

CONTENTS

CONTENTS	VII
Foreword	IX
J. BRETSCHNEIDER, J. DRIESSEN & K. VAN LERBERGHE, Power and Architecture. Monumental Public Architecture in the Bronze Age Near East and Aegean. International Conference Leuven/Louvain-la-Neuve/Münster 21-22/11/2002	1
J. BRETSCHNEIDER, G. JANS & K. VAN LERBERGHE, Power and Monument: Past and Present	3
J. BRETSCHNEIDER, The 'Reception Palace' of Uruk and its Architectural Origin	11
T. CUNNINGHAM, Havoc: The Destruction of Power and the Power of Destruction in Minoan Crete.	23
R. DITTMANN, Elam and Babylonia – Two Neighbours in the Third Millennium B.C.	45
J. DRIESSEN, Iib or not Iib: On the Beginnings of Minoan Monument Building	73
R. FITZSIMONS, Architecture and Power in the Bronze Age Argolid	93
R. LAFFINEUR, Building for Ruling. Architecture and Power at Mycenae	117
J.-W. MEYER, Town Planning in 3 rd Millennium Tell Chuera	129
M. C. NELSON, Pylos, Block Masonry and Monumental Architecture in the Late Bronze Age Peloponnese	143
J. OATES, Monumental Public Architecture in Late Chalcolithic and Bronze Age Mesopotamia, with Particular Reference to Tell Brak and Tell al Rimah	161
L. RISTVET, The Third Millennium City Wall at Tell Leilan, Syria: Identity, Authority, and Urbanism	183
I. SCHOEP, Architecture and Power: The Origins of Minoan 'Palatial Architecture'	213

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POWER AND ARCHITECTURE

Monumental Public Architecture in
the Bronze Age Near East and Aegean

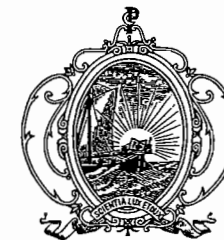
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THE THIRD MILLENNIUM CITY WALL AT TELL LEILAN,
SYRIA: IDENTITY, AUTHORITY, AND URBANISM¹

“[Babylon] stands on a broad plain, and is an exact square, a hundred and twenty furlongs in length each way, so that the entire circuit is four hundred and eighty furlongs. While such is its size, in magnificence there is no other city that approaches to it. It is surrounded, in the first place, by a broad and deep moat, full of water, behind which rises a wall fifty royal cubits in width, and two hundred in height... And here I may not omit to tell the use to which the mould dug out of the great moat was turned, nor the manner wherein the wall was wrought. As fast as they dug the moat the soil which they got from the cutting was made into bricks, and when a sufficient number were completed they baked the bricks in kilns. Then they set to building, and began with bricking the borders of the moat, after which they proceeded to construct the wall itself... In the circuit of the wall are a hundred gates, all of brass, with brazen lintels and side-posts.”²

INTRODUCTION

Herodotus' admiring report of Babylon, the jewel in Artaxerxes' crown, begins with a description of the city's fortifications: its moat, its

¹ Operation CG was co-directed by Andrew McCarthy (Edinburgh) and Lauren Ristvet (Cambridge), under the auspices of Harvey Weiss (Yale). Cristiano Putzulo served as our hard-working topographer and computer applications guru; he also provided figures 3, 5, and 6, for which he deserves much thanks. The Yale Tell Leilan survey was conducted by Harvey Weiss (Yale), Elena Rova (Venice), and Richard MacNeil in 1995 and 1997. Figures 10 and 11, the Leilan survey maps, were electronically improved by Mark Besonen. We would like to thank the Directorate-General of Antiquities, Damascus, especially Michel al-Maqdissi and Salam al-Quntar—who served as our representative in the field. I would like to thank Professor Harvey Weiss for allowing us to conduct this excavation and publish the material, letting us use the survey material, and for innumerable comments, suggestions, and amusing e-mails. I am also grateful to Andrew McCarthy for his work on the sealings, radiocarbon dates, and for reading a draft of this paper. The rest of the Leilan 2002 team, Ulla Kasten (Yale), Francesca DeLillis (Rome), Lucia Mori (Rome), Torben Larsen (Copenhagen), Mark Besonen (Amherst), Dominique DeMoulines (UCL) and Mauro Cremaschi (Torino) should also be mentioned here. Finally, we would like to thank our friends from Tell Leilan, Tell Barham, Siha, and Qahtaniya for their hard work and extraordinary hospitality.

² G. RAWLINSON, Herodotus, in: *The Histories*, New York, 1862.

walls, its gates and their construction. In doing so, he highlights an important feature of Mesopotamian urbanism: the city wall. Unlike the symbolism of palaces, temples, or royal tombs, which clearly represent elite royal or religious power, that of a city's fortification is both subtler and more complex. In Mesopotamian literature and iconography, the city wall serves as a synecdoche for the city. The Epic of Gilgameš begins by praising Uruk and its walls. Assyrian bas-reliefs feature vassal kings presenting city models to Assyrian rulers. By the reign of Assurbanipal, the connection between the city wall and power had been explicitly iconized in a crown worn by Assyrian queens—which represented the walls of the city. This crown became the standard Persian crown, and entered the west with Alexander and the later Roman Empire—where it still lives on, “as any child's drawing of a king will show.”³ This perception even penetrated language; At Mari, during the Old Babylonian period, the phrase “to fortify a city,” “*âlam êpešum*” literally meant “to make a city,” as though the construction of a city wall transformed a town into a city-state.⁴

As befits any boundary, city walls were liminal spaces. Even though kings regularly claimed the city wall as their own province, boasting of multiple construction and repair projects in their inscriptions, placing gate-keepers to collect tolls, and ordering soldiers to guard the city, the city wall, and its gates, were not just another objective sign of royal sovereignty. They were simultaneously associated with the people of the city. Neighborhoods were named after and defined by city gates, and the area just inside these gates was a public space used as a marketplace and court of law.⁵ The city wall and the city gate area served as locations where urban identities were constructed, where royal authority was delimited, and where power relationships were brokered in Mesopotamia.

