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Home and Work in Early Bronze Age Mesopotamia: "Ration Lists" and "Private Houses" at Tell Beydar/Nabada

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1. Home and Work: Defining the Research Question

The communal management of labor was one of the dominant features of the economy and society of third-millennium Mesopotamia, as testified by the existence of thousands of so-called "ration lists". These cuneiform documents, listing persons by name or profession with their monthly share of grain, stem from various sites and cover more than half a millennium, from the Fara period (ca. 26th century) to the time of the Third Dynasty of Ur (Ur III, 21st century). Their source were the various agencies concerned with the management of labor, situated at the palace, at temples, or other organizations, often labeled "households" in ancient Near Eastern studies. The specific perspective of the documents, namely the managerial view of the workforce, has greatly influenced the perspective of historical research, aiming at a reconstruction of the scope and hierarchy of the managing organizations.

Significantly, in recent years various scholars have shifted the focus away from the organizations and explanatory models, toward the governing principles of the exchange of goods and services. They have thus paved the way for a change from a managerial perspective, of the laborers as objects, to a view that treats them as subjects, as actors in the economy. The discussion thereby considers both evidence of the Presargonic and the Ur III periods, assuming that comparable socio-economic conditions prevailed throughout the latter half of the third millennium, especially regarding the situation of laborers; this is generally acknowledged at least

since the detailed analysis of Maekawa,[1] but implicitly assumed already by scholars such as Gelb.[2]

The socio-economic situation of the persons covered by the "ration lists" has been dealt with repeatedly, mostly concentrating on the Ur III period. Minute differentiations in the notation of workers pertain to fundamental differences in economic condition, distinguishing, for example, persons holding a sustenance plot and those depending fully on the grain distributed by the communal organization.[3] Such observations are especially relevant, since the uniform listing of persons by number, profession or by name might lead to an impression of a mighty administration that directs collective laborers as unfree "serfs" obligated to work. This was the perspective, for example, of Gelb,[4] and similar views can still be found in the scholarly literature.[5]

More than twenty years ago Steinkeller had opened new paths on how to read such documents.[6] In his seminal study on the foresters of Umma, Steinkeller points to a certain social promotion within the group, which contributes to the "difficulty in detecting any clear social distinctions between the foresters who were directly engaged in productive labor and those who performed managerial functions", thus giving up a strict separation between "people involved in productive labor" and a "managerial group."[7] Even more relevant for the present study, the prosopographical evidence of stable work groups showing family relationships within teams of workers strongly indicates "that the Umma foresters *did* possess family life and that the dumu ['sons'] mentioned together with them were their blood relations and natural heirs."[8] Furthermore, the constant combination of some forests with specific teams of workers leads to the obvious but important conclusion "that the men employed in the Umma forests appear to have been recruited from the rural population permanently residing near the respective forests."[9]

1 Maekawa 1987.
2 Gelb 1965; 1976; 1979; 1980.
3 Koslova 2008.
4 Gelb 1965; 1979.
5 As an example we refer to Dahl 2010: 291, who characterizes ĝuruš, a term that literally means "men", as "'unskilled' workers" or "de-facto state-slaves" and who draws a dreadful picture of their living conditions.
6 Steinkeller 1987.
7 Steinkeller 1987: 100.
8 Steinkeller 1987: 99.
9 Steinkeller 1987: 102.

The observations of Steinkeller on social and living conditions have not been taken up in later research, mainly because the administrative textual documentation usually does not deal with such aspects. Although nobody doubts that the persons noted in the worker lists represent a large part of the population of Babylonia, evidence from administrative documents is usually missing from summaries on houses and household in Early Mesopotamia (which often concentrate on the testimony of legal documents). Basic questions thus remain unanswered: Where and how did the persons appearing in the worker lists live?[10] How does the system of the distribution of grain portions pertain to the setup and equipment of a private household? Is our impression of collective work simply based on the administrative perspective of the worker lists? What percentage of the population was reasonably subject to the redistribution of grain? Since the most substantial groups of worker lists come from archaeological excavations that did not record domestic architecture (the early expedition to Tello/Girsu did not yet recover mud-brick structures, Woolley did not excavate third millennium domestic quarters at Ur, etc.) — or from clandestine diggings (such as Ur III documents from Girsu, Umma etc.), these questions could not be answered. But they can be considered of great relevance, especially regarding the general shift of scholarly attention from communal organizations (*e.g.*, temples) and the managerial perspective (employees as objects) to internal economic dynamics, *i.e.*, the exchange of goods and services in an "entitlement system,"[11] and to employees as subjects (with, for example, their own family life).

On the other hand, archaeological research on third millennium or Early Bronze Age domestic quarters has been conducted in Upper Mesopotamia in the last decades. These investigations are often led by more general research questions like the increase of complexity in societies. So the study of Wattenmaker[12] on Early Bronze Age Kurban Höyük in the

[10] This question was also dealt with by Magid 2001, but based on the administrative texts with few clear results.

[11] Wilcke 2007 describes Ur III economy as an entitlement system. By this he takes up several trends to look at early Mesopotamian economy in terms of dynamic processes and not of rigid organizations; see in this regard for example Steinkeller 2004: 111 on private and state economy, Neumann 2002 on the limits of using only the *oikos* model, or Selz 1999/2000 on the "redistributive planned economy" as condition for a stable society; the examples could easily be multiplied.

[12] Wattenmaker 1998.

Karababa region of the Middle Euphrates observes an "increased involvement of households in specialized production, increasing reliance of households on pottery and textile producing specialists, and household production of surplus goods perhaps in order to provide tribute to the state."[13] The perspective of the single household also dominates the monograph by Pfälzner, who investigates houses and living conditions in Upper Mesopotamia in the Early Bronze Age.[14] The dominant type of house in the period of the Beydar tablets, Early Jezirah IIIb, is the so-called "allotment house" (*Parzellenhaus*).[15] Pfälzner assumes that its inhabitants were active in agriculture, in animal husbandry,[16] and in handicraft. His analysis starts from the individual excavated houses, and therefore his perspective (as Wattenmaker's) focuses on the household as the basic unit; the interpretation of the often meager archaeological remains is informed by modern ethnographic analogues. So the society that emerged from the interpretation of the excavated houses differed fundamentally from the contemporary society in Southern Mesopotamia reconstructed on the basis of written sources: according to Pfälzner the households of Upper Mesopotamia represented self-sufficient economic entities, the subsistence of a household was based on agricultural work on the family's own land or land taken in lease, the families were active in animal husbandry including sheep and goat pastoralism and they performed handicrafts on a domestic basis.[17]

[13] Matthews 2003: 178–79.

[14] Pfälzner 2001.

[15] Pfälzner 2001: 378–79; now also Pfälzner 2011, 152–164.

[16] This conclusion is, however, based only on the presence of sheep dung and of seeds of the ubiquitous *prosopis farcta*, which *can* also be used as fodder for animals, in a room of 3 square metres; see Pfälzner 2001: 271.

[17] Pfälzner 2001: 395 summarizes his results as follows: "Die Ergebnisse der vorliegenden Untersuchung tragen in einigen Punkten zur Beantwortung der oft diskutierten Frage nach den Existenzgrundlagen der urbanen Zentren des 3. Jtsds. in Nordmesopotamien bei […]. Auf der Grundlage der Haushaltsanalysen ergibt sich für die nordmesopotamische Gesellschaft des 3. Jtsds. ein Bild, das deutlich von der geläufigen Theorie der ausschließlich staatswirtschaftlich geprägten (süd-)mesopotamischen Gesellschaft abweicht.

Ein großer Teil der nordmesopotamischen Haushalte bildete selbständig wirtschaftende Einheiten. Dabei bildete der landwirtschaftliche Anbau auf eigenem Land oder als Landpächter die grundlegende Subsistenzbasis. Daneben wurde Viehwirtschaft betrieben, die eine Weidewanderung mit den Schaf-/Ziegenherden einschloß. Da in einigen untersuchten Fällen nachweislich der gesamte Haushalt für die Weidewanderung die Wohnstätte temporär verließ und da während der Anwesenheit der Familien Tiere auch in den Häusern gehalten wurden, kann man davon ausgehen, daß die Haushalte die

This review of some recent scholarly literature on the place of work in Early Mesopotamia has presented two diametrically opposed reconstructions of the society: the philological study of "ration lists" has often lead to an image of collective laborers tightly controlled by the state, whereas the archaeological investigation of excavated "private houses" focuses on independent families and household production.[18] These "two societies", however, actually lived in the same world, as incontrovertibly demonstrated by the discovery of "ration lists" at Tell Beydar in Upper Mesopotamia, today's Syria, a site where large sectors of the ancient city with its "private houses" have been exposed. This evidence forces us to rethink our assumptions and to combine the philological and archaeological evidence. In this contribution we concentrate on a combined understanding of the two different sets of evidence, the cuneiform documents and the residential quarters at the town of Tell Beydar, ancient Nabada; the wider context evoked for the interpretation of the documentation indicates that this site can be taken as a paradigmatic example for early Mesopotamia.

Our study is organized as follows: Two short introductory sections present the contemporary "ration lists" from Girsu (section 2) and the site of Tell Beydar, ancient Nabada (section 3), in order to understand better the worker lists found at Tell Beydar (section 4). The question of how representative these lists are for the city's population leads to calculations of the size of Tell Beydar (section 5). Building on these results, the houses excavated at Tell Beydar can be seen as residences of the workers known from the lists and therefore a description of a house is provided (section 6). The conclusions (section 7) explore some features of the city's layout and the houses that are conditioned by the specific socio-economic situation of collective work and the "rations" system. Furthermore, the Beydar evidence forces us to be more exact about specialization in cities of various rank and finally to address the similarity of living conditions in Babylonia in the South and in Upper Mesopotamia in the North.

Viehwirtschaft ebenfalls in eigenverantwortlicher Weise betrieben haben. In den meisten Fällen war Viehzucht mit ackerbaulichen Tätigkeiten kombiniert. Als dritte mögliche Existenzbasis war häuslich durchgeführtes Handwerk vertreten. Dabei konnten unterschiedliche handwerkliche Tätigkeiten kombiniert werden. Das unabhängige Handwerk ermöglichte ebenfalls ein selbständiges Wirtschaften des Haushaltes."

[18] The use of the very terms "ration lists" and "private houses" may have influenced the different reconstructions of early Mesopotamian society by philologists and archaeologists, respectively.

2. Early Dynastic Worker Lists and the Communal Workforce

2.1. Presargonic Girsu: Some Basic Facts

The classic example for an Early Dynastic organization is provided by the "female house", the Emunus,[19] of the lady of Girsu, the wife of the local ruler, an organization dedicated to the goddess Bawu in the years of king Urukagina. Here it suffices to recall some basic facts about the composition and size of the workforce active in the Emunus of Lagash for a comparison of the ration lists of Tell Beydar. The remains of the Emunus archive of nearly 1,800 tablets date to a span of twenty-three years[20] under the last Presargonic rulers of Lagash, Enentarzi, Lugalanda and Urukagina, thus being contemporary with the royal archives of Ebla and only a few years later than the Tell Beydar tablets (Table 6 below).[21] The texts cover all aspects of the organization's economy, first of all the management of the dependants and of its subsistence economy including agriculture, animal husbandry, horticulture, fishing, and the usufruct of forests. A total of ca. 600 to 800 persons depended directly on the Emunus, living on its grain and wool "rations" and contributing to its subsistence. The Emunus represented only one organization of its kind in the state's capital Girsu. The largest was the organization of the ruler, dedicated to the city-god Ninĝirsu. The "children's" households were partly attached to the Emunus, and also other cities like Lagash were subdivided into various temple households. Representatives from smaller settlements within the state of Lagash like Pasir or Urub were only identified by their place name, although these organizations could have been housed by temples as well, those of Enki and of Lugal-Urub respectively.[22] Representatives of the state's temples and settlements appear in the Emunus organization, when the wives of Lagash's elites were hosted as recipients of festival gifts designated as "holy milk and holy malt", which were distributed by the lady of Girsu and by the members of her

[19] The traditional reading é-mí is based on the assumption that this is the same word as á-mi etc.; see Attinger 1997: 116f.; the variant of *VS* 25, 23 iii 2 é-MUNUS-a-kam instead of common é-mí-kam, however, strongly favours a reading é-munus, which would allow the variation of the two writings of the genitive with and without extra -a- (I owe this observation and the argumentation to Vera Meyer-Laurin).

[20] Numbers after Foxvog 2011: 58; see also Schrakamp 2014 with ample documentation of relevant literature.

[21] The chronology used is the one established by Sallaberger and Schrakamp forthc.; for the dating of the Tell Beydar tablets see Sallaberger 2012.

[22] On the deities Selz 1995: 121 and 167–68.

organization; among these women appears the "wife of the administrator (saĝĝa) of Pasir (or of Urub)."[23]

The organizational unit is traditionally called "household," thereby referring to the *oikos* model.[24] The term "household" appears apt since it allows a link with the Mesopotamian terminology, with the frequent designation of organizations as é "house" and as "temple." However, the term might also imply the notion that the members of an *oikos* actually lived together in a building or a building complex. The Emunus community comprised c. 600–800 persons, who certainly could not all have inhabited a building of the types known from the Early Dynastic period. In order to acknowledge the presence of various designations and compositions of these organizations, such as temples, the palace, settlements, or city quarters, I will use the more neutral term "communal organization", implying the sociological use of the term "organization" without a further determination of the character or size of the "communities."[25] The use of this term should also underline the fact that these communal organizations act as largely self-sufficient entities, which were of course closely tied to the political center by their obligations toward the state, but in periods of political change survived and continued to function. This permanence is most fittingly expressed by the fact that the eternal gods were regarded as the patrons of the communal organizations called temples in Babylonia.

The management of persons and goods in the city state of Lagash reflects a multilevel system. The capital with the seat of the ruler dominated various further cities of the state, on which in turn the villages depended. Such a multilevel system is also indicated by the distribution of the ancient sites, and written sources allow identifying the political capital and the extent of a city state.[26] The various communal organizations were largely concerned with subsistence economy, but additionally they also fulfilled special functions which served wider segments of the community beyond the household. The Emunus of the lady of Girsu featured a prominent sector of textile industry, which can be considered

[23] Selz 1995: 74–77; Prentice 2010: 183–184 (with lit.).

[24] For a definition see Renger 2003–2005; see above section 1.

[25] "Communal" is thus understood as "of a community" of whatever character. The neutral cover-term "communal organization" should not be confounded with the English translation of Max Weber's "kommunistische Leistungsvergemeinschaftung" (Weber [5]1972, 88, II. § 26) as "communal organization" (Weber 1947).

[26] The system of settlements was studied by Sallaberger & Ur 2004 for Early Dynastic/Early Jezirah Nagar and by Steinkeller 2007 for Ur III Umma.

as characteristic for a household led by the queen or another high-ranking woman.[27] The palace, on the other hand, controlled the royal treasure, mainly of silver, including both its collection and its distribution, in order to secure the political stability of the state.[28]

The cuneiform documents written by a specific organization list persons grouped according to their professions and social status, and in this sense it is appropriate to speak of "collective labor": there exist no individual contracts between a person and the organization concerning specific service obligations.[29] The term "collective labor," however, does not indicate that all the persons listed in the respective documents necessarily worked or lived together.

