879: 490–491.

- Dioscorides, *De Mat. Med.*, 1.128.3; Oribasius, *Coll. Med.*, 44.5.17.
- j) Boiled yolks: Hippocrates, *Peri gunaikeiôn A*, 34; Dioscorides, *De Mat. Med.*, 2.50; Oribasius, *Coll. Med.*, 8.40.4; Oribasius, *Synopsis*, 1.19.
- k) Fried yolks: Hippocrates, *Peri gunaikeiôn B*, 1; Dioscorides, *De Mat. Med.*, 3.40.1; Oribasius, *Synopsis*, 9.35.
- l) Eggs of farmyard birds: Rufus of Ephesus, fr. 96.⁶⁶
- m) Cuttlefish eggs: Hippocrates, *Peri gunaikeies phusios*, 8,32.2, 32.28; Hippocrates, *Peri gunaikeiôn A*, 12, 24, 35, 84.5, *B*, 1, 26.
- 3) Respiratory/throat afflictions (lung infections, hoarseness of throat and/or trachea, coughing, etc.)
- a) Eggs in general: Celsus, *De Med.*, 4.5.6; Dioscorides, *De Mat. Med.*, 3.78.3.
- b) Raw eggs: Celsus, *De Med.*, 4.10.4, 4.14.3; Marcellus Empiricus, *De Med.*, 14.60, 16.35, 16.57, 16.74; Paulus Aegineta, *Ep.*, 7.3, s.v. Ὠτοῦ.
- c) Boiled egg: Quintus Serenus, *Lib. Med.*, 16.297.
- d) Soft-boiled egg: Dioscorides, *De Mat. Med.*, 3.94.5; Marcellus Empiricus, *De Med.*, 16.16.
- e) Half-boiled egg: Marcellus Empiricus, *De Med.*, 16.29.
- f) Lukewarm albumen: Dioscorides, *De Mat. Med.*, 2.50.
- g) Raw yolks: Pliny, *Nat. Hist.*, 29.11.
- h) Boiled yolk: Hippocrates, *Peri gunaikeiôn A*, 34.
- i) Fried crumbled yolk: Hippocrates, *Peri gunaikeiôn A*, 92.2.
- 4) Eye afflictions (anthrax of the eyelids, chemosis, corneal afflictions, drainings, fusions, inflammations, obscuration of the eyesight, peri-orbital haematoma [‘black eye’], prolapses, sychysis, etc.)
- a) Eggs in general: Scribonius Largus, *Comp. Med.*, 20.2, 23.3, 26.2; Pliny, *Nat. Hist.*, 29.11; Oribasius, *Coll. Med.*, 8.24.39; Oribasius, *Eup.*, 4.14; Marcellus Empiricus, *De Med.*, 8.16,37,117,195.
- b) Beaten egg: Oribasius, *Synopsis*, 7.53.
- c) Boiled egg: Marcellus Empiricus, *De Med.*, 8.53.
- d) Albumen: Scribonius Largus, *Comp. Med.*, 24.2, 26.1, 27.1; Pliny, *Nat. Hist.*, 29.11; Dioscorides, *De Mat. Med.*, 2.50, 2.105.2; Galen, *Ther.*, 13.22; Theodorus Priscianus, *Rer. Med.*, 1.32; Oribasius, *Eup.*, 4.15,19; Oribasius, *Synopsis*, 8.39–42; Marcellus Empiricus, *De Med.*, 8.156; Cassius Felix, *De Med.*, 29.5,27; Alexander of Tralles, *Pr.*, 2;⁶⁷ Paulus Aegineta, *Ep.*, 7.3, s.v. Ὠτοῦ.

⁶⁶ Cf. Daremberg / Ruelle, 1879: 414.

⁶⁷ See Puschmann, 1879: 10–11, 32–33, 34–35, 64–65.

- e) Yolks: Dioscorides, *De Mat. Med.*, 2.170.2; Theodorus Priscianus, *Rer. Med.*, 1.81; Oribasius, *Eup.*, 4.51; Aetius Amidenus, *Lib. Med.*, 7.31,48; Alexander of Tralles, *Pr.*, 2⁶⁸.
- f) Boiled yolks: Pliny, *Nat. Hist.*, 29.11; Dioscorides, *De Mat. Med.*, 2.50, 4.65.4; Oribasius, *Coll. Med.*, 9.43.2; Marcellus Empiricus, *De Med.*, 8.121.
- g) Fried yolks: Dioscorides, *De Mat. Med.*, 3.40.1; Oribasius, *Synopsis*, 8.45.
- h) Albumen of a pigeon egg: Cassius Felix, *De Med.*, 29.27.
- 5) Bleedings (e.g. of wounds, of the meninges, etc.)
 - a) Eggs in general: Quintus Serenus, *Lib. Med.*, 42.795.
 - b) Fried eggs: Pliny, *Nat. Hist.*, 29.11.
 - c) Crushed egg shell: Quintus Serenus, *Lib. Med.*, 20.376.
 - d) Albumen: Galen, *Ther.*, 5.4; Oribasius, *Coll. Med.*, 7.13.7.
 - e) Roasted and pulverized yolk: Celsus, *De Med.*, 5.22.6.⁶⁹
 - f) Goose egg yolks: Alexander of Tralles, *Pr.*, 5.5.⁷⁰
- 6) Ear/hearing afflictions
 - a) Eggs in general: Alexander of Tralles, *Pr.*, 3.6.⁷¹
 - b) Albumen: Oribasius, *Eup.*, 4.36,37; Alexander of Tralles, *Pr.*, 3.7.⁷²
 - c) Boiled goose eggs: Alexander of Tralles, *Pr.*, 3.7.⁷³
 - d) Ant eggs: Plinius, *Nat. Hist.*, 29.39; Marcellus Empiricus, *De Med.*, 9.120.
- 7) Headache (including headache due to a hangover)
 - a) Egg mixed with honey: Marcellus Empiricus, *De Med.*, 1.91.
 - b) Soft-boiled eggs: Alexander of Tralles, *Pr.*, 1.10.⁷⁴
 - c) (Raw) yolks: Marcellus Empiricus, *De Med.*, 4.15; Aetius Amidenus, *Lib. Med.*, 6.50.
 - d) Boiled yolks: Marcellus Empiricus, *De Med.*, 18.15.
- 8) Afflictions related to the joints (arthritis, gout, etc.)
 - a) Eggs in general: Marcellus Empiricus, *De Med.*, 34.60.
 - b) Egg shells: Marcellus Empiricus, *De Med.*, 36.51, 36.55.
 - c) Albumen: Alexander of Tralles, *Pr.*, 12.⁷⁵

⁶⁸ See Puschmann, 1879: 6–7.

⁶⁹ Cf. Penso, 1984: 441.

⁷⁰ See Puschmann, 1879: 192–193.

⁷¹ See Puschmann, 1879: 100–101.

⁷² See Puschmann, 1879: 116–117, 118–119.

⁷³ See Puschmann, 1879: 114–115.

⁷⁴ See Puschmann, 1878: 482–483.

⁷⁵ See Puschmann, 1879: 532–533, 558–559.

- 9) Burn wounds
 - a) Raw eggs: Oribasius, *Synopsis*, 7.6; Paulus Aegineta, *Ep.*, 7.3, s.v. Ὠτοῖ.
 - b) Boiled eggs: Pliny, *Nat. Hist.*, 29.11.
 - c) Albumen: Quintus Serenus, *Liber Medicinalis*, 59.1047.
- 10) Ergotism
 - a) Eggs in general: Quintus Serenus, *Lib. Med.*, 40.761.
 - b) Albumen: Quintus Serenus, *Lib. Med.*, 40.764.
 - c) Raw swan egg: Quintus Serenus, *Lib. Med.*, 40.757.
- 11) Skin and hair problems (lice, hair loss, moles, chapped lips, etc.)
 - a) Eggs in general: Marcellus Empiricus, *De Med.*, 4.19; Alexander of Tralles, *Pr.*, 1.2.⁷⁶
 - b) Inner membrane of the egg: Pliny, *Nat. Hist.*, 29.11; Oribasius, *Synopsis*, 8.34.
 - c) Yolks: Aetius Amidenus, *Lib. Med.*, 8.12.
- 12) Problems with the humours
 - a) Albumen: Galen, *Ther.*, 12.6.
 - b) Yolks: Oribasius, *Synopsi*, 6.27.
- 13) Problems with swellings (including elephantiasis)
 - a) Eggs in general: Quintus Serenus, *Lib. Med.*, 39.750; Oribasius, *Coll. Med.*, 45.29.45, 45.29.52.
 - b) Boiled yolks: Marcellus Empiricus, *De Med.*, 18.15.
- 14) Bites of *haimorrhoids*⁷⁷
 - a) Raw albumen: Dioscorides, *De Mat. Med.*, 2.50.
 - b) Raw yolks: Pliny, *Nat. Hist.*, 29.11.
- 15) Bruises
 - a) Eggs in general: Pliny, *Nat. Hist.*, 29.11.
 - b) Raw yolks: Marcellus Empiricus, *De Med.*, 19.15.
- 16) Coriander poisoning
 - a) Goose eggs: Scribonius Largus, *Comp. Med.*, 185.1.
- 17) Fever
 - a) Eggs in general: Hippocrates, *Peri Nousôn*, 17.L; Alexander of Tralles, *Peri puretôn*, 2).⁷⁸
- 18) General decay of the body
 - a) Raw eggs: Marcellus Empiricus, *De Med.*, 16.89.
- 19) Nose afflictions
 - a) (Raw) albumen: Dioscorides, *De Mat. Med.*, 2.50; Oribasius, *Eup.*, 4.46.

⁷⁶ See Puschmann, 1878: 448–449.

⁷⁷ A snake whose bite causes blood to flow from all parts of the body.

⁷⁸ See Puschmann, 1878: 324–325.

- 20) Problems with the female breasts
 - a) Partridge egg: Quintus Serenus, *Lib. Med.*, 19.357.
- 21) Roseola
 - a) Eggs in general: Quintus Serenus, *Lib. Med.*, 49.921.
- 22) Tooth pain and tooth blackening
 - a) Crushed egg shell: Quintus Serenus, *Lib. Med.*, 14.236; Oribasius, *Coll. Med.*, 10.36.4.
- 23) Inflammations in general⁷⁹
 - a) Boiled yolks: Dioscorides, *De Mat. Med.*, 2.50.
- 24) Brain inflammation
 - a) Egg yolk: Oribasius, *Synopsis*, 4.13.
- 25) Sunburn
 - a) Raw albumen: Dioscorides, *De Mat. Med.*, 2.50.

Eggs were not always considered as a good ingredient for drugs. In the 9th book of his *Practica*, Alexander of Tralles states that eggs should be forbidden for people suffering from liver inflammation (*Practica*, 9.1).⁸⁰

It may also be mentioned that eggs were used in cosmetic treatments: to make the face radiant, Greeks and Romans used albumen (Hippocrates, *Peri gunaikeiōn B*, 79; Oribasius, *Eup.*, 4.54) and cuttlefish eggs were used to get rid of dyes or skin of the body (Marcellus Empiricus, *De Med.*, 19.36).

Summarizing, eggs were much more present in Greek and Roman medicine than in Mesopotamian medicine. In addition, the larger part of eggs used by Greek and Roman physicians are from chickens. Only if indicated otherwise, the eggs mentioned in the classical medical texts are chicken eggs. This is in contrast to Mesopotamia, where eggs of various birds are attested, but not chicken eggs. The main reason for this is probably the fact that the chicken was introduced rather late in Mesopotamia,⁸¹ so chicken eggs were hardly available.

Beside chicken eggs we have goose eggs and partridge eggs. Two non-avian animals whose eggs were used, albeit rarely, in classical medicine are the cuttlefish and the ant (as in Mesopotamia).

As to the afflictions treated with drugs containing eggs, one can see that principally renal and rectal afflictions, afflictions of the gastro-enteron and eye problems occur. This is a nice parallel to Mesopotamian medicine, where similar diseases were treated using eggs. Most likely, principles of Mesopotamian medicine and pharmacology have been transmitted to Greece through the Achaemenid Empire and the Greek physicians working there, this in addition to the classical physicians' own discoveries.

⁷⁹ Cf. Leven, 2005: 242.

⁸⁰ Cf. Puschmann, 1879: 382–383.

⁸¹ Ehrenberg, 2002; Minnuno, 2014–2016: 584; von den Driesch 2014–2016: 587.

3.2 Syriac medicine

Syriac medicine is, as Kessel, states “Perhaps one of the least investigated and explored domains within Syriac intellectual culture”.⁸² Interestingly, Syriac medicine is inspired by both Mesopotamian medicine (as demonstrated by various Akkadian loanwords⁸³ and similar treatments, e.g. leaving the potion overnight to have the patient drink it in the morning)⁸⁴ and Greek-Roman medicine (Syrian authors translated a huge amount of Greek and Roman medicinal works).⁸⁵ The Mesopotamian influence is especially present in the ‘native’ prescriptions attested in the third section of the book.⁸⁶

In any case, eggs occur frequently in medicinal recipes in the so-called Syriac Book of Medicines. Eggs were used as ingredients or as instruments to administer the drug.⁸⁷ As was the case for the classical medicine, an overview below offers an insight into the use of eggs in Syriac medicine. Note that from folio 261b on the prescriptions belong to the native Eastern tradition, not to the Greco-Roman tradition.

- 1) Gastrointestinal afflictions
 - a) Eggs in general: folio 268b.⁸⁸
 - b) Boiled eggs: folio 199a.⁸⁹
 - c) Albumen: folio 142a,⁹⁰ 269b.⁹¹
- 2) Renal, uterine, vaginal and rectal afflictions
 - a) Eggs in general: folio 198b.⁹²
 - b) Yolks: folio 197a,⁹³ 199b,⁹⁴ 200a,⁹⁵ 207b.⁹⁶
 - c) Egg of the *qarîta*-bird: folio 270b.⁹⁷

⁸² Kessel, 2019: 438.

⁸³ Pers. comm. M. Geller, 24/05/2022.

⁸⁴ An example of this practice is a prescription against heart disease, which has to be prepared and put aside all night “under the stars”.

⁸⁵ Kessel, 2019: 441–443.

⁸⁶ Cf. Kessel, 2019: 446.

⁸⁷ Examples can be found in folios 178b (Wallis Budge, 1913: 431; for liver diseases) and 272b (Wallis Budge, 1913: 685; for pain in the loins).

⁸⁸ Cf. Wallis Budge, 1913: 675.

⁸⁹ Cf. Wallis Budge, 1913: 489.

⁹⁰ Cf. Wallis Budge, 1913: 331.

⁹¹ Cf. Wallis Budge, 1913: 677.

⁹² Cf. Wallis Budge, 1913: 488.

⁹³ Cf. Wallis Budge, 1913: 484.

⁹⁴ Cf. Wallis Budge, 1913: 490.

⁹⁵ Cf. Wallis Budge, 1913: 491 and 492.

⁹⁶ Cf. Wallis Budge, 1913: 510.

⁹⁷ Cf. Wallis Budge, 1913: 680.

- 3) Respiratory/throat afflictions
 - a) Eggs in general: folio 118b,⁹⁸ 266b.⁹⁹
 - b) Boiled eggs: folio 87b,¹⁰⁰ 115b.¹⁰¹
 - c) Albumen: folio 119a.¹⁰²
- 4) Eye afflictions
 - a) Shells: folio 264a.¹⁰³
 - b) Albumen: folio 39b,¹⁰⁴ 40a,¹⁰⁵ 45b,¹⁰⁶ 563a,¹⁰⁷ 263b,¹⁰⁸ 264a.¹⁰⁹
 - c) Raven eggs: folio 264a.¹¹⁰
- 5) Bleedings/wounds
 - a) Albumen: folio 208a,¹¹¹ 261b,¹¹² 278a.¹¹³
 - b) Yolks: folio 208b.¹¹⁴
- 6) Ear/hearing afflictions
 - a) Albumen: folio 50a.¹¹⁵
- 7) Headache
 - a) Albumen: folio 28a,¹¹⁶ 30a,¹¹⁷ 261b.¹¹⁸
 - b) Yolks: folio 30a.¹¹⁹
- 8) Skin and hair problems (too much hair, hair loss)
 - a) Yolks of pelican eggs: folio 280b.¹²⁰

⁹⁸ Cf. Wallis Budge, 1913: 277.

⁹⁹ Cf. Wallis Budge, 1913: 670.

¹⁰⁰ Cf. Wallis Budge, 1913: 199.

¹⁰¹ Cf. Wallis Budge, 1913: 267.

¹⁰² Cf. Wallis Budge, 1913: 279.

¹⁰³ Cf. Wallis Budge, 1913: 663.

¹⁰⁴ Cf. Wallis Budge, 1913: 85.

¹⁰⁵ Cf. Wallis Budge, 1913: 87.

¹⁰⁶ Cf. Wallis Budge, 1913: 103.

¹⁰⁷ Cf. Wallis Budge, 1913: 660.

¹⁰⁸ Cf. Wallis Budge, 1913: 661.

¹⁰⁹ Cf. Wallis Budge, 1913: 663.

¹¹⁰ Cf. Wallis Budge, 1913: 663. Note that the only Mesopotamian attestation of eggs used for an eye disease ('closed eyes') was also treated with raven eggs.

¹¹¹ Cf. Wallis Budge, 1913: 513.

¹¹² Cf. Wallis Budge, 1913: 656.

¹¹³ Cf. Wallis Budge, 1913: 698.

¹¹⁴ Cf. Wallis Budge, 1913: 514.

¹¹⁵ Cf. Wallis Budge, 1913: 113.

¹¹⁶ Cf. Wallis Budge, 1913: 60.

¹¹⁷ Cf. Wallis Budge, 1913: 64.

¹¹⁸ Cf. Wallis Budge, 1913: 657.

¹¹⁹ Cf. Wallis Budge, 1913: 65.

¹²⁰ Cf. Wallis Budge, 1913: 704.

- b) Ant eggs: folio 274b.¹²¹
- 9) Problems with the joints
 - a) Albumen: folio 266b,¹²² 272a.¹²³
- 10) Burns
 - a) Albumen: folio 273a.¹²⁴
- 11) ‘Red wind’
 - a) Albumen: folio 272a.¹²⁵
- 12) Thirst
 - a) Albumen: folio 267b.¹²⁶

Clearly, similar symptoms as the ones in Mesopotamian and Greco-Roman medicine also appear in the Syriac medicinal recipes.

3.3 Medieval English/Irish medicine

The medicinal use of eggs also appear in the so-called *Alphabet of Galen* (*Alfabetum Galieni*), a text named after Galen, but actually written much later (the oldest manuscript dates back to the 7th century CE) and popular in Europe; the work circulated in Europe until the 13th century).¹²⁷ The text lists 301 medical entries and boasts to be a translation of the work of Galen. However, the source of this work is probably somewhat previous to either Dioscorides or Galen.¹²⁸

This work has the following paragraph on eggs:

“The egg is the offspring of a chicken, as everyone knows. It has a double application. If it is eaten when half-cooked, it fortifies the stomach and does not allow the body to become enfeebled because of the egg’s nature as a life-giving organism. It moderates everything, because it has a gentle element. When raw egg is drunk it heals those who are hoarse. Its albumen when warmed and applied topically to inflamed eyes restores their health. Egg yolk, when applied externally by smearing on any part of the body is found to be paregoric and styptic. Eggs cooked in vinegar until they harden are helpful against dysentery. Their strength is greater when drunk rather than eaten. Raw egg when drunk prevents thirst” (Par. 204).¹²⁹

¹²¹ Cf. Wallis Budge, 1913: 691.

¹²² Cf. Wallis Budge, 1913: 669.

¹²³ Cf. Wallis Budge, 1913: 683.

¹²⁴ Cf. Wallis Budge, 1913: 686.

¹²⁵ Cf. Wallis Budge, 1913: 684.

¹²⁶ Cf. Wallis Budge, 1913: 672.

¹²⁷ Everett, 2012: 3.

¹²⁸ Everett, 2012: 64–82; Scarborough, 2014: 195.

¹²⁹ Everett, 2012: 86.

In another paragraph (86) it is told that stag horn, when drunk with an egg, “drives out intestinal parasites”.¹³⁰ Again, the diseases mentioned are in parallel to Mesopotamian and classical medicine: eye problems and renal and rectal afflictions.

Furthermore, egg yolks appear often in medieval English/Irish medicinal texts from the 15th century. They are a part of poultices against various afflictions, such as biles, a rectal affliction, and canker sores, a kind of mouth ulcers.¹³¹ According to Britton / Fletcher,¹³² these yolks were “probably used as binding agents to make the several ingredients of the poultice cohere”. If this is true, the use of eggs in the Middle Ages differs from that in Mesopotamia and Classical Antiquity.

An interesting example is one of the so-called Smarmore slates, a group of inscribed slates from Smarmore, near Ardee in Ireland. In one of the texts (slate 8a; Fig. 7) egg yolks appear as part of a poultice applied to an ulcer or wound: ‘yolkis of eggis’. In all likelihood, the slate is a school exercise.¹³³

4. Modernity

Riddle¹³⁴ informs us that eggs are not mentioned anymore in modern pharmaceutical guides, among which the 1955 edition of the Dispensatory of the United States.¹³⁵ Although this statement is correct, it must be slightly nuanced: in former editions of the Dispensatory of the United States, eggs still appear as being applied to various purposes, with that condition that they had to mixed with other ingredients. In the 1854 edition¹³⁶ and still in the 1894 edition,¹³⁷ egg yolks are still used against jaundice and indigestion, whereas they also appear as ingredients or binding agent in treatments of diarrhoea, dysentery, coughing and anginose affections, whereas albumen was ideal in the clarification of liquids and as ingredient against (copper) poisoning. The use of eggs as remedy against jaundice has disappeared in the 1899 edition¹³⁸ and by 1907 the medicinal use of eggs was limited to their function as binding agent.¹³⁹ Nevertheless the albumen remains useful as antidote.

Although eggs seem to have disappeared as ingredient for drugs in modern Western medicine, they are still used in traditional southern African medicine. In Tanzania, physicians use ostrich eggs against asthma and earaches,¹⁴⁰ whereas in

¹³⁰ Everett, 2012: 211.

¹³¹ Henslow, 1899: 30, P.175 and 34, P.177.

¹³² Britton / Fletcher, 1990: 64.

¹³³ Cf. Bliss, 1965–1966: 45–47 and Britton / Fletcher, 1990: 58–68.

¹³⁴ Riddle, 2013: 66–67.

¹³⁵ Osol / Farrar, 1955.

¹³⁶ Wood / Bache, 1854: 80–81, 206, 304, 498, 548–549, 1029.

¹³⁷ Wood / Remington / Sadtler, 1894: 659 and 1006.

¹³⁸ Wood / Remington / Sadtler, 1899: 147, 471, 692, 1643.

¹³⁹ Wood / Remington / Sadtler, 1907: 1476.

¹⁴⁰ See Magige / Røskaft, 2017.

South African traditional medicine, crushed ostrich egg shells are believed to stimulate birth labour.¹⁴¹

Even most recently, modern researchers turn their attention again to eggs as medicinally useful in the battle against deadly hospital infections,¹⁴² other infectious diseases such as cholera and dengue,¹⁴³ and even cancer¹⁴⁴ or COVID-19.¹⁴⁵ Some of the researchers use ostrich eggs, but not because of the specific antibodies that are present in these eggs, but because of the quantity: an ostrich egg contains about as much yolk as 24 chicken eggs and a female ostrich can pound 50 to 100 eggs a year, over a 50-year period. The importance of eggs for medicinal purposes surely is not just something from the past.

5. Conclusion

This study has focused on the use of eggs in Mesopotamian medicine, including comparisons with classical, medieval and modern medicine. Mesopotamian physicians used eggs as ingredients for drugs applied against various affections. Nevertheless, the overwhelming majority attested in the medicinal textual corpus are ostrich eggs, more specifically the shell of ostrich eggs. They were principally used in drugs against eye affections, renal and rectal/uterine diseases and gastrointestinal problems.

The connection between eggs and these types of diseases is still visibly present if one has a look at the Greek and Roman medicinal textual corpus.

One important difference between both cultures is that in Classical Antiquity chicken eggs were the most widely used type of eggs, contrary to Mesopotamia where the chicken was not really known until late in Mesopotamian history.

The purely medicinal value of eggs diminishes in the Middle Ages, but still remained vivid enough, even into the late 19th century, where eggs are described as being used against e.g. diarrhoea, dysentery and jaundice. However, the relation between eggs and ocular diseases has disappeared. Moreover, in the last decades, there is a new attention for eggs, as the antibodies they contain could help against a wide variety of infectious diseases.

¹⁴¹ Van der Kooi / Theobald, 2006: 16–17.

¹⁴² <https://www.dailymail.co.uk/health/article-4288000/Could-ostrich-eggs-key-treating-deadly-infections.html>, 06/03/2017; <https://www.news24.com/You/Archive/ostrich-eggs-to-be-used-in-treatment-for-deadly-hospital-infection-20170728>, 11/03/2017.

¹⁴³ <https://www.audubon.org/news/how-biggest-birds-earth-could-help-fend-epidemics>, 21/03/2019.

¹⁴⁴ <https://www.theguardian.com/science/2007/jan/15/medicalresearch.drugs>, 15/07/2007; <https://www.cbsnews.com/newyork/news/chickens-drug-filled-eggs-medication/>, 28/01/2019.

¹⁴⁵ Batiha *et al.*, 2021; <https://med.stanford.edu/news/all-news/2022/04/chicken-egg-antibody.html>, 08/04/2022.

The following table intends to give an overview of the diseases/affections treated using eggs over the various periods. It shows the continuity of some of these diseases.

Affection	Mesopotamia	Greco Roman	Syriac	Middle Ages	Modernity
Gastrointestinal	X	X	X	X	X
Renal, etc	X	X	X	X	
Respiratory		X	X	X	X
Eye	X	X	X	X	
Bleedings/ulcers		X	X	X	
Ear/hearing		X	X		X
Headache		X	X		
Joints		X	X		
Burns		X	X		
Skin and hair	X	X	X		
Fever	X	X			
Moles	X				
Thirst			X	X	

Lastly, in general, Mesopotamian medical staff predominantly used the shells of ostrich eggs in their prescriptions. Yolks are completely absent, contrary to Greco-Roman and the other types of medicine. The reason for this is unclear. Possibly, the Mesopotamians thought that they would destroy a new life when using yolks. A more prosaic explanation is that shells contain more minerals.

This study has shown that there was at least partial transmission of medicinal and pharmaceutical knowledge from Mesopotamia to the Greco-Roman and the Syriac world, although independent discoveries cannot be ruled out. The case study concentrated on eggs, whereby the main difference between Mesopotamian and other medicine is the complete absence of yolks in Mesopotamia.

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Rites, Music, and Banquets

Some Observations on Rituals in Sumerian Divine Journeys

*Klaus Wagensonner**

A recurring theme in Sumerian literature is the divine journey, i.e., the trip of a deity from her or his hometown to a god in another city, who is often of superior rank in the pantheon. Examples are the travels of Ninurta and Ningirsu to Enki in Eridu or Nin-Isina's procession from Isin to Enlil in Nippur. While most compositions deal with the logistics of the travels only in passing, some texts mention the rites and festivities in greater detail including processions and banquets. This paper aims at providing an overview of the evidence for the rites performed at the various stages of the journey.

1. Introduction

(The goddess) passes by the broad street of her city; her city rejoices with
her (Middle Assyrian: does equal).

Her spouse, the hero Pabilsaĝ, walks in joy with her.

Her beloved child, Damu-saga (and) the righteous woman Gunura,
– (they are) the good protective spirits (Lama-saga; Middle Assyrian:
Alad-saga) of the Egalmah – follow behind her.

Alad-saga (Middle Assyrian: Udug-saga), her father Enlil (Middle
Assyrian: Enlil's father), walks on her right side.

Udug-saga (Middle Assyrian: Lama-saga) – he is lord Nunamnir – walks
on her left side.

Her emblem, the light of the sky, is prepared before her.

Šumah, the righteous messenger of the Egalmah, walks before her.

He cleans the alleys and the broad street for her; he purifies the city.

(Nin-Isina's Journey to Nippur, lines 5–13)¹

* I would like to thank the organizers of the 67th Rencontre Assyriologique Internationale, Turin. Readings in Sumerian literary texts follow Attinger, 2021.

¹ Read after the unprovenanced Old Babylonian manuscript Saeedi 212 (edited in Cohen, 2017: 85–101):

5 ṣila daġal¹ eri-na-ka mi-ni-ṣdib¹-be₂ eri-ne₂ mu-un-da-hul₂*

The quoted lines are attested in a short composition of just 49 lines, which is currently known through two Old Babylonian manuscripts, one from Nippur, the other unprovenanced, and two texts of Middle Assyrian date from Assur. This composition, categorized as a *ser₃-nam-šub* of Isin's patron deity,² deals with a journey of Nin-Isina (or Ninkarrak and Gula) to Nippur (Fig. 1).

The stage is set in the sanctuary Egalmah in Isin. The goddess leaves her temple and participates in a lavish procession, in which she is surrounded by her family members, who appear in the roles of different protective spirits, and the inhabitants of her city. The journey to Nippur towards the north is undertaken by boat along the Kirsig canal (line 15).³ Likely accompanied by the king, the boat arrives in Nippur, where the goddess presents offerings to Enlil. From other texts discussed below it can be assumed that the king had a central role in gathering these offerings. Enlil, being happy about the gifts, decrees a (good) fate for the goddess. Thereafter, Nin-Isina returns to Isin, where she takes up seat on her dais and festivities bring this successful journey to its close.

-
- 6 ṛḡešdana¹-a-ne₂ ur-saḡ ṛ^dpa¹-bil₂*-saḡ hi-li-a mu-da-an-DU
 7 dumu ki-ṛaḡ₂¹-ḡa₂-ne₂ ṛ^dda-ṛmu¹ sa₆-ga munus zi ṛ^dgu-nu-ra
 8 ṛ^dlama₂-sa₆-ṛga¹ e₂-gal-ṛmah¹-a-ke₄ eḡir-ra-ne₂ im-mu-us₂
 9 ṛ^dalad-sa₆-ṛga¹ aia-ne₂ ṛ^den-lil₂-e zi-da-ne₂ mu-un-DU
 10 ṛ^dudug-sa₆-ga en ṛ^dnu-ṛnam¹-nir-ra ṛ^dgub₃¹-bu-ne₂ mu-un-zi
 11 šu-nir-ra-ne₂ zalag an-na-ke₄ ṛ^digiⁱ*¹-ne₂-še₃ si im-sa₂^{si*}
 12 šu-mah sukka¹ zi e₂-gal-mah-a-ke₄ igiⁱ*-še₃ mu-un-ṛna¹-DU
 13 e-sir₂ sila daḡal mu-un-na-ab-ṛsiki¹-e eri mu-un-ṛna¹-ab-ku₃-ge

This almost perfectly preserved Old Babylonian manuscript contains a few variants compared to the later, Middle Assyrian, recension. New readings are based on collation of the tablet and are marked by *. I would like to thank Andrew George for making the study of this tablet possible in January 2018. A hand copy will be included in a forthcoming volume on Sumerian literary texts by the author. For a prior edition of the bilingual sources and another small Old Babylonian fragment, see Wagensonner, 2008.

² The Middle Assyrian source *KAR 16* (CDLI P282602) reads *ser₃-nam-šub ṛ^dnin-isin₂^{si}-na-ke₄*; the unprovenanced Old Babylonian text has *ser₃-nam-šu-ub ṛ^dgu-la-kam*.

³ The Akkadian interlinear translation of the text renders the name of the canal as *Isinītu*. The rather fragmentary composition *Pabilsaḡ's Journey to Nippur*, thus a journey by Nin-Isina's spouse, also mentions this watercourse connecting the two cities. In the Old Babylonian forerunner of the god list *TCL 15, 10* (CDLI P345354) a goddess *Nin-Kirsiga* (or *Egi-Kirsiga* or *Ereš-Kirsiga*) occurs in the context of *Nin-Isina* and *Ninkarrak*; see Cavigneaux / Krebernik, 2000: 449; Frayne & Stuckey, 2021: 82 s.v. *Egi/Ereš-Mirsiga*.

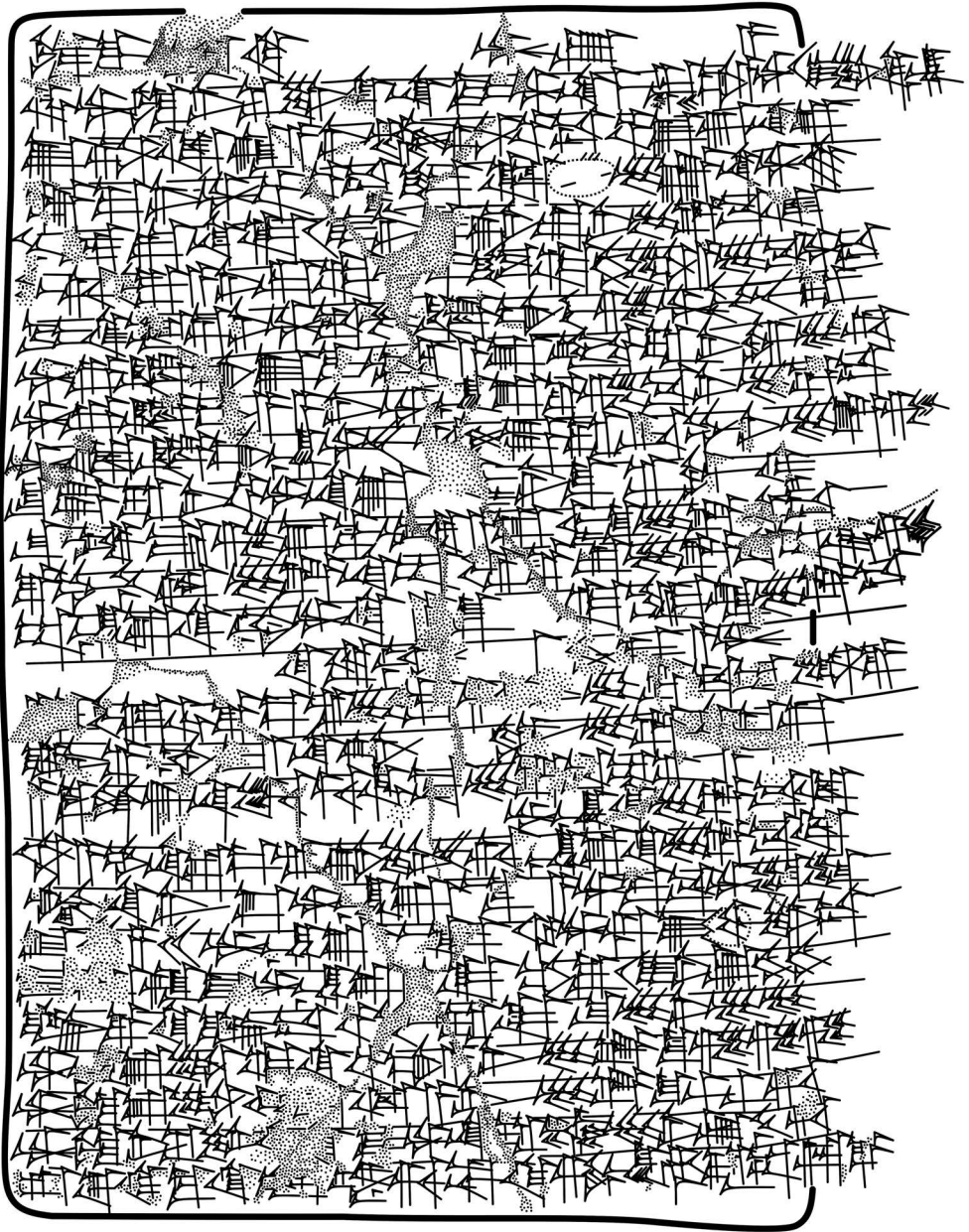


Fig. 1: A manuscript of Nin-Isina's Journey to Nippur (Saeedi 212, obverse; drawing by the author).