The model of the "household" economy for third millennium Mesopotamia rests heavily on the Emunus archive of Girsu. The persons of the Emunus can be grouped in various categories according to their socio-economic status and the terminology used in the documents. They are listed in the documents as receiving monthly barley allotments: men 60 liters, women 30 liters.[30] According to the subscripts the workforce of the Emunus can be grouped as follows:[31]

A. = *Category* 1: lú šuku dab$_5$-ba "those who have received a sustenance field"; 189–267 persons, 49 different occupations, only males, receiving rations for 4–5 months per year

B. lú iti-da "persons of the month"; 266–436 persons, of various categories, including women and children, receiving "rations" for all 12 months, consisting of

[27] For the role of the textile industry cf., *e.g.*, Prentice 2010, chapter "Redistribution" p.13–95.

[28] Sallaberger 2013.

[29] Personal service contracts appear to be more typical in the Old Babylonian period, although similar contracts are known in the third millennium as well, especially concerning hired labor. In passing it should be stressed that "administrative" texts like worker lists represent *legal* obligations of service and its remuneration. Furthermore specific documents exist that list individuals who become members of a communal organization. A well-known example for the Emunus is DP 120 listing 43 individuals by name and filiation, a text that bears the following subscript: "Total of 43 men of 36 liters (of grain ration), persons belonging to the Bawu (temple) of Sasa, wife of Urukagina, king of Lagash: captain Eniggal took them over for the workforce" (ùŋ-šè e-dab$_5$). Note that also in this case the new status is fixed in an administrative document.

[30] Among the summaries of the Emunus organization see Gelb 1980: 34–35, Bauer 1998: 553–555, Prentice 2010, all with further literature.

[31] Prentice 2010. The fishermen as a special group (group 4 in Prentice 2010) are not considered here.

Category 2: igi-nu-du$_8$ íl šà-dub didli "who do not 'see', carriers, various people on the tablet"; 125–208 persons

Category 3: gemé dumu "women and children"; 159–229 persons, almost only women mainly in the textile sector

The first category lú šuku dab$_5$-ba "those who have received a sustenance field" includes 49 occupations with some professions appearing also in categories 2 and 3. In some cases the members of category 1 represent the foremen of the persons of categories 2 and 3, so the lú šuku dab$_5$-ba-group is composed of the more influential men. The composition of this group is exemplified by one text (Table 1).

general description	number	professions as listed
"farmers and warriors"	96+x	96+x RU lugal under 5 captains
activities in the fields	4+x	x engar ki-gub "plowmen at the plots," 4 RI.ḪU "?"
care of gardens and woods	9	2 lú-ter "foresters", 7 nu-kiri$_6$ "gardeners"
care of animals, herdsmen for donkeys, sheep, or pigs	22	1 sipa šaha$_x$ "herdsman of pigs," 2 sipa anše sur$_x$-ka "herdsmen of donkeys for the teams," 4 sipa AMA.GAN.ŠA, "herdsmen for breeding," 3+2 gáb-ra saĝ-apin "(who care for animals) for plowmen," 3+6 gáb-ra sipa udu siki-ka "... for the herdsmen of wool-sheep," 1 gáb-ra udu níĝ-gu$_7$-a, "... for the sheep for slaughter"
fishermen	4	4 ŠU.ḪA a du$_{10}$-ga "sweet water fishermen"
boat and wagons	21	13 má-laḫ$_5$ "boat-men", 8 persons with gáb-kaš$_4$ "responsible for equids, coachman"
overseers/foremen (ugula) for the subordinate workers in textile production	6	2 ugula ki-siki-ka "overseers at the wool place," 4 ugula íl "foremen of carriers"
textile production	20	16 azlàg "fullers," 4 tu$_9$-tan$_x$ "cleaners of textiles"
managers	2	1 agrig "manager of household," 1 NU-bandà "captain"
food production	10+x	5+x LÚ.BAPPÌR "brewers," 1+4 muḫaldim "cooks"
care of beverages, oil and other goods	3	1 ka-saman$_4$ "responsible of oil vessels", 1 sagi "steward", 1 lú é-NÍĜ-ka "man of the house of goods"
care of persons and buildings	3	1 šu-i "barber," 1 sugal$_7$ "attendant," 1 ì-du$_8$ "doorkeeper"

administration and control	7	1 lú-ešé-gíd "field measurer," 1 lú zi-ga "the one for conscriptions(?)," 3 dub-sar "scribes," 2 lú igi-niĝén "overseers, inspectors"
craftsmen (ĝeš-kíĝ-ti)	32	4 SIMUG "casters", 3 naĝar "carpenters," 7 ašgab "skinners," 6 ^{ad}adgub(KID) "basket makers," 4 tu_9-du_8 "rope makers," 1 $saman_4$-kešé "who closes oil vessels," 7 bahár "potters"

Table 1: *Category* 1, lú šuku dab_5-ba "those who have received a sustenance field," example DP 121 (Urukagina year 6, month 6), total of 226 persons

RU lugal "subordinates(?) of the king" or "(who work on a) lot for the king" and àga-ùs "gendarmes" were the most important groups. They did the agricultural work on sustenance fields and furthermore fulfilled various duties for the community; they for example provided the Emunus with reed and firewood, produced baked bricks, or worked on canals and were integrated in building projects. Most importantly, they appear in conscription lists and thus formed the army. The RU lugal constituted the core of the Mesopotamian society, the people that were farmers and warriors.[32]

The groups of lú iti-da "persons of the month" are less diversified and can be summarized as follows (Tables 2 and 3).

igi-nu-du_8 "who do not 'see'"	87	51 with gardeners, 36 with fullers
íl "carriers"	38	male and female carriers
šà dub(-ba) é-gal "on the tablets, in the palace"	29	male and female personnel, relatively consistent group working in the personal household of the lady of Girsu, *i.e.*, in the palace, including various servants, attendants, and persons in charge of storerooms
šà dub didli "on the tablets, various"	42	mostly men, smiths and textile workers as craftsmen, door keeper, brewer, herdsmen, boatmen, and 2 cult priests, 3 different singers

Table 2: Category 2: igi-nu-du_8 íl šà-dub didli "who do not 'see', carriers, various people on the tablet", example numbers in year Urukagina 3 (STH 17, see Selz 1993; Prentice 2010: 23–52): total of 196 persons

[32] See e.g. Maekawa 1987, Schrakamp 2013 with further literature.

ki-siki "at the wool"	115	70 women + 45 children in 4 teams
ki-gu "at the flax"	11	6 women + 5 children
work mainly in provision and preparation of food	101	for regular provision, in the brewery, carrying firewood (also men), milling women, pig herding

Table 3: *Category* 3: gemé dumu "women and children", example text STH 21 (Urukagina year 2; see Selz 1993; Prentice 2010:52–64), total of 227 persons, namely 4 men, 143 women, 80 children

The Emunus has become the classic example for the economy of early Mesopotamia, where a large part of the workforce was employed to care for the daily needs or the subsistence of the community. The Emunus organization is also typical in the sense that it concentrated on a specific task, namely the textile industry, due to the role of the master of the household, the queen of Lagash. Queens and high-ranking women of ancient Mesopotamia usually controlled textile production. The textile sector of the Emunus included only the work of spinning and weaving, but not the production of wool, since it did not deal with an exceptionally high number of sheep. Furthermore the trading and distribution of the textiles was not controlled by the Emunus, but, as indicated by other archives, by the palace, the ruler of Lagash himself.[33]

2.2. Ration, salary, and redistribution: a short note on terminology

Ignace J. Gelb coined the term "ration" for the contribution of grain (še-ba), wool or clothes (siki-ba, tu_9-ba), and rarely oil, to persons.[34] He argued strongly against a translation "wages, *Lohn, salaire*", which was current in Assyriology before.[35] The position of Gelb has been generally accepted and the term "ration lists" is nowadays widespread in Assyriology. Dissenting voices concerning the use of the term "ration" are rare.[36] Recently, Rosemary Prentice has argued against the term "rationing", since it has "the negative connotation of either being distributed due to

[33] Sallaberger 2013.
[34] Gelb 1965.
[35] Gelb 1965: 230.
[36] However, the alleged strict link between social status and type of remuneration has been revisited most notably by Waetzoldt 1987: 119–121; Postgate 1992: 237–239.

a shortage (as in modern times) or to maintain a subservient labour force at a subsistence level."[37] Regarding the underlying hierarchy of the lists and the service of the persons involved, each of whom received a grain allotment depending on their work, status, gender and age, she argues in favor of "wages" that are related "to the degree to which they performed their service to the institution."[38] A third term hitherto not considered, but more fitting would be "salary", which denotes more clearly the type of remuneration Prentice is arguing for. The distinction is fundamental: compensation in terms of wages is given to workers for the completion of work, and compensation in terms of salary is given to employees and paid mensually.[39]

The grain portions distributed, however, are more than simply a remuneration for work, since all members of the communal organization, whether sick, small children or old people, received their share.[40] So besides the specific value of a laborer depending on gender, age, work and rank, the membership within an organization has to be regarded a defining feature of the Mesopotamian alltoment system. Grain was produced by the communal organizations themselves and thus, in a way, their members divided their harvest. Although barley could also be bartered for other commodities, the basic idea was surely to fulfill the daily needs of food (monthly distribution of barley) and clothing (annual distribution of wool or textiles).

Given the modern meaning of the term "ration", we will generally avoid it in the following discussion and use instead more neutral terms like allotment, portion or share; and instead of "ration lists" the respective cuneiform documents are called "worker lists", which are regularly organized according to profession and place of work.

[37] Prentice 2010: 94. Note the following Wikipedia definition: "Rationing is the controlled distribution of scarce resources, goods, or services. Rationing controls the size of the ration, one's allotted portion of the resources being distributed on a particular day or at a particular time" en.wikipedia.org, last accessed 08/04/2012. See also the introduction to this volume by Steinkeller.

[38] Prentice 2010: 94–95.

[39] Definition after Wikipedia (en.wikipedia.org s.v. wage, access 04/08/2012); note the terminology in German and Italian: wage of a worker = *Lohn eines Arbeiters* = *salario di un operaio;* salary of an employee = *Gehalt eines Angestellten* = *stipendio di un impiegato*.

[40] On children, see, *e.g.*, Gelb 1965; Waetzoldt 1987: 132–33.

3. Nabada/Tell Beydar

Despite the fragmentary nature of the textual evidence from Tell Beydar, this city provides a unique occasion to study socio-economic conditions, simply because a large part of the tell is excavated and therefore the study of the material remains can be combined with the textual evidence.

3.1. The Site Tell Beydar and the Archaeological Excavations

The site of Tell Beydar (fig. 1) covers an area of about 22 hectares. The tell is of roughly circular shape and consists of a circular central mound, the upper city, and an outer perimeter, the lower city. Settlements of this type have been called *Kranzhügel* or "cup-and-saucer" tells.[41] When the

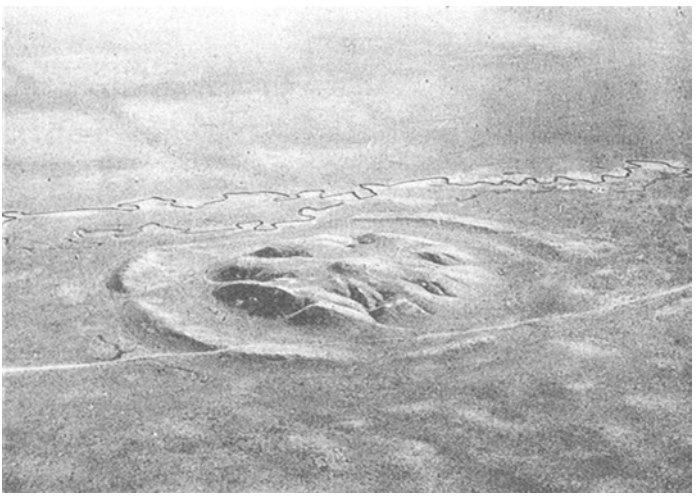

Fig. 1: Aerial view of Tell Beydar in 1927 (Poidebard 1934: Pl. 135, 2)

city was founded in the first centuries of the third millennium (see Table 4), both parts were settled. However, the lower city wall and thus the whole lower city were abandoned before the middle of the third millennium.[42] In the following periods (including Beydar IIIb, the phase of the main archive), the settlement proper was located on the upper city with

[41] A *Kranzhügel* is defined as a circular or polygonal tell with a circular upper city in the center and an annular lower city around. Ca. 20 third-millennium sites in North-Eastern Syria and South-Eastern Turkey belong to this category. See Moortgat-Correns 1972: 25–52 for the first definition of the term, and Meyer 2010: 11–34 for a recent discussion of its significance.

[42] Bretschneider 1997: 194–95.

an area of 7 hectares. A massive city wall made of mud-brick walls and debris filling layers surrounded the upper city.[43] The street system (fig. 2) consisted of straight radial streets and circular connecting roads, making the street-map similar to the appearance of a dartboard.[44]

In the very center of the city (fig. 3) was an elevated area separated by terracing walls and artificial slopes, which is called the acropolis (Fields F, L, N, and O). This part of the city had a palace, several temples, storage buildings, a large bakery and a tower, but no private houses. The

Fig. 2: Street system of Tell Beydar in phase IIIb (A.Pruß).

[43] Suleiman 2003; Milano and Rova 2003: 373–76.
[44] For a very similar street system, in the much larger contemporary site of Tell Khuera, see Meyer 2010: 199–221, especially Pl. 15.

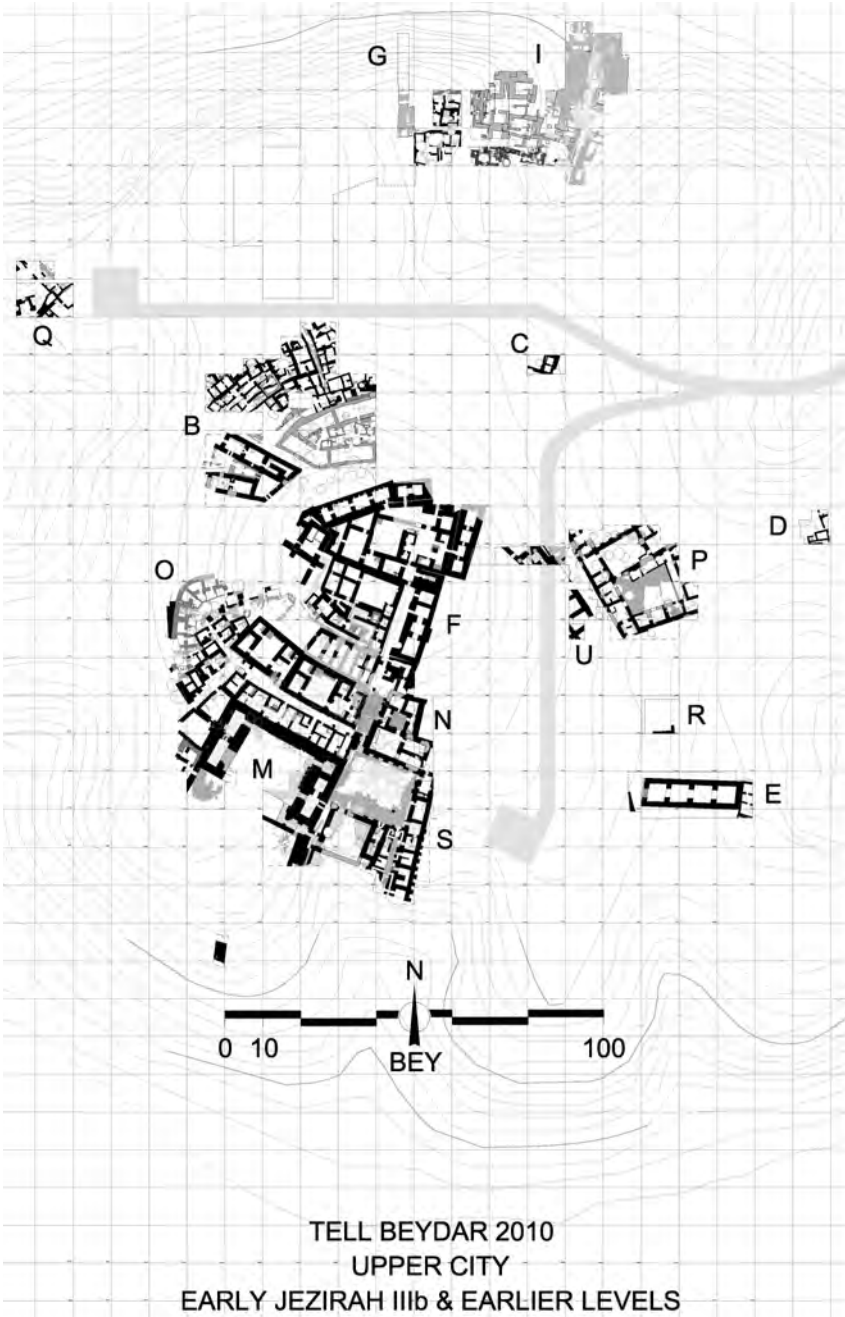

Fig.3: Excavated 3rd millennium remains in the Upper City of Tell Beydar (Mission Tell Beydar)

largest housing quarter uncovered so far is situated to the north of the acropolis, in Field B. Excavations in other Fields have revealed a large number of official or public buildings even outside the acropolis. These include: a temple (by far the largest temple of Tell Beydar known so far) (Field M), an open square surrounded by a large reception room and storerooms (Field S), a granary (Field E), a second palace (Field P), a massive building of still unexplained function (Field U), and a large building filled with many small workshops (Field I).

Beydar Period	Urban Development	Jazirah Period	South Mesopotamian Period	Date BC (ca.)
		EJZ 0		3100–2750
I	*Kranzhügel* settlement	EJZ 1	ED I	
II		EJZ 2	ED II	2750–2560
IIIa	Lower town abandoned	EJZ 3a		2560–2430
IIIb	Part of the Nagar kingdom; tablets	EJZ 3b	ED III	2430–2340
IV	Loss of urban features	EJZ 4a	Proto-Imperial	2340–2290
		EJZ 4b	Akkad	2290–2220
		EJZ 4c	Post-Akkad	2220–2100
Hiatus	Abandonment	EJZ 5	Ur III	2100–2000

Table 4: Periodization of Tell Beydar in the third millennium. The dates are taken from the Jazirah ARCANE volume (Lebeau ed. 2011).

3.2. Historical Context

The main archive of Nabada/Tell Beydar consists of 220 tablets (as of 2010) discovered in a secondary context mostly on the northern slope of the acropolis (Field B), but tablets stem also from the acropolis (Field F), and even from the granary (Field E) and the quarter near the Northern gate (Field I). According to the most recent periodization of the acropolis, the tablets do not belong to the latest monumental phase of the acropolis palace.

Some persons appear in similar functions in various tablets and sealed bullae. Thus the documents were once part of one archive, if an archive is defined as the documents belonging to one organization and disregarding their possibly accidental deposition or their actual findspots. Although the Tell Beydar administration dealt generally with local affairs, the expenditure of fodder for the ruler's donkeys and the appearance of Nagar, modern Tell Brak, as first-rank capital on which Tell Beydar depended, allow to locate the archive within the general historical

EJZ Period	Beydar Period	Acropolis	Field P	
3b	IIIb	2	7	
			6	
		3a	5c	
			5a–b	Beydar tablets
		3b	4c–d	
		"Post-palatial"	4a–b	
4a	IVa	"Early Akkadian"	3	

Table 5: Placement of the main archive in the stratigraphy of Tell Beydar (after Sallaberger 2011:335).

situation.[45] The title of the ruler was written with the Sumerogram EN in the documents, perhaps to be read *mal*(*i*)*kum*, as in other states of Syria and Upper Mesopotamia during that period.

Nagar/Tell Brak as the capital of the region was the home of Mara'il, the first historical figure from the Jezirah, appearing in texts from Ebla and Mari at the time of Iplu(s)'il of Mari, *i.e.*, ca. fifty years or more before the destruction of Ebla (fig. 4). Mari's leading role must have ended soon after Iplu(s)'il, after the death of Enna-Dagan, thirty-five years before Ebla's end.[46] With the decline of Mari, Ebla gained more influence in Syria and Upper Mesopotamia. To this context belongs the phenomenon of gifts that were sent by Ebla to the ruler of Nagar and to the representatives of the seventeen cities forming Nagar's kingdom, among them Nabada (Tell Beydar's name during that time). These friendly relations culminated in a diplomatic marriage of a prince of Nagar with an Eblaite princess.

The geographical extent and internal layout of the state Nagar in the Habur triangle was reconstructed on the basis of archaeological survey data and the appearance of place names in documents from Ebla and Tell Beydar. The evidence of the Ebla gifts indicates that the capital Nagar/Tell Brak dominated seventeen second-rank provincial centers, among them Nabada. And the town Nabada itself controlled about 13 to 22 smaller settlements including two larger administrative sub-centers; the province's area covered between 300 and 500 km^2.[47]

[45] For the historical context, see in more detail Sallaberger 2011 with references to texts and studies.
[46] Archi and Biga 2003: 1–5.
[47] Sallaberger and Ur 2004.

Nagar was the dominant state in the Habur triangle, but only one of those existing in the region. The documents from the palace archives of Ebla clearly indicate political connections and commercial exchange between Ebla and the cities situated in the Euphrates valley down to Mari, in Northern Syria and in the Jezirah up to Nagar in the east, and even as far as Babylonian Kish. Whereas the Tigridian region was of marginal importance in the late Early Dynastic period, the politically and culturally closely linked city-states formed a continuous belt from Northern Babylonia to Upper Mesopotamia and to Northern Syria, as shown, for example, by the use of cuneiform writing and texts of Mesopotamian tradition at Tell Brak, Tell Beydar, Mari, and Ebla.

The main archive of Tell Beydar can be dated by its palaeography to the period about a generation or more before the fall of Ebla. This fits the historical situation of the domination of Mari. So the prominent appearance of Paba in a Beydar document, where she is listed even before the ruler of Nagar, may refer to the wife of Iplu(s)'il and the ruling queen of Mari, about fifty years before the destruction of Ebla.

Ebla and Mari	Tell Beydar	Babylonia	Sargon
Iplu(s)'il of Mari Igrishhalab of Ebla until c. 2353	*Main archive of Tell Beydar* around c. 2390/80–2355		
Irkabdamu c. 2353–2346			
Ish'ardamu c. 2345–2310		É-munus *archive, Girsu:* Enentarzi c. 2336–2331 Lugalanda c. 2330–2325	
		Urukagina c. 2324–2315	Sargon of Akkad c. 2324–2285
Ebla destroyed c. 2310			
		End of Lugalzagesi c. 2300	
Mari destroyed c. 2295			

Table 6: Historical context of the texts from Tell Beydar and from Girsu after Sallaberger & Schrakamp forthcoming, Middle Chronology dates. Note that the correlation with the archaeological chronology (based on radio-carbon; see table 4 above) is not absolutely clear.

Within the regional state of Nagar, which comprised a large part of the Habur basin in Upper Mesopotamia, Nabada/Tell Beydar represented a second rank town, or what we may call a "provincial center." The local economy was based on rain-fed agriculture and animal husbandry, sheep for the production of wool and oxen and donkeys as draught animals. The professions of Nabada's inhabitants are most clearly demonstrated by the worker lists.

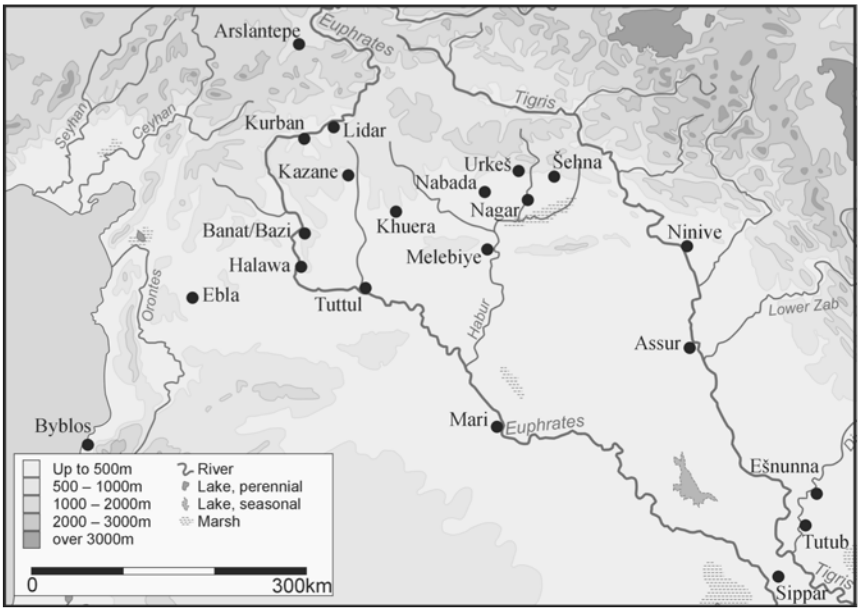

Fig. 4: Map of Syria and Upper Mesopotamia in the later 3rd millennium (A. Pruß).

4. Worker Lists from Tell Beydar

4.1. Structure and Scope of the Worker Lists

The management of workers is one of the dominant themes of third millennium administrative texts, and so it is of little surprise that some worker lists enrolling various professions with their monthly share of grain turned up among the tablets of Tell Beydar's main archive.[48] Several of the lists were found together in a fill under the last building phase in area B, room 2611, but also at a distance of ca. 80 m in area I.[49]

[48] The text group has been dealt with by Sallaberger 1996: 89–99. In Field I ration lists of the same character were excavated, but these tablets are of an earlier date; the tablets in question are *Subartu* 12, no. 216; Milano forthc. nos. 221(?), 223, 226, 233, 239.

[49] See Lebeau 1996 for the find-spots of the tablets published in *Subartu* 2; also *Subartu* 12, no. 209 comes from Field B: see Lebeau 2004: 3 ("couche de destruction"); 6, Pl. II a. Milano 2014, no. 239, however stems from Field I (see above fig. 3).

The following texts, many of them fragmentary, belong to this category:

Subartu 2, nos. 44, 54, 57, 58, 59, 71, 72, 119, 123, 131, 137, 140
Subartu 12, no. 209
Milano 2014, no. 239

The fourteen worker lists or fragments are all of the same structure:

- First entry: lú-ĝeš-DU, followed by the name of the "main official," number (of persons) + grain share, and additional grain (še-RU)
- list of professions, indicating number of persons and their grain share
- occasional other expenditures of barley (*e.g.*, fodder for donkeys or birds)
- Subscript: total of grain, month name

The persons named in the first entry are Arrum, Arši-aḫu, Ḫalti, KUR-ilum, who together with Tabla'alim form the group of the five leading officials of the archive of Tell Beydar; perhaps Išgi is also to be added.[50] They are responsible for various aspects of Nabada's economic life: agriculture, the distribution of metal tools, and the management of grain and even of fattened sheep.[51] According to the structure of the Beydar administrative texts, the name of the first entry is valid also for the following entries; other archives would use subscripts for this information. Therefore, the persons in a given list are linked to one of the main officials. Since in two cases two lists of the same official are dated to the same month, to the Sungod-month with Arrum and to the Ešḫara-month with Ḫalti, the ration lists stem at least from two different years. Albeit many texts are fragmentary, the grain totals indicate that each list covers ca. seventy-five to more than 200 persons.[52]

The combined evidence of the Tell Beydar archive suggests that five (or six) largely parallel groups of persons are concerned, each led by one official. There are two main arguments for this, namely the correspondence of the numbers of agricultural workers between worker lists and some agricultural documents, and secondly the total of persons under control of an official compared to an attestation elsewhere.

First, the numbers of the lú-ĝeš-DU and *ba-rí* udu in the worker lists agree largely with the number of the same professions in texts that document agricultural workers grouped with the main officials as representatives of the city of Nabada; the latter texts additionally identify workers assigned to small settlements in the city's countryside (*Subartu* 2, no. 3

[50] Section 4.2 below on *Subartu* 2, no. 123.
[51] Sallaberger 1996: 90–92; Van Lerberghe 1996: 115–16.
[52] Sallaberger 1996: 89.

and 39)[53]. As Table 7 clearly indicates, there are some fluctuations in the numbers of workmen per leading official; text *Subartu* 2, no. 3, the assignment of plough-teams, for example, features very small numbers of lú-ĝeš-DU; apparently few of them were employed in ploughing; and *Subartu* 2, no. 72 is a worker list of Arrum with very few laborers at hand. Nevertheless and despite the fragmentary data, it becomes evident that the work-groups listed in the agricultural texts as being employed at the same time pertain to the same groups under their officials in the monthly worker lists.

a) number of lú-ĝeš-DU per leading official in agricultural texts and worker lists

	Arrum	Arši-aḫu	Ḫalti	Tabla'alim	KUR-ilum
no. 3	3	2	7	[x]	0
no. 39 i–ii	30+[x]	35	45	[x]	[...]
agricultural texts		10 (no. 124)			
worker lists	38 (no. 54) 40 (no. 57) 17 (no. 72) 25 (no. 239)	36 (no. 59)	[x] (no. 58) 43 (no. 71)		34+[x] (no. 119)

b) number of *ba-rí* udu per leading official in agricultural texts and worker lists

	Arrum	Arši-aḫu	Ḫalti	Tabla'alim	KUR-ilum
no. 3	18	[x]	[x]+9	20	33
no. 39 iii-vi	[1]8	11	18	[x]+9	30
agricultural worker lists		23 (no. 53)			
	28 (no. 54) 27 (no. 57) 0 (no. 72) 28 (no. 239)	22 (no. 59)	[x] (no. 58) [x] (no. 71)		19 (no. 119)

Table 7: Correlations between worker lists (text numbers see above) and agricultural texts concerning number of laborers with leading officials (after Sallaberger 1996: 91–92; *Subartu* 2, no. 72 corrected after collation)

[53] See the tabulation concerning the place names in texts *Subartu* 2, nos. 3, 39 and 125 and the implications for the setup of the province of Nabada by Sallaberger and Ur 2004: 55–56.

Secondly, each of the five officials was responsible for at least 130 to ca. 240 persons, as can be seen from a list of persons engaged for harvesting (*Subartu* 2, no. 102; see Table 8). Since every person able and dispensable had to be employed for harvest, including even specialized workers as other archives demonstrate, the number of persons listed with each leading official may well represent a large part of his subordinates.