This composition shares features with several other Sumerian literary texts that are generally referred to as Divine Journeys. In style, the extant texts are rather different and are not restricted to a specific ancient category of text. We have seen that the journey of Nin-Isina is dealt with in a *ser₃-nam-šub*, an “incantation-song.”⁴ The category *ser₃-gid₂-da*, a “long song,”⁵ is known for a journey of Ninurta to Eridu and also the god’s return to Nippur in the composition *An-gen₇ dim₂-ma*. Divine journeys or the presence of a deity in a city or place other than his or her hometown may also be alluded to in other types of texts, such as *ir₂-sem₅-ma* lamentations. An example is an *ir₂-sem₅-ma* directed to the moon god.⁶ Another example of this category of text alludes to Nin-Isina’s presence in Nippur.⁷

As different as the textual genres, so is also the quality and quantity of the information provided in the extant Divine Journeys. While in some compositions the journey of the protagonist lies in the centre of the storyline – examples are *Nanna-Suen’s Journey to Nippur* and *Enki’s Journey to Nippur* –, other compositions only address the journey in part, sometimes even only briefly hint at a trip (e.g., *Sulgi F* and *Gudea Cylinders*). One of the most explicit treatments of a divine journey is certainly *Nanna-Suen’s Journey to Nippur*, a composition of more than 350 lines. The text details the moon god’s intent to visit his parents in Nippur, the preparation for the construction of a processional boat, the gathering of gifts and offerings, the journey itself with stops *en route*, and the events unfolding in Nippur. While the moon god’s journey is often taken as *the* prime example for this group of texts, short allusions to traveling gods are attested frequently. This is the case, for instance, in the *Gudea Cylinders*, which refer to a journey of Ningirsu to Eridu:⁸

⁴ The text *Inana G*, which partially details a journey of Inana to Eridu (see Wagensonner, 2010), is categorized as a *ser₃-nam-šub* as well. For this category of song see Shehata, 2009: 270–272.

⁵ See Shehata, 2009: 274–278.

⁶ The text is known from three manuscripts, two of Old Babylonian date, the third one dating to the Hellenistic period.

⁷ In this *ir₂-sem₅-ma* the goddess laments:

25 ga-[ša-an]-i₃-si-in^{ki}-na-ĝen nu-hul₂-la nu-du₁₁-ga-mu-de₃
 26 aia-zu-ta e₂ na-aĝ₂ tar-re-da a-gen₇ im-da-an-ku₄-re-en
 27 ^dmu-ul-lil₂-da e₂ na-aĝ₂ tar-re-da a-gen₇ im-da-an-[ku₄-re]
 28 e₂ di-da-ka e₂ ka-aš-a-ka a-gen₇ im-da-ku₄-re

I am Nin-Isina, I will not talk happy words.

Thus I enter *to* my^l (T: your) father, into the house in which fates are being determined.

Thus I enter *to* Enlil, into the house in which fates are being determined.

Thus I enter into the house of judgement, into the house of decisions.

See Cohen, 1981: 100. I would like to thank Jonathan Beltz for referring me to this text.

⁸ See Edzard, 1997: 93.

That he (i.e., Ninĝirsu’s adviser Lugal-sisa) might bid farewell
when the warrior is going to Eridu and that,
(as a result) when Ninĝirsu returns from Eridu,
the throne of the built-up city is firm.

(*Gudea Cylinder B*, col. viii, 13–16)⁹

In this short passage, by far the earliest attestation in a literary context, the reason of Ninĝirsu’s trip transpires: He visits Enki to have his (and by extension Gudea’s) reign legitimized. A similar reason is hinted at in another journey of Ninurta to Eridu. In *Ninurta’s Journey to Eridu I*, the god travels, among other things, “to decree abundance as (the land’s) destiny.”¹⁰

The reasons for a specific trip transpire in different ways. Frequently the visiting deity seeks to legitimize him- or herself. In *Enki’s Journey*, for instance, the god travels to Nippur after having completed his temple in Eridu: “That the pure house (in) Eridu was built, Enki be praised” (lines 125–126).¹¹ In *Enki and the World Order*, the crafty god’s presence in Nippur is hinted at several times: “He (i.e., Enki) [indeed filled] the Ekur, Enlil’s temple with possessions. Enlil was delighted with Enki, and Nippur was full of charm” (lines 261–262).¹² The reasons for the moon god’s journey are somewhat different. After handing over his gifts to Enlil, he asks him to bestow upon him abundance in the land. This abundance is expressed by a well-known topos.¹³

In summary, the features of Divine Journeys are, among others, (1) the indication of the journey of a deity from one place to another, (2) a mode of transportation, (3) gifts presented to the visited deity, (4) rituals that accompany various

⁹ Read after *RIME* 3/1.1.7.Cyl B:

13 ur-saĝ eridu^{ki}-še₃ du-a-ne₂
14 silim-ma du₁₀ di-da
15 ^dnin-ĝir₂-su eridu^{ki}-ta du-ne₂
16 eri du₃-a ^{ĝes}gu-za-be₂ ge-na-<da>

¹⁰ CBS 13938 (*CDLI* P268939), col. i,8: [na]m-he₂ [n]am-be₂ t[ar-r]e-^fde₃¹. Despite collations, the subsequent lines are rather fragmentary, but hint at the various aspects of abundance in the land. After line 13 containing the statement that Ninurta travels to Eridu, another section continues to itemize the purpose of his journey.

¹¹ See Ceccarelli, 2012: 96:

125 eridu^{ki} e₂ ku₃-ga du₃-a-ba
126 ^den-ki za₃-mim

¹² Read after CBS 4562+ (*CDLI* P260876):

261 e₂-kur-re e₂ ^den-lil₂-la₂-ke₄ niĝ₂-ĝal₂-la nam-s[i]
262 ^den-ki-da ^den-lil₂ mu-un-da-hul₂ nibru^{ki} g[iri₁₇-zal-am₃]

Compare also two fragments from Ur that deal with Enki’s role in Nippur; see Ludwig, 2006.

¹³ See Gabbay / Mirelman / Reid, 2020. This topos may also appear, after collation, in *Ninurta’s Journey to Eridu I*, lines 14–22.

aspects of the journey, and (5) the occasional explicit mention and participation of the king. This paper does not aim at looking at all these features. It focuses on the ritual aspects of Divine Journeys and how they are reflected in the extant literary sources. The paper will limit itself to the Sumerian literary evidence with a few glimpses into administrative texts as well as later attestations. Occasionally, letters refer to cultic events such as processions and divine journeys, although it should be stressed that the scattered information gained from many mundane texts only permit glimpses. The same holds true regarding iconographical depictions of deities in boats and on chariots on seals.¹⁴

2. Time and frequency of journeys

In the month, on New Moon, the day when fates are [being determined],
Ninurta indeed went to Eridu.

On the dais of the Abzu he indeed took a seat.

So that he can decide Abzu's verdict for that place.

So that he can arrive at Eridu's august decision for that place.

(*Ninurta's Journey to Eridu* II, lines 20–24)¹⁵

The literary sources only provide little information on time and frequency of traveling. The quoted lines come from an unpublished composition dealing with a journey of Ninurta to Eridu. According to the text, Ninurta travels at New Moon (Sumerian *u₄-sakar*). This point in time for the journey can be contrasted to a short passage in the *Gudea Cylinders*, which alludes to a journey of Ningirsu:

The year had ended; the month had been completed.

The new year had appeared in the sky.

The month had entered its house,

and of that month the third day had passed:

Ningirsu had arrived from Eridu,

and the most beautiful moonlight shone

illuminating the land. Eninnu vied with the (new-)born moon.

(*Gudea Cylinder* B, col. iii,5–11)¹⁶

¹⁴ See Mayer-Opificius, 2000.

¹⁵ Read after ms. A (N 1363 + UM 29–16–785 + N 6368 + N 4171 = *CDLI* P257198):

20 it₁ u₄-sakar u₄ nam-[tar-re-d]₃e₃

21 ^dnin-urta eridu^{ki}-še₃ na-ĝen

22 para₁₀ abzu-ka dur₂ nam-mi-ni-ĝar

23 di abzu ki-be₂-še₃ i₃-ku₅-de₃

24 ka-aš mah eridu^{ki}-ga^(eras.) ki-be₂-še₃ i₃-bar-re

¹⁶ Read after *RIME* 3/1.1.7.Cyl B:

5 mu ĝen-na-am₃ iti til-la-am₃

6 mu gibil an-na im-ma-gub

Some texts only refer to the time of day a journey begins. Nin-Isina, for instance, starts her procession early in the morning at sunrise:

From the house she indeed came forth joyfully, while(?) in the cella.
Her nation *uttered* prayers at sunrise.

(*Nin-Isina's Journey to Nippur*, lines 3–4)¹⁷

Other texts, such as the royal song of praise *Sîn-iddinam A*, do not explicitly state a time of travel, but allude to the season by the quality of the offerings presented:

The abundance – pure first-fruit offerings, the first-fruit offerings of the New Year, he (i.e., Sîn-iddinam) made perfect in great fashion there.

To the Quay-of-Life, the quay of Ur, he made the respective load travel.

(*Sîn-iddinam A*, lines 10' and α)¹⁸

We can glean some dates also from the extant economic records. The texts dating to the Ur III period attest to different journeys of the healing goddesses Nintinuga of Nippur and Nin-Isina of Isin and Umma.¹⁹ But the available texts do not allow for any conclusive evidence whether or not individual journeys happen on a regular basis.²⁰ Some evidence can also be gleaned from letters, which occasionally refer to divine processions.²¹ The following Old Babylonian Akkadian letter from Šaduppûm, for instance, refers to a journey of the weather god Adad:

7 iti e₂-ba ba-a-ku₄

8 iti-be₂ u₄ 3-am₃ im-ta-zal

9 ^dnin-ĝir₂-su eridu^{ki}-ta ĝen-am₃

10 i₃-ti sa-sa im-e₃

11 kalam-ma u₄ mu-ĝal₂ e₂-ninnu ^dsuen u₃-tu-da

¹⁷ Read after the Old Babylonian manuscript Saeedi 212:

3 e₂-ta hul₂-la-a-ne₂ nam-ta-e₃ u₄ e₂-agrun-na-ke₄*

4 ^lkalam¹-ma-ne₂ ^dutu-e₃-de₃ šudu₃ {×} mu-un-na-an-ša₃

The bilingual recension from Assur renders line 3 *ištu bīt lališa ina kummīša ittašā*, “Being in her cella(?), she came forth from the house of her joy”; alternatively: “from the house of her joy, from(?) her cella, she came forth.”

¹⁸ Composite text based on the manuscripts *CT* 42, 45 (*CDLI* P283737) and *UET* 6, 98 (*CDLI* P346183):

10' he₂-ĝal₂ nisaĝ sikil nisaĝ za₃-mu-ka / šu gal mu-un-ni[?]-i[n[?]]-du₇-du₇

α kar^l(T: TE)-nam-ti-la kar^l(T: TE) uris^{ki}-ma-še₃ / gu₂-be₂ im-mi-ni-u₅^l

¹⁹ See Sallaberger, 1993: 152–154.

²⁰ See Sallaberger, 1993: 152.

²¹ See, in particular, Finet, 1981.

On the first auspicious day, which is the sixteenth, three days from now, Adad will leave for (his) sacred precinct. As soon as you hear this tablet of mine, send instructions.

(*Letter from Šaduppûm*, lines 4–11)²²

Much later dates the following attestation in a Neo-Babylonian letter:

On the 22nd of month XI I was released from duty and given orders to travel. Now, on the 6th of month XII (the images of) the gods will travel. I will travel with the gods for five days.

(*Letter from Nabû-ahhê-ušallim to Ibni-Ištar*, lines 8–12)²³

None of the earlier sources rival the detailed information that is attested in late ritual texts pertaining to the Babylonian New Year Festival. On the eighth day the gods gather in Marduk's temple in Babylon. A procession leads through the city gate to the canal, where they board the processional boat with destination at the *bīt akīti*.²⁴ Three days later, the gods return to Babylon for a second divine assembly, before the deities who visited Marduk return to their respective home cities on the twelfth day.

3. Rites before or at the beginning of the journey

Pure feasts and great rites

the righteous shepherd Sulgi established for that place.

In Nippur, all the great gods bathe in pure water.

In the city he assigns the fate to their places; he divides the righteous divine

Enlil embraced her (i.e., Ninlil) like a pure wild cow. \ powers.

The [mother] of the land, Ninlil, the fair one, indeed [came out] of the
house.

They take seat on the pure dais, while provisions are lavishly provided.

(*Sulgi R*, lines 41–47)²⁵

²² Read after *Sumer* 14, Pl. 11 (*ARCHIBAB* T14843): (4) *a-na* {×} *u4-mi-im dam-qi2-im* (5) *ma-ah-ri-im ša* U₄ 16.KAM (6) *iš-tu i-na-an-na* U₄ 3.KAM (7) ^dIM *a-na ha-am-ri-im* (8) *uš-ši2 tup-pi2 an-ni-a-am* (9) *i-na še-me-e-em* (10) *a-na ma-[ah-ri-ia]* (11) *ši-ta-pa-[ra-am-ma* (?)]. See also Cohen, 1993: 255.

²³ Read after *YOS* 3, 9 (*CDLI* P304990): (8) U₄ 22.KAM₂ *ša2* ^{iti}ZIZ₂ *paṭ-ṭar-ra-ak* (9) KASKA-L^{II} *a-na* GIR₃^{II}-*ia šak-na-at* (10) *a-mur* U₄ 6.KAM₂ *ša2* ^{iti}ŠE (11) DINGIR^{mes} *il-la-ka* {×} (12) *it-ti* DINGIR^{mes} U₄ 5.KAM₂ *al-la-ka*. See also Cohen, 1993: 342; Zgoll, 2006: 33.

²⁴ See Zgoll, 2006: 31–33.

²⁵ Read after the CBS 14058+ (*CDLI* P269076), col. i, 1–12, and CBS 8316+ (*CDLI* P263157), lines 43–49:

41 *izim ku3 be6-lu5-da gal-gal*

42 *sipa zi sul-gi-re ki-be2-še3 mu-ĝa2-ar-ĝa2-ar*

Some of the extant literary compositions, such as the quoted lines from the royal song of praise *Sulgi R*, allude to rites and events prior to the departure of the respective deities. In this text, after having fulfilled the gods' commission to build a processional barge, king Sulgi continues to carry out the rites that start Ninlil's (and Enlil's) journey to the sanctuary Tummal.

The most explicit description of events and rituals in the corpus of Sumerian divine journeys can be found in *Nin-Isina's Journey of Nippur*, which was quoted at the beginning of this paper. The composition describes in great detail a procession leading from Nin-Isina's sanctuary, the Egalmah, down to the river (Fig. 2). The goddess is surrounded by her family. Her spouse, the god Pabilsaĝ, walks probably next to the goddess. She is followed by their children Damu-saga and Gunura. The text is here somewhat ambiguous. Both children appear to walk in the role of protective spirit(s), the Lama-saga. Alternatively, the goddess is followed by Damu-saga, Gunura, and a protective spirit.²⁶ Another protective spirit (Alad-saga) walks on her right side. This spirit is identified as her father Enlil. The Middle Assyrian source has here Enlil's father. On the left side walks the Udug-saga, who is identified as Nunamnir. Before the goddess is an emblem (šunir) set up. The procession is led by Nin-Isina's messenger Šumah. According to line 13 of the composition, he performs purification rites. Likely the inhabitants of Isin participate in the procession following the goddess and her entourage to the river.²⁷ The participation of the inhabitants can also be seen much later in the context of the Babylonian New Year Festival: "Bēl came forth from Babylon. The lands bowed before him."²⁸

43 nibru^{ki}-a diĝir gal-gal-e-ne a ku₃ mu-tu₁₇-tu₁₇-u₃-eš₂

44 eri^{ki}-a nam ki-be₂-še₃ mu-tar^{ur}-e me zi mu-hal-^fhal²¹-[e]

45 [ama] kalam-ma ^dnin-lil₂ lu₂ sa₆-ga e₂-ta nam-^f×¹[...]

46 [^den]-lil₂-le ab₂-šilam ku₃-gen₇ gu₂-da mu-^fni¹-[in-la₂]

47 ^fpara₁₀¹ ku₃-be₂ dur₂ im-mi-in-ĝa₂-re-eš₂ niĝ₂ mi-ni-ib₂-^fgu¹-[ul]-gu-ul-ne

²⁶ Compare *Gudea Cylinder B*, col. ii,9: u₂-du₁₁ sa₆-<ga>-ni igi-še₃ mu-na-ĝen (10) ^dlama₂ sa₆-ga-ne₂ egir-ne₂ im-us₂, "His (i.e., Gudea's) good Udug walked before him. His good Lama followed him.

²⁷ The Middle Assyrian recension uses the verbal base sa₂, "to do equal." However, the recently published manuscript Saeedi 212 dating to the Old Babylonian period, has clearly hul₂. Both signs start similarly. The Akkadian translators rendered the verbal form *išan-nan*, "(her city) does equal."

²⁸ *ittašâ Bēl Bābili kamsū mātātu ina pānīšu*; see Zgoll, 2006: 33.

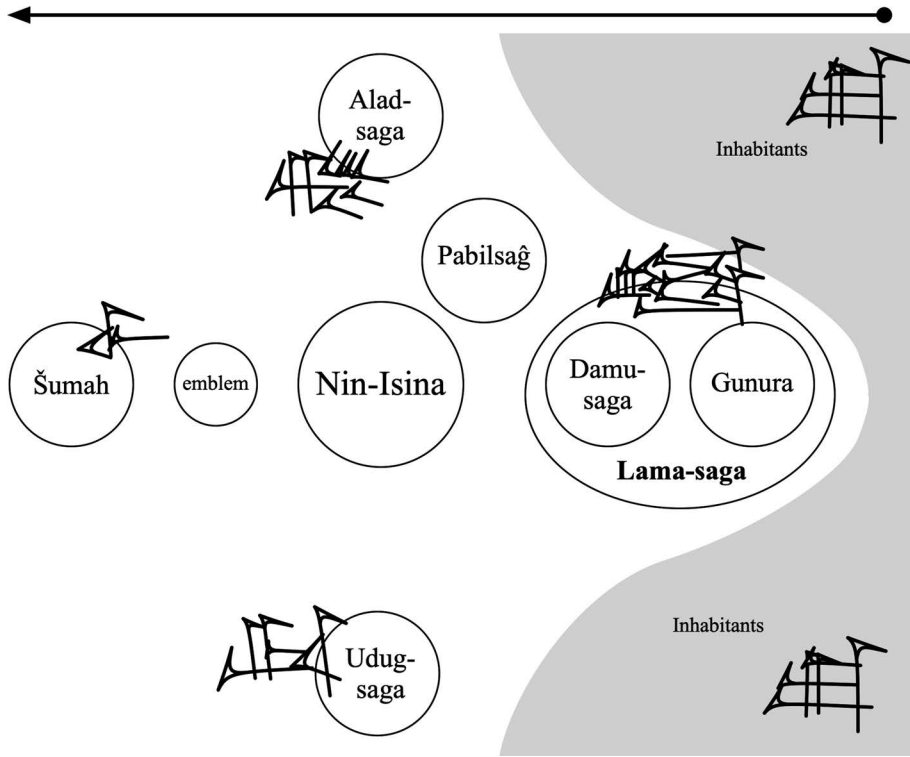


Fig. 2: Graph showing a reconstruction of the procession described in Nin-Isina's Journey to Nippur (drawing by the author).

In the moon god's journey described in the short song of praise *Sîn-iddinam* A, offerings happen already in Ur, where the king presents his gifts to Nanna. The *ser₃-gid₂-da* of Ninurta may hint at festivities at the beginning or during the trip as well:

[He prepares the path for the] ki[ng, who travels to the Abzu.]

He prepares the path for Ninurta, who travels to Eridu.

He made the road festive; he ... for him.

He leads Ninurta joyfully (into) the Abzu of Eridu.

(*Ninurta's Journey to Eridu* I, col. ii,1'–4')²⁹

²⁹ Read after CBS 13938 (CDLI P268939):

1' lug[al abzu-še₃ du-a-ne₂ ĝiri₃ mu-na-ĝa₂-ĝa₂]

2' ^dnin-urta eridu^{ki}-še₃ d[u-a-ne₂] / ĝiri₃ mu-na-ĝa₂-ĝa₂

3' kaskal izim-gen₇ mu-na-du₃ gu₂ mu-na[-]

4' ^dnin-urta abzu eridu^{ki}-ga ul-la mi-ni-ib-tum₂-mu

4. Rites en route

Uruk lay ahead of the offerings, Larsa lay behind them.
 She brought out of the house what was (never) brought out of the house,
 and what must not be brought out of the house.
 Holy Inana brought out of the house what was (never) brought out of the
 house.

May you be greeted, may you be greeted, o boat, may you be greeted.
 O boat of my father, may you be greeted, o boat may you be greeted.
 She laid out flour before the barge and spread bran.
 At her feet was a covered bronze *gakkul* vat.
 With her fingers she pulled out the boxwood pin for him:
 “Let me rub first-quality oil on its peg.”
 “May ghee, syrup, and wine be plentiful in your midst,”
 “May the *suhur* carp and the *eštub* carp rejoice at the prow of your boat.”
 (But) the boat did not give to her its cargo (saying) “I am going to Nippur.”
 (*Nanna-Suen’s Journey to Nippur*, lines 220–230)³⁰

The moon god stops five times on his trip from Ur to Nippur. The stops are Enegi,³¹ Larsa, Uruk, Šuruppag, and Tummal. As the above quote from the composition details, at each location the city goddess meets the moon god. Even if these places are not the moon god’s destination, the various temples fully partake in the rituals. Offerings are presented to the ship and parts of the ship are anointed. The offerings appear not to be added to the gifts that will be presented by Nanna-Suen to Enlil later in Nippur.

Apart from the moon god’s journey, the extant Sumerian literary compositions do not provide much information regarding rituals performed during the trip. Usu-

³⁰ Read after JRL 1060 (*CDLI* P430871):

220 niĝdaba-a saĝ-be₂ larsam-ma ʿegir¹-be₂ IM^{rki}¹-a
 221 ʿe₂¹-ta nu-e₃ e₂-ta nu-e₃ ʿe₂¹-ta nam-ta-ab-e₃
 222 d^še₃-ʿri₂¹-da sa₆-ga ʿe₂¹-<ta> nu-e₃ e₂-ta nam-ta-ab-e₃
 223 silim-ma he₂-me-en silim-ma he₂-me-en ĝeš^{ma}₂ silim-ma ʿhe₂-me-en¹
 224 ĝeš^{ma}₂ aia-ĝu₁₀ silim-ma he₂-me-en ĝeš^{ma}₂ ʿsilim¹-ma he₂-ʿme¹-[en]
 225 ĝeš^{ma}₂-gur₈-ra zi₃ im-ma-ab-gub-be₂ du₈ im-ma-ab-[gub-be₂]
 226 ʿĝiri₃¹-ne₂ gakkul zabar-ra im-ma-an-š_u₂-š_u₂
 a šu-si-ne₂ ĝeš^{bulug} taskarin-<na> mu-na-bu-bu-r[e]
 227 aškud₂-be₂ i₃ he-nun-na-ka šu ga-am₃-ma-ni-i[b]-u[r₃]
 228 ša₃-zu-a i₃-nun lal₃ ĝeš^{tin} niĝ₂ he₂-ni-ib-gu-ul-gu-[ul]
 229 ʿsi¹ ĝeš^{ma}₂ saĝ-ĝa₂-zu suhur^{ku}₆ eštub^{ku}₆ ul-ul hu-ʿmu-ni-ib¹-[du₁₁]
 230 [ĝeš^{ma}₂]-ʿe¹ gu₂-be₂ nu-mu-na-ab-šum₂-mu nibru^{rki}¹-š₃ ba-DU¹-[un]

³¹ The place name written with the sign IM refers to three different localities: (1) Enegi, a cult place of Ninazu, (2) Karkar, a cult place of the weather god Iškur, and (3) Muru, a cult place of Ninkilim. See Edzard, 1976–1980.

ally, the accounts do not mention stops at all. Somewhat ambiguous is *Enki's Journey to Nippur*. In line 90 of the poem, Enki slays oxen and slaughters sheep.³² The slaughtered oxen and sheep, however, are not among the food prepared for the gods after Enki arrived in Nippur.

5. Rites at the destination

(All) things of a year Nanna had brought in from the pure pen for his father
 After he had prepared the ship of the first-fruit offerings, \ Enlil.
 in order to bring (all of it) to Enlil in Nippur,
 in order to prepare in the courtyard of the Ekur the first-fruit offerings,
 for that purpose, his mother, Ninsumuna, has born the hero,
 for that purpose, his mother, Ninsumuna, has born Sulgi.

(*Sulgi* F, lines 14–19)³³

When deities arrive at their destination, they usually present the visited deity with gifts. The lines quoted above come from a royal song of praise dedicated to Sulgi, which is known from a number of Old Babylonian manuscripts. The king's prerogative was, among many other things, to gather the offerings for the gods. These are then presented by Nanna to his father in Nippur. We encounter a similar aspect in another journey by the moon-god. A short song of praise dedicated to the Larsa king *Sîn-iddinam* shows that the king gathers offerings, which he brings before Nanna in Ur. The god then travels with these offerings to Nippur:

The first barley he tied together (for) the lapis lazuli Ekur.
 He (i.e., the king) [brought] the load to the Quay-of-Life, the quay of Ur.
 He had it enter in joy the Emah, the house of Sîn.
 Nanna rejoiced over the king; Ningal ... because of him.

(*Sîn-iddinam* A, lines 4'–7')³⁴

³² ^den-ki-ke₄ gud im-ma-ab-gaz-e udu im-ma-ab-šar₂-re.

³³ Read after HS 1460 (source A):

14 ^dnanna¹-a niĝ₂ mu-a aia-ne₂ ^den-lil₂-ra tur₃ ku₃-ta ¹mu-na-ni-in-ku₄-ku₄¹

15 ma₂ nesaĝ-[ĝa₂-ke₄] si um-sa₂

16 ^den-lil₂-¹ra¹ nibru^{ki} tumu₃-de₃

17 kisal e₂-kur-ra-ka nesaĝ si sa₂-sa₂-e-de₃

18 ur-saĝ ¹ama¹-ne₂-e ¹ur₅¹-re ba-an-du₂ ^dnin-sumun₂-na-ke₄

19 sul-gi ama-¹ne₂-e ur₅¹-re ba-an-du₂ ^dnin-sumun₂-na-ke₄

For the translation compare Lämmerhirt, 2012: 55.

³⁴ Read after BM 14016 (source A):

4' ¹še saĝ¹-be₂ gu₂-sa bi₂-in-la₂-la₂ e₂-kur za-gin₃

5' ¹kar¹-nam-ti-la kar uri₅^{ki}-ma-še₃ gu₂-un-be₂ i[m-mi-ni-u₅]

6' e₂-mah-a e₂ ^{d+}suen-na-še₃ hul₂-la ba-ni-in-ku₄

7' lugal-ra ^dnanna mu-da-hul₂ ^dnin-ga[l m]u-un-ši-in-[-]

Economic records dating to the Ur III period occasionally refer to expenditures provided upon arrival or return of a divinity. According to one text, for instance, goddess Nin-Isina of Umma receives one fattened sheep upon arrival in Nippur at the embankment of the Amar-Suenītum-canal.³⁵ More prestigious gifts such as silver rings are given upon entrance to the temple of Ninlil.³⁶

In the literary sources, the general verb used is *si-sa*₂, “to prepare/arrange properly.”³⁷ *Nin-Isina’s Journey to Nippur* uses the verb *sa*₂-*du*₁₁, “to arrive,” in the same context.³⁸ The gifts are often summarized as *niġdaba*, “offerings.” In *Nanna-Suen’s Journey to Nippur*, the god recites before the Ekur’s doorkeeper all the gifts he had brought upon arrival. The doorkeeper Kalkal is pleased and lets the moon god pass:

Nanna-Suen arranged the offerings there.
Enlil, rejoicing over the offerings,
gave bread to his son Suen.

(*Nanna-Suen’s Journey to Nippur*, lines 316–318)³⁹

6. Banquets and other festivities

In the sanctuary of Nippur, Enki
let Enlil, his father, eat bread.
He let An sit at an august place.
He placed Enlil next to An.
He let Nintu sit at the place of honor.
He let the Anuna gods sit on their pedestals.
These *guests* drank beer and enjoyed *kurun* beer,
they *filled* the bronze AGA-vessels *up to the rim*,
they competed about the bronze (vessels) in heaven and on earth.

See Brisch, 2007: 122–123; Wagensooner, 2007: 547–548.

³⁵ *SACT* 1, 154 (*CDLI* P128909); see Sallaberger, 1993: 153 with note 733.

³⁶ Sallaberger, 1993: 153.

³⁷ See, for instance, *Nanna-Suen’s Journey to Nippur*, line 316: ^dnanna-suen-e niġdaba si bi₂-in-sa₂, “Nanna-Suen prepared therein (i.e., Enlil’s temple) the offerings.” Very similar, *Sin-iddinam* A, line 11: ^dsuen-e niġdaba si bi₂-in-sa₂ nibru^{ki}-še₃ ^rnam[?]-tumu₃¹, “Suen prepared the offerings therein and brought them to Nippur.”; *Sulgi* F, line 15 (see note 33, above).

³⁸ The Old Babylonian manuscript Saeedi 212 is partially written with non-orthographic spellings. Line 20 reads: e₂-[ku]r za-gin₃ ^den-lil₂-^rla₂-ka¹ niġdaba sa {×} pi-in-du, “In the lapislazuli Ekur of Enlil she (i.e., Nin-Isina) made the offerings arrive.”

³⁹ Read after *TMH NF* 3, 4 (*CDLI* P345599):

316 ^dranna-^dsuen-e¹ niġdaba si bi₂-in-sa₂

317 ^den-lil₂-e niġdaba hul₂-la-da

318 dumu-ne₂ ^dsuen-ra inda₃ mu-na-ba-e

They let the *tilimda* bowls – pure barges – ...
 After the beer has been drunk and the *kurun* beer has been enjoyed,
 after they *stood up* (in order to) leave the house,
 they let Enlil stand in joy in Nippur.

(*Enki's Journey to Nippur*, lines 101–113)⁴⁰

A banquet is usually the crowning moment of a divine journey, but only a few of the extant texts refer to banquets explicitly. The quoted lines are attested in *Enki's Journey to Nippur*. The god Enki is visited by several deities: Ninĝirsu or Ninurta and Inana. But on one occasion, Enki travels to Enlil in Nippur by boat after he completed the construction of his temple in Eridu.⁴¹ Among the Sumerian divine journeys *Enki's Journey to Nippur* is the best known, since the composition was part of the advanced scribal curriculum. Hence, many manuscripts survive to this day.⁴²

When the moon god arrives in Nippur at the Ekur, he prepares for his father Enlil the bread offerings. Enlil is happy about these offerings and orders the temple's servants as follows:

Enlil rejoiced over Suen, speaking kindly:
 "Give to my little one, someone who (likes to) eat sweet cake, sweet cake!
 Give to my Nanna, who loves eating sweet cake, sweet cake!
 Bring forth for him from the Ekur bread allotment and august bread!
 Pour out for him first-quality beer, my pure ...!"

(*Nanna-Suen's Journey to Nippur*, line 319–322)⁴³

⁴⁰ Read with Ceccarelli, 2012: 95–96:

101 ^den-ki-ke₄ eš₃-e nibru^{ki}-a
 102 aia-ne₂ ^den-lil₂-ra inda₃ mu-un-gu₇-e
 103 an ki mah-a im-ma-an-tuš
 104 an-ra ^den-lil₂ im-ma-ni-in-us₂
 105 ^dnin-tur₅ za₃-gal-la im-mi-in-tuš
 106 ^da-nun-na ki-us₂-ki-us₂-be₂ im-mi-in-dur₂-ru-ne-eš
 107 lu₂-u₃-ne kaš i₃-na₈-na₈-e kurun₂ im-du₁₀-ge-ne
 108 ^{zabar}AGA im-kur₄-kur₄-re-ne
 109 zabar-e an uraš-e a-da-min₃ mu-un-e₃-ne
 110 ti-lim-da ma₂-gur₈ ku₃ im-bi-bi-re-e-ne
 111 kaš ba-naĝ kurun₂ ba-du₁₀-ga-ta
 112 e₂-ta ĝiri₃-be₂-a ba-ra-ĝar-ra-ta
 113 ^den-lil₂ nibru^{ki}-a hul₂-la mu-ni-ib-DU

⁴¹ One other text, known from two fragments from Ur, alludes to Enki's presence in Nippur; see Ludwig, 2006.

⁴² For a list of witnesses see Ceccarelli, 2012: 91–92. Add the unprovenanced source *CUSAS* 42, 669.

⁴³ Read after *BL* 1 (*CDLI* P414091):

In the account of the journey of the healing goddess Nin-Isina to Nippur a banquet may be indicated by the following line:

In the spacious courtyard, the courtyard of Enlil she offered in great quantity oxen and sheep.

(*Nin-Isina's Journey to Nippur*, line 21)⁴⁴

The main festivities in this text, however, happen when the goddess and her entourage returned to Isin. The concluding lines of the composition testify to a sumptuous dinner accompanied by music:

They (i.e., Nin-Isina and her spouse Pabilsaĝ) entered the Egalmah, her beloved cella,
And took seat on the great august dais. Provisions are provided in great quantity there.

Her beloved pure harps, Ninhinun and Ninigizibara,
enter(?) loudly resounding in pure song and abundant praise for her.

The pure drum and pure harp play for her.

The *gala*-priests ... rise for Nin-Isina,

After An, Enlil, Enki, and Ninmah have soothed her,

After Ninmah in her Egalmah has made (her) abode pleasant,

The king slays an ox for her, he slaughters a sheep for her.

Syrup, wine, emmer-beer, *kurunnu*-beer, and first-quality beer he libates for her.

(*Nin-Isina's Journey to Nippur*, line 40–49)⁴⁵

319 ^dsuen-ra ^den-lil₂ mu-da-hul₂ m[i₂ Z]i na-mu-ne

320 ^rlu₂-tur-ĝu₁₀ lu₂¹ ^rinda₃ gug₂ gu₇-ra ^rinda₃ gug₂¹ šum₂-mu-na-ab-[ze₂-e]n

321 ^dnanna-ĝu₁₀ ^rinda₃ gug₂ gu₇¹ [ki] aĝ₂-^rĝa₂¹-ra / ^rinda₃ gug₂ ^ršum₂¹-mu-na-ab-ze₂-^ren¹

322 ^rinda₃-ba u₃ ^rinda₃ mah-ĝu₁₀ ^re₂¹-kur-ra e₃-mu-na-ra-ab-^rze₂¹-en

323 kaš sag₁₀-ga a₂ sikil-la-ĝu₁₀ de₂-mu-na-ra-ab-ze₂-^ren¹

⁴⁴ Read after the Old Babylonian manuscript Saeedi 212:

21 kisal [daĝa]-la kisal ^den-lil₂-^rla₂¹-ka gud udu mi-ni-ib-šar₂-šar₂

⁴⁵ Read after the Old Babylonian manuscript Saeedi 212:

40 e₂-gal-mah ame₂ ki aĝ₂-ĝa₂-ne₂-še₃ am₃-^rma¹-da-an-ku₄-ku₄

41 para₁₀ gal mah-be₂ dur₂^{du-ur}-be₂ mi-ni-ĝar-re-eš₂ ^rniĝ₂¹ mi-ni-ib-gul-gul-ne

42 ^rbalaĝ¹ ku₃ ki aĝ₂-ĝa₂-ne₂ nin-hi-nun ^dnin-igi-zi-bar-ra

43 ser₃ ku₃ za₃-me-en la₂^a-la ĝal₂-la-ne₂ gu <<he₂>> nun di i₃-^rku¹-re

44 ub ku₃ balaĝ ku₃-be₂ šu-uš ^rmu¹-un-na-^rta¹-ke₄

45 gala re-a mu-un-na-zi-zi-zi ^dnin-i₃-^rsi¹-in^{ki}-na-ra

46 an ^den-lil₂ ^den-ki ^dnin-mah-be₂ [m]u-un-^rše₃^{*}¹-huĝ₂-ĝa₂-ta

47 ^dnin-mah-e e₂-gal-mah-an-ne₂-a ki-tuš mi-ni-in-du₁₀-ga-ta

48 lugal-e gud mu-un-na-ab-gaz-e ^rudu¹ mu-un-na-ab-šar₂-e

49 la₃ ĝešt_{in} u₂-lu-šin-ši-en gu-ru-^run-ši^{*}¹-en^{*} mu-un-na-ba-ab-le-e

Some other texts in this corpus are less explicit. An account of a journey of Ninurta to Eridu mentions the following:

When the king entered Abzu, the day was abundance, the night was
magnificence.

When Ninurta entered Eridu, the day was abundance, the night was
magnificence.

(*Ninurta's Journey to Eridu I*, col. ii, 5'–6')⁴⁶

In the poem *Inana and Enki*, a poem that loosely can be related to the topic of divine journeys, the goddess is served refreshments upon entering Eridu:

After Inana had entered the Abzu (and) Eridu,
She eats butter cake.

They pour cool water for her, which refreshes the heart,
And give her beer to drink in front of the lion,
He treats her like a friend, make her feel like a colleague.
At the pure table, the heavenly table,
he welcomes holy Inana.

Enki and Inana drink beer together and enjoy *kurun* beer,
they filled the bronze AGA-vessels up to the rim.

(*Inana and Enki*, Seg. B, 17'–26')⁴⁷

In this composition, Inana tricks Enki into handing over the divine powers to her. She leaves Eridu with the Boat-of-Heaven. Enki, with the help of his minister Isimu and a number of supernatural creatures, attempts to stop her en route.