Leading official	Workers for harvest (*Subartu* 2, no. 102)		Worker lists
	Transliteration	Translation and reconstructed numbers[54]	Total number of persons
	Superscript: ki *šu* / bàd še al-gur$_{10}$-gur$_{10}$	"Placement of those of the wall/fortress: harvesting barley"	
Arrum	[1] *mi-at,* 30 (ii 6–iii 2)	[1]30	158 (no. 57) 158/161 (no. 54) 102/105 (no. 72)
Arši-aḫu	2 *mi-at* (ii 4–5)	200	134/136 (no. 59)
Ḫalti	2 [*mi-at*], 1,00[+x] (i 3–5)	260[+x] (max. 290, ≤ 299)	194+x, ca. 206 to 276 (no. 71)
Tabla'alim	2 *mi-at,* 40[+x] (ii 1–3)	240[+x] (max. 252, ≤ 259)	
KUR-ilum	2 *m*[*i-at*] (iii 6–iv 1)	200	(92+x) (no. 119, fragmentary)
[Išgi?][55]	[1] *mi-at,* 31+[(1/2)]	131 (max. 133)	
Total		1161 (max. 1205, ≤ 1221)	

Table 8: Total number of persons with leading officials according to list of workers for harvest (*Subartu* 2, no. 102) and to worker lists (same sequence of officials' names as in Table 7).

As the workers for harvest were needed at the same time, this proves that the five officials plus one unidentified person commanded a total of c. 1,160 to 1,200 persons. This corresponds by and large to the range of numbers of the worker lists, especially regarding the fact that Ḫalti is listed with

[54] The numbers are reconstructed according to the probable maximum determined by the available space on the tablet and the possible maximum determined by the notation of numbers.

[55] The missing personal name in no. 102 iii 3 apparently had a slightly different position than the other five leading officials; see Sallaberger 1996: 90 Table 1 as an overview of texts pertaining to the five main officials. One of the persons named Išgi (*iš*$_{11}$-*gi*) would be a possibility according to his appearance with other leading officials in *Subartu* 2, nos. 7 and 66; he is listed in the extra expenditures of the ration list *Subartu* 2, no. 123 v 2′, similarly as Arši-aḫu and Ḫalti in their ration lists (see section 4.2 below).

the largest number in both series. We can only speculate about the differences in the numbers: on the one hand, some men like guards may not have been allowed to leave their post for harvest work; on the other hand, the official may have included family members of his group of people for special tasks as harvest.

The evidence summarized in Tables 7 and 8 thus demonstrates that each of the five leading officials headed a group of ca. 150 to 270 persons. The lists of the same officials (Arrum and Ḫalti) display differences that hardly point to a fixed composition of their groups: two lists of Arrum (no. 54, 57) with 158 and 156/161 persons agree fairly well, whereas the third text (no. 72) lists only 102/105 persons. This suggests some fluctuation or a system of rotating services of which we are not yet aware; the texts themselves do not give any clues for an interpretation.

4.2. The Worker Lists: An Overview

The following list gives text number, leading officials, total of persons listed, the number of the lú-ĝeš-DU, the total of grain as preserved, expenditures other than for personnel, and the grain used for remuneration only. The restorations are based on the parallel lists.[56] The relation between amount of grain and numbers of persons allows a reconstruction of the numbers of persons involved in the more fragmentary texts. Note that the quantities of grain are indicated in the local system of capacity measures used at Tell Beydar:

1 kor = 10 bariga = 60 bán = 600 silà (liters)
Notation: 1.2.3 = 1 kor + 2 bariga + 3 bán = 600 + 120 + 30 = 750 silà (liters).

1. *Arrum*

Subartu 2, 57: Arrum, Month of Ba'li-Sulum: 158 persons

Total of grain: 22.[0.0] kor
Extra expenditures: total 0.7.3; 0.1.3 *dab$_6$-ḫir-tum* "collection"(?), 0.5.0 anše kungá-equids, 0.1.0 birds, mušen-mušen
Grain for persons: 21.6.3 kor; per kor of grain 7.3 persons
Remarks: Restoration in vi 1: 2+[2] dub-sar; v 2 [bur]-gul(?)

Subartu 2, 54: Arrum, Month of AN.SAG: 155+[3 to 6(?)] = 158/161(?) persons

Total: [2?]1.9.0 (probably some additional expenditures not preserved on the reverse)

[56] See Sallaberger 1996: 96–97 Table 3.

Extra expenditures: [x] *dab$_6$-ḫ*[*ir-tum*] "collection"(?); 0.1.0 onager, anše edin (or responsible person?); other entries not preserved
Remarks: Restorations according to parallel lists (entries for *šu* é-éš, *šu* ká?, ašgab, and *su-li-im* missing) and to missing indications of professions in i 6 (1 person), i 7 (x persons), iii 1 (1 person) and perhaps in gaps on the reverse.

Subartu 2, 72: Arrum, Month of Sungod (Utu): 99 [+3/6 aslag$_4$] persons

Total: 10.4.0 kor
No extra expenditures
Grain for persons: 10.4.0 kor; per kor of grain ca. 9.8 persons
Remarks: 3 or 6 fullers (aslag$_4$) in i 8 according to parallels. Note the low number of the lú-ĝeš-DU and the absence of *ba-rí* udu and their ugula (see above Table 7); this suggests a situation as recorded in agricultural text *Subartu* 2, no. 3 (Table 7), specific work assigned to these two groups. Read ˹ugula˺ é in ii 5 (already correct in Sallaberger 1996: 96 Table 3; transliteration to be corrected accordingly).

Milano 2014, 239: Arrum, Month of Sungod (Utu): 66+x persons (large gaps)

Total: [2?]7.2.0 kor
Extra expenditures: 0.1+x.3 [x]-*bù-tum*, 0.2.0 for *garà-sa* "leeks"(?), 0.2.0 for níĝ-è "expenditures", 0.1.0 for apin "plow (donkeys)."

2. *Arši-aḫu*

Subartu 2, 59: Arši-aḫu, Month of Ba'lim: 133 persons [+1/3 ugula *ba-rí* udu]

Total: 21.1.0 kor
Extra expenditures: total 3.8.5; 0.1.4 *dab$_6$-ḫir-tum* "collection (?)", 0.1.0 mušen-mušen "birds", 1.5.0 anše apin "plough equids," 1.0.0 Arši-aḫu, 0.0.3 AN.AN "gods"(?), 0.0.4 níĝ-è "expenditures"
Grain for persons: 17.2.1; per kor of grain ca. 7.8 persons

3. *Ḫalti*

Subartu 2, 58: Ḫalti, Month of Ešḫara: total not preserved, text with large gaps

Remarks: x+x+1.6.0 for 2[+x]+x+32 dumu-ninta "sons" (cf. no. 71 below), 0.2.0 for Muda and Enna'il

Subartu 2, 71: Ḫalti, Month of Ešḫara: 194+x persons (several gaps)

Extra expenditures: total 4.2.0; 2.2.0+[x] še [x], 2.0.0+[x] níĝ/ninda Ḫalti
Total: 32.4.0+x kor

Grain for persons: 28.2.0 kor (or less); calculating 7.3 (cf. no. 57)/7.8 (cf. no. 59)/9.8 (cf. no. 72) persons per kor: up to 206/220/276 persons

Remarks: The text includes besides the dumu "sons" with the carpenters (naĝar) another 5+2 dumu "sons" (cf. no. 58 above); 0.5.0 for dam lá-ŠÈ "...-women" (ii 5); 1 tibira "sculptor" at 60 liters (vi 2)

4. *KUR-ilum*

Subartu 2, 119: [KUR-i]lum in [x (x)]$^{ki?}$ (i 1): 92+x persons (several gaps, total not preserved)

Extra expenditures: 1.0.0 for MIN ud_5 "she-goats", x+0.3.0 for 100 uz-uz "ducks"(?); 0.4.4 for 10 uz-˹x˺ "ducks"(?); 0.[x].5 for x-mušen "birds", 0.1.0+x for AN.AN "gods"(?), and four personal names (x-muzu, Aba, Ḫulum, 'À-x-li)

Remarks: Note women in vi 3′–8′: [x] for lú x TUR munus 4+[x]; [x] for gemé *si-*˹*a-ḫa*$^{?}$˺ "female servant(s) of Ši-aḫa(t)", x for 40 GÁ×MUNUS+GI "(women of the) 'locked quarter'/harem", x for 5 ˹dumu munus$^{?}$ en˺ "girls$^{?}$ of the sovereign (of Nagar)"; this provides a link with the women in the palace (more in detail Sallaberger 2004b: 45–47). KUR-ilum may thus be related closely to the acropolis (note the exceptional place name in i 1)

5. *Išgi*(?), anonymous lists and fragments

Subartu 2, 123: Išgi(?) (see fn. 55), fragment

Extra expenditures: 0.2.0 for Išgi, x for še gu_7, an[še ...] "grain fodder for [x] equids", 0.4.0 for 8 anše-IGI ninta "male donkeys"; 0.2.4 níĝ-è "expenditures"

Remark: 1 *ša* mušen-mušen "she of birds" iii 1′

Subartu 2, 44: Fragment

Extra expenditures: 1.3.3 for 10 tu "doves"; x *dab*$_6$*-ḫir-tum* "collection (?)"

Total: 16.3.2 kor

Grain for persons: max. 15.9.8, calculating 7.3/7.8/9.8 (cf. no. 71 above) persons per kor, up to 117/125/157 persons

Subartu 2, 140: Fragment

Total: 25.0.0 kor, thus probably in the range of 200 persons (cf. no. 71 above)

Subartu 2, 131: Fragment

Extra expenditure: 0.1.3 for *dab*$_6$*-ḫir-tum* "collection(?)"

Subartu 2, 137: Fragment

Subartu 12, 209: Fragment

4.3. The Professions

The Tell Beydar worker lists document the issues of grain to persons under the leading officials, whereby the recipients are identified and counted by profession with the total amount of grain indicated. This allows one to calculate the *rate* per person for a specific profession. Table 9 provides a summary of the number of persons per profession in the various Beydar lists; although various groups headed by different officials are concerned, the professions and the respective numbers are largely similar.[57] Single entries will also be discussed below.

The first, most numerous and best paid group are the lú-ĝeš-DU.[58] A literal translation of this term is hard to understand: the signs produce something like "person, bringing the wood(en implement)" or better (following a suggestion of P. Steinkeller) "person assigned to the wood(en implement)." The pertinent texts make clear that they were performing agricultural work and thereby served also as ploughmen (lú-ĝeš-DU APIN). The high number of persons, mostly around forty men, and the highest assignment, the first place in the lists, the organization with "foremen" (ugula), and finally their link with the political capital Nagar,[59] all these facts suggest that the lú-ĝeš-DU formed the fundamental component of ancient Mesopotamian societies: the group of holders of sustenance land that took care of the agricultural land and was obliged to perform public services, most importantly in the royal army. The best analogue here are the RU-lugal[60] of contemporary Girsu in the South, holders of sustenance land and performing services (see above). They are the ones that are called to the army by the king, as is underlined by their connection with the agà-ús "gendarmes" in Girsu; and similarly the gate-keepers

[57] For a more detailed listing of the data of the worker lists see Sallaberger 1996: 96–97 table 3; add there *Subartu* 12, no. 209 and Milano forthc. no. 239; correct the rations for the $aslag_4$ in no. 57 to 0.8.3 and in no. 59 to 0.9.3(?).

[58] Sallaberger 1996: 94.

[59] Sallaberger 1999: 399–400, especially on *Subartu* 2, nos. 107 and 111 and the so-called grain expenditure documents (Sallaberger 1996: 99–106).

[60] In Ukg. 4 x-xi the RU lugal is protected from the lú gu-la "the big/strong man". Maekawa 1987 argues that the Ur III éren can be seen as the successors of the Pre-Sargonic RU lugal; note that already the Presargonic RU lugal were called sur_x(ÉREN) "teams" in texts pertaining to workforce; their identification as RU lugal is possible by prosopography; see Bauer 1998: 483–87.

Profession	**Translation**	**Number**	**Ration** per head in liters (silà)
lú-ĝeš-DU	= ? (agriculture) (see Table 7)	17–43	120 + 10 še-RU
ugula lú-ĝeš-DU	overseer of lú-ĝeš-DU	3–7	80
ba-rí udu	"sheep-watcher"(?) (agriculture, see Table 7)	19–28	90
ugula *ba-rí* udu	overseer of "sheep-watchers"(?)	1/3	60–80
ḪAR-dú	(female) domestics	13–39	30
šu ká	he of the gate	1	60
ša ká	she of the gate	1	30
šu é-éš	he of the prison	1–2	60
šu KÍD.KÍD	(a doorkeeper?)	1	60
ugula é (šabrá)	overseer of a building	7–10	60
ugula $kaš_4$/maškim	overseer of runners/ commissioner	1	30
šu ŠE gud	he of the grain for(?)/grainfed(?) oxen	1	60
šu anše edin/eme_6	he of onagers/of she-asses	1	60
ša $sila_4$-$sila_4$	she of the lambs	1–2	30
nu-$kiri_6$	gardener	9–11	60
^{ad}adgub$_x$(KID)	basket weaver	2–5	60 (2–3) (+ 30 [1–2])
baḫár	potter	1–2	60
ašgab	leather worker	1	60
$aslag_4$	fuller	3–6	60
naĝar ^{ĝeš}gigir + dumu	cartwright, coach-maker + 'son'	6–8 1–4	60 30
mar-bala$_x$(NUMUN)	cart driver(?)	1	60
dub-sar	scribe	4	60
šu ḪAR.ḪAR	he of milling	1-2	60
sar-ra-bù	?	1–2	60
su-li-im	?	1	60

Table 9: Professions appearing regularly in the Tell Beydar worker lists

(*šu/ša* ká, *šu* KÍD.KÍD) and the keeper of the prison (*šu* é-éš) follow directly in the Tell Beydar lists,[61] sometimes even before their "foremen" (ugula; *e.g.*, 72).

The second group, which shares most features of the lú-ĝeš-DU, are the *ba-rí* udu, literally "sheep watchers". Our interpretation may be correct for the literal meaning, since in another text group from Tell Beydar we observe an alternation with *gu-li-sum*, perhaps "herdsman;"[62] and also the earlier worker lists from Field I use the term *gu-li-sum* instead of *ba-rí* udu.[63] But it can almost certainly be excluded that they all actually worked as shepherds, because of (1) the high number of 20–30 persons per text, which implies a total of about 100 persons;[64] (2) the fact that the few personal names for *ba-rí* udu do not at all agree with the names of the actual shepherds of Nabada;[65] (3) the *ba-rí* udu's organization with foremen (ugula) like that of the lú-ĝeš-DU; (4) their involvement in agriculture, again together with the lú-ĝeš-DU.[66] Like the latter, they turn up in the provisions for travelers and other services.[67] Disregarding whether or not the designation of this group really means "sheep watcher," they are unquestionably related to the lú-ĝeš-DU. Does this designation mean that they served as "guards" of animal herds, *i.e.*, the movable property of the community? Although this must remain speculative, such a situation would be appropriate in a world where the capture of sheep herds was an aspect of warfare.

The c. thirty herdsmen that actually herded the flocks of the palace, counting seven to eight thousand sheep and goats, are known from the animal inspection records and other texts;[68] they may or may not be summarized among the "sheep watchers," but there is no other entry in the worker lists that may pertain to these people. Therefore, it is not absolutely certain if the shepherds in the service of the town received monthly grain allotments or not.

[61] *Subartu* 2, nos. 44, 57, 59, 71, 72, 131, 140
[62] Sallaberger 1996: 102.
[63] Milano 2014, nos. 223, 226, 233.
[64] Adding the numbers of *Subartu* 2, no. 3 (Table 7) for the five officials: Arrum 18, Arši-aḫu [11], Ḫalti [1]9, Tabla'alim 19, KUR-ilum 33; total 100 persons (missing numbers reconstructed according to the parallels listed; see Table 7 above).
[65] Names listed and relation of professions discussed by Sallaberger 2004a: 17–18.
[66] Sallaberger 2004a: 18.
[67] Sallaberger 1996: 101–02.
[68] Sallaberger 2004a.