Economic records dating to the end of the third millennium BCE occasionally refer to offerings given to deities at departure or upon their arrival. Thus, we learn

⁴⁶ Read after CBS 13938 (*CDLI P268939*):

5' lugal abzu-a ku₄-a-ne₂ u₄ he₂-ġal₂-am₃ gi₆ giri₁₇-zal-am₃

6' ^dnin-urta eridu^{ki}-ga ku₄-a-ne₂ u₄ he₂-ġal₂-am₃ gi₆ giri₁₇-zal-am₃

⁴⁷ Read after CBS 13571+ (*CDLI P268601*), col. ii:

17' ^dinana abzu eridu^{ki}-še₃ um-<ma-ku₄-ra-ta>

18' gug₂ i₃-nun-ta im-da-gu₇-e

19' a sed niġ₂ ša₃ te mu-na-de₂-e-ne

20' igi piriġ-ġa₂-ka kaš mu-na-na₈-na₈

21' ġa₂ ma-la-še₃ mu-na-si-ge nam-ge₄-me-eš₃ mu-na-ak-e

22' ^{ġeš}bansur ku₃ ^{ġeš}bansur an-na-ke₄

23' ku₃ ^dinana-ra niġ₂-silim mu-na-e

24' ^den-ki ^dinana e-en-be₂-ta

25' abzu-a kaš im-na₈-na₈-ne kurun₂ im-^fdu₁₀-ge¹-ne

26' ^{fzabar}aga im-gur₄-gur₄-e-^fne¹

The final lines of this passage are close to *Enki's Journey to Nippur*; see note 40, above.

in one document from Puzriš-Dagan that one fattened sheep belonging to the palace is provided for Nin-Isina of Umma when she arrives from Umma.⁴⁸

7. Music

The *ala* drums, which were not available, he (i.e., Enki) let reach the place.
The bronze *sem* drums, which were not available, he made go out to their
place.

(*Enki's Journey to Nippur*, line 91–92)⁴⁹

Vocabulary pertaining to music and musical performance is scarce. Even in the longest and most detailed composition, *Nanna-Suen's Journey to Nippur*, there is no mention of any musical performance at all. The above-quoted lines appear in *Enki's Journey to Nippur*. Their context describes Enki gathering gifts for Enlil. The use of music in the context of the divine journey is clearer in *Nin-Isina's Journey to Nippur*. This account briefly refers to it as part of the festivities upon the goddess's return to Isin:

Her beloved pure harps, Ninhinun and Ninigizibara,
enter(?) loudly resounding in pure song and abundant praise for her.

The pure drum and pure harp play for her.

(*Nin-Isina's Journey to Nippur*, line 42–44)⁵⁰

According to its rubric, the composition is a *ser₃-nam-šub*, an “incantation-song.” Even if its content is more narrative than hymnic, texts such as these were likely performed.⁵¹ The Old Babylonian manuscript is divided into three *ki-ru-gu₂* sections, another indicator for its ritual performance.

⁴⁸ *SACT* 1, 154 (*CDLI* P128909), lines 3–6. For this document see Sallaberger, 1993: 153 with note 733.

⁴⁹ Read after Ceccarelli, 2012: 95:

91 ^{kuš}a₂-la₂ nu-ĝal₂-la ki-be₂-še₃ sa₂ im-du₁₁

92 sem₅^{zabar} nu-ĝal₂-la ki-be₂-še₃ im-mi-in-e₃

⁵⁰ Read after the Old Babylonian manuscript Saeedi 212:

42 ʾbalaĝ¹ ku₃ ki aĝ₂-ĝa₂-ne₂ nin-hi-nun ^dnin-igi-zi-bar-ra

43 ser₃ ku₃ za₃-me-en la₂^a-la ĝal₂-la-ne₂ gu <<he₂>> nun di i₃-ʾku¹-re

44 ub ku₃ balaĝ ku₃-be₂ šu-uš ʾmu¹-un-na-ʾta¹-ke₄

Considering the frequent use of non-orthographic spelling in this source, the verb in line 43 may be a spelling for ku₄, “to enter.”

⁵¹ See Shehata, 2009: 272.

8. The role of the king

With Ninlil they (i.e., divine attendants) sit next to each other at the feasting
Sulgi brings along to them his great offerings. \ place.

(*Sulgi R*, lines 66–67)⁵²

The royal figure appears occasionally in direct relation to the divine journey. The two lines quoted from the song of praise *Sulgi R* show his clear participation in the rituals pertaining to the divine procession. These events happen at the destination. The composition *Sulgi R* is dedicated to the construction of a processional boat (ma₂-gur₈) of Ninlil, which is used for the goddess's short journey to the sanctuary Tummal just outside of Nippur.⁵³ According to the text, the goddess instructs Sulgi to build it (lines 3–4). This event can be linked to the name of Sulgi's eighth year: "Year, the processional boat of Ninlil was caulked."⁵⁴ The first half of the text addresses the different parts of the barge. Thereafter, starting in line 41, the events after completion of the construction are described. The king appears throughout the events that pertain to the journey. It is he, who gathers the materials for the construction of the barge (line 8) and it is the king, who establishes the feasts and rituals (lines 41–42).

In the composition, which was quoted in part at the onset of this paper, the king is mentioned during the trip:

She (i.e., Nin-Isina) directs the boat on the Kirsig-canal. The king crosses
The king puts his feet on both banks. \ over for her.

(*Nin-Isina's Journey to Nippur*, lines 15–16)⁵⁵

After having arrived in Nippur, the goddess presents her gifts to Enlil. Here too, the king plays a part in the story line.⁵⁶ He is also involved in the concluding festivities in Isin after the party returns there:

⁵² Read after CBS 8316 + CBS 14111 (*CDLI P263157*):

66 ⁴nin-lil₂-da ki ^êšešbun₂-na-ka za₃-ge mu-ti-ni-ib₂-si-eš₂

67 sul-gi sipa ni^êdaba gal-gal-la-ne₂ mu-ne-ši¹-ib₂-dib-dib-be₂

⁵³ For this composition and the similar text *Isme-Dagan I* pertaining to the construction of a chariot for Enlil see Klein, 1990.

⁵⁴ mu ma₂-gur₈ ⁴nin-lil₂-la₂ ba-ab-du₈.

⁵⁵ Read after the Old Babylonian manuscript Saeedi 212:

15 ^r17¹kir₁₁-sig-e ^êes^{es}ma₂ mu-¹da-ri lugal¹ mu-¹un¹-da-¹ab¹-le-e

16 lugal-e gu₂-¹tab¹ min-na-be₂ ^êiri₃ mu-un-¹na-^êa₂¹-^êa₂

⁵⁶ The "king" is not to be mistaken as Nin-Isina's spouse, Pabilsa^ê, who, in his own account of a journey to Nippur, is referred to as king. In *Nin-Isina's Journey*, Pabilsa^ê appears to stay back in Isin. When the goddess returns from Nippur, he greets her.

The king slays an ox for her, he slaughters a sheep for her.
Syrup, wine, emmer-beer, and *kurunnu*-beer he libates for her.

(*Nin-Isina's Journey to Nippur*, lines 48–49)⁵⁷

Some indication on the royal role in these journeys is also attested in the short text *Sîn-iddinam A*, which describes a journey of the moon god to Nippur. In this text, the king gathers offerings and brings them, supposedly from Larsa, before the moon god in Ur. But Ur is not the final destination of these offerings, as they are not destined for the moon god, but for Enlil in Nippur. Enlil's son Nanna serves as intermediary between the king and the highest god in the pantheon:

After he brought them to Nippur, Suen prepared the offerings.
He brought them into the Ekur, Enlil's temple.
Enlil, being rejoiced over the offerings, decreed a good fate for him.

(*Sîn-iddinam A*, lines 11', β, and 12')⁵⁸

Other than in *Nanna-Suen's Journey to Nippur*, the purpose of this journey is not abundance in the land, but a good fate and a prosperous reign for king Sîn-iddinam. This tripartite division of the journey with the king gathering offerings first can also be seen in the royal song of praise *Sulgi F*. The king's role to take care of the offerings is among the reasons why Ninsumuna bore Sulgi.⁵⁹

9. Conclusions

As the examples above have shown, the topic of Sumerian divine journeys does not appear as formulized within the corpus of Sumerian literature as, for instance, precedence debates (*Rangstreitgespräche*).⁶⁰ Travelling deities are attested in several very different types of texts. While a few narrative poems address the journey

⁵⁷ Read after the Old Babylonian manuscript Saeedi 212:

48 lugal-e gud mu-un-na-ab-gaz-e ʾudu¹ mu-un-na-ab-šar₂-e

49 la₃ ḡeštin u₂-lu-šin-ši-en gu-ru-ʾun-ši*¹-en* mu-un-na-ba-ab-le-e

The composition's final line, line 49, has several variants compared to the bilingual recension known from Middle Assyrian Assur. The two types of beer, emmer-beer and *kurunnu*-beer, rendered *ulušinnu* and *kurunnu* in the Akkadian version respectively, are written syllabically. The Middle Assyrian spelling kaš-ziz₂-su₃ is written *u₂-lu-šen-ši-en*; the spelling kaš-su₃ is written *gu-ru-un-ši*-en**. Cohen (2017: 90) read the last two signs [ka]š mah, but the tablet does not support this reading. Thus, the spelling *ši-en* appears to represent a phonetic writing for what later appears as su₃. The usual Sumerian equivalents for *ulušinnu* and *kurunnu* are kaš-ziz₂-a-an and kaš-din respectively.

⁵⁸ Read after the manuscripts *CT* 42, 45 (*CDLI* P283737) and *UET* 6, 98 (*CDLI* P346183):

11' ^dsuen niḡdaba-da si bi₂-in-sa₂ nibru^{ki}-še₃ ʾin[?]-tumu₃[?]¹

β e₂-kur-re e₂ ^den-lil₂-la₂-še₃ b[i₂-i]n-ku₄

12' ^den-lil₂ niḡdaba-da hul₂-la-e nam du₁₀ mu-ni-tar

⁵⁹ For the full quote see above, Chapter "Rites at the destination."

⁶⁰ See, for instance, Mittermayer, 2019: 2; 2020.

of a god as the or at least one of the main topics, other compositions only hint at a procession or journey. Similarly, the level of detail varies greatly between the different examples or attestations. Some put particular emphasis on the mode of transport, others put the reasons for the journey into greater focus. This paper focused, in particular, on rituals mentioned or described in the extant sources.

Apart from Sumerian literature, divine processions are particularly well known from much later evidence. Here, the New Year festival comes to mind. We are best informed about the processions of Marduk and later Anu. Not so much unlike the moon god in the afore-mentioned Sumerian narrative *Nanna-Suen's Journey to Nippur*, Late Babylonian ritual texts provide ample evidence for the different stops during the New Year festival. The main difference is that the moon god, similar to the other major gods, travels to other cities, while Marduk only travels to the *bīt akīti*. While *Nanna-Suen's Journey* appears rather stereotypic in this regard – the account of every single stop is repeated word for word except for the place names and the respective city goddess –, the late ritual descriptions are far more detailed. In total, Marduk stops eleven times between his temple and the *bīt akīti*.⁶¹ According to the Seleucid era texts, Anu stops seven times on his procession from the Bīt rēš temple in Uruk to the *bīt akīti*.⁶² The gods travel from the inner city (of Babylon) to the *bīt akīti* outside of the city walls. Upon completion of the rituals there, they return to the city three days later.⁶³ Deities from other cities participate in these festivities as well. A Late Babylonian ritual text states as follows: “Anu and Enlil travel from Uruk and Nippur to Babylon to grasp Bēl’s hand. They move in procession with him to the House-of-Prayers (i.e., *bīt akīti*).”⁶⁴ The text also mentions that all the gods from all the cult centres come to Babylon on this occasion. The cases of Marduk’s and Anu’s cultic processions are only the two better attested instances.

Nebuchadnezzar II commemorates in his inscriptions the construction of processional boats. Like Ninlil’s barge in *Sulgi R*, also the boat of Marduk is heavily decorated:

The Ma’umuša, (Marduk’s) processional boat, [his] pure vehicle,
its sides, prow and stern, its equipment, its hold, I coated with eagles
and *mušhuššu*-dragons, of *šāriru*-gold.

I decorated it with precious stones and in the current of the pure Euphrates

I had its brilliance made like stars in the firmament.

I filled it with splendor for the amazement of all the people.

At the festivities of the beginning of the year, I placed Marduk,

⁶¹ See Pongratz-Leisten, 1994: 40–41.

⁶² See Pongratz-Leisten, 1994: 42–43.

⁶³ See Zgoll, 2006: 18.

⁶⁴ BM 32654+, rev. vi,8–12. See Pongratz-Leisten, 1994: 133; Lambert, 2013: 296–297.

the Enlil of the gods, in its midst and had him go in procession
to the magnificent festival of his august *Akītu*.

(Nebuchadnezzar II, WBA, col. v, 19–36)⁶⁵

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⁶⁵ See Debourse, 2022: 54–55. For a discussion of processional boats see Pongratz-Leisten, 1994: 196–198.

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6.

Philological and Archaeological Researches

An Old Babylonian Cylinder Seal from the Museo Orientale Umberto Scerrato

Notes on a Digital Microscopic High Magnification Analysis

Romolo Loreto

1. Introduction

Thirty-seven seals constitute a collection exhibit in the Museo Orientale Umberto Scerrato (MOUS) of the University of Napoli “L’Orientale”. The lot was acquired during the 1960s of the last century by Professor of Semitic Studies Giovanni Garbini in order to give form to a permanent collection for educational purposes.¹ All of them, both cylinder and stamp seals were previously studied by L. Cagni,² S. Campurra Mazzoni,³ and A. de Maigret⁴ in the early 1970s; finally, they were described by S. Graziani in the catalogue of the MOUS, whose last edited version (2nd) appeared in 2018.⁵

Since the previous studies focused on the stylistic and iconographic features of both cylindrical and stamp seals, a technological study mainly addressed to engraving and intaglio techniques will be carried out within the laboratory activities of the MOUS and the teaching of Archaeology and Art History of the Ancient Near East at “L’Orientale”. The collection is even more valuable because the seals cover a wide chronological range, stretching from the Akkadian to the Sassanian period, allowing to observe the technological changes that characterize the Ancient Near Eastern glyptic, based on a high magnification digital microscopic analysis approach and the support of 3D orthorectified models.

An Old Babylonian cylinder seal engraved with a worshipping scene is the main topic of this contribution. Nonetheless, in order to better suggest the possible identification of engraving and intaglio techniques, an Akkadian (MO255) and an Ur III cylinder seal (MO257) are taken into account for comparison.

¹ Graziani, 2018: 20.

² Cagni, 1971; 1972.

³ Campurra Mazzoni, 1972.

⁴ De Maigret, 1974.

⁵ Graziani, 2018.

The history of developments of seal-cutting techniques is deeply indebted to the studies of Sax / Meeks,⁶ and Sax / McNabb / Meeks,⁷ who were able to replicate experimentally the tool marks of the seal cutter on the basis of the British Museum collection of seals. It is on their results that one ventures in the collection of the MOUS.

1.1 The iconographies

The analysis here introduced takes place from an Old Babylonian cylinder seal (MO262, Fig. 1). It is a 2.2 cm high and 1.3 cm in diameter piece of haematite, the most common type of stone adopted right after the Akkadian period together with chlorite.⁸ A double worshipping scene is engraved. On the left, the king offers a goat to the god Shamash who is holding his ritual knife, under the sun disc and the crescent; on the right, a “priest” or “attendant” is holding a bucket and a sprinkler (perhaps making a libation according to Cagni, 1971; Campurra Mazzoni, 1972; Graziani, 2018); the god Adad who is standing on a bull (perhaps a wild animal or a dragon according to Cagni, 1971; Campurra Mazzoni, 1972; Graziani, 2018) is holding a bolt or “lightning fork” with his right hand and an axe with his left hand and the wavy line is a sort of rope or leash attached to the nose of the bull on which the storm god stand. Under Adad and in front of him are quite visible two deep scratches that affected the seal otherwise well preserved.

MO255 (Fig. 1), a serpentine stone 3.4 cm high and 2 cm in diameter, shows a presentation scene, among the most frequent iconography of the Akkadian period: a doubled headed god (Usmu, vizir of Ea) introduces Zu, the bird-god, to the water god Ea sitting on his throne.⁹ Behind Zu a third deity stands; behind Ea a kneeling nude attendant is holding the gate-pole under the lunar crescent, from where three fishes are swimming up towards the water god. Ea, sitting on a throne simply rendered by a vertical line, has his left shoulder bare, he is holding a jar with his right hand and his left arm addressed toward the upcoming visitors. The doubled headed god has his right shoulder bare and both arms bent towards his chest. Zu, whose lower half of the body reveals his bird nature, is followed by a last figure with a long skirt and his right hand on Zu’s left shoulder. Ea has got a horned headdress; the doubled headed figure has a flat hat; Zu has got a diadem, possibly; the last figure after Zu has got a flat cap with two disks close to his head suggesting astral symbols connected with a natural myth or a different cap type (?). All of them have got a long beard. Ea wears the typical ruffles dress, whilst the other, apart from Zu, a long grooves skirt.

⁶ Sax / Meeks, 1994.

⁷ Sax / McNabb / Meeks, 1998.

⁸ Collon, 2005: 36, 41.

⁹ Collon, 2005: 32–35.

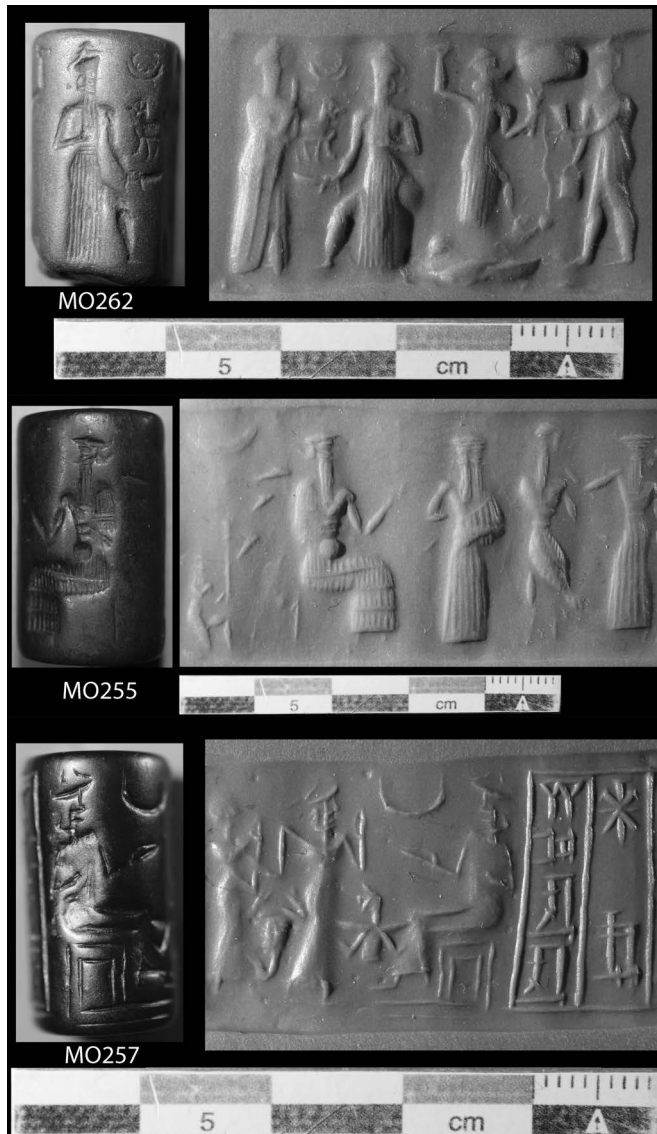


Fig. 1: MO262, MO255, and MO257. Seals and stamps on polymer clay.

The Ur III seal MO257 (Fig. 1), a serpentine stone 2.1 cm high and 1.2 cm in diameter, also displays an introductory scene rather standardized.¹⁰ A worshiper is led by a goddess before a god or goddess (no beard clearly visible) seated on a box-like or panelled throne under the crescent. Between the figures a scorpion is visible, whilst between the leading goddess and the seated god/goddess also a

¹⁰ Collon, 2005: 36.

winged figure stands, possibly a lion-headed eagle as in BM 119330.¹¹ Finally, an inscribed panel, that shall be discussed later on, is carved behind the back of the seated god.

1.2 Engraving techniques: state of the art

The amount of seals emerged from the Ancient Near East archaeological contexts is extremely varied and the abilities, techniques, and the general expertise of a seal cutter should have been resourceful as well. Factors in the making of a product include not only technical ones, such as the stone quality, the type of tools and abrasive agents adopted, but also the iconographic style, whose choice could be linked to the workshop or to the commissioner, or simply derived from the cutter himself (a master or an apprentice) and, of course, the amount of time and patience devoted to the task. As previously stated, the history of developments of seal-cutting techniques is deeply indebted to the studies of Sax / Meeks and Sax / McNabb / Meeks,¹² who were able to replicate experimentally the tools' marks of the seal cutter on the basis of both the seals collection of the British Museum and the usage and adoption of high quality stone types. Therefore, in this paper the same technical language used by Sax *et al.* (1998) is adopted, defining at first vertical, horizontal and diagonal orientations, then, to identify the tools' marks and technical details that can allow to define the engraving process.

Apart from a wide range of blended techniques, basically four main procedures are defined: micro-chipping by indirect or direct percussion, as well as a direct scratching or gouging (with a forward-backward movement) using stones or flint or obsidian or metal tools; filing or sawing by a metal very sharp file or saw; drilling by bow-drill or simply by bare handling a pointed drill tool; and wheel-cutting by vertical wheel or by horizontal wheel. All of them possibly include a wide range of variations based on the material, the fundamental charge of abrasives and the way of using the tools.

Among several diagnostic techniques, most of them adopted by Sax *et al.* (1998), it must be stressed that the most suitable instrument for a better detection of the most significant traces left by the working tools is the Scanning Electron Microscope (SEM), already used (together with X-ray) to analyse some cylinder seals' details, such as the central bore or the drill marks by Gorelick / Gwinnett.¹³ SEM scans objects with a focused beam of electrons capable to interact with the atoms of the object, so that it defines the surface topography of the sample, at a scale able to give form to the most infinitesimal detail or sign that a peculiar tool can leave on the worked surface. More recently, Vidale / Angelini / Frenez carried

¹¹ A close comparison is in Collon, 1982; num. 386; for further comparisons see Cagni, 1971: 96–97.

¹² Sax / Meeks, 1994; Sax / McNabb / Meeks, 1998.

¹³ Gorelick / Gwinnett, 1978; 1979.

out a technological study on the Indus valley steatite (softstone) stamp seals by adopting a Laser Scanning Confocal Microscopy (LSCM), able to give form to a high definition 3D model.¹⁴

1.3 The adopted methodology

This contribution is based on both macro photography and 3D orthorestitutions of the seal itself and its stamp generated by macro lenses and the crucial usage of high magnification digital microscopes. Macro photography and macro 3D orthorectified models can provide not only a beautiful and suitable for museums' audience entertainment 3D model to play with, but also define first morphological details to recognize the most detectable engraving or intaglio techniques well attested during specific period of time.

Digital microscopes, stretching from 10x to 470x magnification rates are used to take the analysis to a higher level of definition. Although one has at its disposal the original seal, anyhow considered, it is known that micro technical details are better visible on the stamped moulded surfaces. The moulds adopted, up to now, are two: the wet polymer clay, useful to stamp the whole seal's surface in a single print, and a silicon impression material in order to better compare our stamped mould with the Sax *et al.* (1998) ones also made with silicon (for this contribution the use of hyperhydrophilic type 0, with a ISO 4823 putty consistency, that is able to detect up to 5 micron wide details, was preferred).

2. First steps towards a digital microscopic high magnification analysis

Coming to the Old Babylonian seal, a detailed analysis can be performed starting from Shamash arms (Fig. 2).

If one looks at a 250x magnification rate it is possible to distinguish that the whole arms, from shoulders to hands, are made from a continuous curvilinear deep mark, interrupted only by oblique marks at the wrists and vertical lines at the shoulders. Thus, only a continuous mechanical action could have provided such a smooth feature. It is also quite evident the cutting line between the hands and the wrists. So, according to Sax / Meeks,¹⁵ only a mechanical wheel-cutting tool can engrave such curvilinear elements.

To better understand the technique, one can have a look at the Ur III seal MO257, where the arms of the participants to this introductory scene are rendered by two straight line, a vertical one and/or an oblique one (Fig. 3a): there is no sign of a curvilinear mechanical action. The oblique line, according to Sax / Meeks should be the result of sawing or filing;¹⁶ on the contrary, the vertical lines cannot be the result of such instruments (a saw applied vertically to the seal would have

¹⁴ Vidale / Angelini / Frenez, 2018.

¹⁵ Sax / Meeks, 1994: 156.

¹⁶ Sax / Meeks, 1994: 156.

cut it all along its vertical axis, from the top to the bottom edges), but only of a wheel or micro chipping or scratching. Also, if one compares Shamash arms and shoulders with the last figure in the Akkadian seal (Fig. 3b), clearly two different engraving techniques emerge, a wheel-cutting one and a tool hand-held procedure the other, that is a coarser engraving procedure. As it is known, according to Sax / McNabb / Meeks and Collon the introduction of the wheel-cutting technique is later than usually believed and must be dated to the first half of the II millennium BCE (Age of Hammurabi).¹⁷ Thus, we do not recognize the usage of such a mechanical and efficient instrument on the Akkadian seal, whilst it is attested in MO262, which is most probably attributable to the 19th–18th cent. BCE.

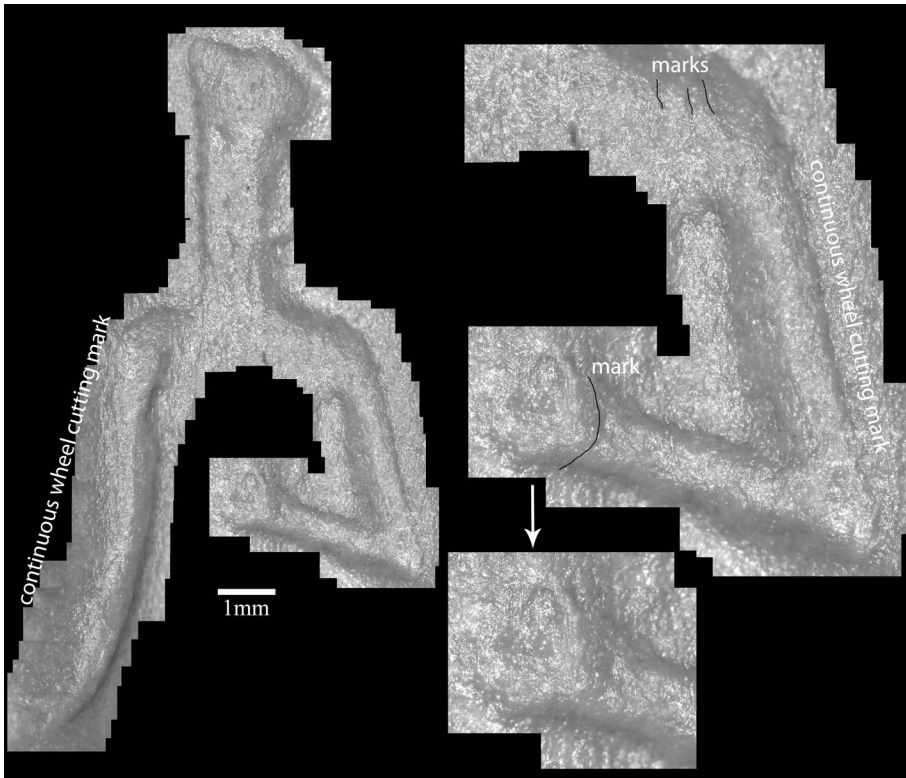


Fig. 2: 250x magnification rate photomosaic of Shamash.

It is also useful to look at the arms of Adad (Fig. 3c). His left arm once again shows a continuous curvilinear fine shape, from the shoulder to the hand; on the contrary the right arm shows a less accurate intaglio, with an interruption at the elbow. Such a difference could derive from a wrong usage of the wheel-cutting

¹⁷ Sax / McNabb / Meeks, 1998: 20; Collon, 2005: 52.

tools or from the usage of another tool or is attributable to a typical style, indeed comparisons for this detail are quite abundant (BM 134760, BM 89298).

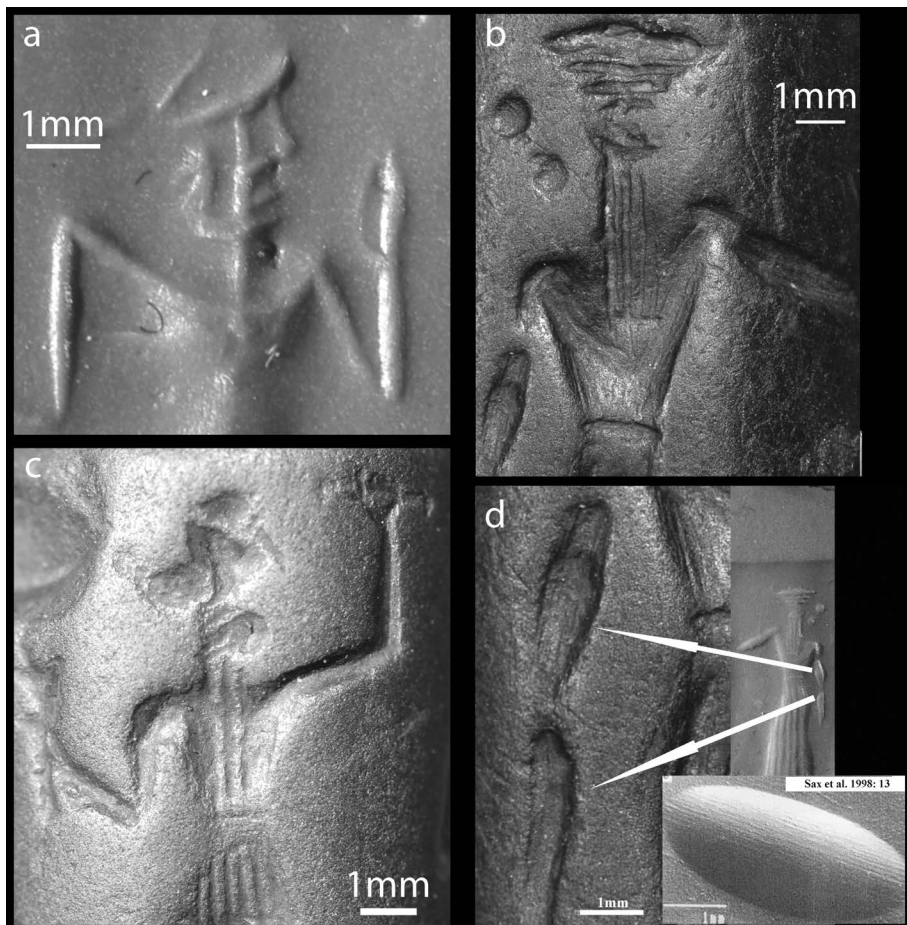


Fig. 3: Details of the arms' intaglio techniques: a) MO257; b) MO255; c) MO262; d) MO255 compared to the experimental marks obtained by Sax *et al.*, 1998.

A further element arose by comparing the intaglio techniques of the arms, it can be found again on seal MO255, the Akkadian one (Fig. 3d). The left arm of the last figure in the scene shows signs of saw or file cutting tools comparable to the experimental marks reproduced by Sax / McNabb / Meeks.¹⁸ In this case, by going on with a 470x magnification rate it is also possible to appreciate the very detailed features of a saw or file tool (Fig. 4a): straight marks, with a triangular regular profile, less than a half millimetre thick, clearly marks of a rather sharp-edged tool.

¹⁸ Sax / McNabb / Meeks, 1998: 13.

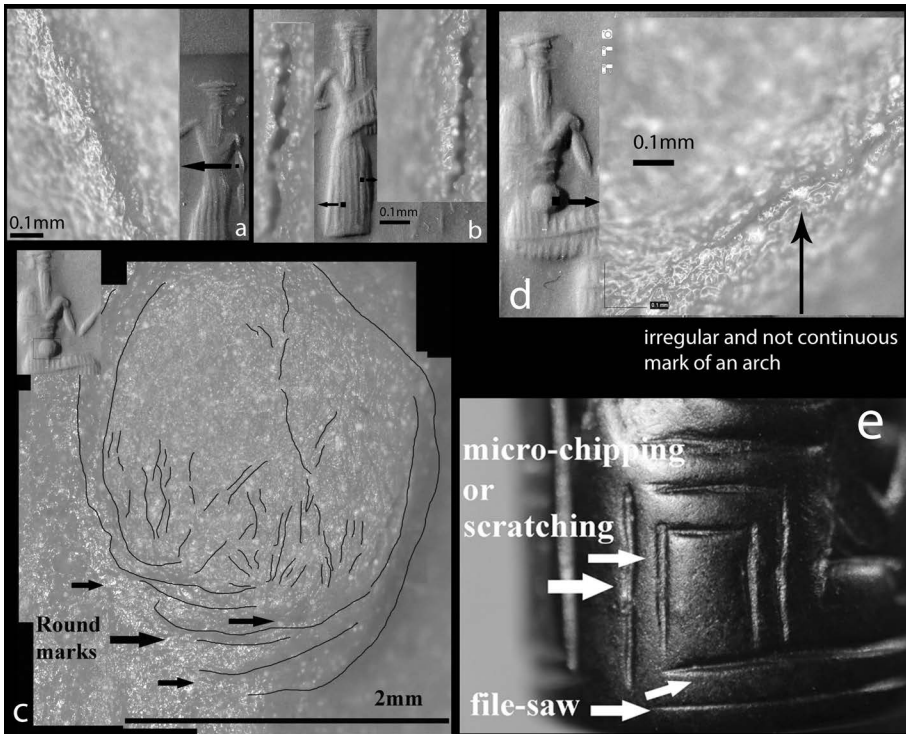


Fig. 4: Details of MO255 and MO257 regular and irregular marks: a) MO255, straight marks, with a triangular regular profile (470x); b) MO255, irregular marks (470x); c) Ea's jar (250x); d) detail of the Ea's jar at 390x; e) comparison between straight marks (file or saw) and irregular marks (scratching or micro-chipping) in MO257.

To better appreciate the most accurate details of tool's mark, one can compare this last feature with the garment of the double-faced god in the Akkadian MO255. In this case, the garment shows marks of a less accurate instrument (Fig. 4b), resulting from scratching or micro-chipping. Indeed, even at a macro scale some marks are recognizable. Both the garment of the standing figures and seated Ea show non parallel and irregular lines. This is also the case of the linear features of the inscribed panel and god's throne in the Ur III MO257 (Fig. 4e). All the horizontal lines, made by using a saw or file, are straight and regular marks, with a constant thickness, whilst all the vertical elements are characterized by irregular marks, thicker in their upper part and thinner in the bottom edge, most probably resulting from the usage of a scratch or a chipping procedure: basically one can see here the first impact point of the scratcher or chipper right where the groove is larger.

Among the rough techniques visible, one could probably include the making of the cultic water jar held by Ea (Fig. 4c). This rounded element is clearly made thanks to the usage of a tool driven by a revolving movement, apparently a fine one, if we limit the analysis to a macro scale. In fact, one can dissertate if the tool

is a hand-held pointed instrument or a mechanical bow-drill by looking at high magnification different scales. Looking at a 250x magnification rate, one can easily recognize both rounded irregular marks along the edge of the jar, traces of a revolving movement, and vertical marks that testify to the secondary usage of chipping or scratching to deepen the spherical part of the jar. Also, by looking at a 390x magnification detail of the jar (Fig. 4d), it is possible to recognize irregular and not continuous marks in shape of arches parallel to the circumference of the jar. There are no traces of very regular and concentric marks that a bow-drill can leave on the seal,¹⁹ but only traces of a hand-held procedure. Nonetheless, the surface of the rounded element seems to be also partially smoothed by the action of abrasive, that may have removed more clear tool marks.

3. Conclusion and perspectives

This contribution is an attempt to proceed with a complete updated re-publication of the MOUS seals corpus by adopting an archaeological perspective based on the lapidary techniques study, the production of an iconographic photo-documentation still poorly accomplished in previous publications as well as to generate a museum's audience accessible 3D models following the dissemination vocation of the MOUS.

Moreover, one last issue could be introduced, that is the support that this kind of high magnification analysis can give to the detection of fake artefacts. On this regard, the case of Ur III MO257 is an example (Fig. 5). Already Cagni supposed that according to the poorly quality of the engraved garments of the standing figures, the orientation of the legs of the seated figure, and the orientation of the arms of the standing figures this seal could be considered a fake.²⁰

Nonetheless, as far as the seal legend concerns, it is possible to observe some signs mistakenly written, in particular the front extension in the sign KAL (Fig. 5a).²¹

Line 1: DIGIR-dan

Line 2: dumu ha¹-DU¹(UŠ).DU¹(UŠ)

¹⁹ Sax / McNabb / Meeks, 1998: 15.

²⁰ Cagni, 1971: 96–97.

²¹ Line 1: the additional wedge in the front part of the sign KAL also appears in CUSAS 6 1544. Line 2: the patronymic dumu ha.DU.DU occurs in NATN 882, where the name of the scribe is ur-^dkal-kal, of which the writing in MO257 could be an odd abbreviation (or copy). Differently from the carving of the scene, the legend is of poor quality, and the signs are either wrong or irregular in terms of paleography. The author owes the reading and interpretation of the inscription to Noemi Borrelli: to her goes my gratitude.

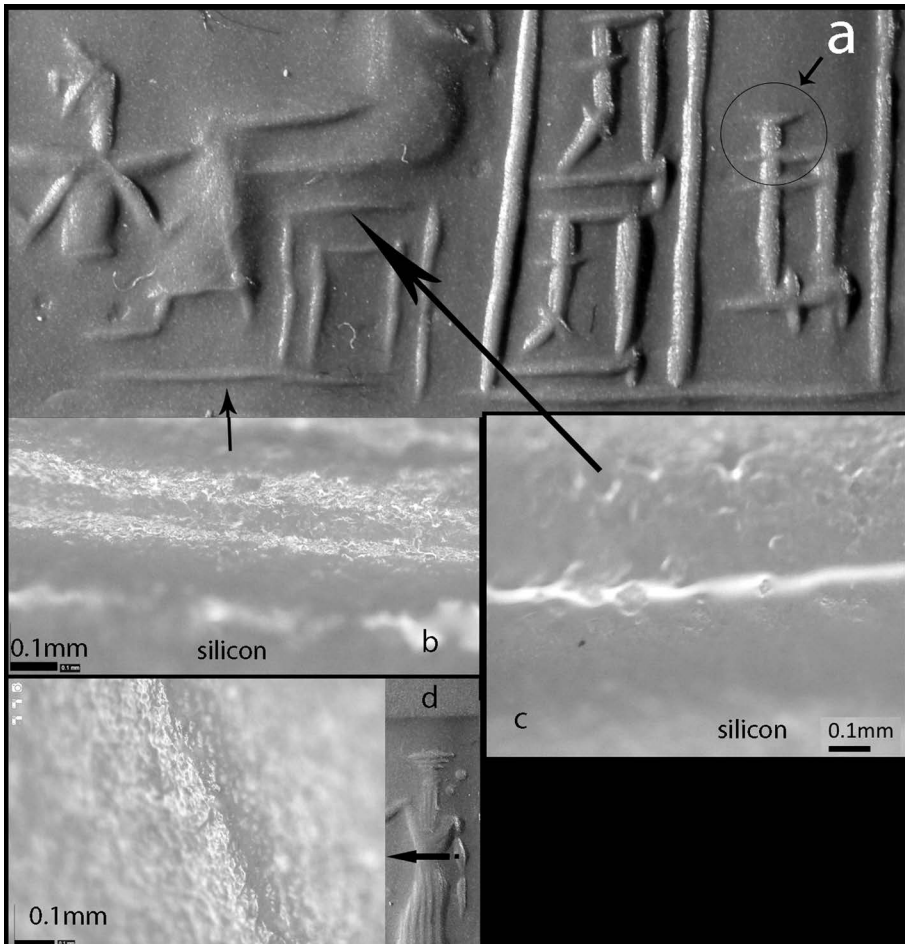


Fig. 5: Details of MO257 inscription and throne's marks resulting from a saw or a file and compared to the MO255: a) the sign KAL mistakenly written, the wrong part is highlighted; b-c) horizontal mark resulting from a saw or file on MO257 (470x, silicon paste); d) MO255 diagonal mark resulting from a saw or file (470x, polymer clay).

So, either this is a mistake made by a modern falsifier or this is a mistake made in antiquity, maybe a mistake made by the seal cutter itself, not necessarily an erudite. From a microscopic approach it is possible to suggest to compare the tool marks left on the Ur III seal with others. For example, by looking at the clearly identified marks of a saw on both the Ur III and Akkadian seals (Fig. 5b–d). The marks apparently match, both in their triangular profile and in the straightness of the lines, even when different pastes for the mould are used: polymer clay or silicon. There is not such a poorly engraving techniques as noted by Cagni after all,²² thus the MOU257 Ur III seal should not be a fake.

²² Cagni, 1971: 96–97.

To conclude, this brief preliminary analysis pointed out how a diachronic study of the intaglios techniques performed by macro photography and usage of digital microscopes on still poorly known seals collection, as it is the case of the MOUS one, could better support the definition of such archaeological materials, from a wide range of perspectives. More will follow, hopefully, on the whole corpus of seals of the MOUS.

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The Cuneiform Corpus in its Geographical Setting

Preliminary Results of the Project *Geomapping Landscapes of Writing*

Seraina Nett / Gustav Ryberg Smidt / Carolin Johansson / Rune Rattenborg

1. Introduction

The present paper gives an overview of the aims and preliminary findings of *Geomapping Landscapes of Writing* (GLoW), a research project funded by Riksbankens Jubilæumsfond for the Advancement of the Humanities and Social Sciences (MXM19–1160:1) and hosted by the Department of Linguistics and Philology of Uppsala University, Sweden. GLoW is headed by Jakob Andersson, with Seraina Nett and Rune Rattenborg as researchers and Carolin Johansson and Gustav Ryberg Smidt as research assistants. As the project at the time of writing is still in its initial stages, our review will focus on the general aims and methodology of our work, as well as present some provisional results, namely a first look at an updated estimate of the total number of cuneiform inscriptions known and the archaeological locations from which they derive, and a case study to illustrate the kind of information that can be extracted from data collected by the project.

The core aim of the project is, firstly, to assemble a comprehensive metadata index, namely attribute (i.e., the specific characteristics of a given text), bibliographical, geographical and chronological metadata, of all cuneiform texts currently known from digital or analogue resources, and secondly, to make as large a part as possible of the resulting dataset publicly available through collaboration with existing open access digital catalogues (in particular, the Cuneiform Digital Library Initiative), and thirdly to conduct a number of smaller exploratory analyses of a quantitative as well as a qualitative nature based on the assembled dataset. Incorporating perspectives from cuneiform studies and landscape archaeology coupled with the extensive use of a variety of data applications for the management and analysis of structured data, the project is highly interdisciplinary, situated at the intersection between philology, archaeology, and digital humanities.

The project data structure mimics the core data structure of the Cuneiform Digital Library Initiative in order to facilitate easy sharing and integration of data, further data compatibility and exchange between repositories, and bolster long-term sustainability of the collected data. Through the conscious adaptation of our

data collection efforts to the structure of existing key repositories in the field, as well as through maintaining cross-reference capability between different datasets, we hope that the project will contribute to the overall integration and standardisation of primary catalogue data over the long term. Our focus as far as data collection is concerned lies with basic attribute variables, e.g., material, artefact type, genre, language, and script, as well as the formalised recording of object provenience and dating. The metadata assembled during the course of the project will be integrated into the Cuneiform Digital Library online repository after the conclusion of the data collection efforts.

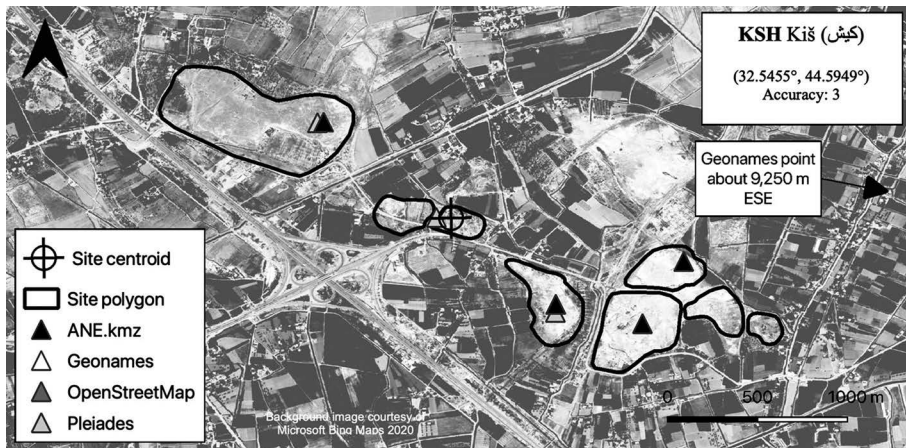


Fig. 1: Select open access geodata records for the site of ancient Kiš, c. 85 kilometres south of Baghdād, Iraq. Records captured 20 August 2020. Background image courtesy of Google Maps. Map by Rune Rattenborg.

Whereas concepts and vocabularies for basic categorical attribute data are relatively well-established within the domain of cuneiform studies, the formation of high-quality data relating to the spatial and temporal location of inscriptions require a significant degree of curating. Procedures and requirements for defining and generating geodata, for example, are often poorly documented or employing opaque definitions of accuracy and certainty.¹ For example, geodata on the location of even major and well-known archaeological sites in the Middle East available from current spatial data repositories such as Google Maps, OpenStreetMap, Geonames or Wikipedia display considerable spatial variation (Fig. 1). Establishing a more robust set of geographical data for archaeological sites as done during the course of the GLoW project (available in Rattenborg *et al.*, 2021b) improves the accuracy of the analyses conducted and provides a more secure framework to make archaeological sites more easily accessible when using digital geographical

¹ For a detailed discussion, see Goodchild, 2007.

tools (e.g., Google Earth, Pleiades) and satellite images.

Chronological data, similarly, is still served mainly through cultural-historical period designations that are defined with reference to a relatively small part of the overall area in which cuneiform inscriptions are distributed.² Considering the relatively high degree of chronological accuracy that can be assigned to cuneiform inscriptions, using variables such as date formulas, rulers identified, archaeological context or palaeographical characteristics, even basic revision of temporal data coupled with the aforementioned geodata collection is bound to produce a much more versatile and potent catalogue going forward.

The analytical perspectives enabled through a formalised and consistent mapping of long-term and large-scale trends and patterns in the composition and distribution of the cuneiform corpus are, we would suggest, immense. A comprehensive index of basic metadata variables will allow for easy and consistent querying of prevalence and prominence of, e.g., text genres across space and time, a range of novel and macrohistorical perspectives on text and material culture, e.g., the relationship between large urban settlements and text assemblages, aspects of literacy, the use of cuneiform vis-à-vis other scripts, the materiality of the inscriptions, and so on.

Most importantly, our project serves to further the comprehensive and sustained documentation of cuneiform as a discrete and unique body of world written heritage, and an integral element of the archaeological record of the Middle East.

2. Distribution of cuneiform texts

To provide some illustration of the geographical extent of our data collection efforts, we present here the initial results of a survey of cuneiform finds conducted by Gustav Ryberg Smidt during 2020 and early 2021. This survey was undertaken as an initial part of our work programme in order to provide a clearer basis for metadata collection efforts by producing a provisional estimate of known finds of cuneiform inscriptions, their overall number at any one archaeological site, and pertinent bibliographical references from which these numbers were sourced. Previous estimates, compiled most recently by Peust (2000) and, more thoroughly, by Streck (2010) have pointed to an overall corpus size of ca. 500,000 and 533,800 cuneiform texts, respectively. The number of unique records currently available from the Cuneiform Digital Library amounts to 341,342 (as of August 2020), of which 246,743 are assigned to a known provenience. It should be noted that the figures assembled by Streck relied primarily on records in museum inventories, as well as print and digital scholarly publications, whereas our survey deals exclusively with figures given for known archaeological locations to which individ-

² For an attempt to integrate the regional chronologies of West Asia and neighbouring regions in the 3rd millennium, for example, see the results of the ARCANÉ project, in particular Sallaberger / Schrakamp, 2015 for the textual evidence.

ual inscriptions can be assigned with a relatively high level of certainty and therefore does not include texts with unknown or unclear provenience.

The estimates included in our index are based on compiled or overall estimates from specialist literature, and so make no distinction between published and unpublished objects, or whether these objects have been unearthed through scientific excavation or clandestinely. Our definition of ‘cuneiform writing’ for this purpose has been kept intentionally broad, also including derived scripts such as Ugaritic and Old Persian, but disregarding other contemporary scripts.³ This leads to a number of idiosyncrasies within our dataset, as, for example, Cuneiform Luwian is included, whereas its Hieroglyphic counterpart is not. To the extent possible, our notion of an inscription includes every discrete archaeological object carrying an inscription, also if the text is a duplicate. Inscribed bricks with identical inscriptions, for example, are counted as separate objects. Joining fragments, on the other hand, count as one text, as far as it is possible to identify and track such joins.

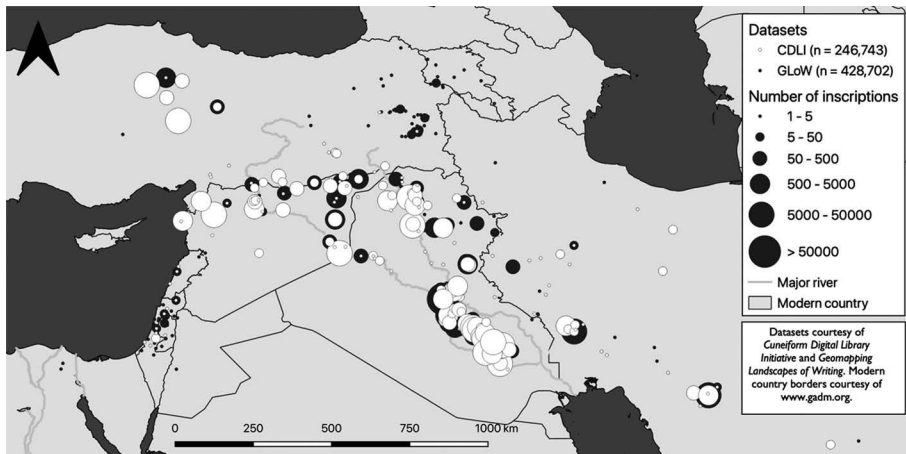


Fig. 2: Numerical and geographical distribution of records, juxtaposing the estimated numbers from the GLoW index (grey) with the texts currently recorded in the CDLI (white). CDLI dataset acquired August 2020.

Our index of archaeological sites with cuneiform finds is compiled from a base index developed as part of *Memories For Life*, a research project funded by the Swedish Research Council for 2017–2021 and led by Jakob Andersson and Christina Tsouparopoulou. This index has been further augmented based on provenience values from a variety of digital and analogue catalogues. Each record has been thoroughly checked and referenced through the consultation of excavation reports, text editions, and museum catalogues. The current version of the index

³ For reasons of consistency, following the definition laid out in Edzard, 1980: 545.

stands at 428.702 textual records distributed over 544 discrete archaeological locations.⁴ The geographical spread is quite extensive, reaching from Civita Castellana in central Italy⁵ to Kabul in northeastern Afghanistan,⁶ and from the suburbs of Orsk in central Russia⁷ to Edfu in southern Egypt.⁸ Additional finds from the extreme periphery of the corpus include inscriptions found in Malta, Greece, and elsewhere in southeastern Europe, as well as various locations in Central Asia, predominantly Iran and Afghanistan. Together, these outliers form a broad peripheral zone that should of course not be taken as indicative of the extent of cuneiform writing per se. If we look at sites within southwest Asia itself – or the area that we may call the ‘cuneiform world’ – the number and density of sites is, however, quite impressive, also outside the traditional core areas in southern and central Iraq. While certainly minor compared to the immense textual assemblages found at principal sites in the alluvial south, the regularity with which smaller finds of cuneiform writing occur in adjoining areas across the Fertile Crescent and along major infrastructural nodes in the Iranian highlands suggests a much more prevalent corpus than what is typically implied by general readers.

To illustrate this further, the second data series on the distribution map introduces similar estimates derived from the CDLI catalogue for comparison. As can be seen, a larger number of finds included in our survey is not found in the CDLI dataset, indicating a strong – and very understandable – bias towards major text assemblages from core areas of the cuneiform world in the latter database. While we would like to stress that our work is not intended to duplicate existing data collections, and without detracting from the efforts of current digital text catalogues, these figures suggest significant room for further augmenting and expanding existing data repositories in order to provide a comprehensive catalogue of the corpus.

3. Using text metadata

We would now like to consider a subset of our current project database that will allow us to explore and demonstrate the types of analyses that can be undertaken based on this material. We focus on assemblages from seventeen archaeological locations in the area around Ur and Uruk as our programme of data collection for this particular area has been largely completed. As such, this subset will serve as

⁴ The collected geodata is freely available online in Rattenborg *et al.*, 2021b, the overarching methodology is discussed in greater detail in Rattenborg *et al.*, 2021a.

⁵ An inscription, likely Neo-Babylonian in date, on a vessel fragment found in a tomb at the site of Falerii, published in Cristofani / Fronzaroli, 1971.

⁶ Two signs, possibly Elamite, on a silver fragment that forms part of a Persian-period hoard, see Hulin, 1954.

⁷ A vessel with a short trilingual Old Persian-Elamite-Babylonian inscription dating to the Persian period, see Savelyeva / Smirnov, 1972.

⁸ Michaelidis, 1943.

an example of data-driven perspectives that the project aims to apply across the entire cuneiform corpus once the project data collection programme has been completed.

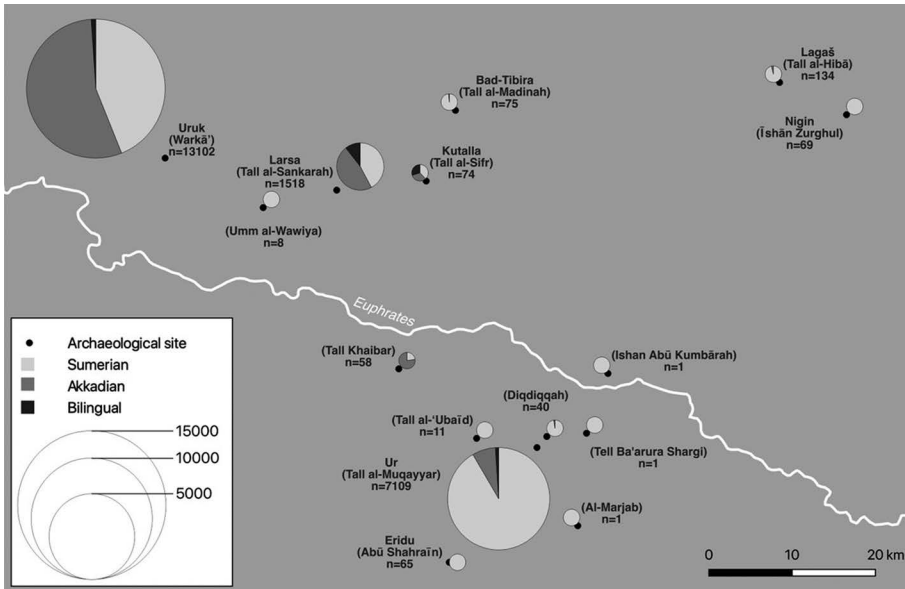


Fig. 3: Distribution of Sumerian, Akkadian, and bilingual texts in the Ur-Uruk region, based on the records in the GLoW database. Map by Carolin Johansson and Rune Rattenborg.

Taking language distribution as our starting point (Fig. 3), the present map plots percentages for Sumerian, Akkadian, and bilinguals for each assemblage. The picture that emerges is not particularly surprising, underscoring as it is the strong predominance of Sumerian inscriptions in the far south of the alluvium. Of some interest is Tall Khaibar, which includes a sizeable proportion of Sumerian-language texts dating to the later second millennium BCE.⁹ Language distribution also ties in rather neatly with the chronological distribution of inscriptions from the same general region (Fig. 4). In the following map we have, for reasons of clarity, separated the available records into two phases, before and after the Old Babylonian period. Unsurprisingly, sites with a high proportion of Sumerian-language texts in the previous map dominate the earlier chronological phase, with the exception of Ur. The difference here can be ascribed to the presence of Sumerian-language school texts from later periods. Moreover, the chronological distri-

⁹ The Sumerian-language texts from Tall Khaibar are part of a group of school texts from the elementary curriculum, including lexical lists. For the Tall Khaibar texts, see Campbell *et al.*, 2017: 28–32.

bution also illustrates the relative decline of the region in the south and population shifts occurring in the middle of the second millennium BCE.

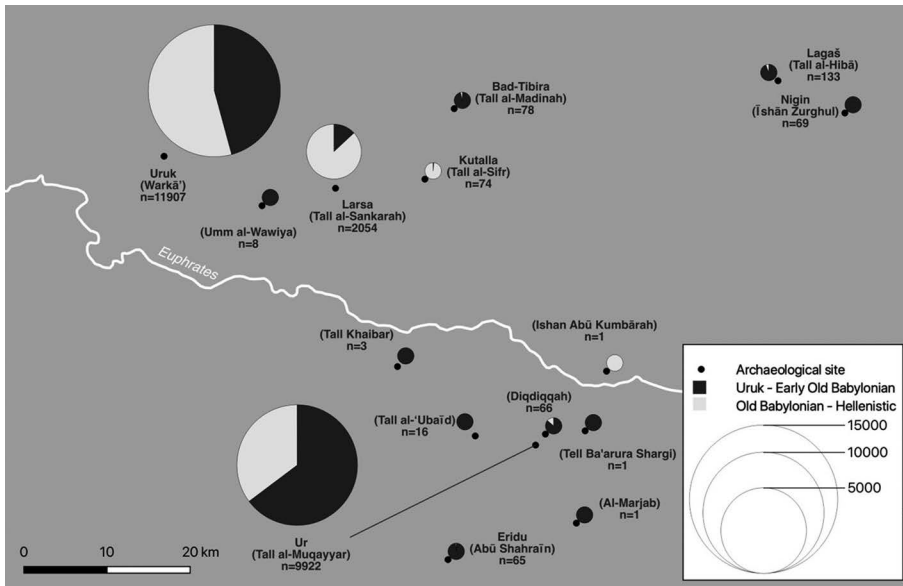


Fig. 4: Chronological distribution of text finds in the Ur-Uruk region, based on the records in the GLoW database. Map by Carolin Johansson and Rune Rattenborg.

A third relevant variable is the distribution of genres at different sites (Figs. 5–6). What becomes immediately evident is the significant degree of variability of genres, particularly in larger assemblages, such as Ur, Uruk, and Larsa. Tall Khaibar, again, stands out due to the number of school texts unearthed at this site, which also serves to explain the larger proportion of Sumerian texts from later periods noted previously. Looking at most prominent categories, the present chart (Fig. 6) shows the distribution of the most important genres (administrative and royal inscriptions, the total number of records in other genres, and uncertain genre records) on a logarithmic scale. The most obvious outliers include sites with finds only of royal inscriptions, e.g., Bad-Tibira and Nigin, typically stemming from surface finds of bricks and similar building inscriptions. The relatively similar distribution of main text genres seen for Ur and Uruk can, on closer inspection, be seen to hold marked differences in the distribution of genres. Ur, in particular, includes a large number of uncertain records, as well as a large number of royal inscriptions. The latter is certainly to be expected, considering the role of Ur as a capital city and the general bias of the sample towards earlier periods.

Of course, this case study addresses a very homogeneous area that is well-studied, but it is nevertheless interesting to note how even in this small sample, a number of interesting observations can be made – such as the appearance of the 2nd millennium Sumerian school texts from Ur and Tell Khaibar – which then

have to be further explained by looking at the textual record from individual sites in greater detail.

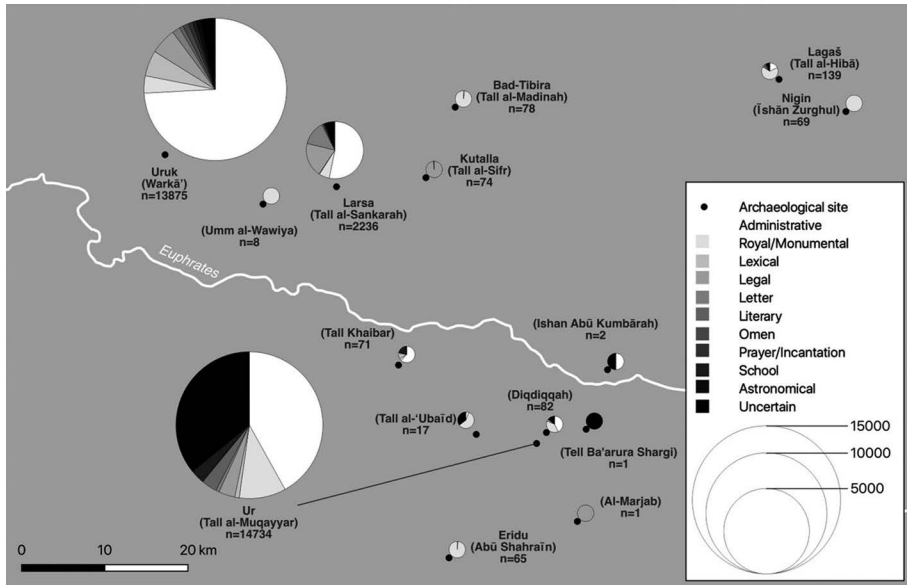


Fig. 5: Texts in the Ur-Uruk region distributed according to genre, based on the records in the GLoW database. Map by Carolin Johansson and Rune Rattenborg.

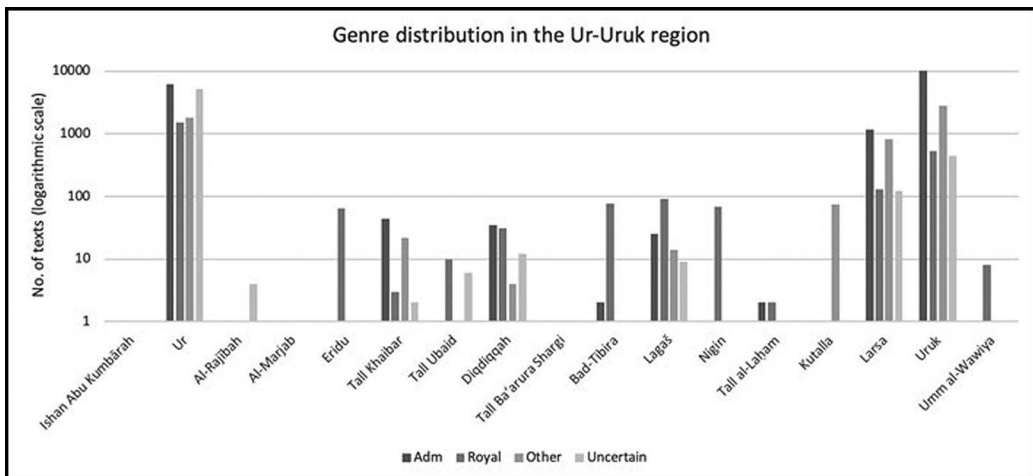


Fig. 6: The comparative distribution of the most important genres among the sites of the Ur-Uruk region (logarithmic scale).

4. Further perspectives

These examples have, we hope, served to demonstrate the uses and types of analyses that can be conducted with the data collected by the GLoW project, and how detailed and comprehensive metadata may open up a variety of new avenues for research of a quantitative as well as a qualitative nature. This approach is bound to be particularly rewarding at regional and interregional levels of inquiry. The example of language distribution may, for example, look entirely different from the area around Ur and Uruk presented here when queried for other regions in a larger perspective. A review of material or artefact type distribution in one or several regions over time may bring out broader trends in the use of writing in a variety of historical settings, for example in terms of the relationship between genre, language, and writing material. In turn, the example of the Ur-Uruk region outlined above also reinforces how crucial it is to complement these types of macro-analyses with an in-depth view of the evidence at hand. Thus, combining metadata distribution with archaeological survey data through geolocation can offer further insights on the broader patterns that can be observed at the intersection between material culture and texts and open up new avenues for further research.

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ArCOA Project

The Ancient Near Eastern Collections in Italy from Study to Public Fruition

*Luca Peyronel / Tatiana Pedrazzi / Stefano Anastasio / Elena Devecchi /
Silvana Di Paolo / Stefania Ermidoro / Valentina Oselini / Irene Rossi**

1. Aims and methodology: study, fruition, and knowledge dissemination of the collections

ArCOA (Archivi e Collezioni dell'Oriente Antico) is a project focusing on the collections of ancient artefacts from the Near East and their related documents housed in Italy. It was launched with a pilot study on Mesopotamian objects in Lombardy's museums in 2020 and was then enlarged to include collections from all the Italian territory. It is led by the Università degli Studi di Milano and the Istituto di Scienze del Patrimonio Culturale del Consiglio Nazionale delle Ricerche (CNR-ISPC), under the scientific coordination of Luca Peyronel and Tatiana Pedrazzi, and is carried out by an interdisciplinary team including archaeologists, philologists, museum curators, computer and multimedia experts, with the Università degli Studi di Torino acting as the principal academic partner.

The project has three main research goals related to the study, public fruition, and knowledge dissemination of the collections.

The first goal deals with mapping all the collections in Italian museums and in various public and private institutions through a dedicated Database in which the information could be stored and accessed through a unified digital archive (§2).¹ The following criteria were adopted to include a collection in the ArCOA digital

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¹ The chronological and geographical span considered by ArCOA ranges between prehistory and the beginning of the Hellenistic period in south-western Asia and in the Eastern Mediterranean, with a macro-regional distinction between Cyprus, Northern and Southern Levant, Anatolia, Mesopotamia, Iran, and the Arabian Peninsula.

archive: (a) it must be kept in a place in the Italian territory and it must be under the national administration and subject to the Italian law; (b) it must be stored in public museums and institutions; (c) if a collection is property of a private institution, it is included only if it is accessible for scientific research and public fruition.² Regarding collections in public museums, a threefold distinction is adopted: national, regional and municipal museums, according to the state of cultural heritage.³ Permanent exhibitions of materials in university museums, other institutions, companies and foundations – both of public, private or mixed status – are also surveyed and included in the archive. A separate case concerns the category of artefacts belonging to ecclesiastical property: in particular, with regards to the property of the Catholic Church, which is certainly the most numerically significant on Italian territory, the State exercises protection, but the activities of valorisation and promotion are regulated by specific agreements between the Ministry of Culture (MiC) and the Italian Episcopal Conference (CEI).⁴ Concretely, this is also reflected in the cataloguing and accessibility aspects of these assets, so much as to justify their specific identification within the database.⁵

In general, artefacts that reached Italy after the 1980s are included only if their acquisition can be traced by clearly demonstrating their provenance from previous collections legally declared. At the present state of the project, personal collections have also been excluded from the Database, and only donations to public institutions have been selected and catalogued.⁶ However, the ArCOA project

² According to these criteria, some collections have been so far excluded, such as the Ligabue collection (Fales, 1989; Favaro, 2017) and two ample collections of cuneiform tablets and cylinder seals kept in catholic institutions: the Pontificio Istituto Biblico (van Buren, 1940; Westenholz, 1975; Cagni, 1976; Mayer, 2005) and the Università Pontificia Salesiana (Archi / Pomponio, 1981), even if they are known through publications and catalogues.

³ On the administrative organisation of the cultural heritage and the new assessment of the Ministry of Culture – as resulted from the legislative reform implemented in Italy between 2014 and 2017 – see Barbati *et al.*, 2017.

⁴ In 2020, 262 museum collections belonging to ecclesiastical institutions were listed in the report released by the Italian National Institute of Statistics: ISTAT 2022 (the 2021's census is currently in progress; www.istat.it). The ancient Near Eastern antiquities of the Musei Vaticani and those kept in the Biblioteca Apostolica Vaticana are not considered in the project, as they belong to the public museums of the Vatican City State: Vattuone in Dolce / Nota Santi, 1995: 318–323; Amenta, 2009; Amenta *et al.*, 2022.

⁵ Chizzoniti / Fumagalli Carulli, 2008; on the legislative sector related with the ecclesiastical goods, Roccella 2006. Data derived from the registering of catholic dioceses' cultural heritage in Italy can be gathered from the constantly updated web portal BeWeB (<https://beweb.chiesacattolica.it/>).

⁶ The Michail collection is one of the largest in Italy, including 81 cuneiform tablets, several inscribed artefacts and sealings (Pettinato, 1997). The relevant Sinopoli collection includes several Mesopotamian sculptures, cylinder seals, foundation clay cones, and one

reports the presence of ancient Near Eastern materials in the country, monitoring the current situation, especially in relation with the strong increase in trafficking of antiquities from lootings and illegal activities in Near Eastern countries during the last two decades. Cooperation with the authorities in charge of cultural heritage is also active by reporting the existence of private collections in which artefacts coming from the Near East are kept.

Data are filed in English, and the protocol includes the autoptic inspection of the artefacts to verify and integrate what is already available in publications and in the museum's sheets and the acquisition of images and 3D models. The digital archive has been created by the CNR's ArCOA team and it is a relational database hosted at the CNR (§2).

The second goal consists of making the public aware of the cultural heritage and the ancient civilizations of the Near East by communicating to a wider audience the objects, the stories of the collections, the personages involved in the acquisition, the documents attesting the routes and travels in the Near Eastern countries, the sites and their context of provenance. The ArCOA website has been designed and will be online in 2024, giving the opportunity to interact with the Database and offering a user-friendly interface with textual information written according to storytelling principles, 3D models of the artefacts, a web-GIS to explore the collections in Italy and the ancient centers of the Near East.

The third goal is to build a network of researchers, institutions and associations interested in the communication and enhancement of the collections to realize activities of public engagement and inclusive participation.⁷

Neo-Assyrian relief (Biga, 2012; Dolce, 2012; a complete catalogue of the artefacts is currently in preparation by M. G. Biga and R. Dolce). After Giuseppe Sinopoli passed away in 2001 the Ministry of Culture acquired the collection, and the Greek pieces are permanently displayed in the Museo Aristaios located inside the Auditorium – Parco della Musica of Rome. As correctly pointed out by Ermidoro (2011) who has listed several private Italian collections, the nature itself of this kind of collections (the artefacts are usually not accessible, the number of artefacts can easily increase or decrease, only a part of the artefacts are declared by the owners, the origin of the pieces cannot be verified to exclude their provenance from trafficking) make mandatory their exclusion from the digital archive, according with the ethical principles adopted by the ArCOA project.

⁷ The formal adhesions and the successful cooperation in the project by the two museum institutions hosting the largest collections of ancient artefacts from Western Asia – the Museo di Antichità – Musei Reali di Torino and the Museo Archeologico Nazionale di Firenze – clearly testify for the strong commitment of the Ministry of Culture towards an enhancement of these collections, recognizing their potential as a powerful means to strengthen cultural dialogue. The cooperation with the Musei Reali di Torino has been included in a former agreement already signed by the University of Turin and the Musei Reali di Torino (2019). The Museo Archeologico Nazionale di Firenze is a partner of the ArCOA project through a specific agreement (June 2021) signed by the Direzione

The project also has positive spin-offs in terms of University education, as it offers the possibility of involving students in learning and training activities related to the implementation of the database and to the setting of valorisation issues through storytelling activities.

LP / TP

2. The tools. The ArCOA digital archive, GIS and website

The ArCOA system has been designed in compliance with the principles of Open Science, so that the tools developed, and the data produced within the framework of the project, will be openly accessible and reusable by the scientific community, to foster the knowledge of the Near Eastern collections hosted in Italy. Three interrelated digital and ICT's tools have been developed within the project: the ArCOA digital archive, the ArCOA GIS, and the ArCOA website.

The ArCOA digital archive has been conceived as a tool able to capture the complexity of Near Eastern collections and the heterogeneity of related materials hosted in the Italian museums. These multiple layers of information are organised in the most effective way for the varied purposes of the project, which is targeted at the scientific analysis of the materials and at the reconstruction of the collections' history, but also at their dissemination beyond the academic audience.

The ArCOA digital archive model consists of nine entities, characterised by specific properties and mainly linked by many-to-many relationships (Fig. 1). The database, designed by Irene Rossi and developed by Salvatore Fiorino of the CNR-ISPC, is based on the open-source DBMS MySQL, implemented via the MariaDB replacement.⁸ It is populated through a user-friendly data-entry interface, which was created by Nicolò Paraciani of the CNR-ISPC as a web application based on the Laravel open-source framework.⁹ The interface is accessible to project participants via authentication.¹⁰ The data-entry interface manages editing and consultation of the records of the nine entities of the database model, which are: *Bibliography*, *Collection*, *Collector*, *Conservation place*, *Document*, *Image*, *Object*, *Site*, and *3D model*. Relations with the records of the other entities can be created in a specific tab. The fields of each record are filled in with free text or with the values of the drop-down menus, according to the field typology. A dedicated section of the interface is devoted to the management of the lists of controlled terms, that is the values of the vocabularies appearing in the drop-down menu fields; based on agreed-upon taxonomies, their use ensures uniformity of description and coherent search results. Once created, a record can be edited, cop-

Regionale per i Musei della Toscana, the CNR-ISPC and the Università degli Studi di Milano.