Professions in the worker lists dealing with animals are: "he of grain for cattle"; "she of lambs"; "he of the donkey of the steppe"; "he of the she-asses"; "he of ducks/geese" (*šu* uz-uz, *Subartu* 2, no. 119 iv 7); "she of birds" (*ša* mušen-mušen, no. 123 iii 1′). The nine to eleven documented gardeners (nu-kiri$_6$) apparently took care of fruit trees (such as the textually attested fig trees).

Administrative duties remained in the hands of the female ugula kaš$_4$ "overseer of the runners" (or maškim "commissioner"?), the three or four scribes (dub-sar), and the seven to ten "overseers of buildings" (ugula é), who probably served as managers of the various storehouses, so many of which were excavated in Tell Beydar (see Fig. 3 and section 5.2).[69]

The craftsmen included two to five basket weavers, two potters, five to eight cartwrights, one leather worker, three or six fullers, perhaps a single "seal cutter"(?) ([bur]-gul 57 v 2),[70] one "sculptor" (tibira, Ḫalti list 71 vi 2); transportation was perhaps entrusted to a mar-bala$_x$, "who transfers the carts" (if the term is correctly interpreted).

Remarkable is the high number of cartwrights among the craftsmen. Apparently, the Nabada community had a special service to take care of the manufacture and repair of wagons, an important means of traffic in the Habur basin and in Upper Mesopotamia. It is not without coincidence that carts appear dominantly in the glyptics of Tell Beydar, and in this way images in art refer to the most prestigious goods.[71]

Unclear remain the professions *su-li-im*, *sar-ra-bù*, and *šu* ḪAR-*da-nu*.[72]

The largest female group are the "domestics" (ḪAR-dú) of 13–39 persons per list, comprising a total of c. 150 women. It is safe to assume that they fulfilled the typical female duties mostly in the production of food like milling grain, baking bread and brewing beer. In the palace area the excavators found a milling place with two bread baking ovens in the corner between temple terrace and palace on the acropolis; furthermore in the ration lists one or two males are "men of the milling", thus listed as their supervisors. The ḪAR-dú may specially have served various organizations, not only the palace, since another center for food production was excavated in Field I at the northern fringe of the upper town (see below section 4.4.2).

[69] Cf. Sjöberg 2003: 262 on the term ugula é.
[70] Bonechi 2003: 56.
[71] Bretschneider and Jans 1998.
[72] The latter only in no. 119 iii 2, otherwise known from the grain expenditure documents.

Finally, it has to be emphasized that not all texts list the same professions or the same numbers. One text of Ḫalti (*Subartu* 2, no. 71), for example, features more craftsmen, the "sculptor" (tibira) and an exceedingly high number of cartwrights, who include "sons" (dumu-ninta). The "sons" are prominent in both his lists (no. 58, 71). The group perhaps to be assigned to Išgi (*Subartu* 2, no. 123) was seemingly more active in animal husbandry. The large but fragmentary list of KUR-ilum (*Subartu* 2, no. 119) includes forty "women of the locked house" (GÁ× MUNUS+GI) and the record furthermore provides prosopographic links with the lists of women from the palace area.[73] About forty women lived probably in the palace, among them "girls of the ruler," *i.e.*, the king of Nagar.[74] The preserved texts do not indicate directly whether the women were engaged in textile work. Incoming wool is documented in the administrative records of Nabada, but neither texts nor material remains can answer the question of where the production of textiles actually took place. The KUR-ilum list (no. 119), which through the women provides a link with the monumental complex on the acropolis, is fragmentary; also some other professions that are linked to the palace like blacksmiths or producers of perfumed oil could easily be fitted in the missing parts of the tablet.

4.4. Identifying Crafts in the Archaeological Record

4.4.1. The Metal Workshops

No metal workers are mentioned in the Beydar lists with the possible exception of the already mentioned tibira "sculptor" (Ḫalti-list no. 71 vi 2).[75] However, the archaeological evidence can help to define the relation between the metal workers and the central administration.

The best evidence for metal production in Beydar is a metal workshop uncovered in the former Eastern Palace in Field P.[76] The Eastern Palace, a large representative building, was erected shortly before the period of the main archive. After a rather short time of use it lost its representative function, though the building was still intact. The northern wing of the palace was abandoned, but the rest was transformed into a

[73] See above 4.2. remarks on the text.
[74] Sallaberger 2004b.
[75] See Pruß 2011a: 127 for the discussion of this professional and of his possible relation with the Field P metal workshop.
[76] Pruß 2011a: 121–28.

metal workshop. At least four kilns were installed in the former banquet hall, another one near the former entrance (see fig. 5). Crucible fragments and metal spills were found in the former banquet hall and the main courtyard of the building. No molds were found, but a trial piece impressed from a mold from which a male head of a composite figure could have been cast.[77]

Fig. 5: Location of kilns and crucible fragments in the former Eastern Palace of Beydar, Field P, level 5a–b (A. Pruß)

[77] See Pruß 2011b for a description of the trial piece and its role within the production process.

Several impressions of two very similar seals[78] were found on floors within the context of the metal workshop (fig. 6). One of the impressions is on a container sealing, the others on door sealings. Impressions of one of the seals were found on the Acropolis (Field F) in a context contemporary with the archive; both seals are frequently attested on the sealings from the floor of Temple E in the South of the town. These seals must have been owned by some officials of the town (one or two of the five leading officials of the ration lists?), who were responsible for the control of several large public buildings. The Field P seal impressions thus prove two things: the metal workshop is contemporary with the archive and it was controlled by the central administration.

Fig. 6: Location of sealings in the former Eastern Palace of Beydar, Field P, level 5a–b (A. Pruß)

[78] See Rova 2008: 72–73, no. 9–10, Fig. 8–9. The design of both seals is nearly identical: on one seal the boat-god and accompanying figures look to the left, on the other one to the right.

Another metal workshop existed in the center of the Acropolis in Field F.[79] Two molds and remains of a kiln were found in room 32861. This room is situated in the former Temple A and is dated to the "Early Akkadian" Phase IVa, *i.e.*, after the reduction of the city to a 1.5 ha village and the abandonment of the city wall, the palaces and most temples. The former Temple A, however, seems to have kept at least some of its functions, since the main room remained nearly unchanged in this phase. The setting of the workshop indicates thus some degree of administrative control for this metal-working location, too.

The archaeological evidence of metal-working at Tell Beydar contrasts with the evidence of the worker lists. Various reasons could be adduced for this mismatch: A few professions remain unidentified (*su-li-im*, *sar-ra-bù*), and many lists are fragmentary. Furthermore, it could well be that the metal workshop was directly related to the sovereign's palace at Nagar/Tell Brak, since metals, textiles, and other luxury goods were often directly controlled by rulers themselves. If that was the case, the craftsmen in question may not have belonged administratively to the local Nabada organization.[80]

4.4.2. Food Production

It is safe to assume that also the production of food was linked to the palace: here, one needed institutional kitchens and in fact such a milling place with two bread baking ovens was found in the angle between temple terrace and palace on the acropolis.[81] So a bakery may well be linked to the palace only, and therefore be managed in another administrative section than the communal workers. The same can apply to the brewers, and certainly a palace organization could hardly exist without the local production of beer.[82]

Another center for food production was excavated in Field I at the northern fringe of the upper town. A large workshop complex ("Northern Building") situated just inside the upper city wall contained one large room which was filled with the remains of eleven bread-ovens (*tannurs*), of which up to six were in use simultaneously (fig. 7).[83]

[79] Bretschneider, Jans, and Suleiman 2003: 151, Fig. 6.

[80] See already Sallaberger 1996: 99; for palatial archives of the period see Sallaberger 2013.

[81] Suleiman 2007: 87, Fig. 17–18.

[82] See section 6 below for the domestic production of food at Tell Beydar.

Fig. 7: Bakery room 61859 with many tannur ovens, seen from W (Beydar, field I; Photo L. Milano)

This bakery could feed a large number of people and was most probably integrated in the administration. One could hypothetically and for the sake of the argument assume that the grain allotments, which were calculated in silà (of grain), were in reality distributed as bread, and not as unprocessed grain. The workers in the large workshop building thus would have received (parts of) their shares at their working place. However, the houses in the residential quarter (see below) regularly provide installations for domestic food preparation. So the bread produced in the Field I bakery was more likely provided for people at work and while on travel; this conforms exactly to the third-millennium textual evidence: Especially the location near the city gate can be related to the textually attested expenditure of beer and bread to messengers and travelers.[84]

Other industrial activities attested within the "Northern Building" of Field I are pottery and figurine production as well as food production and preparation other than milling and baking. These activities were situated in single rooms and small courtyards of the building which did not contain typical domestic installations.

[83] Room 61859, see Milano and Rova 2004: 10.

[84] The so-called bread-and-beer texts are expenditures of food to the persons present in a communal organization, *e.g.*, travellers, guests at a festival, but also workers, officials etc. Examples of these documents are the texts on cereals from the palace of Ebla (Milano 1990) or from Sargonic Umma (Foster 1982, especially group C.3.3 *ibid.*109–116).

5. The Size of Nabada/Tell Beydar

As argued above (section 4.1), the five or six leading officials directed an enormous workforce of about 1,200 persons. So an important question emerges from this evidence: what was the extent of the organization that issued the worker lists at Tell Beydar? If we want to compare the Upper Mesopotamian system of collective labor with the Babylonian one—as our ultimate goal is—we need first to estimate how many inhabitants of Tell Beydar belonged to the organization directed by the five or six leading officials.

5.1. The Number of Persons Involved

When the first discussion of the Tell Beydar worker lists appeared fifteen years ago,[85] the organization to which the workforce and the leading officials belonged was vaguely dubbed a "household," as one would do for any comparable third millennium corpus of administrative texts. In the case of Tell Beydar, however, the extent of the inhabited area is now known thanks to the archaeological excavations. It is within this particular area, therefore, that the individuals mentioned in the texts need to be placed.

The size of Nabada's population has already been discussed by Sallaberger and Ur.[86] Here, the main arguments are shortly summarized, and some new observations are added.

The worker lists under the five main officials document each about 150 to 270 persons; lower numbers are due to fluctuations in the labor duties (see above 4.1.). By comparing these figures with the numbers of laborers used for harvest (*Subartu* 2, no. 102), an estimate can be made that the total workforce numbered about 1,200 persons. Since about one third of persons listed in the worker lists are women, and since men and women are evenly distributed, one subsequently arrives at a figure of 1,200 (including 400 women) + 400 (additional women) = 1,600 persons. To this figure one must still add babies and small children that are not included in the lists.

A list of "men" (ninta, *Subartu* 2, no. 73 iii 2–4) allows another estimate: included in it are 605 "men" at Nabada and 240 persons designated as "free" (sikil-sikil, iii 5–iv 2). Assuming that the latter were likewise inhabitants of Nabada, probably temporarily not on duty (as often noted in third millennium texts dealing with workforce), this document thus

[85] Sallaberger 1996.
[86] Sallaberger and Ur 2004.

notes that 845 men were subject to the communal organization. This leads to a comparable number of 1,690 men and women at Nabada. The same text lists 1,001+x persons in the "land" (kalam), evidently the population of the rural settlements that depended on Nabada. Accordingly, between 2,200 and 2,300 persons lived in the villages around Nabada. For the sake of clarity it may be added that the number of working persons does not simply correspond to "grown-ups," since we may assume that people started to work as youths while still living with their parents, as comparable evidence from the Ur III period demonstrates.[87] So Nabada's 1,600–1,700 working persons may reflect a population of plus or minus 2,000 inhabitants, but hardly more than ca. 2,200 persons.

According to the available housing space and the agricultural possibilities of the Beydar sub-region (see below), the city of Nabada had about 2,000 or slightly more inhabitants. Comparing this figure with the totals of the harvesting texts and the worker lists, it becomes evident that we are not dealing with any "household" or a circumscribed "central organization." It is clear, instead, that the total (or at least the largest part) of the active workforce of the city of Nabada in fact figures in the worker lists produced by the five (or six) leading officials. Therefore, the professions appearing in the lists do quite reliably represent the workforce of Tell Beydar; and in this way they also provide a fairly representative picture of the socio-economic structure of a second-rank city. We will return to this point at the end of our paper.

There are other indications as well that the organization responsible for the Tell Beydar documents in fact managed the whole city. Some texts list persons according to city gates (ká), most probably referring to city quarters (*Subartu* 2, nos. 1, 5, 28, 29, 52). And the same administration supervised not only the urban center of Nabada, but also the personnel and agriculture of settlements in the reach of Tell Beydar.[88] Furthermore, we have seen in section 4.3 above that slight differences exist between the various worker lists: KUR-ilum shows strong connections with the monumental center at the acropolis; Išgi has certain links with animal husbandry; and Ḫalti employed more craftsmen and apprentices (dumu), which could place him in the city quarter around Field P (see 4.4.1.), although of course this must remain speculative.

[87] Waetzoldt 1987.
[88] Sallaberger and Ur 2004.

5.2. How Many Houses?

The excavations at the site of Tell Beydar aimed to expose a large area of the Beydar IIIb settlement, contemporary with phase 3 of the Beydar Acropolis sequence.[89] This is the period of the main administrative archive and the final period of a full-scale urban occupation of the site. In the following period Beydar IVa, the settlement was substantially reduced and the two palaces, most temples and the city wall were abandoned. The settled area inside the inner city wall comprised nearly 7 ha, of which ca. 1.2 ha were excavated until 2010.

The large-scale excavation of the settlement allows an attempt to reconstruct the number of houses at Tell Beydar—and thus an estimate of the overall population of the site as well. While some of the required parameters for such a calculation can be measured with some precision, others are just more or less plausible estimates.

Of the excavated area of 1.18 hectares, only 13.6% are covered with private houses, while official buildings (palaces and temples) cover 30.9% and buildings of economic use (storage buildings and workshops) another 28.8% (Table 10). Compared with other third millennium sites of comparable size (Table 11), this is a surprisingly high share of non-private architecture.

	Excavated area in ha	Share
City wall and gate	0.05	4.2%
Streets and open spaces	0.135	11.4%
Palaces	0.17	14.4%
Temples	0.195	16.5%
Storage buildings, workshops	0.34	28.8%
Houses	0.16	13.6%
Indistinguishable	0.13	11.0%
Total:	1.18	100%

Table 10: Use of the excavated area on the Upper City of Tell Beydar

One of the reasons for these percentages is the excavation strategy at Tell Beydar. For many years, the acropolis (where official buildings are concentrated and private houses are lacking completely) received the most attention and only later the Upper City outside the acropolis became the

[89] Lebeau and Suleiman 2003: Plans 6–9.