⁸ <https://mariadb.com/products/community-server/>.

⁹ <https://laravel.com/>.

¹⁰ <https://arcoa.cnr.it/>.

ied, or deleted, depending on the specific role of the user and the associated rights. A search functionality provides parameters on which to filter the records of an entity, based on the AND logic operator on all the specific fields of that entity.

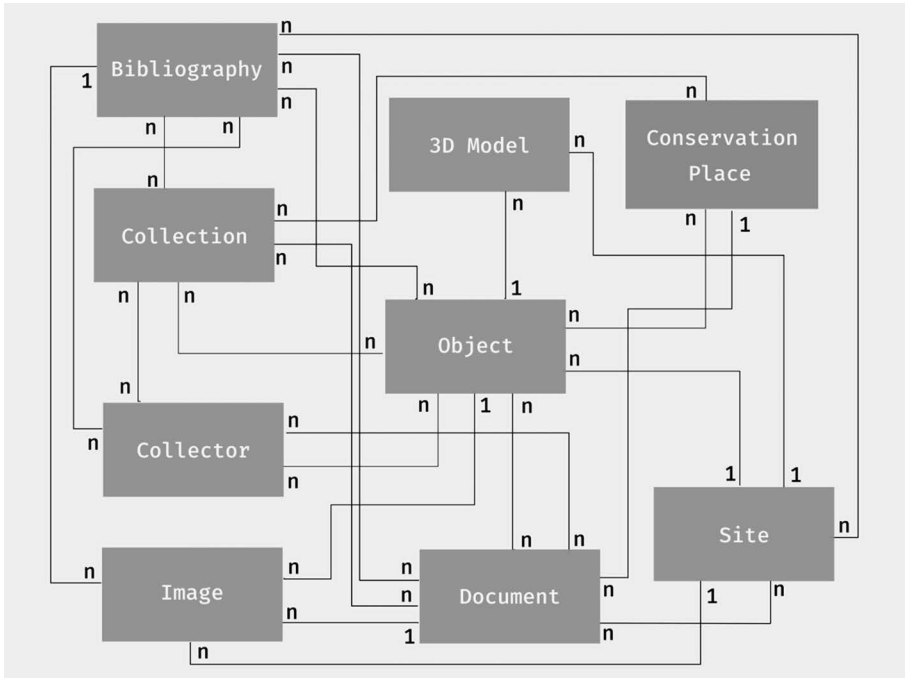


Fig. 1: ArCOA database model. ©ArCOA.

The central entity of the ArCOA digital archive model is the single *object* – be it an uninscribed or inscribed piece – preserved in an Italian institution. We can consider as a case study the bricks stamped with cuneiform inscriptions of different Mesopotamian kings, which constitute a common class of inscribed objects in Italian collections. A list of bricks recorded in the archive can be retrieved by performing a search of *object* records by the *object class* field: the bricks are indexed under the term ‘Building elements’. In the list returned by the query, two bricks appear to be related to the *conservation place* Museo Archeologico Nazionale di Venezia. Both bricks are inscribed with cuneiform inscriptions of Nebuchadnezzar II. The material, chronological, and contextual features of these pieces are recorded as structured metadata in the fields of the relevant *object* card, feeding the queries (Fig. 2). Attention is paid also to the textual features of the bricks, allowing to record script, language, genre and epigraphic sigla. Moreover, a description field allows to discursively describe the item and provide insights on specific aspects, such as – for inscribed records – on textual features and translation. Dedicated fields were also envisaged to host external matches pointing to other projects describing the same item, which may complement and enrich

the ArCOA record and increase its interconnections within the digital ecosystem. For the Cuneiform materials, for instance, links will be provided with web archives of Mesopotamian texts such as Oracc¹¹ and CDLI.¹²

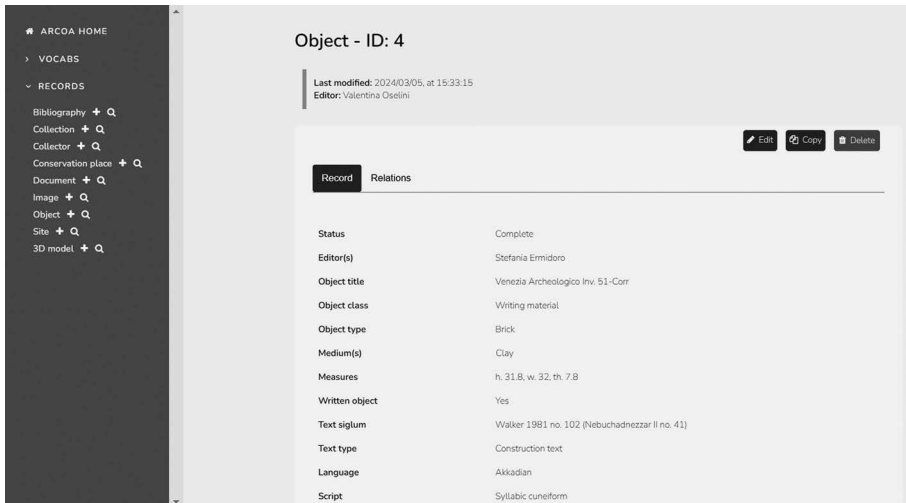


Fig. 2: ArCOA digital archive, main data of an object record (Venezia Archeologico Inv. Corr-51). ©ArCOA.

Inside the Archive, the *Object* can be related with other entities' records which complete its description. Central to the ArCOA project's aims is the relation with the institution hosting the piece (*Conservation Place*) and with the historical collections of which the piece is or was part (*Collection*): their study is especially interesting for their formation history, involving the figures of the collectors who originally brought the pieces to Italy or subsequently acquired them (*Collector*). The acknowledgement of the provenance of the piece (when known) as a related *Site* record, allows to detail the 'journey' of the object until its current location. In addition to secondary literature (*Bibliography*), archival sources (*Document*) are recorded in the archive, being a core element of ArCOA together with the *Object*, as the title of the project shows. Such documents provide first-hand information on the objects and on the history of collections' formation.

For instance, the two bricks with cuneiform inscriptions described above represent tangible proofs of the work and discoveries of Austen Henry Layard, who uncovered Nimrud and made some of the most extraordinary discoveries in Nineveh. The two bricks were destined in 1891 to the Civico Museo Correr and are now displayed in the Museo Archeologico Nazionale di Venezia (Fig. 3).

¹¹ *Open Richly Annotated Cuneiform Corpus* (<http://oracc.museum.upenn.edu/>).

¹² *Cuneiform Digital Library Initiative* (<https://cdli.ucla.edu/>).



Fig. 3: Brick with stamped royal inscription of Nebuchadnezzar II – Museo Archeologico Nazionale di Venezia (Inv. Corr-51).

In the ArCOA database, the specimens have been connected to the *collector* Austen Henry Layard and to his previous *collection*, as well as to the *documents* that allow us to retrace the modern journey of these materials, from the moment of their shipment from Layard's residence in London to Venezia, to their acquisition and the management of the practical issues related to their exhibition. Indeed, Layard's gifts were on public display in the Correr Museum ever since 1899. In 1939, following 'friendly negotiations', they were placed in the Museo Archeologico Nazionale to unite in a single location all the archaeological collections kept in the city of Venezia. The documents that bear witness to these occurrences are kept today in the Museo Correr. They are included in the ArCOA archive, appearing with a description related to the entire dossier. Through the *bibliography* related to this entry, the user may find an article that provides a full con-

textualization of the bricks and of the related documents. Moreover, the latter can also be found as *images*.¹³

The relevance of visual materials (*Images* and *3D models*) is evident as ArCOA is committed, as extensively as possible, to the autoptic check of the archaeological pieces and documents preserved in Italian institutions and their photographic documentation, also in the form of 3D models and RTI images, to support the scientific study as well as to engage the general public with virtual fruition experiences. The ArCOA Project has initiated a campaign of 3D scanning and modelling carried out by Daniele Bursich on the most significant objects. The archive stores the metadata of the 3D model and the link to the location where the model can be accessed.

The general data about the collections were organised in the ArCOA GIS, based on the open-source Quantum GIS system (QGIS), continuously updated and integrated, in step with the compilation of the ArCOA digital archive, allowing for the realisation of thematic and distribution maps that can be used also on the website. One shapefile layer is related with the geolocated conservation places, standardised in a WGS 84 / UTM zone 33N reference system. The institutions have a specific ID number and a nickname. Data in the attribute table includes geographical information (city and coordinates), the categories, the total amount of artefacts in each collection, and the number of objects by classes, following the list on the digital archive (written objects, cuneiform tablets, inscribed bricks, other inscribed objects, glyptic, pottery, terracotta figurines, etc.). The various *Object classes* can be filtered to produce ad hoc thematic maps, both on a national and regional scale, considering the proposed case studies. Moreover, further point and polygon shapefiles corresponding to the sites and regions of provenance allow to correlate the artefacts kept in the Italian collections with the original provenance.

The information and visual material collected in the digital archive will be accessible on the ArCOA website, which is under construction by the Università degli Studi di Milano team member Daniele Bursich. To allow this, the ArCOA digital archive, which has been developed by and is hosted by the CNR, will integrate an API service for automatic querying of the database, which will provide the dissemination web portal with the data recorded. At the same time, the individual records will be openly consultable via their URIs on the public web pages of the archive itself and will be also exposed in a dedicated OAI-PMH repository. The website, intended in English and Italian, consists of four inter-related paths: the *Homepage*, the *Conservation Places*, the *Collections* and the *Collectors*, linked to specific pages and insights. The GIS also will be accessible from the website as a web-GIS interactive map, where visitors can view the

¹³ This case-study paragraph is authored by Stefania Ermidoro (cf. Ermidoro, 2020).

Collections in their *Conservation places*, follow the routes of antique *Collectors* and display the *Objects* provenance *Sites*.

IR / VO

3. A survey of the Ancient Near Eastern collections in Italy

A first step in the project was the creation of a digital library in the ArCOA repository, where all the existing publications dealing with the collections were uploaded. The bibliographical references are stored and managed by using Zotero Standalone, which is a tool accessible to all the project members, easily available also offline, and that matches with the ArCOA DB.¹⁴ This work updated the survey carried out by the former Istituto di Studi Miceneo ed Egeo-Anatolici, then Istituto di Studi sulle Civiltà dell'Egeo e del Vicino Oriente of the CNR within the research Progetto Collezioni, which led to a preliminary evaluation of the collections and their related publications.¹⁵

The ArCOA survey identifies 49 conservation places where at least one object is kept. They have been grouped according to region, from north to south, and have been subdivided into seven different categories depending on the organisation administering them, namely, National/State, Regional and Municipal museums, Universities, Foundations, Private Companies, and Ecclesiastical collections (see also §1) (Fig. 4).

A preliminary estimate (updated to June 2022) indicates a number exceeding 4000 artefacts (Fig. 5).¹⁶ In contrast with the most famous European and overseas institutions, counting on massive quantities of archaeological material from Near Eastern countries, the Italian collections are relatively small but widespread almost over the entire territory, except for a few regions in southern Italy.¹⁷

¹⁴ <https://www.zotero.org/>.

¹⁵ Di Paolo, 2005; 2012. The survey of S. Ermidoro was based on her dissertation on cuneiform documents in Italy discussed in 2008 at the University of Venice: Ermidoro, 2011.

¹⁶ In the current census several university collections that include artefacts coming from archaeological excavations carried out during the last century have not been considered. They are mostly formed by pottery sherds, lithics, a few other small finds and often also by replicas of original pieces used for didactic purposes. At this phase of the Project, only some university museums in which Near Eastern artefacts are available for public fruition were inserted in the digital archive, such as the Museo del Vicino Oriente Egitto e Mediterraneo of the Sapienza Università di Roma: Nigro, 2015.

¹⁷ However, a systematic survey of museums in some regions of southern Italy has been planned in 2023, and it cannot be excluded that some other small collections could be identified.

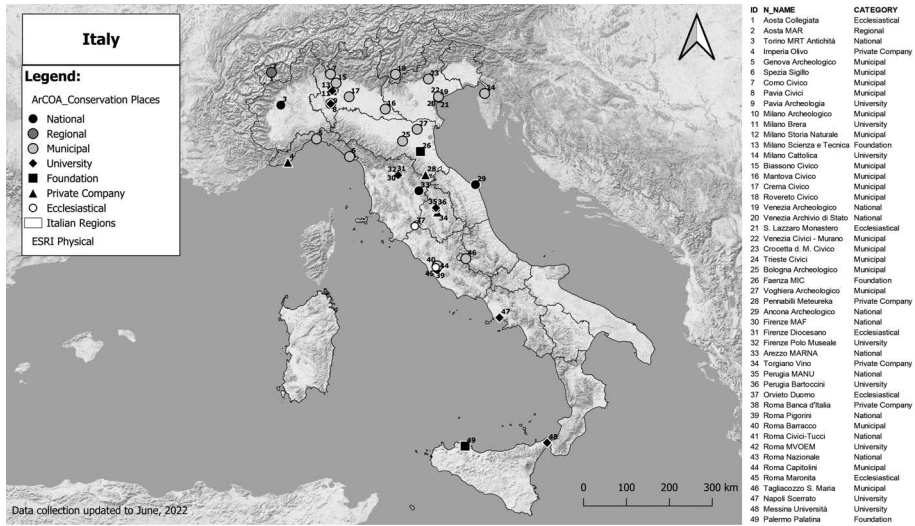


Fig. 4: Distribution map of the Italian institutions where collections are hosted. Map by V. Oselini with QGIS, ©ArCOA. Base map: ESRI World Physical Map, March 2019 (obtained through QuickMapServices QGIS plugin).

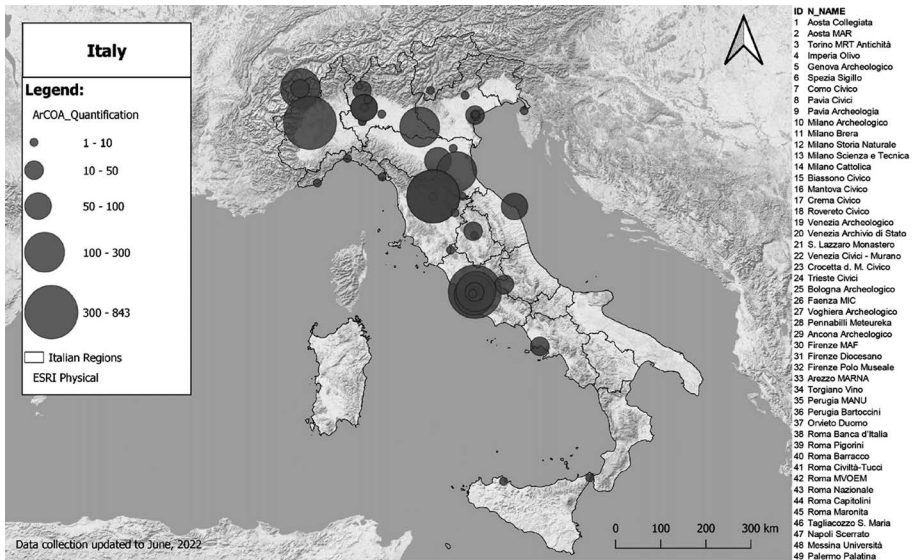


Fig. 5: Distribution and quantification map of the Near Eastern archaeological materials hosted in Italian institutions. Map by V. Oselini with QGIS, ©ArCOA. Base map: ESRI World Physical Map, March 2019 (obtained through QuickMapServices QGIS plugin).

Their variety allows reconstructing the different phases of the formation of the Near Eastern collections in Italy, as well as to trace interesting relations between Italian voyagers, intellectuals, scientists, archaeologists and important foreign personages involved in the study of the ancient Near East. This aspect is

particularly relevant for the ArCOA project, since the approach chosen for the communication of the collections privileges a dynamic narrative which aims at highlighting ties between artefacts, museums, places of origin, and personages. The key concept in the valorisation process is the emphasis on the ‘journey’ of people and things and the ‘relations’ established with the ancient Near Eastern civilizations, through the acquisition, study and dissemination of materials arrived on Italian territory.

The lack of any direct investigations by Italian expeditions in Mesopotamia before World War II, with the only exception of the *Missione Archeologica* in Mesopotamia directed by Giuseppe Furlani and Doro Levi, who carried out a single-year campaign (1933) at Shemomok/Shamamuk in the Erbil plain, prevented the formation of large museum collections of Near Eastern artefacts, as happened in France, Great Britain, Germany and the United States.¹⁸ In fact, Italy did not participate in the process of appropriation of artefacts and artworks that characterizes the pioneering archaeological research of the 19th century, and it was not involved in the post-World War I phase of protectorates when the European and American museums and institutions obtained a wealth of archaeological materials through the partition system of findings. However, minor streams of mainly Mesopotamian artefacts reached Italy through donations and the flourishing antiquity market characterizing the period before and in-between the two World Wars.¹⁹

The discoveries of the great Neo-Assyrian capitals and Sumerian civilisation led to the acquisition of objects from the contemporary and stunning excavations, directly in the territory of provenance or through exchanges, gifts and purchases on the European antiquity market. With the beginnings of the 20th century and until the late 1960s, thanks to the spread of the scientific method and stratigraphic excavation, the perspective and way of acquiring archaeological material from ongoing excavations changed. European institutions put more emphasis on the rediscovery of ancient civilisations and the exhibition of objects representing them. Therefore, also the Italian collections associated with scientific investigations in the field, as is the case of the Museo Archeologico Nazionale di Firenze and the Museo delle Civiltà – Sezione Giuseppe Tucci di Roma, increased. Moreover, the development of disciplines of ancient oriental studies in several universities enlarged the incoming flow of imported materials for teaching purposes and the consequent creation of proper university museum collections.

During this period, the religious institutions collected many objects as well, especially from the ‘lands of the Bible’, with the aim of growing historical-reli-

¹⁸ Furlani, 1934a; 1934b; Anastasio, 2008. The materials taken to Italy from Qasr Shemamok, according to the partition allowed at that time, are kept in the Museo Archeologico Nazionale di Firenze and have been studied and published by Anastasio *et al.*, 2012.

¹⁹ Di Paolo, 2005; 2012. See also Ermidoro, 2011, specifically on the cuneiform documents.

gious studies and analysing ethnocultural phenomena related to the Christian and Catholic spheres.²⁰ Some collections formed as early as the beginning of the 20th century have specific themes, as in the case of the Museo Internazionale delle Ceramiche (MIC) in Faenza, which focuses specifically on pottery and is the result of donations and exchanges between Italian, European and extra-European museums.²¹ Finally, donations by private citizens who, prior to the legislation in force at the present time, legally acquired various types of materials from the Near Eastern regions, constitute a part, albeit a minority, of current museum exhibitions.²²



Fig. 6: Distribution and quantification map of cuneiform tablets housed in Italian institutions. Map by V. Oselini with QGIS, ©ArCOA. Base map: ESRI World Physical Map, March 2019 (obtained through QuickMapServices QGIS plugin).

The largest collections in Italy, consisting of more than 700 items, originated in the first half of the 20th century. Specifically, they are the oriental collections at the Museo di Antichità in Torino and at the Museo Archeologico Nazionale di Firenze, respectively related to the formation of the Museo di Antichità e Egitto

²⁰ *I.e.* the Pontificio Istituto Biblico in Rome, the Musei Vaticani, and minor institutions, such as the Santuario e Museo di Maria SS. dell'Oriente in Tagliacozzo, which nowadays is a Municipal museum, or the Monastero della Congregazione Mechitarista dei Padri Armeni in S. Lazzaro near Venice (Di Paolo, 2005: 148–150).

²¹ <https://www.micfaenza.org/en/>; see also Anastasio *et al.*, 2020.

²² For instance: Garovaglio collection at Civico Museo Archeologico Paolo Giovio di Como (Uboldi / Meda Riquier, 2010); Sissa collection at Museo Civico di Palazzo Te di Mantova (Giovetti, 2000); Barracco collection at Museo Barracco, Roma (Biga *et al.*, 1996).

of Torino, and to the first Italian Archaeological Expedition in Mesopotamia, by Furlani and Levi at Shemamok (see §6).

The bulk of the Italian collection consists of cuneiform tablets and inscriptions (Fig. 6, see §4). Other significant categories are pottery, seals and cylinder seals, terracotta figurines (see §5) and Neo-Assyrian reliefs, although a rich variety of classes of artefacts is also represented (e.g., lithic, weapons, jewels, and so on).

Among the inscribed materials, the bricks with royal inscriptions fascinated the early collectors in the same way that cuneiform tablets did. Many of them were brought to Italy by acquisitions or donations in the late 19th century. More than 60 bricks, both complete and fragmentary, are nowadays hosted in fourteen institutions, and are presented in §4 (Fig. 7).

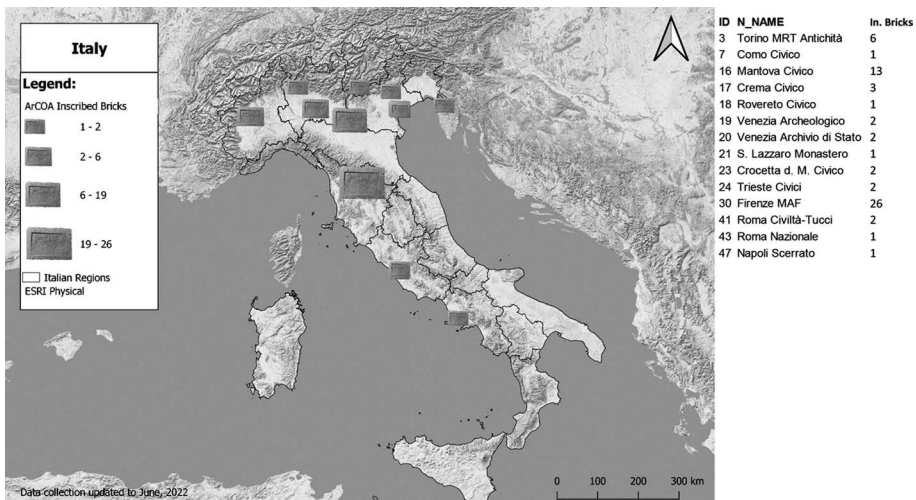


Fig. 7: Distribution and quantification map of inscribed bricks hosted in Italian institutions. Map by V. Oselini with QGIS, ©ArCOA. Base map: ESRI World Physical Map, March 2019 (obtained through QuickMapServices QGIS plugin).

Fragments of Neo-Assyrian carved slabs, which were very popular “souvenirs” of travellers and collectors, are kept in seven museums in northern and central Italy, testifying to the intense relations of some Italian personages with the most important antiquarians, intellectuals, and pioneers of archaeology who were already carrying out excavations in the Near Eastern regions in the late 19th century.²³ It is interesting to mention also the presence of some gypsum replicas of Neo-Assyrian reliefs in the Museo Archeologico Nazionale di Napoli, realized by

²³ Dolce / Nota Santi, 1995. Museo di Antichità (Musei Reali) di Torino, Museo Archeologico Nazionale di Venezia; Museo Archeologico Nazionale di Firenze; Museo Civico di Archeologia Ligure di Genova; Civico Museo Archeologico Paolo Giovio di Como; Museo Barracco in Roma; Museo Diocesano di Santo Stefano al Ponte in Firenze; several reliefs and fragments of Assyrian inscriptions are also collected in the Musei Vaticani.

Domenico Brucciani from Neo-Assyrian reliefs of Ashurnasirpal II and Ashurbanipal kept in the British Museum of London. The moulds were gifted by Alessandro Castellani to the director of the museum Giuseppe Fiorelli, who was also directly in contact with Layard.²⁴

More than 250 cylinder and stamp seals have been filed during the first survey of the collections, with the main groups housed in the museums of Torino, Firenze, Perugia and Napoli. Since the beginning of oriental studies, they represented objects that attracted the first collectors, often constituting the original nuclei of Mesopotamia artefacts in the Italian collections (see §5)²⁵ (Fig. 8).

Terracotta figurines, hosted in Northern and Central Italy collections, mainly in Lombardy (Fig. 9), consist of anthropomorphic figurines and a few animals, for a total of about 170 pieces, principally coming from the Northern Levant and Mesopotamia, and in a minor number from Iran.

Pottery is also widely represented in different institutions. The most relevant group is the Near Eastern ceramic collection at the Museo Internazionale delle Ceramiche in Faenza, which includes both complete vessels and potsherds, dating from the 6th millennium BCE to the Iron Age, coming from the Levant, Mesopotamia, Anatolia and Iran.²⁶ The Museo Archeologico Nazionale di Firenze also hosts more than 200 exemplars, mainly from excavations at Shemamok, dating from the 7th to the beginning of the 3rd millennium BCE (Hassuna, Halaf, northern Ubaid, and Ninevite V periods), to the mid-late 2nd millennium BCE (Middle Assyrian period) and the Iron Age, specifically to the Neo-Assyrian period.²⁷ Moreover, pottery from the 20th century Italian excavations in Syria and Iran is stored in the MNAO of Rome.²⁸ Other minor collections are spread in northern and central Italy as well.²⁹

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²⁴ The copies have been recently shown in the 2019 exhibition ‘Gli Assiri all’ombra del Vesuvio’: Graziani, 2019.

²⁵ This category is presented by Silvana Di Paolo in §5.

²⁶ Anastasio *et al.*, 2020; Torcia Rigillo, 1999.

²⁷ Anastasio, 2008: 561–563.

²⁸ Di Paolo, 2005: 147. Now Museo delle Civiltà – Collezione Arte Orientale “Giuseppe Tucci”.

²⁹ A hundred ceramics from Troy are preserved at the Museo Pigorini, Roma (Di Paolo, 2005: 143–144). More than thirty vessels constitute the Sissa collection in the Museo Civico di Palazzo Te, Mantova (Giovetti, 2000). Some pottery from Bab edh-Dhra’ is at the Museo del santuario di Santa Maria, Tagliacozzo (Di Paolo, 2001). A group of ten Anatolian vessels in the private Museo del Vino in Torgiano, near Perugia (Uncini, 1991); Urartian juglets, a bowl and a pot, two 3rd-millennium painted jars from Iran and a 3rd-millennium jar from the Levantine area are in the Monastero di S. Lazzaro in Venezia (Morandi, 2003); two small collections are at the Museo dell’Olivo di Imperia, and at the Museo Archeologico di Voghiera (Di Paolo, 2005: 152–153).

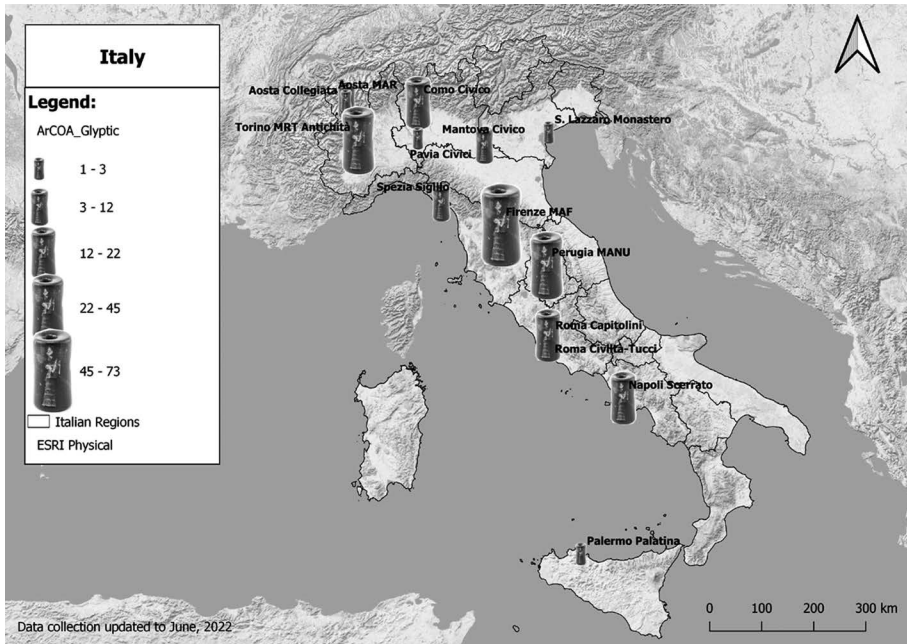


Fig. 8: Distribution and quantification map of cylinder and stamp seals hosted in Italian institutions. Map by V. Oselini with QGIS, ©ArCOA. Base map: ESRI World Physical Map, March 2019 (obtained through QuickMapServices QGIS plugin).

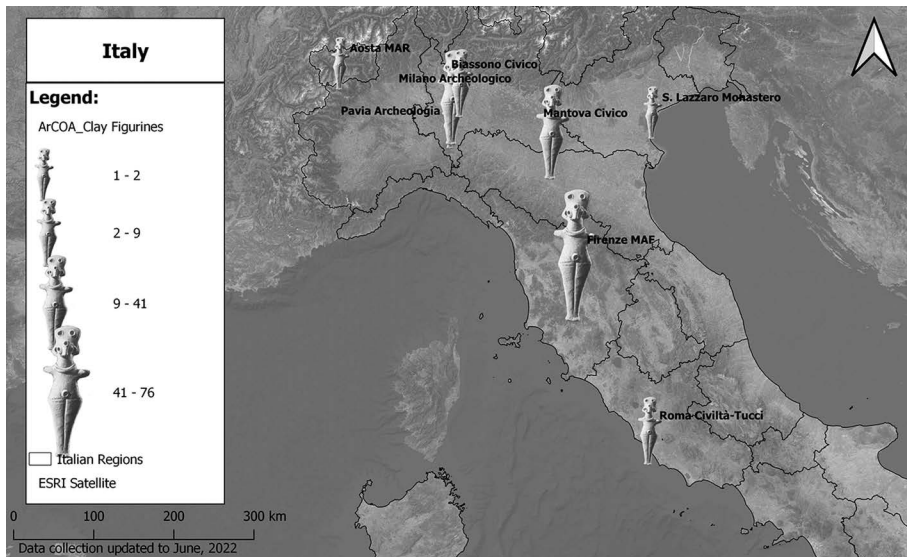


Fig. 9: Distribution and quantification map of the clay figurines hosted in Italian institutions. Map by V. Oselini with QGIS, ©ArCOA. Base map: ESRI World Imagery Map, data July 2022 (obtained through QuickMapServices QGIS plugin).

4. Cuneiform texts and written documents. An updated overview

As part of the ArCOA project, a specific research strand is devoted to the epigraphic material in cuneiform script.

An essential preliminary task consisted in verifying the census of Mesopotamian epigraphic material kept in Italian public and private collections published by S. Ermidoro in 2011, which aimed to map their presence and location throughout Italy, regardless of the size and nature of the collection. The total number of identified assemblages was fifty-six, totaling more than two thousand objects divided among tablets, bricks, cones and fragments of other inscribed items, such as alabaster slabs and stone vessels. Eighteen of the surveyed collections were public, while the remainder were privately owned by various kinds of institutions (private museums and universities, research foundations, individuals, and church-owned collections).

An update of the situation described in 2011 proved to be necessary because research undertaken during the last ten years led to a new assessment of the size, chronological, geographical, typological composition, and acquisition history of some collections included in the census.³⁰

The material of the Museo Archeologico Nazionale di Firenze is currently being (re)studied by a team coordinated by Amalia Catagnoti,³¹ whose work has already highlighted that the collection consists of 251 items including clay tablets, bricks and cones, while the 2011 census listed a total of 200 inscribed objects. The Florence assemblage is rather unique and particularly important among the Italian collections, not only because of its richness but also because it is the most varied in terms of chronology and typology of the items it gathers.

Similarly, Federico Giusfredi and Maurizio Viano are preparing a new edition of the Ur III texts kept in the library of the Università Cattolica del Sacro Cuore di Milano,³² where only 65 of the 71 tablets originally donated by Giustino Boson to the University could be retrieved in the holdings of the collection.³³

Several cuneiform artefacts of the Museo delle Civiltà-Sezione Giuseppe Tucci in Roma have been edited for the first time. Among them, there is also a Middle Elamite door-knob that was not included in the 2011 census and is now published by Gian Pietro Basello.³⁴

³⁰ See Ermidoro, 2020 for an example of recent research into the acquisition history of the Neo-Babylonian and Neo-Assyrian bricks kept in the Museo Archeologico and in the Archivio di Stato in Venezia.

³¹ Catagnoti, 2022; see also Bramanti, 2017.

³² *Editio princeps* in Boson, 1936.

³³ See Giusfredi / Spada, 2018: 148, which also provides a new edition of the only Old Babylonian tablet belonging to the collection.

³⁴ Basello, 2013; see also Mayer, 2012 for the edition of a sealed Nuzi document and of a Middle Babylonian administrative text, and Bramanti, 2015 for a general overview of the collection and the edition of a Neo-Babylonian brick.

Finally, the collection of the Musei Reali di Torino was thoroughly restored and catalogued in view of the opening of a new archaeological gallery, inaugurated in February 2022 (see below §6.1).

In addition to this, it should be noted that since 2011 the total number of Italian public institutions housing materials with cuneiform inscriptions has been enriched thanks to donations of private collectors.

In 2014, the Museo Archeologico Regionale di Aosta received from Aurelio Carugo a collection of Egyptian and Mesopotamian artefacts, including six cuneiform tablets, that were previously kept in Ivrea and are now on display in a room named after the donor.³⁵

In 2017, the Museo Civico Archeologico di Bologna received a collection that previously belonged to Monsignor Nevio Ancarani and is currently being studied by a team coordinated by Nicolò Marchetti and Gianni Marchesi. It includes cuneiform tablets (administrative and legal texts, letters, and scribal exercises) and clay cones, dating from the pre-Sargonic until the Achaemenid period.

Finally, the small corpus of Elamite bricks kept in Italian museums has been increased thanks to Carla Maria Burri's legacy to the Museo Civico di Crema e del Cremasco³⁶ and a donation by the late Egyptologist Edda Bresciani to the Museo Orientale Umberto Scerrato di Napoli.³⁷ Both donated respectively three and one Middle Elamite bricks bearing different inscriptions of king Untaš-Napiriša, that probably originated from the ziggurat of Tchogha Zanbil.

As of today, it is planned to enter in the database materials from 32 collections, for a total of more than two thousand objects divided between tablets, bricks, cones, and fragments of other inscribed items (Figs. 6–7). The collections are located in 12 different regions across Italy, mostly in the North: the most represented region is Lombardy, with eight collections in five different cities. There are only two public collections in Southern Italy: one in the Museo Orientale Umberto Scerrato di Napoli and another in the Università di Messina. Although these texts cover a very broad chronological span, ranging from the proto-cuneiform texts of the 4th millennium BCE to the Seleucid period, the Third Dynasty of Ur is the best represented historical period in Italian collections. As for their provenance, the epigraphic materials held in Italian public collections may be ascribed to all regions of ancient Mesopotamia, having been written in cities of the Southern alluvium, Babylonia and Assyria; the presence of a small corpus of inscribed objects from Elam is also noticeable. Regarding the represented typologies, the Italian collections include mostly archival texts, but royal inscriptions written on

³⁵ Ronc *et al.*, 2011; three Ur III tablets now in Aosta have been studied by F. Pomponio (2011 and 2013) when they still belonged to the Carugo collection in Ivrea.

³⁶ Basello, 2016; Civitillo, 2017.

³⁷ Caterina, 2018: 4; Basello, 2018.

various types of supports (bricks, cones, and fragments of alabaster slabs) are also rather well represented.

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5. The collections of seals and clay figurines in Italy

Among the categories of objects represented in the Italian collections, we would like to draw attention particularly to seals and clay figurines.³⁸

Some ancient Near Eastern cylinder seals arrived in Italy before the formation of the first glyptic collections, closely linked to the nascent Oriental studies in Italy: as heirlooms with a sacral or talismanic value³⁹ or as ‘new’ objects arousing the curiosity of collectors such as Bertel Thorvaldsen, who formed his collections of gems including a chalcedony Assyrian seal during his stay at Rome in the first half of the 19th century.⁴⁰

The collections of ancient Near Eastern seals preserved in public museums are distributed throughout the Italian territory between Aosta and Napoli (Fig. 8). The largest groups are in Northern and Central Italy (Piemonte, Toscana, Umbria), whereas other objects are distributed from north to south, in the Museo Archeologico Regionale di Aosta, the Museo di Antichità di Torino, the Civico Museo Archeologico Paolo Giovio di Como, the Musei Civici di Palazzo Te di Mantova, Museo del Sigillo di La Spezia, Museo delle Civiltà-Sezione Giuseppe Tucci and Musei Capitolini di Roma, Museo Orientale Umberto Scerrato di Napoli.