	Beydar IIIb	Halawa A 3[90]	Melebiye 2[91]
Site size	7 ha	11 ha	3.2 ha
Excavated	1.18 ha	0.39 ha	0.18 ha
City wall and gate	0.05 (4.2%)	0.065 (16.7%)	–
Houses	0.16 (13.6%)	0.19 (48.7%)	0.135 (75.6%)
Temples and Palaces	0.365 (30.9%)	0.065 (16.7%)	–
Storage buildings, workshops	0.34 (28.8%)	0.015 (3.8%)	–
Streets and open spaces	0.135 (11.4%)	0.045 (11.5%)	0.028 (15.7%)
indistinguishable	0.13 (11.0%)	0.01 (2.6%)	0.016 (8.7%)

Table 11: Share of different functional areas in the excavated areas of Beydar, Halawa A, and Melebiye

main focus of the excavations. The share of domestic architecture in the yet unexcavated parts of the Upper City is expected to be much higher. It seems proper to assume that large parts of the unexcavated area were covered with domestic quarters. However, as the results of the latest excavation seasons had made increasingly clear, the area outside the city center also has some large official (Eastern Palace) or economic (granary, workshop building of Field I) buildings.

For the following calculations, three alternative scenarios are used (Table 12). The first assumes that nearly all unexcavated space on the Upper City (5.8 ha) was filled with private houses, leaving only 0.2 ha for the remaining parts of partly excavated official buildings and 0.62 ha (11% of the remaining area) for streets and open spaces.[92] This would mean that 4.98 ha was occupied by additional private houses. Given the frequency of workshops and other buildings of economic use in the excavated parts of the Upper City, this scenario is extremely unlikely. But since it is the maximal possible figure, it gives an upper limit for the possible number of houses.

The second scenario assumes that a third of the available space is covered by official and economic buildings, which would leave 3.74 ha for domestic quarters and 3.33 ha for the houses themselves.

[90] Calculated on the base of the plans published in Orthmann 1989.

[91] Calculated from the plans published in Lebeau 1993.

[92] Following the share of 11.4% in the excavated parts of Tell Beydar. This agrees well with the data used by Postgate 1994: 56, who has 8.78–9.47% of street area for two quarters of Abu Salabikh. Postgate has noticed the absence of open areas in the samples chosen by him, which might explain the difference to Beydar, where some open areas were excavated (*e.g.*, the glacis north of the Acropolis Palace; for this, see Sténuit and Van der Stede 2003: 225, Fig. 1–3).

	All available space covered with houses	33% official and economic buildings	50% official and economic buildings
Domestic quarters	5.6 ha	3.74 ha	2.8 ha
Streets, open spaces	0.62 ha	0.41 ha	0.31 ha
Housing space	4.98 ha	3.33 ha	2.49 ha
Number of houses	830	555	415

Table 12: Available space for housing, according to different settlement patterns

The third scenario assumes that only 50% (2.8 ha) of the unexcavated area is built up with domestic quarters and the other half is covered with official and economic buildings and with some open areas (like dump sites). This would leave 2.49 ha for houses. This figure is used as the lower limit, since an even smaller share of houses appears to be very implausible.

As of 2010, 28 houses had been completely or partly excavated at Tell Beydar. The size of seventeen houses can be measured with certainty or with a high degree of probability. The average size of them (including walls) is 59 m^2. If the very large building B1 (358 m^2) is excluded, the remaining sixteen houses measure just 40.25 m^2 in average. Compared to other third millennium sites, both figures are remarkably low.[93]

One important reason for the small size of the houses is the partition of housing plots into two or more separate units. When constructed, each house had its own walls and the border between two houses was thus marked by a double wall. Later changes in the layout can be observed at several houses, e.g. at house 6 in Field B (fig. 7, see section 6.1 below).

If the double walls are interpreted as indicators of the original size of the house plots, these would have measured around 60 m^2. The distribution of these plots must have happened some time before the excavated state was reached, since a significant number of changes can be observed. The fact that the average house size shrank during the years

[93] The mid-third millennium houses at Abu Salabikh measure 343 sq. m in average (Postgate 1994: 58), for roughly contemporary houses at Tell Khuera different averages were observed in different areas of the town: The excavated houses in area H ("Häuserviertel") have an average size of ca.135 sq. m. (Orthmann, Klein, and Lüth 1986: 25) while the houses of area K ("Kleiner Antentempel") measure just 48 sq. m. in average (Pfälzner 2001: Pl. 60).

before the excavated phase might indicate a shortage of available building space and probably also a population increase. It is unlikely that much unused space suitable for housing was available at Nabada at that time.

In Table 12, a figure of 60 m^2 is used as average for a house in Nabada at the time of the main administrative archive. This figure might turn out to be too low if much more elite residences similar to Building B1 show up in the future, but it seems adequate for the present. This results in 415–830 houses for the unexcavated part of the Upper City, to which twenty-five excavated houses[94] are to be added.

The figure of 60 m^2 for an average house including the walls agrees well with the average house-size postulated by Gelb, derived from a statistical evaluation of the size of houses based in sale documents, administrative texts, and court cases from the Fara to the Ur III period: the average size is ca. 1.33 *sar*, i.e. ca. 48 m^2, but probably excluding the walls.[95] The house sizes in sale contracts from Fara to the Sargonic period lead to the following average values:[96]

Fara period:	1.46 *sar* =	52.2 m^2
Presargonic period:	1.10 *sar* =	39.6 m^2
Sargonic period:	1.12 *sar* =	40.3 m^2
Ur III period:	3.48 *sar* =	125.3 m^2

Houses tend to be of varying size, and the evidence for the Ur III period is revealing in this regard: houses are between 36 and 732 m^2, but most often below 100 m^2.[97] In any case within the third millennium documentation, houses in the Presargonic period tend to be of the smallest size. This tendency apparently coincides with the archaeological trends.

5.3. How Many Families per House?

We know from the results of the excavations that the Beydar private houses had no second floor. No stairways had been found and the walls of the houses are too narrow (40 cm) to support more than 3 m of wall elevation, which is the normal height of a one-storied mud-brick house.

[94] The figure is lower than the actually excavated 28 houses to adjust for only partly excavated houses.

[95] Gelb 1976: 197.

[96] The numbers are taken from the tables of Gelb et al. 1991: 269–273.

[97] Collected by Waetzoldt 1996: 145–47. Piotr Steinkeller has kindly shown me two unpublished manuscripts concerning the size of houses in Ur III Umma, basically agreeing with the findings of Waetzoldt.

This means that the excavated rooms of the houses comprise all of the available space. Some activities, like the drying of cereal products, might have taken place on the roofs, but nobody really lived there.

Postgate has been very skeptical about the possibility of determining the number of families in a single house, since he considered it impossible to distinguish between nuclear and extended families in the archaeological record.[98] Stone and Henrickson were more optimistic when dealing with domestic quarters in Nippur and the Diyala region.[99] They assigned larger houses ("square houses" in Nippur) to extended family households and smaller ones ("linear houses") to nuclear families. This distinction might indeed be arbitrary, but in the specific case of Tell Beydar it is hardly conceivable that the small houses hosted more than a nuclear family.

Sources for the size of a nuclear family in third millennium Mesopotamia are rare. Waetzoldt has dealt with an Ur III text (BM 19972) from an unknown location in Southern Mesopotamia listing two to five persons per house.[100] Since the text mentions only the house-owners, their daughters and eventual slaves, Waetzoldt adds sons and one or two additional relatives and arrives at household sizes of five to nine persons for houses of 108 to 180 m^2. Gelb investigated various administrative documents from Presargonic to Ur III times,[101] and the most instructive example is the Presargonic text Nik I 19 with 55 persons in 12 families, *i.e.*, 4.5 persons/family including slaves.[102] Most researchers use figures between 3 and 6 persons.[103]

The Middle Assyrian "rations" lists from Tell Khuera/Ḫarbe give an indication for household sizes in the 13th century, since several of them list all recipients together with the head of the household, usually a married man. Twenty-eight households of people of local origin are listed, comprising of ca. 127 persons (4.53 persons/household). This includes a broad range of different household structures, from few single households and single parents to nuclear families with one to six children, some of them already adults. Servants (who occur rarely) were counted

[98] Postgate 1994: 62.
[99] Stone 1987: 126; Henrickson 1981: 76.
[100] Waetzoldt 1996: 151–52.
[101] Gelb 1979: 61–65.
[102] Gelb 1979: 61–62; see also Magid 2001: 325.
[103] Adams 1981: 144 uses 3.5 persons/family for Southern Mesopotamia; Pfälzner 2001: 33 uses modern ethnological data and arrives at an average of 5.5 persons per core family.

as household members, too. Another twelve households of Elamite deportees consisted of 43–45 persons (c. 3.67 persons/household).[104] The ration lists from Ḫarbe or contemporary Sabi Abyad indicate that roughly a third of the population were children.[105]

For the Middle Assyrian administration, a household was thus a group of people bound by kinship, marriage or service relations and receiving (and consuming) "rations" together.[106] This is basically the same definition as it is used today and it appears safe to use it also for third millennium contexts. We have every reason to believe that these economic groups actually lived together in one house. This does not exclude the possibility of several households, *i.e.*, families possibly including slaves, per house. In the archaeological record one should therefore expect at least storage facilities and a fireplace per household. The distribution of household installations, tools and pottery within the Beydar houses (see below) indicates clearly that a normal Beydar house was occupied by a single household or family only.

According to the sets of data just mentioned, the following calculations were thus made for 3, 4, or 5 persons per household, respectively. If one combines these data with the estimated number of houses, this results in a population of 1,320 (minimum) to 4,275 (maximum) people within the Upper city of Nabada. The more likely lower-to-medium calculations of house-covered space lead to the estimates of between 1,300

Number of houses	Housing space (as % of town)	3 persons/ household	4 persons/ household	5 persons/ household
855	5.14 ha (73%)	2565	3420	4275
570	3.49 ha (50%)	1710	2280	2850
440	2.65 ha (38%)	1320	1760	2200

Table 13: Estimate of the population of Tell Beydar/Nabada (Upper City) in the Beydar IIIb period using different parameters for housing space and household size.

[104] Jakob 2009: 17–18; 99–103, texts 70 and 71.

[105] Wiggermann 2000: 185–86 (Sabi Abyad, 34.5%); Jakob 2009: 18 (Ḫarbe, 33–38%).

[106] Jakob 2009: 17: Adult children with a finished professional training received their share through their father as long as they remained unmarried; this is different in the third millennium, where each recipient is listed individually.

and 2,900 inhabitants (see Table 13). These numbers are higher than 100–200 inhabitants per hectare, usually assumed by ethno-archaeological researchers and, following them, survey specialists,[107] but they are within the range of the estimates made by Postgate for Abu Salabikh.[108]

These calculations concern the Upper City of Tell Beydar, which was densely settled in the EJ IIIb period. Much less information is available on the Lower City (ca. 13 ha), situated in the outer perimeter of the *Kranzhügel*. The outer city wall, which encircled the Lower City, was abandoned already in the EJ II period, when the people of Nabada started to bury their deceased in the ruins of the abandoned wall.[109] Only few spots of the Lower City were excavated. Besides graves, only a small-scale workshop building in Field K has been uncovered so far.[110] A geomorphological study by Mauro Cremaschi (University of Milan) has led to the assumption that the Lower City was completely void of occupation.[111] As long as there is no proof of the existence of private houses in this part of the site, one can be confident that the domestic occupation in the period of the main archive of Tell Beydar did not extend beyond the walled Upper City.

5.4. Beydar's Population Versus Its Agricultural Base

A completely independent approach to the question of Beydar's population was used by Ur and Wilkinson, when they calculated the agricultural production of various sites in the region of Tell Beydar.[112] Ur and Wilkinson used surface structures, such as the hollow ways, which were still visible on satellite images taken during the 1960s, to determine the extent of agricultural land around various sites. With the assumption of certain parameters,[113] they arrived at the figure of 1,486 people, who could have been fed with the yield of Beydar's agricultural zone. These authors concluded that Beydar might have sustained a significantly larger

[107] See Ur and Wikinson 2008: table 1 as being used for the Tell Beydar Survey (TBS); Adams 1981: 349–50; See Postgate 1994: 51, 63 with further references and a critical remark on the use of these numbers.
[108] Postgate 1994: 62 gives a range of 248–1205 inhabitants/hectare.
[109] Bretschneider 1997: 195.
[110] Debruyne 2003.
[111] Cremaschi and Perego 2014: 81–86.
[112] Ur and Wilkinson 2008.
[113] Biennial fallow; average cereal yield of 500 kg/ha and average yearly consumption of 250 kg/person; Ur and Wilkinson 2008: 313, table 1.

population by using the surplus of neighboring smaller sites (such as Tell Effendi). As they estimated, the latter sites produced enough grain to feed 2,744 individuals.

By grouping together the data from the entire survey area, Ur and Wilkinson reached a conclusion that the importation of food from its hinterland allowed a population of several thousand inhabitants at Tell Beydar.[114] This agrees well with the 1,300–2,900 inhabitants estimated according to the available building space (section 5.3), and the ±2,000 according to the textual evidence (section 5.1).

By using the actual records of grain yields and consumption in this region, one arrives at somewhat different figures. At Sabi Abyad in the Balikh region, one harvest in the Middle Asyrian period yielded 421 kg/ha.[115] Compared with the recent data from Near Eastern dry farming regions, this appears to be a rather bad harvest,[116] although other contemporary texts indicate even worse yields of 174 to 465 kg/ha.[117] However, the detailed study of Reculeau 2011 has demonstrated that the yields from Middle Assyrian Upper Mesopotamia are extremely low if compared with the yields in other periods and regions, this situation almost certainly having been due to the dry climate characteristic of that period. Therefore, the figure of 500 kg/ha used by Ur and Wilkinson is a much better estimate than of the low Middle Assyrian data, although it still might be too low. By using the figure in question, one obtains a yearly grain production of 375 tons for the agricultural zone around Tell Beydar, and 2,205 tons for the area covered by the Tell Beydar Survey. The Beydar texts record the grain "rations" in sìlà. This volume unit measured around one liter, according to Powell's calculations.[118] One liter of cleaned barley weighs ca. 0.62 kg.[119]

[114] Ur and Wilkinson 2008: 313. The authors remark that the Beydar region would have needed the import of additional workers during the harvest season.

[115] Wiggermann 2000: 193.

[116] Akkermans 1993: 214 assumes an average yield of 600 kg/ha for the prehistoric Balikh region. See for further data Wiggermann 2000: 193 with further references.

[117] Wiggermann 2000: Fig. 8.

[118] Powell 1984: 33, 41–42; Sallaberger 1996: 83.

[119] See the discussion by Wiggermann 2000: 186. He prefers to use 0.74 kg/l, which is at the upper end of the possible barley weights in modern times and above the 0.60–0.71 kg/l measured in the 19th century A.D. (Starke 2005: 48, note 96). The value of 0.62 kg/l used by van der Spek 1998 appears to be much more plausible.

Number of recipients	Monthly ration in liters (silà)	Total
206	130	26,780
129	90	11,610
42	80	3,360
257	60	15,420
6	30	180
Σ: 640	Average: 89.61	Σ: 57,350

Table 14: Monthly grain assignments for males in the Beydar worker lists (after Sallaberger 1996: 96f.)

The normal male professional in Nabada received 60 silà of grain per month, some professions (like the lú-ĝeš-DU, see 4.3. above) significantly more.[120] The average male rate thus was ca. 90 silà. Women received 30 silà, half the basic rate of males. The ratio of male to female grain recipients in the Beydar personnel lists is 3.28 : 1. Assuming that the numbers of adult males and females were roughly identical, this means that only about a third of the women received "rations" as payment for their work, and that the rest of them and the children received their grain from their husbands and fathers. The average yearly rate per inhabitant can thus be put at 248 kg; nearly the same value was used by Ur and Wilkinson.[121] At that rate, the 375,000 kg of grain from the fields around Tell Beydar could have sustained 1,512 individuals. Since the textual evidence treated above indicates a population of plus or minus 2,000 inhabitants (section 5.1), this figure highlights the importance of grain that was contributed by the rural satellites of Nabada. An independent indication of this importance is the fact that the agriculture of those sites was directly managed by Nabada's organization.[122]

[120] Sallaberger 1996: 93–98.