The cylinder seals kept in the Museo Civico di Palazzo Te di Mantova belonged to the private collection of Ugo Sissa (1913–1980), who in 1953–1955 and 1957–1958 worked at Baghdad first as Chief Architect of the Development Board of Iraq and later of the Development Office and Department for the Summer Stations and Tourism. During his stay in Iraq, in fact, he started a small collection of antiquities, obtained at antique markets or by exploring the surface of tells, as a result of his role in the building project of a hotel for touristic stops in archaeological areas and thanks to his general interest in Mesopotamian history.⁴¹ Palazzo

³⁸ All types of sealings are not treated in this article. However, they will be included in the Digital archive ArCOA.

³⁹ As a Syrian hematite cylinder seal uncovered within a Late Roman tomb located in the area of Basilica dei Santi Felice e Fortunato in Vicenza and now in the Museo Archeologico Nazionale di Firenze (Felli, 2013: 329–330) or the Mesopotamian specimen dating to Akkadian/Post-Akkadian period found within a reliquary (14th–15th century) of the Treasure of the Cappella Palatina at Palermo (Rocco, 1980–81: 259–274; Rocco, 1981: 237–240; Purpura, 1986: 45–56).

⁴⁰ Fossing, 1929: pl. I:1; Di Paolo, 2012: 29–30, fig. 7. The seal (Inv. No. I1694) is online on the website of the Thorvaldsens Museum at Copenhagen: <https://kataloget.thorvaldsensmuseum.dk/I1694>.

⁴¹ Nicolini, 1984: 28.

Te only hosts a few specimens of his large collection of cylinder and stamp seals.⁴² A Neo-Babylonian quartz seal with a banquet scene is hosted in the Monastero Mechitarista di San Lazzaro degli Armeni, a small island in the Venetian lagoon.⁴³ A Common Style seal of faience, part of the Egyptian collection of the Marquis Malaspina di Sannazzaro, is currently in the Musei Civici of Pavia.⁴⁴

The oldest collections of seals were formed between the 19th and the first half of the 20th century. Information on the acquisition of sixteen seals belonging to Alfonso Garovaglio (1820–1905) and now kept in the Museo Civico Archeologico Paolo Giovio at Como is scanty. He purchased a group of stones on the antiques market at Baghdad during his travel to Mesopotamia in 1887, as recorded in the letters to his daughter.⁴⁵ However, it is possible that some seals were already part of his collection.⁴⁶ The materials were preliminary published in 1909;⁴⁷ most are dated between the Early Dynastic and the Neo-Assyrian periods and include Early Dynastic seals with contest scenes (*Figurenband*), several Old Babylonian specimens, and one Mittani style cylinder seal. One Achaemenid and three Sasanian stamp seals complete the group.⁴⁸

One of the first collections of seals formed in Italy was purchased by the Museo Archeologico Nazionale dell'Umbria at Perugia from Elisa Vincenti. Information about the purchase date and provenance of the stones are unknown, but the first notice of this successful acquisition dates to 1889.⁴⁹ Unfortunately, this material is still very little known to specialists, because when included in the largest collection of Etruscan objects in Umbria, it represents an 'anomaly' in this territory and was never sufficiently researched. According to Bruto Telsoni who published this collection in 1905, the lot consists of 50 stones and 17 modern impressions, but it is uncertain whether the latter were obtained from the same seals. Instead, the presence of 'duplicates' within this collection casts doubt on the authenticity of some seals. The largest group consists of Old Babylonian seals mostly made of iron oxides, and ten Neo-Assyrian and Achaemenid specimens, including some conoid stamp seals.⁵⁰

The collection of the Museo Archeologico Nazionale di Firenze was formed over a long period of time. 67 ancient Near Eastern cylinder (35) and stamp seals (32) entered between 1897 and 1967, whereas four other seals are older acquisi-

⁴² Van Buren, 1959 studied 139 pieces, whereas a list of latest acquisitions (153 stones) was added by Ugo Sissa himself.

⁴³ Morandi Bonacossi, 2003: 79–87, figs. 57–59.

⁴⁴ Stenico, 1957; Di Paolo, 1997.

⁴⁵ Garovaglio, 1896: 181 and fn. 1.

⁴⁶ Regazzoni, 1879: 63; Betti, 2007: 15–16.

⁴⁷ Ballerini, 1909: 563–571.

⁴⁸ Betti, 2010: 34–38.

⁴⁹ Luppetelli, 1889: 40.

⁵⁰ Telsoni, 1905: 195–216, especially 196 and 206.

tions. The latter, already present in the large historical Medici and Lorena gem collection and long preserved at the Uffizi, moved to the Museo Archeologico in 1870.⁵¹ The provenance of the material of Firenze is unknown. It was purchased in different areas of the Mediterranean and Middle East, from Baghdad to Greece (Corinth, Crete) and Alexandria of Egypt. However, it cannot be excluded that some pieces, such as the Mittani style seal purchased at Crete, had already arrived on the island in antiquity, being the most common class of imported Near Eastern seals in the Aegean.⁵² The two larger groups of seals, acquired in 1897 from Antonio Dazzi and in 1930 from the Italian mission at Qasr Shamamuk, consist of an equal number of seals (altogether 52): they include Uruk seal-amulets, Akkadian seals depicting mythological themes and ‘contest scenes’, 15 stones pertaining to the Old Babylonian period with the usual theme of the seated deity facing a frieze of worshippers, a small group of Neo-Assyrian and Neo-Babylonian stones with fight and hunt scenes, and worship of divine symbols.⁵³

In 1921 in Paris the famous Egyptologist Ernesto Schiaparelli and Father Giustino Boson facilitated the purchase of an Iraqi physician’s collection of cuneiform tablets and cylinder seals by the Italian government. This lot of materials includes a group of c. 40 cylinder seals that since 2010–2011 has been part of the collections of the Museo di Antichità (Musei Reali) di Torino. The cylinders at Torino (which also include some fakes) are mainly dated to the 3rd and 2nd millennium BCE.⁵⁴

A glyptic collection specifically acquired for educational purposes in the 1960s is currently kept in the Museo Orientale Umberto Scerrato at Napoli (Fig. 10).

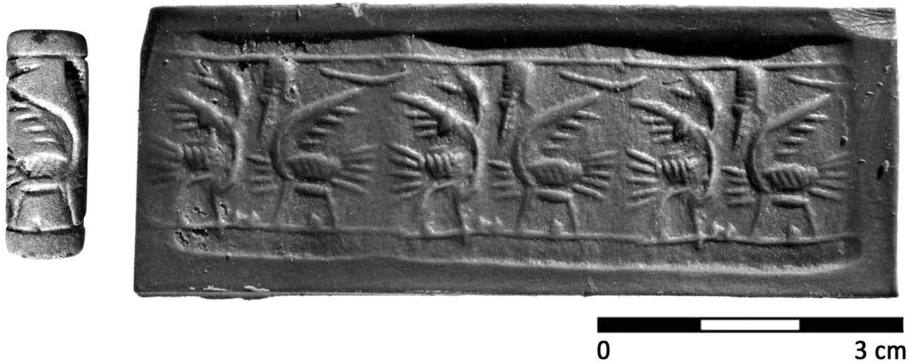


Fig. 10: Neo-Assyrian linear-style faience seal in the Museo Umberto Scerrato di Napoli (MO276). 9th–8th century BCE.

⁵¹ Felli, 2013: 301–305.

⁵² See, lastly, Tabita, 2021: 16.

⁵³ Felli, 2013: 311–356.

⁵⁴ Bergamini, 1987.

This lot is formed by 31 specimens and includes both cylinder and stamp seals. The former covers a broad chronological horizon and geographical distribution. Several seals originally used throughout Mesopotamia are dated between the Akkadian and Neo-Assyrian periods. Others refer to the Cappadocian and Elamite styles. The stamp seals include Neo-Babylonian exemplars, and four Sasanian specimens.⁵⁵

Finally, two other groups of seals are kept in the Museo delle Civiltà-Sezione Giuseppe Tucci and the Musei Capitolini di Roma. The first lot was acquired by the Museo d'Arte Orientale as part of the wide collection of Japanese graphic art owned by Salvatore Pugliatti (1903–1976), jurist, founder of the School of Civil Law and Rector of the Università di Messina.⁵⁶ The seals, covering a long period of time, include some interesting pieces pertaining to the 3rd and 2nd millennium BCE. For the second lot, the Musei Capitolini obtained a form of loan for use by the Roman business family Santarelli, particularly active in the arts and enhancement of the heritage of ancient Rome. The large Santarelli collection also consists of 600 ancient gems,⁵⁷ among which are twenty Mesopotamian seals, dated from the 4th millennium BCE to the Sasanian period.⁵⁸

Another well-represented category of artefacts is clay figurines, preserved only in the public museums of Northern and Central Italy (Fig. 9). The former macro area hosts two-thirds of the collections, distributed across four regions (Valle d'Aosta, Lombardia, Veneto, and Emilia-Romagna), predominantly in Lombardia: Milano, Civico Museo Archeologico; Biassono (in the province of Monza and Brianza), Museo Civico Carlo Verri; Mantova, Museo Civico di Palazzo Te (see *infra*). In addition to these materials, there is also the only ancient Near Eastern item that has been attached to the small Egyptian section of the Museo di Archeologia at Pavia founded for educational purposes as a branch of the local University since 1936⁵⁹ In Central Italy, the collections of the Museo Archeologico Nazionale di Firenze and Museo delle Civiltà-Sezione Giuseppe Tucci in Roma are notable not only for their typological variety of figurines, but also for the provenance of several specimens from regular excavations in Syria and Iran. The Museo in Firenze, for instance, preserves two zoomorphic figurines recovered during the excavations carried out at Qasr Shamamuk (ancient Kilizu) in Iraq in 1933 by the archaeological mission of the Università di Firenze, directed by Giuseppe Furlani and Doro Levi, within a research program promoting the first Italian excavations in Mesopotamia.⁶⁰ The figurines belong to the lot of finds as-

⁵⁵ Campurra Mazzoni, 1972; Graziani, 2018; Graziani, 2019: 225–232.

⁵⁶ Mazzeo, 2010: 631–634.

⁵⁷ Gallottini, 2012: 19–20.

⁵⁸ Gallottini, 2012: 31–43.

⁵⁹ Mora, 1984: 22–24; Di Paolo, 1997: 145–150.

⁶⁰ Petricoli, 1990: 325–328.

signed at that time to the excavating institution as an indemnity according to the antiquities law of the French Mandate for Syria and Lebanon.⁶¹ Information about the original context where the figurines were found and their dating were lost after World War II. The fieldwork was focused on the excavation of a Neo-Assyrian and Parthian necropolis west of the tell,⁶² but other materials dating between the 6th and 2nd millennia BCE probably come from a sounding or survey carried out in a different area.⁶³ A more recent inventory project concerning the unclassified materials in the late 1960s⁶⁴ allowed the re-examination of these two small clay finds.⁶⁵ Preserved in fragmentary form, they could be respectively interpreted as an equid and a breeding animal.

A group of terracotta figurines recovered from the important site of Shahr-i Sokhta in the province of Sistan and Baluchistan (Iran) are currently in storage at the Museo delle Civiltà-Sezione Giuseppe Tucci.⁶⁶ These artefacts come from the Italian excavations carried out in 1967–1978 and directed for several years by M. Tosi.⁶⁷ Owned by the former IsMEO (Istituto Italiano per il Medio ed Estremo Oriente) which financed the excavations, the figurines express the cultural development and cults of the first human communities formed during the 4th–3rd millennium BCE and their interactions on the south-eastern Iranian plateau.

Apart from these small lots of clay figurines of known origin, the materials currently in Italian museums are of unknown provenance and were acquired in two ways: 1) by donation or purchase of old private collections; 2) by purchase on antiques markets (between the end of World War II and the 1980s). The first two groups of figurines arriving in Italy pertain to the Mesopotamian cultural horizon: amounting to 87 pieces, including a monovalve mould, they were acquired between 1930–1957. The oldest date back to 1930 when Furlani and Levi purchased them on the antiques market at Baghdad and later acquired by the Museo Archeologico Nazionale di Firenze.⁶⁸ They are altogether 69 figurines dating to Ur III-Old Babylonian period. The ratio between female and male figures is unbalanced in favour of the former, probably reflecting a choice of the purchasers rather than a real disproportion based on contextualised sets of figurines.⁶⁹ The most noteworthy types are the ‘nude female’ plaques belonging to a well-known Mesopotamian production and the plaques depicting men holding

⁶¹ Segret, 2012: 249.

⁶² Furlani, 1934a, c–d.

⁶³ Ulivieri, 2012: 81.

⁶⁴ Pecorella, 1984.

⁶⁵ Ulivieri, 2012: 128, nos. 127–128.

⁶⁶ D’Amore, 1997: 102.

⁶⁷ Tosi, 1968; 1969; 1983; Salvatori / Vidale, 1997; Sajjadi, 2003: 21 and fns. 2–3.

⁶⁸ Valentini, 2013: 153.

⁶⁹ Roßberger 2018: 526.

curved staffs, such as the ‘bull-eared’ deity and the ‘shrouded god’.⁷⁰

Another small group of Mesopotamian figurines consisting of 18 specimens is hosted at Mantova, in the Museo Civico di Palazzo Te. They were part of the collection of Ugo Sissa and cover a time span from the end of the 5th millennium BCE to the Parthian period. The largest group (8 specimens) is dated to Ur III–Old Babylonian period and includes an almost complete monovalve mould used to produce serially ‘nude female’ plaques: only facial features, headdress and jewellery (not showed in the mould) varied and probably were modelled by hand before cooking.⁷¹ ‘Nude female’ plaques are present in this collection, as well as hand-modelled versions. We would also like to mention three figurines crudely modelled in the round assigned by Dominique Collon to the surface concentration of human and animal figurines as well as inscribed bricks of Nazi-Maruttash II uncovered by chance in 1945–1946 in a low mound c. 2 km north-west of the main palace of Dūr-Kurigalzu.⁷² The presence of dedicatory inscriptions to Gula on some of the figurines identify this area as a temple dedicated to the goddess, only recently included in a detailed map of all excavated remains at Dūr-Kurigalzu.⁷³ The figurines at Mantova seem to share with all other specimens from the Mesopotamian site the iconography of supplicants with hands on different parts of their bodies (lower abdomen, leg). They were manufactured as part of the petition for healing indicating the area of affliction with the hand position.⁷⁴ The explanation for the specific features of the Mantova figurines probably need further investigation. However, during his stay in Iraq, U. Sissa visited ‘Aqar Quf, taking 70 photos of the ziqurat, brickworks, artefacts and local people.⁷⁵ Therefore, it cannot be ruled that the Italian architect picked up any of these figurines, which were also found in other areas of the site.⁷⁶

The more recent acquisitions (starting from the 1970s) are a group of figurines produced in Syria but of unknown provenance (purchased on the antiques markets). Most of them, hosted in the Civico Museo Archeologico di Milano and the Museo delle Civiltà-Sezione Giuseppe Tucci, have been studied and published. The figurines are dated from the Early Bronze IV to the Persian period (c. 2500–330 BCE), albeit with some gaps. The earliest specimens preserved at Milano fall in the category of pillar-shaped anthropomorphic figurines of the Middle Euphrates region, well-known from several specimens retrieved in regular exca-

⁷⁰ Van Buren, 1930: 131–135, figs. 172–178, nos. 638, 643–644, 646, 649–652; Barrelet, 1968: 383, nos. 745, 747, 750, pl. XIII, LIII, LXXII.

⁷¹ Collon, 2000: no. 164. On some general aspects of the serial production, see Di Paolo, 2018: 48–55.

⁷² Collon, 2000: nos. 160, 165–170; Mustafa, 1947.

⁷³ Clayden, 2017: 458, fig. 16.01 (T5).

⁷⁴ Avalos, 1995: 209–210; Watanabe, 2017: 692.

⁷⁵ Urru, 2018: 118, fn. 38; 244–273 (photos), nos. 975, 985.

⁷⁶ Clayden, 2017: 466–467.

vations (Fig. 11). Most of the figurines at Milano have a pillar-shaped lower body, a flattened upper body with well-defined shoulders, applied arms, decoration at the neck, head covered with conical headdress or diadem and different hairstyles (necktail, neckbun).⁷⁷ The core region of this specific production is the Euphrates valley between Tell Sweyhat and Tell Bi'a, but it shows connections with other regions, such as the Northern Levant (Ebla, Hama), Jezirah (Tell Mozan) and occasionally the Tigridian area (Assur).⁷⁸



Fig. 11: Clay figurine in the Civico Museo Archeologico di Milano (A.990.3.17). Provenance area: Euphrates valley. Second half of the 3rd millennium BCE.

These figurines appear in levels dated to the second half of the 3rd millennium BCE (Periods EME 4–5).⁷⁹ The Middle Bronze figurines are uncommon in Italy. A ram of the Carugo Collection in the Museo Archeologico Regionale di Aosta was dated to the end of 3rd millennium BCE,⁸⁰ but some specific features such as the applied eyes encircling the horns and the presence of an applied and incised band on the neck of the animal seem to indicate a date in the Middle Bronze age I–II. Further studies are needed for the refinement of the chronology of this object. The typical Middle Bronze I–II female figurines widely attested in the Northern Levant, with flattened body, arms brought forward, a bird-like aspect and the headdress stretched out in a comb-like shape, are represented by only one specimen in the Museo Civico Archeologico di Milano,⁸¹ in addition to the figurine in the Museo of Archeologia di Pavia (see above).

⁷⁷ Di Paolo, 1999: 34–38 (A1–8).

⁷⁸ Sakal, 2015: 269–270 (Type MEFT A 02); Finkbeiner / Novak, 2015: 39–40 (EME 4–5).

⁷⁹ For their absolute dating, see the Periodization Table referring to the comparative stratigraphy at inter-regional level (ARCANE Project): http://www.arcane.uni-tuebingen.de/EA-EM-EL_phasing_v5-4-6.pdf.

⁸⁰ Ronc *et al.*, 2011: 127, no. 7 (ibex).

⁸¹ Di Paolo, 1999: 52 (B1).

Lastly, it is worth of note the presence of Achaemenid figurines in the Museo delle Civiltà-Sezione Giuseppe Tucci, such as the category of ‘Persian riders’⁸² characterized by the well-known combined technique of solid horse and hollow rider with stamped face typical of north Phoenician and north Syrian riders.⁸³

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6. A focus on some collections in Piedmont, Lombardy, and Tuscany

6.1 Piedmont: the collection of the Museo di Antichità di Torino

The Museo di Antichità di Torino houses the largest collection of Mesopotamian artefacts in Italy. It consists of cuneiform tablets, reliefs and fragments of inscriptions from the Assyrian capitals Khorsabad/Dūr-Šarrukin and Nineveh, cylinder seals, stamped bricks, and a few more inscribed objects.⁸⁴ The collection was formed between 1847 and 1921: at that time, it was housed in the Regio Museo di Antichità greco-romane ed egizie, whose Egyptian collection formed the core of the now world-renowned Museo Egizio. When the collection of classical antiquities was separated from the Egyptian one in 1940, the Mesopotamian artefacts remained in the Museo Egizio, where they have been kept until they were moved to the Museo di Antichità in 2006.

The first Mesopotamian objects entered the collection during the 19th century, mainly as occasional gifts from private individuals. The earliest and most famous of these gifts is a portrait of Sargon II from Khorsabad donated by the diplomat and archaeologist Paolo Emilio Botta to his hometown in 1847 (Fig. 12).⁸⁵

A proper “campaign” of acquisitions was carried out by Ernesto Schiaparelli, director of the museum from 1894 until 1927. In 1896, he arranged an exchange of Mesoamerican objects with the Regio Museo Nazionale Preistorico Etnografico di Roma, which gave in return a group of Egyptian and Near Eastern artefacts that originally belonged to the Kircher Museum. This fascinating institution, often regarded as the first museum in the world, was founded in 1651 by the German Jesuit Athanasius Kircher and was initially housed in the Jesuit College, where the collection of antiquities, scientific tools, and curiosities “from all parts of the world” soon became a must-see attraction for pilgrims and travellers who visited Roma in the 17th century. At the end of the 19th century, the museum was being

⁸² For this typology and its terminology, see Nunn, 2000: 42; Moorey, 2000: 469–486.

⁸³ D’Amore, 1997: 107–108, fig. 4.

⁸⁴ The cuneiform tablets and the other inscribed objects are edited in *Archi / Pomponio*, 1990; *Archi et al.*, 1995; *Archi et al.*, 1999; they are also available at https://cdli.ucla.edu/collections/turin/turin_it.html. For the cylinder seals, see Bergamini, 1987. The Assyrian reliefs have been the object of several publications: see e.g. Bergamini, 2011. For a brief history of the acquisitions, see Bergamini, 1995.

⁸⁵ Bergamini, 2011.

phased out of existence and its collections dispersed among several Italian museums.

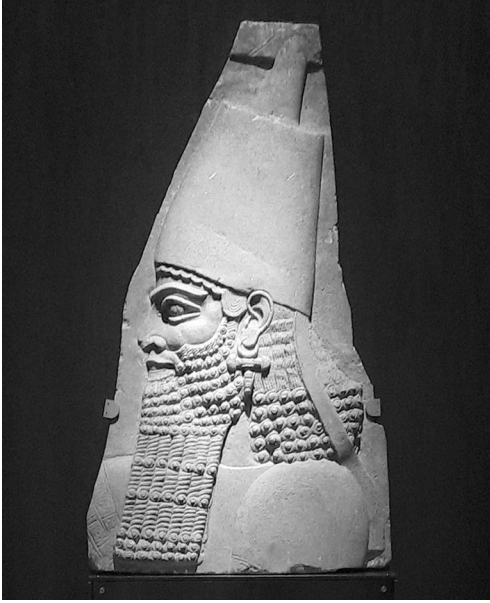


Fig. 12: Neo-Assyrian relief portraying Sargon II from Khorsabad in the Museo di Antichità – Musei Reali di Torino.

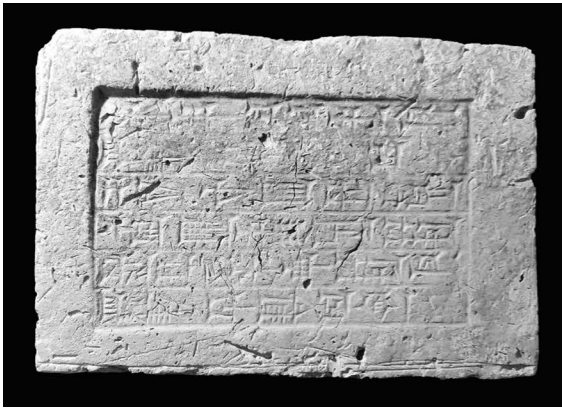


Fig. 13: Brick with stamped royal inscription of Nebuchadnezzar II (MAT 791) in the Museo di Antichità – Musei Reali di Torino and the brick's photogrammetry for the realization of the 3D model by D. Bursich. ©ArCOA.

The Near Eastern items acquired through this exchange have been identified with a stamped brick of Ur-Namma from Ur (MAT 788), a stamped brick of Sennacherib from Nineveh (MAT 789), two stamped bricks of Nebuchadnezzar from

Babylon (MAT 791–792, Fig. 13), the head of a royal guardsman from Khorsabad, and two cylinder seals (CGT 70020 and 70030).⁸⁶

Despite being common artefacts in museums worldwide, the bricks of Ur-Namma and Nebuchadnezzar now in Turin deserve a special mention in the history of Near Eastern collections, since they might have entered the Kircher Museum in a very early phase of its centuries-long history as gifts from an illustrious donor.⁸⁷ In fact, it is possible that Kircher received them from Pietro Della Valle, who travelled extensively in the Near East between 1614 and 1626, and became one of the first Europeans to visit ancient sites such as Babylon, Ur, Ctesiphon, and Persepolis. In his last book, *Turris Babel*, that appeared in 1679, Kircher states that Della Valle gave him a specimen of the bricks he found in Babylon's ruins, which most likely was a brick of Nebuchadnezzar. Since Della Valle collected an inscribed brick also during his visit to Ur, one may assume that also Ur-Namma's brick came into the holdings of the Kircher Museum as a gift from the Roman nobleman. If this reconstruction is correct, the bricks of Nebuchadnezzar and Ur-Namma now in the Museo di Antichità di Torino would be among the first cuneiform objects ever seen in Europe, long before the *kudurru* known as "caillou Michaux" arrived in Paris at the end of the 19th century.

The numerically most important acquisition facilitated by Schiaparelli took place in 1921, when the Egyptian Museum bought a lot of 800 cuneiform tablets (dating mainly to the Third Dynasty of Ur and stemming from the archives of Umma and Puzriš-Dagan, with smaller groups of Old Akkadian and Old Babylonian documents) and 50 cylinder seals on the antiquity market in Paris. The purchase was arranged by Giustino Boson, one of the first Italian Assyriologists, who at that time was in Paris and acted as intermediary between the seller (a doctor stemming from Baghdad) and Schiaparelli.⁸⁸

All these objects remained for a long time inaccessible to the wider public. After the collection was moved to the Museo di Antichità, the Assyrian reliefs together with a small selection of tablets, bricks and seals were put on display, but renovation works often prevented access to this part of the exhibition.

Finally, in February 2022, the museum inaugurated a new section devoted to the historical archaeological collections, which also includes two rooms devoted to the ancient Near East (Fig. 14). On this occasion, the whole collection was thoroughly catalogued and restored, and a photographic campaign was under-

⁸⁶ Bergamini, 1995: 316. The abbreviations MAT and CGT correspond respectively to the publication numbers of the bricks in *Archi et al.*, 1999 and of the cylinder seals in Bergamini, 1987.

⁸⁷ See Devecchi, 2022.

⁸⁸ The history of this acquisition is currently being reconstructed by Elena Devecchi based on unpublished archival records kept in the Archivio di Stato di Torino.

taken, partly conducted by Daniele Bursich on behalf of the ArCOA project, who produced 3D models of a selected group of items (Fig. 13).

More than a century after Schiaparelli purchased the last important group of Mesopotamian antiquities, the collection finally has the visibility and accessibility it deserves, a big part of it being now freely accessible to visitors, students, and scholars.

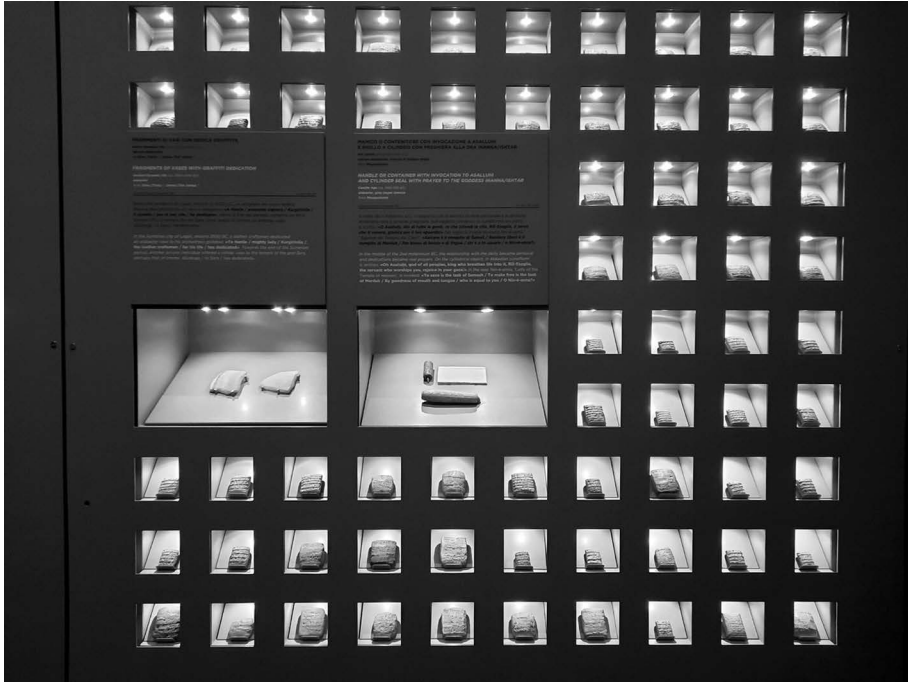


Fig. 14: The cuneiform tablets displayed in the Mesopotamian room of the new section devoted to the historical archaeological collection in the Museo di Antichità – Musei Reali di Torino.

6.2 Lombardy: the collection of the Civico Museo Archeologico Paolo Giovio di Como

The Near Eastern collections held in the territory of Lombardy were the focus of the ArCOA project in its first stages. In fact, the project started with a survey of the institutions in Lombardy holding small or large collections of artefacts from the Near Eastern regions (Fig. 15).⁸⁹ In detail, collections of oriental artefacts are located in Milan, scattered in different museums and institutions: the Civico Museo Archeologico (44 figurines and 15 cuneiform tablets), the Museo di Storia Naturale (housing one tablet), the Museo della Scienza e della Tecnica (two tab-

⁸⁹ As a starting point on the survey of Oriental collections in Italy, see Di Paolo, 2005. On Near Eastern terracotta figurines in Lombardy, see Di Paolo, 1999.

lets), the Università del Sacro Cuore di Milano (72 tablets) and, finally, the Accademia di Brera. At Como, the Civico Museo Archeologico Paolo Giovio houses the Garovaglio collection; at Mantova, the Sissa Collection is in the Museo Civico di Palazzo Te;⁹⁰ at Pavia, the oriental artefacts are kept in the Civici Musei (one seal) and in the Museo di Archeologia dell'Università (one figurine).⁹¹ Finally, at Biassono (near Monza), four figurines, two oil-lamps and one tablet are today stored in the Museo Civico Carlo Verri.⁹²

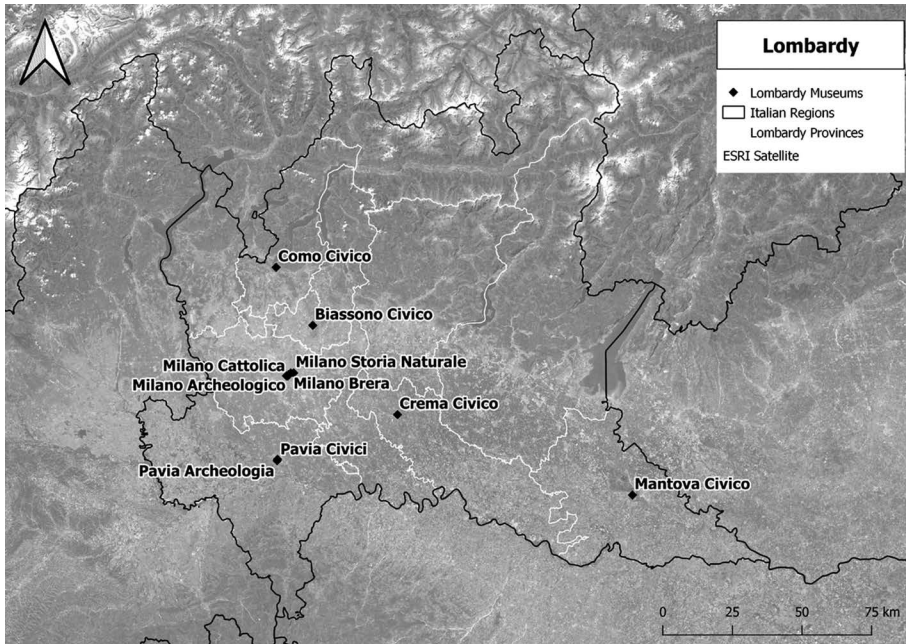


Fig. 15: Map of the institutions hosting ANE materials in Lombardy. Map by V. Oselini with QGIS, ©ArCOA. Base map: ESRI World Imagery Map, data July 2022 (obtained through QuickMapServices QGIS plugin).

The collection of Mesopotamian antiquities in the Civico Museo Archeologico Paolo Giovio di Como consists of two fragments of Neo-Assyrian reliefs, an inscribed brick, an envelope, 10 cylindrical seals, one Achaemenid and three Sasanian stamp seals.⁹³ This collection derives from the acquisition of the previous private collection of Alfonso Garovaglio, a jurist and lawyer, but also a collector of antiquities and a traveller, who had long been involved in archaeological

⁹⁰ The Sissa collection includes ceramics, glyptics, lithic material, toreutics; a fragment of an inscribed alabaster vase, seven tablets, a bulla, an inscribed brick.

⁹¹ Di Paolo, 1997.

⁹² Di Paolo, 2005.

⁹³ Ballerini, 1909: 535–571; see also Betti, 2007; Bergamini, 2010.

fieldwork in the Lake Como area.⁹⁴ Some of the Near Eastern artefacts in his private collection were acquired during the journey that Garovaglio undertook to Syria and Mesopotamia between the years 1886 and 1887. In 1869, he had already made a trip to Syria, Palestine, and Egypt, but his travel across the Near East in 1886–1887 is the most important journey of his entire life.⁹⁵ The traveller was motivated by the desire to visit the places made famous by the excavations of Paolo Emilio Botta and Henry Layard in the middle of the same century, although he did not hesitate to express his frustration seeing the state to which the wall reliefs were reduced.⁹⁶ In that special occasion, Garovaglio also took the opportunity, given by the travel, to purchase archaeological artefacts for his private collection, hosted in his villa in Loveno near Menaggio.

When Garovaglio died in 1904, the objects, passed by testamentary legacy to the Civico Museo Archeologico di Como, inaugurated in 1878, which Garovaglio himself had helped to promote. In his fabulous holiday residency at Loveno, he had set up a small museum, with prehistoric, protohistoric, Phoenician, Etruscan, Greek and Roman artefacts, as well as objects from ancient Egypt, including the sarcophagus and mummy of Isiuret, priestess of the 22nd Dynasty. All these objects were moved to the Museum.

The different ways in which Garovaglio's collection was constituted can be illustrated by the case of the inscribed objects kept in the Museum, that is the Nebuchadnezzar inscribed brick and the envelope, acquired at different times and in different manners. Although Ballerini in his publication of 1909 states that both items were purchased in Baghdad, we can reasonably assume that the Neo-Babylonian inscribed brick must have already been part of the collection of Loveno, at some time before Garovaglio's journey to Syria and Mesopotamia. On the other hand, the envelope, dated to the Old Babylonian period, was acquired directly by the collector during his travel to Mesopotamia, probably in Baghdad in March 1887, together with the cylinder seals also part of the collection kept in the Civico Museo Archeologico Paolo Giovio di Como, as clearly demonstrated by the letters written by Garovaglio to his daughter Adele (Fig. 16).

The circumstance is recalled in the archive documents, specifically in the letters to his daughter Adele, published in a volume entitled *Viaggio in Siria e Mesopotamia. Lettere Famigliari*, published by the author in 1896, and reprinted in 2005.⁹⁷ Indeed, in the letters referring to the visit to Baghdad, where he stayed for a week, from March 25th to April 2nd, 1887, Garovaglio mentioned the Mesopo-

⁹⁴ Uboldi / Meda Riquier, 2010.

⁹⁵ Pedrazzi, 2010: 269–283; Uboldi, 2010: 234–267.

⁹⁶ According to him, Nineveh was left with only the crumbs of Layard's rich banquet ("cadute dal sontuoso banchetto di Botta, Layard, Smith ... imbandito in Europa", Garovaglio, 1896: 165).

⁹⁷ Garovaglio, 1896.

tamian artefacts acquired to enrich his own collection of antiquities at Lovenno. In addition to the cylinder seals, which are also part of the collection now in the Museum of Como, there is mention of an inscribed “brick”, in his words “un mattone in forma di piccolo cuscinetto”, which corresponds to the inscribed clay envelope of an Old Babylonian sale contract.



Fig. 16: Old Babylonian clay envelope – Museo Civico Archeologico Paolo Giovio of Como.

In the same archive documents, Garovaglio also recalls the different ways in which the two fragments of Assyrian reliefs in his collection were acquired. In Baghdad, he received as a gift, from the French vice-consul Siouffi, the fragment of a relief from the palace of Ashurbanipal in Nineveh, with a theory of guards, as known from the letters to his daughter. On the other hand, the fragment of the head of a slave carrying a weight from the palace of Sennacherib, was acquired by Garovaglio in circumstances and at a time that are not clearly understood: the fragment bears a dedication by Layard to his friend Giuseppe Molteni, dated September 27th 1864, when Molteni was the Director of the Brera Gallery; but we ignore when this piece reached the Garovaglio’s collection in Lovenno. Probably, it happened before the trip to Mesopotamia in 1886–87, according to some references in the letters.

6.3 A regional case-study: Tuscany

A good case-study at regional level is Tuscany: a region that has a rich museum heritage, with some institutes housing oriental objects. As it might be expected, most of the oriental collections concern ‘late’ period materials, especially Medieval Islamic artefacts, which arrived in Tuscany starting from the Renaissance, when trade relations with North Africa and the Levant were very strong (there are at least 46 public and private institutes that host “oriental” materials in this broad sense). There are some institutes, however, that also host ancient Near Eastern collections, which are heterogeneous in type, history and origin.

A first noteworthy aspect concerns the legal status of the collection and of the museum or institute that houses the collection: it is the legal status, in fact, that usually determines how accessible the objects are to both specialists and the public, due to the different purpose of the institutes.