[121] Assuming that adult males, adult females and children each made up a third of the population and that only a third of the adult females received rations of their own. Thus the mean ration is based on an "average person" made up of a third each of 1 man (90 liters) + 1 woman (10 liters, a third of the women received rations) + 1 child (0 liters), thus 33.3 liters of grain per month, 400 liters per year.

[122] Sallaberger and Ur 2004.

6. Houses at Tell Beydar

According to its size and the evidence of non-residential buildings and open space (section 5.3), the site of Tell Beydar may have housed 2,000–2,500 persons. A similar picture emerges from the texts, which show the presence of least 1,200 persons, controlled by five chief officials. These data combined imply a workforce of 1,600 individuals, and, correspondingly, a total population of ±2,000 (assuming that only small children and perhaps some old people were not included in worker lists). All this proves that a large percentage of Nabada's population (if not its entirety) depended directly on a communal organization. This implies that there is hardly any room left for private enterprise, such as private business, handcrafts, etc.; and there is equally—as shown by the records of the sheep and goat herds—no room for independent, 'privately' organized nomads.[123] It follows, therefore, that the workmen appearing in the lists were inhabitants of Tell Beydar, who must have lived in the private houses excavated by the Tell Beydar archaeological mission.

6.1. What Did a Typical Beydar House Look Like?

An example of one of the houses excavated in Field B shall be considered here. House 6[124] is situated just south of the "Tablet House" and north of the U-shaped building (fig. 8). It covers an area of ca. 61 m^2 and is—like most of the buildings at Beydar—of trapezoid rather than rectangular shape due to the radial street system. The western part of the house is partly destroyed by a large Hellenistic pit, but its plan is clear.

At some time before the sudden abandonment of the quarter at the end of phase Beydar IIIb,[125] House 6 was divided. The two north-eastern rooms 2597 and 2558 (house 6a) were separated from the rest of the house and received a separate entrance from lane 2592. The remaining larger part (house 6b) was accessible from street 28936 in the south-west. The subdivision of a house into several subunits is a common phenom-

[123] See Pruß and Sallaberger 2003/04; Sallaberger 2004a on the integration of sheep husbandry in the urban economy, thus leaving no space in the region of Tell Beydar.

[124] Van der Stede 2007: 10–11, Fig. 6. 9. 11, Plans I–II.

[125] The whole Beydar IIIb settlement was obviously left in a hurry, since many buildings at different places of the site have yielded rich ceramic inventories from the occupation. There is, however, no evidence of a violent destruction or widespread burning.

Fig. 8 and 9: Beydar house 6, layout and distribution of installations and domestic tools (A. Pruß after Van der Stede 2007: Plan II)

enon in densely inhabited settlements.[126] House divisions like this one might have happened when adult children received part of their parents' house upon marriage, when a house was divided by several heirs, or when some rooms of a house were sold. House 6a has an area of just 15 m^2; house 6b measures 46 m^2, which in both cases includes the walls. The actual space between the walls was considerably smaller (60–65% of the house area).

The presence of domestic installations (grinding stones; fireplace; storage vessels; fig. 9) proves that even the very small house 6a was indeed inhabited. It is possible that one of the two kitchen rooms (28608 and 28612) with a bread oven (*tannūr*) in the south of house 6b was actually used by the inhabitants of house 6a. In addition to the installations and finds mentioned in fig. 9, all rooms contained ordinary domestic pottery (bowls, goblets, and small and medium sized jars).

[126] See Pfälzner 2001: 97–100 for the development of an extended family's house in modern Syria.

The functional interpretation of the different rooms is shown in fig. 10. Both houses have space for storage, preparation, and cooking of food. Room 2670 of house 6b is interpreted as a reception room, since it is situated relatively close to the entrance, has no indication of food production, and because of the presence of some vessels of imported special wares,[127] which were most probably used for special occasions.

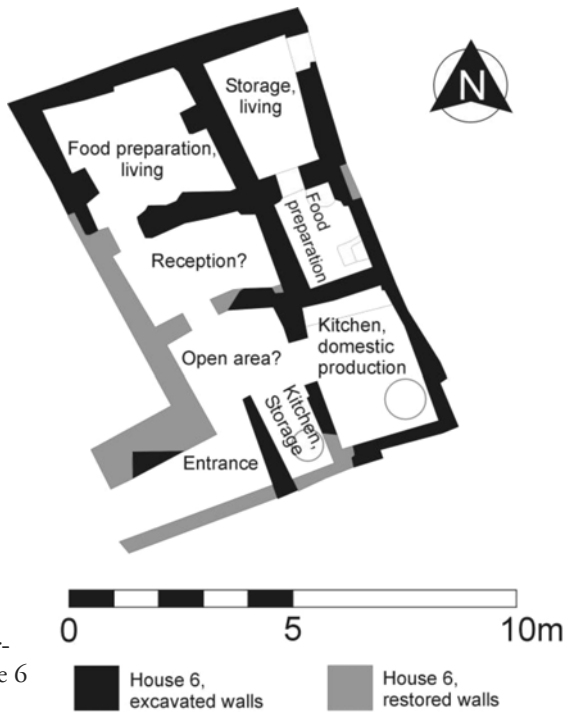

Fig. 10: Functional interpretation of Beydar house 6 (A. Pruß)

The storage capacity of the Beydar houses did not significantly exceed the size of the monthly "rations." There is rarely more than one large storage jar of 90–120 liters capacity. The inhabitants thus depended on the regular distribution of grain, since they simply could not store enough grain to wait for the next harvest.

The production capacities of the houses were sufficient to fulfill normal domestic needs, *i.e.*, mainly food production. But the excavated Beydar houses yielded no evidence for a production of professional craftsmen. These activities must have been situated elsewhere.

[127] In this case these vessels were made of Metallic Ware, a dense and clinky fabric typical for the late EJZ 2 and EJZ 3 periods. On this ware, see Pruß 2000.

6.2. An Elite Residence?

Building B1 in Field B[128] is so far the best candidate for an elite residence at Beydar (fig. 11). The building measures more than 350 m^2 and has rather thick walls of good quality. It is of trapezoid outer shape and consists of two rows of rectangular rooms on both sides of a trapezoid open space in the center. One room in the east of the building housed a large staircase, which proves the existence of a second floor. The building has three phases (B1/c to B1/a). The two later phases yielded a large amount of pottery, among it many storage vessels, but also typical domestic pottery.[129] This building is however not devoted exclusively to storage, since its layout differs fundamentally from the storage complexes known so far from Beydar (on them see 7.1. below). Nor is it a workshop, since it lacks the relevant installations. There is also no evidence for a representative or cultic function.

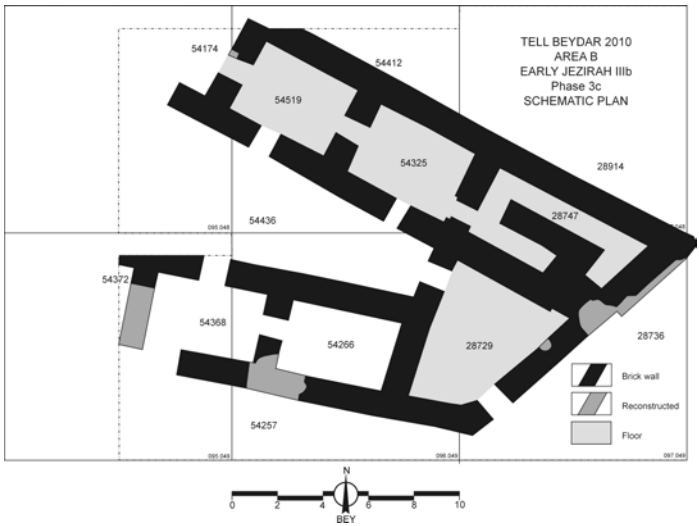

Fig. 11: Beydar, field B: building B1 (A. Pruß after Van der Stede and Devillers 2014: Plan III)

Two tablet fragments and a few sealings were found in the earliest phase of building B1, which might hint at a role in the city administration. But these objects were found in the fill of room 28729, not on the floor, and might have been discarded material from the nearby Acropolis Palace.

[128] Van der Stede and Devillers 2011: 16–22, Plans 2–4; *ead*. 2014: 11–31.
[129] Van der Stede and Devillers 2011: Fig. 45–51; *ead*. 2014: fig. 18–20.

The two later phases of building B1 yielded no tablets and only one door sealing found on the floor of room 54325.[130] A domestic use of building B1 seems thus the most convincing interpretation, at least for the two later phases. Considering the extent of the building and the wealth of its (ceramic) inventory one can safely assume that the head of the household was a member of the local elite, and one of the five leading officials would be a possible candidate. If that was the case, one could envision a larger number of servants actually living within the house.

7. Conclusions

7.1. Archaeological Evidence for the "Ration" System and Collective Labor

The cuneiform documentation reveals that the employees of Nabada's communal organization were paid according to rank, sex and age and to profession; as usual, the monthly portions were calculated in grain. The existence of a distributive system can actually be discerned in the archaeological record. Here, we will not address the speculations that beveled rim bowls of the Uruk period or the Akkadian so-called silà bowls[131] might be evidence of grain distribution. This is unlikely; the silà bowls might have been used for some prepared food, perhaps soup, a main dish of that time. The remains from Tell Beydar pertaining to grain distribution are large, central storage buildings, which point to public use: rows of storage rooms and warehouses along the temple terraces of the acropolis,[132] and a monumental building near the street leading to the eastern gate, which can be only explained as a granary,[133] even if it was completely empty when discovered (Field E, see fig. 3).[134] More importantly, the inventory of private houses suggests that the distributive system of monthly "rations" was realized in practice, just as the lists indicate: a private house contains only one large storage jar of 90–120 liters and several

[130] The design of the seal used on this door sealing is different from the 'Brak style' seals typical for official contexts.

[131] See Weiss and Senior 1992 on the silà-bowls from Leilan, where wasters were found in large quantities, giving the impression not only of mass production, but also of mass rationing. Similar bowls of ca. 1 liter were used at Beydar IIIb as well, but they are not of a standardized size and were not found in large quantities.

[132] Bretschneider 2003: Pl. 9; Fig. 27. 39; Suleiman 2007: Pl. I–II.

[133] Sténuit 2003.

[134] For communal storage buildings in the EJZ III period see Pfälzner 2011: 197–199, listing only Tell Beydar for the period concerned.

small storage jars (section 6.1). This is in marked contrast to the storage facilities in the palace or the temple terraces. And the relevance of this distribution of storage facilities is underlined by a comparison with other periods, for example the Late Bronze Age private houses of Tall Bazi on the Middle Euphrates which always contained several large storage jars[135] and featured separate rooms for storage.[136] Furthermore, concerning the layout of the houses, it may be relevant that they are of a regular size and plan at least in their original form (section 6.1). These so-called "allotment houses" (*Parzellenhäuser*) were described by Pfälzner as the typical house of the Early Jezirah IIIa-b periods,[137] and they may well represent the appropriate housing for the inhabitants of a town with a collective urban management of labor.

Steinkeller has repeatedly pointed out that the administrative necessity to list people does not directly represent a social reality.[138] A list of workers under their foreman may in fact be the bureaucratic construct of a family specialized in some craft. The evidence of Tell Beydar adds another facet to this picture: the private living conditions of those on the worker lists. From the assyriologist's point of view, the administrative documentation of the third millennium has largely obscured a perspective on the role of the family and domestic life. In fact, most of the evidence concerning the laborers' private life is circumstantial, based for example on family traditions of professions, the religious sphere including the role of the family god, and the care of the dead,[139] or rare indications on the size of families.[140]

As argued in section 5, the persons summarized in the worker lists are the inhabitants of Tell Beydar. In this regard it is important to note that despite the urban character of the site (fig. 3) a large part of the population was engaged in agriculture (see Table 9, section 4.3). And since the field-work was organized collectively, no traces of it can be found in the houses of the town: the tools were kept in separate store-rooms, the harvested grain in granaries, and the oxen and equids used in the cultivation of the fields were assigned to work by the communal organization.[141]

[135] Otto 2006: 93–94.
[136] Otto 2006: 239–40.
[137] Pfälzner 2001: 378–79; Pfälzner 2011: 152–164
[138] See, *e.g.*, Steinkeller 1987, 1996, 1999: 294.
[139] Selz 2006.
[140] See above 5.2. on Nik 1 19.
[141] Sallaberger 1996: 90–92.

Furthermore, the craftsmen and those fulfilling services must also have lived in the private houses exposed by the excavations. Generally, larger-scale domestic production is hardly attested in the residential areas of that time and region, known for example at Tell Khuera (areas H and K), Tell Melebiya and other places.[142] The houses excavated at Tell Beydar are mostly of modest dimensions. Usually, one house accommodates one family or household, as is evidenced by the single oven. And food production is the only work that can be documented in the houses themselves.

Work was therefore not only organized collectively, as the worker lists testify, but it must also have taken place in collectively run ergasteria. The strange U-shaped building[143] close to the acropolis, which was perhaps a place for fattening animals if it did not serve another purpose, would ideally fit the condition. We already mentioned the food production on the acropolis and the metal workshop in the former Eastern Palace (section 4.4).[144] In this regard also the storerooms and production areas along the temple terraces and in the acropolis palace become relevant, especially since there are no indications that many persons, if any, lived within the monumental buildings (see section 4.4). The enormous space used by workshops and storage buildings, almost 30% of the town in the excavated parts of Tell Beydar (Table 10), underlines the importance of places of collective labor in a city of that period.

To summarize: The inhabitants of ancient Nabada worked together with their peers in communal workshops, storerooms or in the fields, they received monthly barley portions from the communal granaries, and they prepared food and lived in their small houses of the densely inhabited city.

[142] See Lebeau 1993 and Pfälzner 2001: 295–305 for Melebiye; Orthmann, Klein, and Lüth 1986: 6–25 and Pfälzner 2001: 325–45 for Khuera H and K. The recent excavations in the lower town of Tell Khuera (area U) have however yielded buildings with a variety of installations, especially ovens (Meyer 2010: 176). These structures are interpreted as private houses with integrated workshops (J.-W. Meyer, personal communication).

[143] Sténuit and Van der Stede 2003: 226–29; Van der Stede 2007: 8–10, Plan I–II.

[144] Compare also the situation at Tell Khuera, where the just abandoned palace (F) was used as potter's workshop at the very end of the EJZ 3b period: Orthmann and Pruß 1995: 124–25.

7.2. The Communal Workforce in Context: Subsistence Economy and Specialized Crafts

The workforce of the city of Nabada, a provincial center of some 2,000 inhabitants, was organized into five parallel groups. Allowing some fluctuation and variation, this model appears similar to the management of workforce as we know it elsewhere from Early Mesopotamia. A good example is again provided by the Emunus of Girsu, the household of the ruler's wife (see section 2.1). The archive covers also partly the organizations of the governor's children, and for each single household a largely parallel list of professions is documented; the size of a household determines the number of persons and the presence or absence of various professions. In the case of Girsu, the households are named after their leaders, the wife or the children, or, after Urukagina's reforms, after the corresponding chief deities, the goddess Bawu and the divine children Sulshagana and Ig'alim.

In the case of Nabada, it is impossible to identify the role of the five officials at the top of the lists: the extremely laconic texts never assign titles to personal names. Thus, one might speculate that they were officials in the service of the ruler of Nagar, or members of a local elite bound to city quarters, or tribal chiefs, or even temple administrators— and it is possible to bring forth arguments in favor of each of these alternatives, which, in fact, are not mutually exclusive. The five leading officials are listed without any differentiation, so they could be regarded as officials of the same rank installed by the ruler of Nagar; however, the organization of work would more sensibly be entrusted to local persons of good standing, although loyalty towards the overlord was surely expected. The role of the city quarters designated by the city gates may indicate that the five groups in fact lived together in their own respective neighborhoods, but this must remain an assumption. Tribal organization has always been considered a relevant factor for early Upper Mesopotamia, although the texts give no indication at all in this regard. And finally, Tell Beydar boasts five large temples in the center of the city (Fields F and M), and the five officials could also have been related to them.

In any case, there is no doubt that the organization in question ran the city. There is no apparent dominating presence of a ruler or palace, and the temples appear only indirectly as recipients of sheep for sacrifices. Therefore, it is appropriate to speak of an urban organization that managed the economy including the workforce of Nabada. The contemporary documents of Mari provide a similar perspective.[144a] Be that as it

[144a] Sallaberger 2014.

may, it is evident that the five leading officials were subject to a superior political power, since they are listed together on the same tablets and their ration lists were found at the same place. This superior power may have been either a local representative of the regional ruler or more likely a city council (unken), the existence of which is demonstrated by the mentions, found in the Beydar documents, of the visits paid to it by the ruler of Nagar.[145] As an educated guess, one may therefore describe the hierarchy of control at Nabada as follows:

Ruler (EN) of Nagar
|
Nabada city council (unken) (?)
|
Five organizations, city quarters (?)

As concerns the composition of the workforce, the Beydar lists (Table 9) can be compared to the personnel of the Emunus of Presargonic Girsu (Table 1–3). By and large the same set of professions is included, and in this way the Tell Beydar organization can be described, like the Emunus, as an example of subsistence economy with a specialized sector (cartwrights and textile production, respectively). Both in Sumer and in the Habur basin by far the largest group was composed by men working in agriculture (RU lugal and lú-ĝeš-DU (APIN), respectively). Those men were evidently dependent on the ruler, thus providing soldiers for his army; in this direction points also their appearance together with groups functioning as police. One can add another example to this overview: at contemporary Early Dynastic Mari, the tablets from Chantier B similarly indicate that the respective organization was active in the subsistence economy of agriculture, food production and upkeep of the buildings.[146]

The differences in the composition of the workforce depended on two factors, the specific organization and the rank of the settlement. Concerning the organization, at Nabada, KUR-ilum was probably linked to the acropolis palace, and Ḫalti managed a larger group of craftsmen (see section 4.3); at Girsu, textile production was directed by the queen of Lagash; and at Early Dynastic Mari, one organization concentrated on providing offerings, another one on donkey breeding and riverine trade.[147]

[145] Sallaberger 1996: 106 ad (2).
[146] Sallaberger 2014.
[147] Sallaberger 2014.

Finally, it is clear that the rank of a city largely influenced the composition of its workforce. We use a simple three-tiered system with the capital of a state as the first rank; examples here include Girsu, Ebla, Nagar, Mari. Nabada is a rare representative of the second rank city, a provincial center. The smaller settlements are designated as the third rank, of which those in the province of Nabada provide textually attested examples.[148] To start with the third rank, the documents from Tell Beydar indicate that their agricultural production was organized by Nabada as well, whereas the five leading officials, which represent the provincial center of Nabada, were based in the town. So the diversification of labor and crafts appears to be a typical feature of the town, the center above the agricultural settlements.

The first rank city, the capital of the state, is first of all characterized by the presence of the ruler's palace. Although the palace with its own specific economy is based at the capital, the palace does not embrace the city itself, as most clearly expressed in the phrase SA.ZA$_x^{ki}$ *wa ib-la*^{ki}, "Palace and Ebla".[149] The best example known for a palatial economy dealing mostly with the treasure of the state is provided by the texts of Ebla, whereas this specific focus transpires only rarely in the documents of the Emunus.[150]

The capital is apparently characterized by a more comprehensive differentiation of professions and crafts, including for example the management of prestige goods as silver and metals, specific textiles, equids,[151] or the control of overland trade. A comparison of the professions shows that the Sumerian Emunus organization is more diversified than Nabada, and it includes more specialized professions both in agriculture and horticulture and in crafts; additionally some persons are employed at the palace as attendants of the mistress of Lagash. The scope of crafts performed is significantly different: at Beydar, those dealing with prestige goods are completely or at least largely missing like black-smiths, producers of perfumed oil, and textile workers. Similar to the situation at Girsu, at Early Dynastic Mari the tablets from *Chantier* B reveal an urban organization that apparently managed overland trade by donkey and

[148] Sallaberger and Ur 2004.
[149] E.g. *ARET* 9, Index
[150] Sallaberger 2013.
[151] In this context note the specific link of equids to the capital Nagar as argued both on the archaeological and the textual evidence by Pruß and Sallaberger 2003/04.

riverine traffic by boat, a sector that generated high amounts of silver.[152] Although these organizations at Girsu and Mari devoted a large part of their workforce to subsistence economy, they were also specialized in crafts and services that benefitted the population of the city as a whole. This division of labor is at a lower level already visible between the second-rank city of Nabada and the agricultural settlements in the hinterland.[153]

Rank	*Description*	*Presargonic archives*
First rank: capital city	Palace with management of royal treasure	Ebla palace archives
	City: high diversification of crafts and services in urban organizations	Emunus of Girsu; Mari Chantier B
Second rank: provincial center	City: diversification of crafts and services	Tell Beydar/Nabada
Third rank settlements ("villages")	"Urban" high density in building, agricultural tasks	(no archives; an excavated site is, *e.g.*, Melebiye)

Table 15: Rank of settlements and internal differentiation

7.3. Communal Labor in Babylonia, Upper Mesopotamia, and Syria in the Early Bronze Age

The comparison with Girsu has demonstrated how the composition of the Beydar workforce conforms to the general picture of Early Mesopotamian communal organizations. The choice of Girsu is mainly dictated by the available evidence: other Mesopotamian archives are too fragmentary. The few documents from Mari have provided additional information on the setup of organizations at that period. The texts on cereals from Ebla,[154] however, do not list grain "rations," but are a documentation of the food given out to the people present at the palace at a given moment; in this way the Ebla texts are of the same type as the very common "bread and beer" texts from Early Mesopotamia. So the

[152] Sallaberger 2014.
[153] See also section 5.4 above and the reference to the study of Ur and Wilkinson 2008.
[154] Milano 1990.

Beydar tablets help to place the Ebla documentation in the right perspective: the absence of worker lists in Ebla does not necessarily mean that the distributive system as known from Southern Mesopotamia was unknown in Syria and Northern Mesopotamia.

The cuneiform tablets from Tell Beydar are the first written documents that testify to the existence of collective labor and monthly grain assignments in Upper Mesopotamia in the third millennium, a fact previously unknown. Without the first-hand knowledge one had to rely on evidence from later periods, especially the second millennium, and extrapolate from the few facts known. This has resulted in the common opinion that Southern Sumer differed fundamentally in its social and economic organization from the North, Upper Mesopotamia and Syria. This widely accepted image has definitely influenced the archaeologists' investigations of private houses and their socio-economic interpretations based thereupon (see section 1).

Since the Beydar documents force us to rethink the assumed differences between Northern and Southern society and economy, we will very briefly review some evidence that has been brought forward in this regard. Gelb in his time linked the concept of the ration with his understanding of the society of Early Mesopotamia, and this picture has formed our conception not only of the "rationing" system, but also how one viewed a "working class" of Early Mesopotamia.[155] At that time, Gelb had postulated a strict difference between the society of third millennium Sumer and that of the Old Babylonian period.[156] Along similar lines, namely differentiating between a Sumerian South and the Semitic-speaking north, he characterized the economy of Ebla and thereby northern Syria as follows:

> Sheep raising was the mainstay of the local economy; thousands of sheep were raised, supplying the wool for the production of textiles, the main export product of Ebla. Thus wool was the basis of Ebla's commercial prosperity and political power. ...
>
> The closest parallel to Ebla, with its tremendous number of texts dealing with textiles and metal products, is Assyria in the much later "Cappadocian" period, where these two classes of texts also domi-

[155] Especially Gelb 1965.

[156] Note in this regard that Steinkeller in the introduction to this volume points to the important role of hired labor already in the Ur III period, which is another aspect of socio-economic continuity in Babylonia.

> nate. Old Assyria, like Ebla, was largely devoid of natural resources, had little grain and plenty of wool, and was forced to import metals in return for textiles.[157]

Gelb explained the difference between Lagash and Ebla as based on cultivation methods, whereby his negative impression of the climatic and soil conditions of Ebla is hardly compatible with the excellent situation in the region. This idea of a fundamental division between North and South, whereby the North span from Ebla to Northern Babylonia including Kish, was embraced by many, most prominently Steinkeller:

> These deep-rooted differences between the southern and northern economies, though progressively less and less distinct, survived well into the second millennium, and, in some places, much later. The dominance of temple households in the south, as contrasting their comparative insignificance in the north [*i.e.*, of Babylonia, W. S.], continued during Old Babylonian times […]
>
> Although the organizing principle of northern Babylonian institutions contrasts sharply with that of southern ones, it shows close affinities with that of Pre-Sargonic Ebla. At Ebla, too, the dominant economic institution was the palace, which controlled extensive areas of agricultural land and was the main center for the production and distribution of goods. […]
>
> Another characteristic feature of the Ebla organization, which I would suggest can also be detected in the organization of early northern Babylonia, is the markedly stratified nature of the Ebla society. This is demonstrated by the presence at Ebla of a fully developed aristocratic ruling class, the likes of which was unknown in southern Babylonia. Although the Ebla aristocracy was city based, its origins were likely tribal, as is strongly implied by the active involvement of its members in the economic and political life of the countryside. […] A similar type of social organization is discernible, many centuries later, at Alalakh and Ugarit, in northern Syria, and, closer to Babylonia, at the city of Assur, where the power was shared by "the king and the City."[158]

Later, Steinkeller has further developed the contrast in the various systems of land tenure, the royal dominion at Ebla contrasted with the organization of the domain land by the temples in the Ur III period in the South.[159]

[157] Gelb 1986: 158, 163.
[158] Steinkeller 1993: 123–24.
[159] Steinkeller 1999.

Although the problems involved are highly complex and cannot even be touched in this article, we are obliged to address the wider implications of the Tell Beydar evidence concerning the current understanding of regional differences in the third millennium. Of course no simple solution for all existing data and models can be proposed here, so it will suffice (1) to discuss briefly the arguments behind the traditional understanding of the socio-economic conditions of Northern Mesopotamia and Syria; and (2) to address the context of the Ebla archives, the largest written contemporaneous corpus from the same region.

First, it has to be emphasized that most notions about the socio-economic structure of Assyria, Upper Mesopotamia and Syria in the third millennium were derived from or at least heavily influenced by later, second-millennium evidence, as demonstrated by the citations above. In this regard, however, more recent historical research based on data from archaeological surveys and the textual record has proven that the geo-political situation of the Presargonic period differed fundamentally from that of the early second millennium and later. In the mid-third millennium an uninterrupted series of city states with close political and cultural interaction among them reached from Babylonia through Upper Mesopotamia to Syria.[160] With the break-down of urban culture in Upper Mesopotamia at the end of the Early Jezirah IIIb period, the destruction of Mari by Sargon and its temporal decline and the emergence of the Amorites at the end of the third millennium these interconnections were interrupted forever and the situation changed completely.[161] This historical development helps to explain why the third millennium situation can be judged to have been as substantially different than the one in later periods.

Secondly, the Ebla data were regularly interpreted as evidence of a culture shaped by regional differences. However, the composition of the Ebla archives and their perspective is the best example of a palatial economy that concentrated on the management of the royal treasure, as it is found also, for example, in Ur III Puzrish-Dagan or the Old Babylonian Sînkashid texts from Uruk; also the Presargonic Emunus texts give some indications about the special economic role of the palace. This perspective includes the presence of certain sectors of the society that do not

[160] Interestingly the region on the Middle and Upper Tigris and to the East of the Tigris, including later Assyria, was of little importance at this time; this changed completely with the Sargonic period.

[161] Sallaberger 2007.

appear in documents on land and labor, such as the royal court, members of the army, or messengers.[162] Concerning the complex situation of land tenure, also here the apparently different situation is largely due to the perspective of the documentation: the Ebla archives highlight the royal sector, whereas the Ur III documents treat the provincial sector of the governor (ensí), albeit the royal sector was present as well to a considerable extent, even if not so well covered by the extant documentation.[163]

Steinkeller's article cited earlier was published in 1993, the same year when cuneiform tablets were discovered at Tell Beydar, ancient Nabada. These sources surprisingly demonstrated that the allotment system, the collective and communal cultivation of land were economic features at home both in Southern Sumer and in Northern Upper Mesopotamia, thus shattering the traditional view on third millennium Mesopotamia.[164] The similarities in the internal organization of labor do not exclude that regional differences may well have existed at a higher level, concerning the control of the land by temples, cities and/or the palace. In any case, the combination of the textual and archaeological record at Tell Beydar allows a more differentiated understanding of home and work in Early Dynastic Upper Mesopotamia. It will be the task of future research to investigate similar questions for other regions and periods as well, and to elaborate the regional, chronological and institutional variations of collective labor.

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[162] Sallaberger 2013.

[163] Steinkeller 2013, section II, extensively discusses the royal sector and its relation to the institutional economies, as he calls it, for the Ur III period.

[164] As formulated, *e.g.*, by Pfälzner 2001, see fn. 17 above.

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Labor in the Ancient World

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Edited by
Piotr Steinkeller
Michael Hudson

ISLET
Dresden

COVER ART: A stone relief of the Pre-Sargonic ruler of Lagash named Ur-Nanshe (ca. 2400 BC = ED IIIa). AO 2344.

The upper register of the relief shows the construction of a temple, with Ur-Nanshe carrying a corvée basket (*tupšikku*). In the lower register, a feast culminating the construction is depicted.
Photo by Philipp Bernard. Courtesy of the Louvre Museum.

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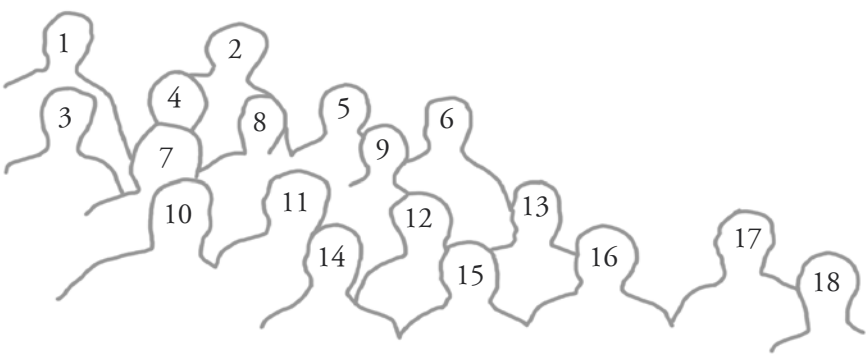

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