In the case of Tuscany, two collections belong to State museums (the Museo Archeologico Nazionale di Firenze and the Museo Archeologico Nazionale di Arezzo), one collection belongs to an Ecclesiastical Museum and one to a University museum. The accessibility of these collections is indeed very different: the objects in the State museums are on permanent display in the case of Arezzo, where some South Arabian statuettes are exhibited. In the case of Florence, which has a much richer and more assorted collection, the objects are not on permanent display but have been temporarily exhibited on different occasions (in 1966, 2013, and 2014), in addition to being published in complete catalogues and appearing, as single or small groups of objects, in other exhibitions in the form of temporary loans (recently, for example, in the exhibitions “From Assyria to Iberia” at the New York MET in 2014/2015, and “Nineveh – Heart of an Ancient Empire” in the Dutch National Museum of Antiquities of Leiden in 2018). All the artefacts are also accessible on request to scholars in storage facilities.

The situation is different for the other two museums: an Assyrian relief and two cuneiform inscriptions that belong to the ecclesiastical collection of the Florence Diocese are known in the literature, but have never been exhibited.⁹⁸ The same situation is repeated for the collection of the Museo di Antropologia dell’Università di Firenze, where noteworthy Pre- and Protohistoric lithic industries from various Near Eastern regions, which were collected mostly during the 1930s, merged into the general “Collezione paletnologica” of the Museum, yet no item has been exhibited or published so far. In this case, it should be noted that the survey carried out for the ArCOA project has led to the ‘rediscovery’ of these industries and to new attention by Museum staff towards this group of finds. Our hope is that they will soon be studied and published.

The opportunity to have a single database that contains a consistent description of collections that are so different in terms of accessibility will certainly be one of the main project outcomes. The scientific community will thus be able to become familiar with objects that, although already formally known because they have been catalogued and, in some cases, published, have never been seen, not even by specialists.

The particular case of the Museo Archeologico Nazionale di Firenze deserves special attention: the Museum has an important Near Eastern collection, both for the intrinsic value of the artefacts and for its history. Indeed, the bulk of the collection consists of the findings from the first Italian archaeological expedition to

⁹⁸ The cuneiform inscriptions are displayed in <https://beweb.chiesacattolica.it/>, searching for <tavoletta epigrafica> and <Firenze>.

Mesopotamia, namely the one led in 1933 by Furlani and Levi at the site of Qasr Shamamuk, the Assyrian Kilizu, in Northern Iraq, as well as those collected by the same expedition during a preliminary survey in Southern Iraq in 1930 (Fig. 17).

Other objects from Anatolia, Syria and Iran were added to these finds over time, through donations and exchanges. All this has made the Florentine collection become extremely varied, both in terms of the type of materials, and of their origin and chronology.⁹⁹ All the finds have been catalogued and their publication is almost complete (the last volume of the series dedicated to the “oriental collection” of the Museum, that is, the one on cuneiform documents, is currently in progress) but the objects were exhibited only for a short period during the 1960s, but they are currently not on display nor does the museum have an overall online catalogue (this is a feature that distinguishes the majority of collections in Italian state museums).

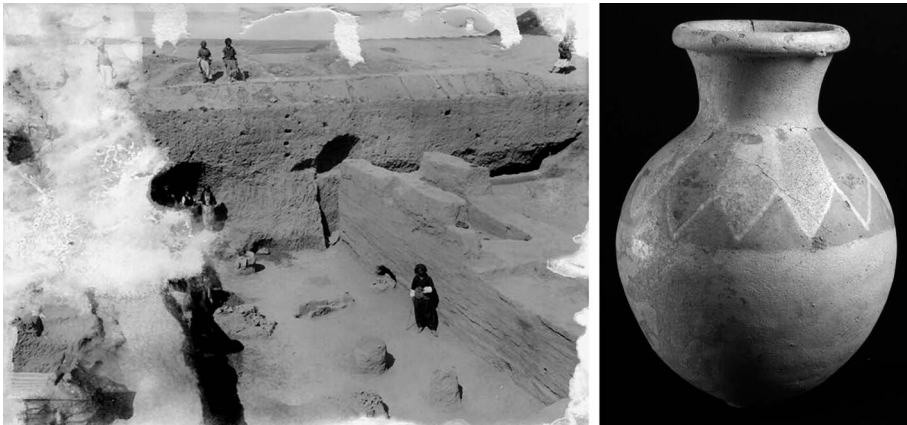


Fig. 17: The Assyrian necropolis of Qasr Shamamuk/Kilizu in a photo taken by Doro Levi at the end of the 1933 campaign and a Neo-Assyrian glazed bottle from the excavations, now at the Archaeological Museum of Florence (inv. 93789; courtesy of Direzione regionale musei della Toscana).

Cataloguing through the ArCOA project, therefore, will allow users to have an updated and consistent database of the collection in a single repository, thus ensuring its best use and accessibility, both for the public and, above all, for specialists.

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⁹⁹ The collection has been published in two separate volumes, the first one focused on the 1930–1933 expedition (Anastasio / Conti / Ulivieri, 2012), and the second one dealing with the material from different provenances (D’Agostino / Felli / Valentini, 2013).

7. Towards a unified virtual museum of the Ancient Near East in Italy

The ArCOA Project, which started with an earlier and preliminary survey of the Ancient Near Eastern collections held in museums in Lombardy, has become over time a broad, collaborative, open, multidisciplinary project, aiming at the valorisation and wider use of the artefacts from Mesopotamia and the Ancient Near East.

This specific segment of the tangible cultural heritage in Italy also has major potential from a social point of view; in fact, enhancing knowledge and promoting the fruition of these collections not only mean generating a useful tool for specialists in the field – archaeologists, philologists, historians. It also means, above all, building an instrument useful to society. In fact, the presence of historically and culturally relevant artefacts of allogenic origin on Italian territory is a concrete expression of cultural diversity, that is believed to be of fundamental value to humankind and that – in the domain of culture – plays a crucial role, similar to the role played by biodiversity in nature.¹⁰⁰ In the spirit of the Faro Conference,¹⁰¹ the centrality of cultural work aimed at promoting the participatory valorisation of cultural heritage, enhancing the active role of local communities in the processes of recognizing and transmitting shared cultural values, is increasingly evident. From this perspective, a greater and improved knowledge of the collections present in Italy, coming from the Ancient Near East, would trigger positive trends in terms of an inclusive valorisation, on multiple levels.

First and foremost, the artefacts on the Italian territory represent a gateway to the cultural world of the Ancient Near East, allowing us to highlight shared cultural roots, and enhancing the idea of cultural diversity and exchange, encouraging, and fostering positive coexistence processes within a multicultural society.

Second, tracing patterns of movement of ancient objects from the countries of origin allows us to understand the late 18th, 19th and then early 20th century Italian cultural milieu: i.e., the interest in Biblical places, the emergence of early archaeological research in Near Eastern sites, the phenomenon of the cultural journey and the intersection (and interaction) between cultural heritage and the domain of diplomacy.¹⁰² This very rich scenario, consisting of travellers, scholars,

¹⁰⁰ Seitel, 2001. This concept was clarified as early as 1989, when the “Recommendation on the Safeguarding of Traditional Culture and Folklore”, approved by the UNESCO General Conference, highlighted the difference between the material and the immaterial cultural heritage, recognising both as having an equal worth and value, as an expression of cultural diversity, plurality, and the necessity of exchange to foster innovation and creativity.

¹⁰¹ Montella *et al.*, 2016. Signed in Faro, Portugal, by the Council of Europe, on 27 August 2005 (<https://www.coe.int/en/web/venice/faro-convention>), it has been ratified and the execution of the framework convention approved by Italy only in 2020: <https://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:legge:2020;133>.

¹⁰² Di Paolo, 2012; Savino, 2017.

art merchants, diplomats, antiquarians, has very often represented the fertile background from which some Italian local museum institutions, at least those of medium or small size, have also originated. Therefore, familiarizing the public with the different figures who concretely gave life to the collections also means making the fruition of the artefacts more vivid: the original and ancient history of the artefact is intertwined with the history of its acquisition, through the various stages of the journey from the East to Italy, up to the current location of each object.

And thirdly, revealing, enhancing, and disseminating this poorly known heritage to a wider public also enables the involvement of those communities and social groups living in Italy but coming from the same regions of origin of the artefacts.

Participatory valorisation can also be achieved through modern technologies, which allow the creation of new forms of fruition and thus a wider and more widespread accessibility of heritage. The construction of the data entry allowed us to organise data into a coherent and functional system for the purposes of the project. The three-dimensional restitution (through the realisation of 3D models) of some of the most significant objects – including fragments of Assyrian reliefs, inscribed bricks, and tablets – allows these finds to be enjoyed also by the public unable to physically reach a certain museum. The 3D models, in fact, are gradually being made available on the website under construction, which is intended to bring together in one virtual place all the eastern collections scattered throughout Italy. Through a web-GIS, the user of the website will be able to move through the different Italian locations where the collections are now housed, but also through the archaeological sites of origin of the artefacts, in the Near East.

The website, which will be available online as of 2024, will therefore allow a real dissemination of knowledge of this “foreign” heritage, which, in spite of its profound “cultural otherness”, is nevertheless very closely linked to the shared Mediterranean cultural roots, and to the Italian cultural history of the last centuries. Indeed, the sharing of this common heritage is made possible by emphasizing the relations between Italian scholars and foreign colleagues, the history of the journeys to Western Asia, the accounts and notebooks of travellers, and the development of diplomatic relations.

If, on the one hand, the Near Eastern collections in Italy are obviously scattered over the territory, located in small or large, central or peripheral museums, on the other, new technologies and the resources of the virtual world allow us to bring together the artefacts in a single unified Virtual Museum of the Ancient Near East: seals, tablets, inscribed bricks, figurines, fragments of reliefs and other objects, can be presented and narrated in a contextual and “choral” manner, with attention to their reception by a wide audience in accordance with the principles of storytelling. At the same time, this heritage can also be easily made available and immediately accessible to scholars.

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News from Ashurbanipal's Library

Babette Schnitzlein / Sophie Cohen

1. Introduction¹

In the ruins of Nineveh, capital of King Ashurbanipal's (668–631 BCE) empire, a series of excavations since the mid-19th century brought to light around 32,000 tablets and fragments. While it has been estimated that this figure includes around 6,000 archival texts² the bulk are manuscripts of scholarly texts. The collection is curated almost in its entirety at the British Museum. It has been central to the modern study of Assyrian and Babylonian scholarship for almost two centuries now. Yet the sheer size and complexity of this corpus, together with uncertainties generated by the shortcomings of the pioneering excavation techniques and museological practices, have hindered our understanding of what that collection of scholarly texts actually represents. For while we now understand in detail particular texts or groups within the "Library", we know very little about the Library itself. The Research Project "Reading the Library of Ashurbanipal: A Multi-sectional Analysis of Assyriology's Foundational Corpus" – a collaboration between the Ludwig-Maximillan University (Enrique Jiménez, Sophie Cohen, Ekaterine Gogokhia and Mays al-Rawi) and the British Museum (Jon Taylor and Babette Schnitzlein) – aims to tackle the problem through the analysis of the colophons. What can they tell us about the size, content, structure, and acquisition/production of the Library collection?

2. Colophons from Nineveh: state of research

Colophons are scribal notes appended to scholarly texts. They provide facts such as the name of the scribe, the date and place of completion of the work, the provenance of the original from which it was copied, and the number of the chapter within a serialised text composition. Thus, they are of utmost importance for the study of any "library". Manuscripts from Nineveh bear primarily colophons marking the respective tablets as belonging to Ashurbanipal (or donated by him to the Nabû-temple library), with a minority bearing colophons of private individuals.

¹ This research was undertaken within the DFG-AHRC-funded project, "Reading the Library of Ashurbanipal: A Multi-sectional Analysis of Assyriology's Foundational Corpus". AH/T012773/1.

² Parpola, 1987: XI. See also Parpola, 1986: 224 and Reade, 1998–2000: 421.

In 1916 Maximilian Streck offered an overview of Ashurbanipal's Library and his colophons. He labelled the subscripts with the alphabetical letters a–v.³ For each subscript Streck listed some of its text witnesses and offered a transliteration and translation. He suggested that a proper statistical evaluation could enhance our understanding of the use of these colophons but was unable to achieve this himself.

In his seminal 1968 monograph on Mesopotamian colophons, *Babylonische und Assyrische Kolophone* (= BAK), Hermann Hunger listed colophons according to when and where they were written. Hence, alongside a lengthy section on Library colophons, there is a number of private colophons found at Nineveh recorded either under Nineveh or another place name, as well as headings indicating an unknown origin. Hunger merged closely related subscripts from Streck's typology. For example, Ashurbanipal colophons c–e can be found under the number BAK 319. Hunger was able to identify additional colophons beyond what was known to Streck: BAK 324, BAK 331–342.

Some Ashurbanipal colophon types have since received closer scrutiny.⁴ Nevertheless, it remained unclear how many attestations of each Ashurbanipal colophon type there are. Alongside the colophons naming Ashurbanipal are many naming a scribe or no-one at all. The single biggest group of manuscripts with private colophons which can be assigned to an individual is that of Nabû-zuqup-kēnu.⁵ In an early phase of the British Museum's "Ashurbanipal Library Project", Jeanette Fincke collected and studied Babylonian manuscripts,⁶ paying attention to their colophons. An overview of all private colophons, Assyrian and Babylonian, is still lacking.

3. Our research

3.1 Approach

The "Reading the Library of Ashurbanipal" project aims to identify every colophon in the Nineveh collection. These would be catalogued in a dedicated Filemaker database. Soon after the project began, Covid-19 restrictions were imposed, preventing access to the British Museum collection, and placing Taylor on

³ Streck, 1916: LXV–LXXXII. Subscripts p and w do not represent Ashurbanipal colophons. The subscript p is a votive inscription to Nabû, which doesn't name Ashurbanipal. It is only attested with K.2873, which uses late Babylonian characters and turns like a book. The latter indicates that it might be a school tablet. Subscript w mentions a date and the name of two reporters, none of them being Ashurbanipal. It is written on the reverse of K.102, a Neo-Assyrian extispicy query, compare for its edition Starr, 1990: no. 317.

⁴ See, e.g., Borger, 1970a; Borger, 1970b; Frahm, 2011: 133; Gabbay, 2014: 253, 276–279.

⁵ See Frahm, 1999; Frahm, 2011: 265–267 and May, 2018.

⁶ Fincke 2004 and Fincke 2014.

furlough. Work began with a preliminary list compiled by Taylor. This was then augmented through examination of around 60 major text editions. The selection consisted primarily of monographs on scholarly texts published after Hunger's 1968 *Babylonische und Assyrische Kolophone*. In addition, a search for traces of colophons was made among further newly transliterated fragments. The on-going process will be completed by a systematic survey of all Library fragments. This is made possible by use of the "electronic Babylonian Literature" (eBL) project platform, which offers convenient access to cataloguing and bibliographic data, transliterations of thousands of fragments, and images of all the fragments.⁷ High resolution photographs of the Library texts had been produced during an earlier phase of the British Museum's "Ashurbanipal Library Project". They are available via the British Museum's Collection Online⁸ and the eBL site.

3.2 Library preserved fragmentarily

The number of tablets with a colophon would give a minimum figure for the size of the ancient collection. As of January 18th 2022, our project database contains 2,170 records for colophons. Of these, 1,363 are Library colophons, 486 are private, and 321 are as yet unassigned. The manuscripts are often preserved in fragmentary form. There are 582 fragments with only part of the colophon preserved; that is, the text to which they were attached is not present. This applies to 442 Library colophons, and 80 private colophons. It would be expected that these fragments should join, but there is a question as to how complete the reconstructed tablets will eventually be. Taylor went systematically through fragments with Ashurbanipal colophon type a and found only few joins possible. Cohen met with similar results when she tried to join fragments with private colophons. This suggests that many fragments have not been excavated. There is other evidence pointing in the same direction.

In preparation for the "I am Ashurbanipal" exhibition at the British Museum (2018), Taylor searched the collection for more-or-less completely reconstructed Library tablets. He found fewer than 200 such tablets. That is a remarkably low number. It is also noticeable how fragmentary even these tablets remain. Almost all of them contained a Library colophon. There were also a few tablets with private colophons, plus a few without a colophon. A range of different colophons and text genres were attested. From this, Taylor inferred that it is likely that most tablets in the modern collection will have belonged to Ashurbanipal's collection, and accordingly bear one of his colophons.⁹ The rather high number of fragments with private colophons and the reason(s) why they are apparently less completely preserved still need to be explained.

⁷ <https://www.ebl.lmu.de/>.

⁸ <https://www.britishmuseum.org/collection>.

⁹ This echoes Bezold's observation in 1899: xiii.

Alongside the display of well-preserved tablets, plans were made for a display of tablets containing the Epic of Gilgamesh. The best-preserved examples of each of the 12 tablets of Gilgamesh were selected. A few were well-preserved, but most were not. Given how much effort has been put into identifying fragments of Gilgamesh for over a century, this is striking. While it remains possible that some further fragments may be identified in the future, it seems very unlikely that enough will be found to fill the substantial gaps in these tablets. Smith's assumption (Smith, 1875: 144) that less than half the Library had been recovered remains plausible, even though the number of fragments excavated has more-or-less doubled since his time. The same phenomenon can be observed in other tablets preserved in the Library. This is significant not only because it offers information about what was found during the early excavations, but because we must factor this into calculations of how many tablets are in the Library. When the fragments are all finally re-joined, the result will not be complete tablets, as has long been assumed. What was found was probably not the result of tablets breaking as they fell to the floor, but something more complicated.¹⁰

3.3 Ashurbanipal library colophons

In addition to the text of the Ashurbanipal colophons proper, further elements can sometimes be present. These are: the catch line; the tablet identification line; and the notes to the scribal process.¹¹ The catch line is written directly after a single ruling, more rarely after a double ruling. If there is no catch line, there is usually a blank space before the other elements of the colophon, e.g. K.2049. The catch line is followed, when present, by the tablet identification line and the notes to the scribal process, e.g. K.6053. While the presence of each of these elements is optional, their sequence is fixed. In some instances, the number of lines is mentioned as well, but its position doesn't seem to be fixed compared to the other elements; it can appear in between rulings, before the other items. In the latter case, one might question if it should be considered part of the colophon. After the notes to the scribal process, comes the Ashurbanipal colophon proper. Hence, the scribes adhered to a strict sequence of ruling, catch line, tablet identification line, notes to the scribal process and Ashurbanipal colophon proper. No correlation has been detected between these extra elements and the colophon type. The only exception is Ashurbanipal type b. So far, there is not a single example of extra notes to the scribal process attested with this colophon type. In this colophon type Ashurbani-

¹⁰ See now George, 2020.

¹¹ A given text composition/series would be written on several tablets, due to its length. The tablet identification line refers to the present tablet itself, e.g. "nth tablet of composition x". The catch line quotes the first line of the next tablet in the sequence. Notes to the scribal process offer information about the production of the tablet, such as "written and checked according to its original".

pal states that these manuscripts were written in an assembly of scholars. The absence of extra notes indicates that this claim should be taken seriously.

If there are no other elements of the colophon attested, the Ashurbanipal colophon is written down some distance from the single or double ruling. Usually the colophon is spaced, although counter-examples can be cited, e.g. K.163. Rarely, Ashurbanipal colophons can even be inscribed on the lower/bottom edge, e.g. 1882,0522.541. Spacing choice and placement may have depended on the remaining room available on the tablet.

Table 1: Distribution of Ashurbanipal colophons.

Number of examples found	Colophon type
Over 100	<ul style="list-style-type: none"> ○ Asb a (301) <i>All genres</i> ○ Asb b (112) <i>About half are extispicy divination texts; plus other smaller groups, but hardly any magic</i> ○ Asb c (199) <i>Mostly magic; no corpus of extispicy texts</i> ○ Asb d (108) <i>No corpus of extispicy texts</i> ○ Asb c/d (133) <i>No corpus of extispicy texts</i>
50–100	<ul style="list-style-type: none"> ○ Asb l (66) <i>Only corpus of extispicy texts (divination and rituals)</i>
10–49	<ul style="list-style-type: none"> ○ Asb g (10) <i>Uruanna</i> ○ Asb k var (14) <i>Commentary texts, mostly to Enūma Anu Enlil</i> ○ Asb o (40) <i>Lamentations, kalūtu catalogue (Nabû-temple library colophons)</i> ○ Asb q (44) <i>Nineveh Medical Encyclopaedia</i> ○ Asb r=s/BAK 342/BAK 331 (14) <i>Often Bīt rimki</i> ○ Asb v/BAK 335 (10) <i>Emesal texts</i> ○ BAK 338/339 (17) <i>Diverse (Nabû-temple library colophons)</i>
1–9	<ul style="list-style-type: none"> ○ Asb e (6) ○ Asb f (1) ○ Asb h (1) ○ Asb i (1) ○ Asb k (1) ○ Asb m (3) <i>Lugale</i> ○ Asb n (1) (Nabû-temple library colophon) ○ Asb t (1) ○ Asb u (1) ○ BAK 324 (1) ○ BAK 336 (1) ○ BAK 337 (1) ○ BAK 340 (1) ○ BAK 341 (1) ○ Further non-standard types

Some colophon types are attested very frequently, while others are found only rarely. The distribution is summarised in the table above.

The most common type (301 examples) is Ashurbanipal colophon type a, which can be attested with a variety of texts. Other colophon types display different distributions. With Ashurbanipal colophon type b, about half of the respective manuscripts are part of the corpus of extispicy, alongside a variety of smaller text groups. Ashurbanipal colophon type d is an abbreviated form of Ashurbanipal type c. A number of colophons (133) are fragmentarily preserved and could represent either Ashurbanipal colophon type c or d. Within this group, there are no texts belonging to the corpus of extispicy. However, there is still a significant difference between texts with Ashurbanipal colophon type c and d. Almost all texts with Ashurbanipal type c are magical; meanwhile, the Ashurbanipal type d magical texts are only one group among others. As explicit in its wording, Ashurbanipal colophon type l is found only with manuscripts belonging to the corpus of extispicy.

Colophons with under 50 attestations are often linked to particular text groups. Ashurbanipal colophon type g is connected to plant list Uruanna; type o to lamentations and the catalogue of these texts;¹² type q to the Nineveh Medical Encyclopaedia.¹³ Unicum Ashurbanipal colophon k is an extended version of established Ashurbanipal colophon type k var. The latter is found with *Enūma Anu Enlil* commentaries, and once with a *Šumma Alu* commentary.¹⁴ Some types can be combined. Streck designated separate Ashurbanipal colophon type r (K.4986) and Ashurbanipal colophon type s (Rm.129), noting that these were variants of each other.¹⁵ Identifying further manuscripts with these colophon types, Borger postulated that Ashurbanipal colophon type r und Ashurbanipal colophon type s are identical.¹⁶ He assigned BAK 331 (Rm.447) to this type as well and offered a new edition. BAK 342 (K.10269) is supposed to represent the same colophon type, albeit with more titles of the king. Colophon type Asb r=s is often attested with ritual text *Bīt rimki*. Colophon type v belongs to BAK 335, as Hunger¹⁷ and Stefan Maul implied.¹⁸ All texts with this colophon type are Emesal texts. Both Ashurbanipal colophon type r=s and type v are not as standardised as other types, such as Ashurbanipal type q. With Ashurbanipal type v, the names of the gods mentioned can differ, probably in connection to the ones referred to in the main part of the manuscript. The only difference between BAK 338 and BAK 339 is an

¹² Compare Gabbay, 2014: 276.

¹³ Panayotov, 2018: 109 f.

¹⁴ Frahm, 2011: 133,276 f.

¹⁵ Streck, 1916: LXXXI.

¹⁶ Borger, 1970a: 168.

¹⁷ Hunger, 1968: 104 (BAK 335).

¹⁸ Maul, 1988: 126, 204.

extra line in BAK 339.¹⁹ Colophons BAK338/339 mark tablets that belonged to the Nabû-temple library. Tablets bearing this colophon contain a variety of text compositions. Given the preservation of the fragments with BAK 338 and BAK 339, it has not been possible to identify a distinction between both groups in regard to the attested text compositions.

The number of colophons attested only once or rarely is rather high. These do not represent “types” in the same way as more commonly occurring colophons. Nevertheless, Ashurbanipal colophons share textual elements, making them easily recognisable, even when they can't be assigned to a colophon type. Tablets belonging to some colophon types are similar in certain aspects, but differ in others. To this group belong Ashurbanipal colophon types k, k var, i, BAK 324, 336, 337, 341, as well as non-standard colophons which can't be identified with any of the Ashurbanipal colophons established by Streck and Hunger. Ashurbanipal colophon type k var is the only one within the group which we would call a proper colophon type at the moment, because of the number of attestations. The similarities between some subscripts suggests that they are based on a limited number of main types, constructed from a vocabulary of established phrases. A revised typology of colophons is currently under construction.

Further deductions can be made from the evidence. Less well-attested types, less-standardised ones, and singular ones, could indicate that the creation of new colophon types was an ongoing process linked to the production of Library editions of certain texts. Probably, the bigger colophon types were established first and with them certain rules, as suggested above.²⁰

The colophon types o, BAK 338/339, n and further non-standard Ashurbanipal colophons demonstrate the existence of a separate “library” in the Nabû-temple. The distribution of the genres among the colophon types with more than 50 examples recorded (Ashurbanipal types a, b, c, d and l) might point toward sub-collections within Ashurbanipal's Library, something akin to reference libraries.

3.4 Private colophons

The group of 486 private colophons is very heterogeneous. It can be differentiated into 129 Babylonian, 354 Assyrian and 3 unattributable texts. 298 colophons mention an individual. 188 lack a name in the colophon or are too fragmentary. 56 of the known individuals wrote in Babylonian script, 240 in Assyrian and 3 remain unclear. Further subgroups emerge with a closer look at these subtotals.

¹⁹ Borger, 1970b. With the line counting of BAK 338 it appears in the middle of line 18: *ú-sur kib-si-ia / la ba-še-e GIG-ia na-saḥ si-li-i'-ti-ia liš-ša-kin šap-tuk-ka / e-ma šip-ru šú-a-tú.*

²⁰ Compare Taylor / Jiménez / Schnitzlein / Cohen, forthcoming.

The biggest private collection – currently including 123 tablets – stems from the famous scribe, Nabû-zuqup-kēnu 760–680 BCE,²¹ whose texts according to his colophons dated to 716–684 BCE, and were written in Kalḫu.²² It is the only known private collection recovered at Nineveh that may have been stored there in its entirety; none of his tablets have been found in Kalḫu.²³ The number of Nabû-zuqup-kēnu’s colophons stands in striking contrast to those of all the other attested individuals. Among these is his grandson, Issar-šumu-ēreš,²⁴ whose 9 colophons form the next largest group. Of course, the picture is not as simple as it seems at first glance. Nabû-zuqup-kēnu’s collection contained tablets that are written in several hands.²⁵ This signifies that his collection was either built up by different individuals or just by him incorporating tablets written by multiple individuals. Likewise, among Issar-šumu-ēreš’s colophons two tablets might have been written by different scribes.²⁶

As has already been seen from Nabû-zuqup-kēnu’s collection dating in the reign of Sargon II and Sennacherib,²⁷ not all tablets from Nineveh with private colophons were written during Ashurbanipal’s reign. Only a small part of the colophons is datable. Around 7 further tablets can be dated to Sennacherib (705–681 BCE), 2 to Sargon II (722–705 BCE), 1 to Ashur-nērari V (754–745 BCE), 1 possibly to Šalmaneser IV (782–773 BCE), 1 possibly to Ashurnasirpal II (883–859 BCE) and 9 are middle Assyrian tablets, probably all written during the reign of Tiglath-pileser I (1114–1076 BCE). It is noteworthy that none of the private colophons date to Esarhaddon’s reign. When and how the older tablets entered Ashurbanipal’s Library remains unclear. Nabû-zuqup-kēnu’s collection is believed to have been transferred by one of his descendants to Nineveh.²⁸ Another

²¹ Hunger, 1998–2000: 34; Parpola, 1983a: XIX.

²² One of Nabû-zuqup-kēnu’s tablets (K.3460) mentions his father Marduk-šumu-iqīša as ŠAMAN₂.LA₂ “apprentice” and might predate the other tablets.

²³ Although it is possible that he had written many more tablets in his lifetime yet to be found in the depth of the soil. A few tablets from Kalḫu mentioning his name can be associated with his son Adad-šumu-ušur, who held a high position as “exorcist” of the king at the royal court in Nineveh. He left many letters in the royal correspondence of Nineveh; see e.g. <http://oracc.org/saao/corpus/sub/Adad-šumu-ušur> (accessed 16.02.2022).

²⁴ A scribe active under Esarhaddon, becoming chief scribe of Ashurbanipal.

²⁵ Tablets with distinctive handwritings are e.g. tablets copied from an original of the individuals LU₂-IB-*līa* in 711 BC (= K.2692+, K.2678+, K.2683+, K.6348, K.8014, K.2690) and a tablet copied by the hand/from an original of the Babylonian Nabû-nāšir 694 BC (K.75 + K.237). The second Babylonian tablet K.6075 that was attributed to Nabû-zuqup-kēnu in the past didn’t preserve his name.

²⁶ K.3054+ mentions a son of Šumu-libši in its notes to the scribal process and K.3877 is written in Babylonian script. However, it cannot be completely ruled out that Ištār-šumu-ēreš wrote the Babylonian tablet himself.

²⁷ Compare footnote 5.

²⁸ See Lieberman, 1987: 217; Frahm, 2011: 265.

reason might be in Nabû-zuqup-kēnu's case and for other private tablets the tablet collecting activities of Ashurbanipal.²⁹

Finally, it is likely that there will be several different answers to all the questions about the private colophons. Maybe some of them were used as models for the creation of new tablets. Others might have been used as reference for the active divination processes. This might be especially the case with the series *Enūma Anu Enlil* that seems to have been imported on a larger scale.

4. Conclusions

The picture provided by the colophons of the Nineveh tablets turns out to be rather complex. Some Library colophons were attached to specific kinds of text, while others were attached more generally. There are colophons which are attested numerous times, while others are singular. Yet, the sharing of certain phrases and the fixed sequence of the extra elements point to the structured way they were created. This can be brought in connection with the manuscripts they were appended to: if we consider some Ashurbanipal colophons to have been created later than others, this would imply as well that certain manuscripts were written later than others. Hence, the Library of Ashurbanipal was an on-going project to which manuscripts were continuously added.

Then there are the private colophons, which represent a surprisingly large component of the corpus. It is difficult to identify the individuals named in the private colophons with individuals mentioned in other sources. The number of names points toward the involvement of numerous people with the Library of Ashurbanipal. There must have been multiple ways in which these tablets with private colophons ended up in Nineveh. Some tablets with private colophons might stem from older collections and/or have been assembled from different places for the Library of Ashurbanipal. Others might have been written in Nineveh itself. Cohen's forthcoming dissertation as part of the project is looking into connections between Ashurbanipal and private colophons, linking the scribes of both.

The manuscript collection in itself is incompletely preserved. Still some assumptions seem plausible given the available sources. The Library of Ashurbani-

²⁹ Late Babylonian copies of letters from the neo-Assyrian period indicate that Ashurbanipal assembled tablets from Babylonia for his collection; see Frame/George, 2005. They might not be authentic copies but texts revised or composed following the Zeitgeist of the Hellenistic period according to Ronni Goldstein, 2010. The library records, which date to the reign of Ashurbanipal, list scholarly texts in combination with their writing supports and personal names. This has been brought in connection with Ashurbanipal's endeavour; see Parpola, 1983b. For collecting and writing scholarly texts during the reigns of Ashurbanipal and his father Esarhaddon see also Schnitzlein, 2022: 294–316 with a discussion of the evidence.

pal was a place where knowledge was produced, reproduced and exchanged.³⁰ The existence of tablets with Ashurbanipal colophons clearly points to the (re)production of texts at Nineveh, the numerous names in the private colophons to an exchange in one way or another. The high number of commentary texts found at Nineveh further strengthen the argument of knowledge exchange and production taking place at the royal court.³¹

We are gaining a clearer idea of the number of tablets represented by the surviving fragments, and the correlation between the ancient and modern collections. In the next stage of the project, we will focus on the relation of the colophons to each other within the Library system.

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³⁰ For this notion of library see Schnitzlein, 2022: 213–217.

³¹ For the commentaries compare Frahm, 2011

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7.

Varia

Marad between the Neo-Assyrian and Neo-Babylonian Empires

*John P. Nielsen**

1. Introduction

Two tablets separated by fifty-six years record the transfer of butcher's prebends associated with the cult of Lugal-Marada and the gods of Marad. The first is a sale dated at Babylon in 666 during Šamaš-šuma-ukīn's second year on the throne.¹ The sale was very much a family affair: the seller, the buyer, and five of the ten witnesses to the transaction were all from the prominent Šangû-Ištar-Bābili family.² Just over a half century later in 610, Nabopolassar's sixteenth regnal year, another transfer of butcher's prebends in the cult of Lugal-Marada was recorded. As with the earlier transfer, the prebends changed hands between members of the same family, a reflection of the strong tendency for prebendal families to retain ownership within the paternal line.³ Unfortunately, the specifics of the second transfer are difficult to reconstruct due to a few damaged lines, but it appears that the prebends in question passed between cousins from the Dannēa family. Fur-

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All abbreviations are in accordance with the list of abbreviations in the U–W volume of *The Chicago Assyrian Dictionary* (CAD), vii–xxix.

¹ YBC 9120, published in Driver, 1924: 41–48; San Nicolò, 1951: No. 35; Stephens, 1947: 273–274.

² Members of this family are attested in contemporary tablets from Babylon and a branch of the family later rose to prominence at Sippar (Nielsen, 2011: 135, 172–174; 2015: 357–358); three men from the family served as *šangû*-priest of Sippar from 554 to 521 (Bongenaar, 1997: 12–15, 28–31).

³ Waerzeggers, 2010: 98–99.

thermore, unlike the earlier tablet that was dated at Babylon, the latter transaction was actually witnessed at the town of Marad,⁴ the home of Lugal-Marada's cult.

These two tablets are some of the very few private legal documents from the 7th century that inform us about the city of Marad. To my knowledge, the only other tablet from Marad dating to the era of Assyrian supremacy is an unpublished land sale dated in 639, Kandalānu's ninth year.⁵ Yet in spite of this dearth of textual evidence, these tablets, in combination with mentions of Marad in royal inscriptions and letters, can contribute to our understanding of the transition at Marad between the Neo-Assyrian and Neo-Babylonian empires in Babylonia during the latter half of the 7th century and the reorientation of relations between urban centers and tribal regions that resulted from this shift in power.

Marad, modern Tell Wanat es-Sadum, was a city of considerable antiquity in the first millennium BCE. Over the preceding centuries, Marad had the good fortune to remain situated along important arteries that linked northern and southern Babylonia through both the second and first millennia, even as the main channel of the Euphrates meandered westward. During the second millennium, the primary channel of the Euphrates, the Abgal, would have run from Kish through Marad, and the Me-Enlilla canal probably branched off from the Abgal just north of Marad and ran through Nippur before flowing southeast toward Larsa.⁶ By the first millennium, the Euphrates had shifted away from Kish and its riverbed in the Abgal and had moved west to the Araḥtum,⁷ a channel that flowed from Sippar in the north through Babylon, Marad, Uruk, and the Sealand.⁸ Yet in spite of consistently being situated on or near a branch of the Euphrates, Marad never rose to the forefront of southern Mesopotamian cities.

This understanding may change with future discoveries, but the current picture of Marad is that of a provincial city that was the occasional beneficiary of royal largesse and which typically held a liminal position between power centers to the north and south and between urbanized and tribal zones. Although Marad was not included in the Sumerian King List, the city was mentioned in the Early Dynastic Temple Hymns and received the attention of the kings of the Akkadian dynasty.⁹ Maništusu's obelisk includes his acquisition of large tracts of land from members of an extensive kinship group in the region of Marad,¹⁰ and Narām-Sîn's son,

⁴ YBC 11453.

⁵ FLP 1314. An image of this tablet is posted on the Cuneiform Digital Library Initiative website (<https://cdli.ucla.edu/>) with the CDLI no. P459871.

⁶ Cole / Gasche, 1998: 27–29; Gasche *et al.*, 2002–2003: 541–543.

⁷ Cole / Gasche, 1998: 32.

⁸ Jursa *et al.*, 2010: 64.

⁹ Edzard, 1987–1990: 351.

¹⁰ Gelb / Steinkeller / Whiting, 1991: 116–117 and No. 40: C xii 6–xix 28, and xxxiv 25–29; Foster, 2016: 1–2.

Lipit-ilī built the temple of Lugal-Marada in his capacity as governor of Marad.¹¹ During the Ur III period, it was the seat of a provincial governor.¹² While Marad's chronology during the Old Babylonian period remains murky, it does appear that, having initially been part of Isin's domain after the fall of the Ur III state, Marad broke away and, along with the nearby city of Kazallu, became the center of an independent kingdom, retaining this status until eventually falling under Babylon's control about a half century prior to Hammurabi's accession.¹³ Marad was sacked by the Elamites at the close of the Kassite Dynasty,¹⁴ but it remained important enough through the first millennium that it had the status of an administrative province (*pīhatu*) overseen by a *šākin tēmi* under the Assyrians,¹⁵ and was the site of some of Nebuchadnezzar II's building projects during the Neo-Babylonian period.¹⁶

2. Marad in the Neo-Assyrian Empire

Royal inscriptions composed early in Sennacherib's reign to commemorate the events of his first campaign depict Marad both as one of Babylonia's traditional urban centers and as a city located in tribal territory. The account enumerates from south to north the many cities and territories throughout Babylonia that had united under Merodach-baladan II in opposition to Assyria. The cities of the south, such as Uruk and Ur, are listed first, then the Chaldean tribes from Bīt-Yakīn to Bīt-Dakkūri, next the many Aramean tribes that resided along the banks of the Tigris, Surappu, and Euphrates Rivers, and finally the cities in central and northern Babylonia: Nippur, Dilbat, Marad, Kish, Ḫursagkalama, Babylon, Borsippa, and Cutha.¹⁷ This passage reveals a clear delineation in the Assyrian geographic imagination between Babylonian cities on one hand and on the other, tribal regions controlled by either the large Chaldean tribes, who tended to engage in sedentary agriculture and occupy towns or walled cities,¹⁸ or the many smaller Aramean tribes, whose villages were bases for transhumant pastoralism.¹⁹ In this initial conceptualization, Marad fell squarely in the former category. However, later in the inscription when Sennacherib's pursuit of Merodach-baladan II into Chaldean territory is described, Marad's status is changed and it is counted among the 33 fortified cities of Bīt-Dakkūri captured and plundered by Assyrian forces.²⁰

¹¹ Frayne, 1993: E.2.1.4.9.

¹² De Boer, 2013: 73–74.

¹³ De Boer, 2013: 88–89.

¹⁴ Brinkman, 1968: 87.

¹⁵ Frame, 1992: 220.

¹⁶ Stol, 1987–1990: 148.

¹⁷ Grayson / Novotny, 2012: No. 1 10–15; 2014: No. 213 10–15.

¹⁸ Fales, 2011: 96.

¹⁹ Fales, 2011: 92.

²⁰ Grayson / Novotny, 2012: No. 1 36–39; 2014: No. 213 36–39, note the inscription has

Marad's status in the Neo-Assyrian period as both a city to be grouped with the other venerable Babylonian cult centers and one located in Chaldean territory under the control of Bīt-Dakkūri comes into better focus in the contemporary epistolary evidence. Four letters,²¹ which were probably written to Esarhaddon,²² alert the king that Nabû-ušallim, the Dakkūrean leader (often referred to in the letters simply as the "son of Dakkūru"), was asserting his power over Marad, even though Sennacherib had previously appointed a *šākin tēmi* to govern the city.²³ In the midst of this turmoil, Aqar-Bēl-lūmur,²⁴ a Babylonian official in the service of the Assyrians, wrote two petitions to the Assyrian king. In these, Aqar-Bēl-lūmur bemoans his misfortune since the Dakkūreans had seized Marad and destroyed his property.²⁵ Aqar-Bēl-lūmur gave weight to his pleas by elaborating on what he considered to be Marad's links to Babylon and Borsippa, explaining to the king that Marad's patron deity, Lugal-Marada, was the brother of Nabû and Nergal. He went on to remind the king that Sennacherib had ordered a survey of the territory in Marad to be recorded and deposited before Nabû in the Ezida temple in Borsippa.²⁶ Finally, he related how his own documents, which he had stored in Babylon, had also been destroyed.²⁷ Aqar-Bēl-lūmur's alignment with Babylon and Borsippa and the institutional ties between those two cities and Marad are evident in these letters, as is his hostility toward the Chaldeans of Bīt-Dakkūri. His reference to records deposited at Borsippa make it reasonable to suggest that Sennacherib transferred aspects of the oversight of the Eigikalamma's property in Marad to the Ezida in Borsippa, possibly due to concerns about the threat that Bīt-Dakkūri posed to Marad.

The conditions at Marad described by Aqar-Bēl-lūmur shed light on the possible circumstances of Marduk-šāpik-zēri's prebend purchase in 666. The sale, which was recorded in triplicate,²⁸ took place at Babylon and not at Marad. Furthermore, even though the prebends were assigned to Lugal-Marada and the gods of Marad, the ritual offerings associated with them were to be performed in the cella (*papāhu*) of those gods, which presumably was located in Babylon, and not in the Eigikalamma, Lugal-Marada's primary sanctuary in Marad. Contrast this wording with the tablet dated at Marad in 610 in which Tabnēa son of Zērūtu of the Dannēa family received butcher's prebends from Bēl-aḥḥē-erība of the Dannēa family. Unlike the earlier tablet, the opening of the text explicitly states

34 cities.

²¹ Reynolds, 2003: No. 18 57–60.

²² For the dating of these letters, see Reynolds, 2003: xxiii.

²³ Reynolds, 2003: No. 59: 13–r. 2.

²⁴ Nevez, 1998: 122 No. 3.

²⁵ Reynolds, 2003: No. 60.

²⁶ Reynolds, 2003: No. 59: 5–r. 3.

²⁷ Reynolds, 2003: No. 60 r. 5–9.

²⁸ YBC 9120, YBC 11391, and YBC 11567.

that the prebends were in the Eigikalamma temple, raising the possibility that the rites for the cult of Lugal-Marada at Marad had temporarily been observed in absentia at a cella in Babylon in 666. If we factor in the contents of the land sale dated at Marad in 639 (Kandalānu year 9) in which the field being sold was described as having recently been brought under cultivation, the picture of Marad that emerges – albeit with limited evidence – is that of a city that had undergone a period of low-level turmoil during Esarhaddon's reign due to competing Assyrian and Dakkūrean interests, but which may have received renewed attention from urban cultivators after Ashurbanipal's suppression of the Šamaš-šuma-ukīn revolt in 648.²⁹

3. Marad in the Neo-Babylonian Empire

Recalling that Nebuchadnezzar II would engage in building activities at Marad, the second tablet dated in 610 indicates that peaceful conditions eventually prevailed at Marad sometime after Nabopolassar had expelled the Assyrians from Babylonia. The Dannēa family, a family with roots at Babylon,³⁰ were able to function within the Eigikalamma temple as owners of butcher's prebends, and Marad, located on the main channel linking Sippar with Uruk, was increasingly becoming a city where men from Babylon conducted their affairs.³¹

Given the shift in imperial regimes from Assyrian to Babylonian rule, speculation that the Dannēa family had concomitantly supplanted the Šangū-Ištar-Bābili family at Marad in their role as prebend holders within the cult of Lugal-Marada would be warranted. However, a small private archive from Marad that belonged to a branch of the Dannēa family reveals a much different scenario, one that points to institutional continuity. The five tablets that comprise the archive record the dealings of Tabnēa son of Zērūtu of the Dannēa family and his two sons, Šāpik-zēri and Pir'u between 558 (20+-IV-2 Ner.) and 545 (5-III-11 Nbn.).³² Tabnēa's father, Zērūtu, was likely identical to the man of the same name who appeared in the second transfer of butcher's prebends that took place in 610. In that earlier text, Zērūtu was called the son of Bēl-ēṭir and descendant of Dannēa. He and his nephews, Bēl-aḥḥē-erība and Nadin, had seemingly acquired the prebends earlier from three men of unknown affiliation, Marduk-ēṭir, [PN], and Damqīya. The tablet appears to confirm the transfer of some of the prebends from Bēl-aḥḥē-erība to Zērūtu's son, Tabnēa. Tabnēa would therefore have been the cousin of Nadin and Bēl-aḥḥē-erība, and he and his two sons would have likely

²⁹ It is not clear which side Bīt-Dakkūri took during the revolt, although it is clear that one Dakkūrean was singled out for punishment at Assyrian hands. Frame, 1992: 170–175.

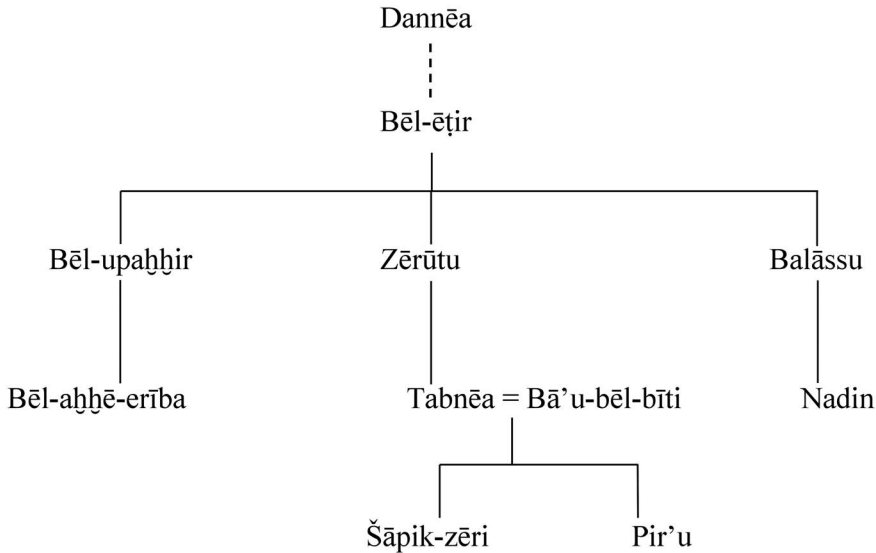
³⁰ Nielsen, 2015: 103.

³¹ Jursa *et al.*, 2010: 90, 136–137.

³² Jursa *et al.*, 2010: 201–202.

been prebend owners with close familial ties to other prebend owners from the Dannēa family.

4. The Dannēa family at Marad



The family's links to members of the Šangû-Ištar-Bābili are revealed in three of the five tablets from the Dannēa archive, which make it clear that Tabnēa and his sons had financial dealings with members of the Šangû-Ištar-Bābili family at Marad. Over a three-week period in 551 (Nbn 5), Šāpik-zēri and Pir'u concluded a pair of financial arrangements with members of the Šangû-Ištar-Bābili family. On the 24th of Araḥšamnu (VIII), the two men satisfied a credit obligation that Tabnēa had previously owed to Marduk-šuma-ušur son of Kabtia of the Šangû-Ištar-Bābili family after the latter had acted as guarantor for an earlier debt. Three weeks later on the 15th of Kislimu, they arranged for Marduk-šuma-ušur to pay the remainder of a debt in dates and silver that they had owed to Na'id-Marduk son of Nabû-mukīn-apli of the Šangû-Ištar-Bābili family in compensation for a debt that Marduk-šuma-ušur had owed to Pir'u. Six years later, Pir'u agreed to deliver dates to Šumāya son of Bēl-šuma-iškun of the Šangû-Ištar-Bābili family after the latter covered Pir'u's obligation to pay silver to equip a royal soldier.

The contents of these receipts and settlements point to a close financial association between the two families at Marad over at least two generations, one that would have been typical of colleagues affiliated with the Eigikalamma and the Marad cult. Though it cannot be demonstrated that Šāpik-zēri and Pir'u owned butcher's prebends in 551, their grandfather and father had been prebendaries sixty years earlier in 610. Likewise, the Šangû-Ištar-Bābili family can be shown to have possessed butcher's prebends in the cult of Lugal-Marada, albeit more than a century earlier. Familial ownership of prebends over multiple generations

would have been the norm. As a purveying priesthood, the butchers participated in the daily ceremonial presentation of sacrificial commodities to the temple-enterers (*ērib-bītis*) in the temple courtyard (*kisallu*). This duty placed the butchers among the consecrated and ritually-shaven priests whose suitability for office was, in part, determined by their descent.³³ Consequently, even if these men were not themselves prebendaries in the Eigikalamma, they were very likely related to men who were. Furthermore, it is even reasonable to speculate that marital ties existed between the two families. If the marital practices that linked the priestly families at Borsippa were mirrored at Marad,³⁴ then it is conceivable – though admittedly just speculation – that the men of the Šangû-Ištar-Bābili and Dannēa families had an affinal connection in addition to their financial interactions and possible shared temple affiliations.

5. Conclusions

The inhabitants of Babylonia's ancient cities, particularly those residents associated with the temple institutions, claimed a distinct identity from both Chaldeans and Arameans. Aqar-bēl-lūmur's explanation to the Assyrian king that Lugal-Marada was the brother of Nabû and Nergal was in part a rhetorical device intended to curry the sympathy of the king and not a commonly held understanding of the pantheon.³⁵ However, it also reflected the likelihood that at least aspects of the cult of Lugal-Marada were being observed in absentia at Babylon at that time. For Aqar-bēl-lūmur, these activities would have justified his fraternal link between Lugal-Marada and Nabû and Nergal. At the same time, the familial and hierarchical relations that existed within the Babylonian pantheon had a potential for fluidity.³⁶ They were an expression of the urban gentry's conceptualization that each temple existed within a relational network of temples that linked Babylonian cities together. This network overlapped territories inhabited or controlled by Chaldeans and Arameans and was occasionally disrupted by their presence. This most famously occurred when proper celebrations of the *akītu*-festival at Babylon were interrupted by Aramean tribes,³⁷ but the actions of the Dakkūreans at Marad described by Aqar-bēl-lūmur could have led to a suspension of cultic activities at Marad that is possibly alluded to in the transferal of prebends of Lugal-Marada and the gods of Marad at Babylon in 666. The divide between urbanized and tribal populations predated but also precipitated and was exacerbated by Assyrian interventions into Babylonia beginning with Shalmaneser III's campaign into Chaldean territory after he intervened at Babylon on

³³ Waerzeggers, 2008: 1–38; 2010: 47–48; Still, 2019: 13–15.

³⁴ Still, 2019: 29–62.

³⁵ Pomponio, 1978: 169.

³⁶ Hundley, 2013.

³⁷ Grayson, 1975: 137–138; Glassner, 2004: 300–301.

behalf of Marduk-zākir-šumi I.³⁸ The Assyrians worked through Chaldean intermediaries in their efforts to control Babylonia, but they also cast the Chaldeans as an inimical other to the urban Babylonians when it suited their purposes.³⁹ Bīt-Dakkūri's hostile actions at Marad may have been more a product of the broader rivalry between Assyrian and Chaldean interests in Babylonia and not specifically due to any tensions between the members of Bīt-Dakkūri and the urban Babylonians who comprised the priesthood of Lugal-Marada at Marad.

The collapse of the Assyrian Empire put an end to these struggles. The Chaldeans were perhaps triumphant in the end, if, that is, Nabopolassar were of Chaldean extraction as has been suggested.⁴⁰ Certainly, as Nebuchadnezzar II's *Hofkalender* attests,⁴¹ the status of Chaldeans within the Neo-Babylonian Empire shifted to that of partners, and conditions described at Marad in 610 presumably reflected that reality. Such a perspective may help us to better appreciate the experiences of the Šangū-Ištar-Bābili and Dannēa families, two families that originated at Babylon but whose activities reached beyond that city and included Marad. The shift in imperial regimes may have afforded them the opportunity to resume rites at Marad without any lingering animosity from Bīt-Dakkūri. The evidence is admittedly sparse, but the circumstances in 610 appear to have been a return to greater coexistence across the complex divide, which typified Babylonian society, between the temple-affiliated urban residents and tribally-aligned populations who inhabited rural settlements throughout the Babylonian hinterland,⁴² a divide which had been accentuated and exploited under Assyrian rule.

6. Texts

6.1 YBC 9120

obv.

1. [a-*hu* giš.šub.b]a lú.gír.lá-ú-tu šá é pa-pa-^rhu¹
 [d^lugal-marad.d]a ù dingir.meš marad.da^{ki} ma-la ba-šu-^rú¹
 [šá kal mu.an.n]a pu-ut ha.la šá ^mšu-ma-a dumu-šú šá
^ma-^rqar^l-[a] ^{md}amar.utu-dub-numun dumu-šú šá ^m[a-qa]r-^damar.utu
5. dumu lú.[šid-d] ^rinni¹n-din.tir^{ki} it-ti ^{md}e[n.líl]-sig_s-iq
 dumu-šú šá [^{md}amar].utu-lugal-a-ni a lú.šid-^dinnin-din.t[ir]^{ki}
 ki-[i 1] ^rma¹.na kù.babbar <kù>.pad.du ki.[l]am

³⁸ Brinkman, 1984: 22; Beaulieu, 2018: 182–183; Radner, 2020: 93–95; Nielsen, 2021: 111–113.

³⁹ Nielsen, 2021.

⁴⁰ Jursa, 2006: 161 n. 8, but for another possibility see Jursa, 2007.

⁴¹ Beaulieu, 2013: 32–37.

⁴² Levavi, 2021: 17–33 describes a comparable shift toward more collaborative relations between the Eanna and the officials of the Sealand after the collapse of the Assyrian Empire.

- [*im-bi*]-*e-ma i-šam šám-šú* til.l[a.bi]. ʿšè¹
 pap l ma.na [kù.babbar ba]bbar-ú šám *a-ḥu* ʿgiš¹.[šub].ʿba¹
 10. lú.gír.lá-ú-[*tu šá é pa-pa-ḥu* ^dlugal-marad].ʿda¹
 ù dingir.meš marad.da^{ki} [*ma-la ba-šu*]-ú
^{md}amar.utu-dub-numun a-šú šá ^ma-qar-^d[amar.utu dumu lú.šid-^dinnin-
 din.tir]^{ki}
it-ti ^{md}en.líl-sig₅-iq dumu-šú šá [^{md}amar.utu-lugal]-*a-ni*
 dumu lú.šid-^dinnin-din.tir^{ki} *ki-i kàs-pa ga-mir-ti*
 15. *id-din ma-ḥir a-pil za-ka ru-gúm-ma-a ul i-ši*
ul i-gur-ma a-na a-ḥa-meš ul i-rag-gu-mu
ma-ti-ma ina egir u₄.meš ina šeš.meš <dumu.meš> im.ri.a
im.ri.a ù sa-lat šá é ^{md}en.líl-ʿsig₅¹-iq
 šá e₁₁-*ma ina ugu giš.šub.ba lú.gír.lá-ú-tu ur₅.ʿmeš*¹
 20. *i-dab-bu-ub ú-šad-ba-bu bal-ú ú-pa-qa-ru um-ma*
giš.šub.ba lú.gír.lá-ú-tu ur₅.meš ul na-din-ma kù.babbar ul ma-ḥir
i-qab-bu-ú kù.babbar im-ḥur a-di 12.ta.àm i-ta-^ʿnap-^ʿpa^ʿ
u₄-mu lú.se-ḥu-u u lú.pa-qir-ra-nu šá a-ḥu giš.šub.ba
lú.gír.lá-ú-tu šá é pa-pa-ḥu ^dlugal-marad.«ud».da ù dingir.meš
 25. marad.da^{ki} *ma-la ba-šú pu-ut ḥa.la šá* ^mšu-*ma-a*
 dumu-šú šá ^ma-qar-*a it-tab-šu-ú* ^{md}en.líl-sig₅-iq dumu-ʿšú¹ šá ^{md}a
 mar.<utu>-lugal-*a-ni*
 dumu lú.šid-^dinnin-din.tir^{ki}
- rev.
- ʿiṭ¹-*ṭir-ma a-na* ^{md}amar.utu-ʿdub¹-numun dumu-šú šá
^ma-qar-^damar.utu dumu lú.šid-^dinnin-din.tir^{ki} *i-nam-di-nu*
 30. *ina ka-nak na₄.dub mu.meš*
igi ^{md}amar.utu-sur dumu ^mga-ḥal lú.tu.é ^ddi.kud
igi ^mmu-še-zib-^damar.utu dumu ^{md}en-e-ṭè-ri
igi ^mníg.du dumu-šú šá ^mú-pa-qu dumu lú.šid-^dinnin-din.tir^{ki}
igi ^mza-kir dumu-šú šá ^mú-pa-qu dumu lú.šid-^dinnin-din.tir^{ki}
 35. *igi* ^{md}en-gi dumu-šú šá ^{md}en.líl-sig₅-iq dumu lú.šid-^dinnin-din.tir^{ki}
 sum.na-nu giš.šub.ba
igi ^{md}ag-šeš.meš-bul-liṭ dumu-šú šá ^mbi-ta-a dumu lú.zálag-^dpap.sukkal
igi ^{md}numun-ú-tu dumu-šú šá ^mza-kir dumu lú.šid-^dinnin-din.tir^{ki}
igi ^{md}en-šeš-mu dumu-šú šá ^mníg.du dumu lú.šid-^dinnin-din.tir^{ki}
 40. *igi* ^mníg.du dumu-šú šá ^{md}ag-numun-*ib-ni* dumu lú.gal-*a-šá*-^dmaš
igi ^mba-šá-^damar.utu dumu-šú šá ^{md}en-*ib-ni* dumu lú.ad.kid
igi ^{md}en-šeš-mu dumu-šú šá ^{md}en-mu dumu lú.šá-na-*aḥ-be-e-šú*
igi ^{md}ag-za-kir dumu-šú šá ^mšul-lu-mu
 ù lú.dub.sar *šá-ṭir* im.dub ^{md}u.gur-šeš-ir
 45. dumu-šú šá ^mib-na-a din.tir^{ki} iti.kin.2.kám
 u₄.20.kám mu.2.kám ^dgiš.šir-mu-gi.na

lugal din.tir^{ki}
šu-pur^{md}en.líl-siḡs-iq dumu-šú šá^{md}amar.utu-lugal-a-ni
 dumu lú.šid-^dinnin-din.tir^{ki} ki-ma na₄.kišib-šú

(1–8) Half of a share of a butcher’s prebend in the cella of Lugal-Marada and the gods of Marad, as much as there is for the whole year, jointly held property of Šumāya son of Aqara. Marduk-šāpik-zēri son of Aqar-Marduk and descendant of Šangû-Ištar-Bābili established a price of 1 mina of silver in lump form with Enlil-mudammiq son of Marduk-šarrāni and descendant of Šangû-Ištar-Bābili and paid the complete price for a half of a butcher’s prebend of the cella of Lugal-Marada and the gods of Marad, as much as there is for [the entire year], the title for which is held by Šumāya son of Aqara.

(9–15a) Marduk-šāpik-zēri son of Aqar-Marduk and descendant of Šangû-Ištar-Bābili with Enlil-udammiq son of Marduk-šarrāni descendant of Šangû-Ištar-Bābili gave a total of 1 mina of silver in full in silver, the price of a half of a butcher’s prebend in the cella of Lugal-Marada and the gods of Marad, as much as exists.

(15b–22) It is received, it is paid, it is clear. It does not have a claimant. They will not return and make claims against one another. In the future if anyone should come forth from among the brothers, <sons>, and relations of the house of Enlil-mudammiq and raise disputes with regards to that butcher’s prebends saying: “That prebend was not given, the silver was not received,” that person will have to pay out twelve times over the silver that was received.

(23–29) If a legal challenger or claimant for the half of the butcher’s prebend of the cella of Lugal-Marada and the gods of Marad (as much as there is the title for which is held by Šumāya son of Aqara) should appear, Enlil-mudammiq son of Marduk-šarrāni and descendant of Šangû-Ištar-Bābili will redeem it and give it to Marduk-šāpik-zēri son of Aqar-Marduk and descendant of Šangû-Ištar-Bābili.

(30–49) At the sealing of this document:

Marduk-ēṭir, descendant of Gahal, temple-enterer of Madānu
 Mušēzib-Marduk, descendant of Bēl-eṭēri
 Kudurru, son of Upāqu, descendant of Šangû-Ištar-Bābili
 Zākir, son of Upāqu, descendant of Šangû-Ištar-Bābili
 Bēl-ušallim, son of Enlil-mudammiq, descendant of Šangû-Ištar-Bābili,
 seller of the prebend
 Nabû-aḥḥē-bullit, son of Bītā, descendant of Nūr-Papsukkal
 Zērūtu, son of Zākir, descendant of Šangû-Ištar-Bābili
 Bēl-aḥa-iddin, son of Kudurru, descendant of Šangû-Ištar-Bābili
 Kudurru, son of Nabû-zēra-ibni, descendant of Rabâ-ša-Ninurta
 Iqīša-Marduk, son of Bēl-ibni, descendant of Atkuppū
 Bēl-aha-iddin, son of Bēl-iddin, descendant of Ša-naḥbēšu
 Nabû-zākir, son of Šullumu

and the scribe who wrote the tablet (was) Nergal-nāšir, son of Ibnaya. Babylon. Intercalary month of Ulūlu (VI/2). Day 20. Year 2 of Šamaš-šuma-ukīn, king of Babylon. The fingernail (marks) of Enlil-mudammiq, son of Marduk-šarrāni, descendant of Šangû-Ištar-Bābili, are in lieu of his seal.

6.2 FLP 1314

obv.

1. 4 pi še.numun a.šà edin *tap-tu-ú*
a.gàr bi-rit uru.meš nam amar.da^{ki}
 uš an.ta im.mar ús.sa.du ^{md}ag-mu-si.sá
 dumu-šú šá ^{md}ag-din-iṭ a ^mhar-ri-ri
5. uš ki.ta «uš» im
 sag an.ta im.si
 sag ki.ta im.u₁₈ ^{md}ag-šeš.meš-bul-din-iṭ
a ^mur-^dšeš.ki
 pab 4 pi še.numun *i-ši ma-a-du*
10. ki ^mi-ba-a dumu-šú šá ^mšil-la-a
 ù ^{md}ag-šeš.meš-bul-liṭ a-šú šá ^{md}en-ib-ni
^{md}ag-numun-^ršeš¹ a ^{md}30-še-mi
ki-i 11 gín kù.babbar kù.pad.du u 5 ^rbán¹ še.bar šá a-ki-i
diri sum-nu
15. pab.pab 11 gín ^rkù.babbar kù.¹pad.du u 5 ^rbán¹ še.bar
ina šu ^mnumun-ú-tu a ^{md}30-še-mi
u ^{md}ag-šeš.meš-su a ^mšil-la-a
^ršám¹ a.šà-šú *ki-i ka-sap til-ti*
ma-ḥir a-pil za-ki ru-gúm-ma-a
20. ^rul¹ *i-ši ul i-tur-ru-ma*
a-na a-ḥa-meš ul i-rag-gu-mu
ma-ti-ma i-na egir.meš u₄-mu
i-na šeš.meš dumu.meš kim-ti
ni-su-tu u sa-la-tu šá é

rev.

25. ^{md}en-šeš.meš-su a-šú šá ^mšil-la-a
 u ^{md}ag-šeš.meš-bul-liṭ a-šú šá ^{md}dumu-^den-ib-ni
 šá e₁₁-ma a-na ugu a.šà mu.meš
i-dab-bu-ub ú-šad-ba-bu in-nu-ú
ú-paq-qa-ru um-ma a.šà mu.meš
30. *ul na-din-ma ka-sap ul ma-ḥir*
i-qab-bu-ú pa-qir-a-nu en 12.ta.àm
i-ta-na-pal niš dingir u lugal mu
ina ka-nak ka-gu mu.meš
 igi ^{md}ag-šeš.meš-su a ^{md}dan-^dim

35. ^{md}ag-en-dingir.meš a ^{me}sag.íl-man.sum
^{md}i-sin-na-a-a dumu ^mlul-ta-mar-^dim
^{md}ag-šeš-mu a ^mhar-ri-ri
^{md}u.gur-mu a lú.gír.lá
^{md}amar.utu-mu-ib-ni a lú.šid-gašan-din.tir^{ki}
40. u lú.dub.sar ^{md}amar.utu-lugal-a-ni
dumu lú.šu.ḥa
amar.da^{ki} iti.ḏu₆ ud.14.kám mu.9.kám
^mkan-da-la-nu lugal din.tir^{ki}
^{šu-pur} ^{md}en-šeš.meš-su a ^mšil-la-a
45. u ^{md}ag.šeš.meš-din-iṭ a ^mdumu-^den-dù
gim na₄. ¹kišib-šú-nu¹

(1–2) 4 *pānu* seedland, field and steppe land recently brought under cultivation (in) the meadow between the towns (located in) the province of Marad.

(3–8) The upper long side on the west borders (the field of) Nabû-šumu-līšir, son of Nabû-uballit, descendant of Ḫarriru. The lower long side on the east (blank). The upper short side on the north (blank). The lower short side on the south (borders) Nabû-aḫḫē-bullit son of Ur-Nannar.

(9–14) A total of 4 *pānu* of seedland, whether little or much. Nabû-zēra-ušur son of Sîn-šemi (established a purchase price) with Ibaya son of Šillaya and Nabû-aḫḫē-bullit son of Bēl-ibni total amounting to 11 shekels of silver in lump form and 5 *sūtu* of barley which he paid as additional payment.

(15–32) A grand total of 11 shekels of silver in lump form and 5 *sūtu* of barley from the hand of Zērūtu son of Sîn-šemi and Nabû-aḫḫē-erība (Ibaya) son on of Šillaya, the price of his field in full. It is received, it is paid, it is clear. It does not have a claimant. They will not return and make claims against one another. In the future if anyone should come forth from among the brothers, sons, and relations of the house of Bēl-aḫḫē-erība son of Šillaya and Nabû-aḫḫē-bullit son of Bēl-ibni and raise a dispute, cause a dispute, change, or contest (the sale) with regard to that field saying: “That field was not given and the silver was not received”, the contestant will have to pay out twelve times over (the purchase price). The oath of the god and king is spoken.

(33–46) At the sealing of this document:

Before: Nabû-aḫḫē-erība descendant of Mudammiq-Adad

Nabû-bēl-ilāni descendant of Esaggil-mansum

Isinnāya descendant of Luštammār-Adad

Nabû-aḫa-iddin descendant of Ḫarriru

Nergal-iddin descendant of Ṭābiḫu

Marduk-šuma-ibni descendant of Šangū-bēlit-Bābili

and the scribe is Marduk-šarranni, descendant of Bā'iru (Fisher). Marad. Month of Tašrītu (VII). Day 14. Year 9 of Kandalānu, king of Babylon. The fingernail

(marks) of Bēl-aḥḥē-erība, son of Šillaya and Nabû-aḥḥē-uballit, son of Mār-Bēl-bāni, are in lieu of their seal.

6.3 YBC 11453

obv.

1. ^{md}en-šeš.meš-su a-šú šá ^{md}en-ú-nigin a ^mdan-ni-e-a
ina ḥu-ud lib-bi-šú ina iti 3 u₄-mu u 3-ta 4.gál.la
šá u₄-mu lú.gír.lá-ú-tu šá kal-la mu
é.igi.kalam.ma é ^dlugal.amar.da u dingir.meš amar.da^{ki}
5. ḥa.la-šú lú.gír.lá-ú-tu šá it-ti ^mnumun-ú-tu
a-šú šá ^{md}en-sur a ^mdan-ni-e-a šeš ad-šú ù ^mna-din
a-šú šá ^mdin-su a ^mdan-ni-e-a dumu šeš ad-šú šá ina šu^{ll}
^{md}amar. ʾutu-sur¹ ^{mr}d¹[...] u ^msig₅-ia ki.lam
ʾi¹-pu-ʾuš¹ [.....] 2 ma.na kù.babbar ú-de-e é
10. [ina^(?)] ʾpa^(?)-an^(?) ká¹ en é dumu-ti-šú a-na ^mtab-ni-e-a
[a-šú šá numun]- ʾú-tu¹ a ^mdan-ni-e-a dumu šeš ad-šú
[.....] a [...x]-numun šá ^mnumun-ú-tu
[...] ʾki¹ [...] -ub-bu
[.....] ki.lam i-pu-uš sum.na

rev.

15. [lú]. ʾmu¹-kin-ni ^mta-qiš-^dgu-la a-šú a-šú [šá ^mx]-ʾšeš¹-ùru
[a ^mʾé-a-maḥ-dingir.meš ^mba-šá-a ʾdumu-šú šá¹ ^{md}utu-mu
a lú.dím ^{md}ag-mu-kám a-šú šá ^{md}a-é-iq-bi
a lú.uš.bar ^mú-bal-liṭ-^damar.utu a-šú šá ^{md}ag-šeš.meš-bul-liṭ
a ^mmu-sig₅-iq-^dim a ^map-la-a dumu-šú šá ^{md}amar.utu-numun-dù
20. a ^mšá-na-aḥ-bi-e-šú ^mir-^dgu-la a-šú šá ^{md}en-mu
a ^{md}é-a-maḥ-dingir.meš ^mdin-su-^damar.utu a-šú šá ^{md}en-da
a ^mur-^dšeš.ki lú.šid ^{md}amar.utu-na-šir
a-šú šá ^mdingir-dù a ^mur-^dšeš.ki
amar.da^{ki} iti.ziz ud.8.kám
25. mu.16.kám ^{md}ag-ibila-šeš
lugal tin.tir^{ki}

(1–9a) Bēl-aḥḥē-erība son of Bēl-upaḥḥir descendant of Dannēa of his own free will [alienated(?)] 3 days and ¾ of a day per month of the butcher's prebend for the whole year (in the) Eigikalamma, the temple of Lugal-Marada and the gods of Marad, his share of the butcher's prebend which with Zerūtu son of Bel-etir descendant of Dannea, his paternal uncle, and Nadin, son of Balassu descendant of Dannea, the son of his paternal uncle he had completed the transaction from the hand of Marduk-ēṭir, [PN], and Damqiya.

(9b–14) [For(?)]2 mina silver, the household goods, [before?/at the?] gate of the owner of the house of his filial status(?), to Tabnēa, son of Zērūtu and descendant

of Dannēa, the son of his paternal uncle [...] son of [...] -zēri, which Zērūtu [.....] he completed the transaction. It is given.

(15–25) The witnesses are: Taqīš-Gula, son of [DN]-aḥa-uṣur, descendant of Ea-šīr-ilāni; Iqīšaya, [son of] Šamaš-iddin, descendant of Itinnu (Builder); Nabū-šuma-ēreš, son of Mār-bīti-iqbi, descendant of Išparu (Weaver); Uballiṭ-Marduk, son of Nabū-aḥḥē-bullit, descendant of Mudammiq-Adad; Nabū-mukīn-apli, son of Marduk-zēra-ibni, descendant of Ša-naḥbēšu; Arad-Gula, son of Bēl-iddin, Ea-šīr-ilāni; Balāssu-Marduk, son of Bēl-lē'i, descendant of Ur-Nannar; and the scribe is Marduk-nāšir, son of Ili-ibni, descendant of Ur-Nannar. Month of Šabattu (XI). Day 8. Year 16 of Nabopolassar, king of Babylon.

Comments

2. The writing 3-ta 4.gál.la is unexpected for the fraction $\frac{3}{4}$, but the meaning is clear. It seems to be a combination of more conventional writings: *ina* 3-ta šu^{ll}, 3-ta 4-tú, or 3 igi.4.gál.la (M. Streck, 1995: 62 and CAD R *rebūtu* a 2').
- 8–9 and 14. The writing ki.lam *i-pu-uš* for *maḥīra īpuš* is clear in line 14 and the traces in line 9 favor *i-pu-uš* but the reading is not certain. CAD M/I *maḥīru* mng. 4 d) translates the term with *epēšu* as “to make a purchase, to buy.” AHW M *maḥīru(m)* 2) c) *m. epēšu* translates the phrase as “Kauf durchführen,” which CDA (J. Black *et al.* [eds.], 2000: 190) emulates with the translation “to complete a transaction,” employed here. The transactional nature of the phrase is clear, but the subjunctive form would be expected in line 9 if the phrase *ša ina qāti* governs the clause. It is unclear who the subject of the verb is in line 14.
10. Damage to the beginning of this line obscures the understanding of the phrase that follows. What the “gate of the owner/lord of the house of his filial status (natural or adopted) means is unclear, but given the strong association of prebend ownership with the paternal line, it seems likely that some aspect of legitimate descent related to the transfer of a prebend is communicated here.
13. Restoration of this line is difficult, but the belief here is that the two signs *-ub-bu* at the end of the line conclude a 3m.pl. verb, possibly in the subjunctive. One solution is to read the preceding ki as *itti* and restore an ungrammatical form of *dabābu*, which CAD D mng. 3 translates as “to discuss a topic, to come to an agreement, to negotiate.” The gemination of the final radical is unusual, but in IM 57900:23, an unpublished legal tablet from Nippur, the verb is written ^li^l-dab-^lbu^l-ub-bu in a standard legal clause against disputing a sale. The sense here being that there was a negotiation between the parties prior to the transfer of the prebend. Another solution was suggested to me by L. Pearce, who proposed *ebēbu* in the D-stem, which according to CAD E mng. 2 c) has the meaning “to clear a person or property of legal or financial claims.” Like *dabābu*, this verb applies to contracts and transaction, but the final geminated radical is unexpected.

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