Although the final recension of the Epic of Gilgameš and the carving of the bas reliefs at the Nineveh palace date to the Neo-Assyrian empire of the first millennium BC, recent archaeological work and epigraphic finds suggest that the unique position of the city wall *vis-à-vis* corporate

identity and royal power was articulated even at the dawn of urbanism. By the mid-third millennium, the Beydar tablets use the set phrase: “KI ŠU BÂD ŠE AL GUR₁₀. GUR₁₀”—“those of the fortress, who harvested the grain” to identify worker; BÂD, the Sumerian for city wall, or fortress, denotes the ancient city at Beydar.⁶ This is an extraordinary example of the symbolic power of these walls, especially given that the fortifications at Beydar were most likely constructed only a generation or so before this phrase was used.⁷

The spread of cities and state-level political organizations in the dry-farming plains of Northern Mesopotamia during the mid-third millennium BC provides a framework in which to explore the relationship between the construction of fortifications and the emergence of a distinct urban identity. A summer 2002 excavation at the northern City Gate of Tell Leilan, Syria (ancient Šeḫna) has revealed that the circumvallation of this city dates to ca. 2600 BC, rather than 2200 BC, as previous limited excavations adjacent to the Eastern city wall had suggested.⁸ The construction of this fortification wall was coeval with its six-fold expansion, from a 15 hectare settlement to a 90 hectare city. Both the growth of this site, and the creation of its fortifications were not unique events, rather they occurred as part of a general pattern of urbanization and state organization in the Habur plains. Walled, planned cities also arose at Tell Chuera, Beydar, Hamoukar, Tell Mozan, Tell Khoshi, and Tell Taya at the same time.⁹

The construction of these fortifications both structured and was structured by the processes of secondary state formation on the Habur plains.

⁶ F. ISMAIL et al., *Administrative Documents from Tell Beydar (Seasons 1993-1994)* (Subartu II), Turnhout, 1996.

⁷ M. LEBEAU, La situation géographique, la topographie et les périodes d'occupation de Tell Beydar, in: M. LEBEAU & A. SULEIMAN (eds.), *Tell Beydar, Three Seasons of Excavations (1992-1994). A Preliminary Report* (Subartu 3), Turnhout, 1997, p. 7-20.

⁸ G.J. STEIN, Excavations at Operation 4, the City Wall Mound, contribution in: H. WEISS, *1985 Excavations at Tell Leilan, Syria*, in: *American Journal of Archaeology* 94, 1990, p. 547-556; H. WEISS, Postscript in: H. WEISS, *1985 Excavations at Tell Leilan Syria*, in: *American Journal of Archaeology* 95, 1990, p. 580-581; H. WEISS, *Tell Leilan 1989: New Data for Mid-Third Millennium Urbanization and State Formation*, in: *MDOG* 122, 1990 p. 193-218; H. WEISS, M.-A. COURTY, W. WETTERSTROM, F. GUICHARD, L. SENIOR, R. MEADOW & A. CURNOW, The genesis and collapse of third millennium north Mesopotamian civilization, in: *Science* 261, p. 995-1004, 1993.

⁹ H. WEISS, The origins of Tell Leilan and the conquest of space in 3rd millennium Mesopotamia, in: *The Origins of Cities in Dry-Farming Syria and Mesopotamia in the Third Millennium B.C.*, H. WEISS (ed.), Guilford, 1986, p. 71-108; H. DOHMANN-PFÄLZNER & P. PFÄLZNER, Untersuchungen zur Urbanisierung Nordmesopotamiens im 3. Jt. v.Chr.: Wohnquartierplanung und städtische Zentrumsgestaltung in Tall Chuera, in: *Damaszener*

³ M. VAN DE MIEROOP, *The Ancient Mesopotamian City*, Cambridge University Press, 1999, p. 52, Fig. 3:1.

⁴ J.-M. DURAND, Documents épistolaires du palais de Mari, in: *Littéraires anciennes du Proche-Orient, Les Éditions du CERF, Tome II*, Paris, 1998, p. 290.

⁵ *The Assyrian Dictionary of the Oriental Institute of the University of Chicago*, Chicago (= CAD), A/1 p. 83-88, “abullu”; CAD, Chicago, B, p. 19-22, “babu”; J.N. POSTGATE, *Early Mesopotamia: Society and economy at the dawn of history*, London and New York, 1994, p. 67.

Their construction and maintenance required a large workforce, including skilled masons, mathematicians, and administrators. Furthermore, the daily operation of the city gate employed different officials: gate-keepers, toll-takers, judges, and soldiers. A study of the construction and use of space at the Leilan city gate can shed new light on the connections between urbanism, defense and the rise of states. Since the city wall defines the boundary between the settlement and the outside world, it also provides a framework in which to view the changing relationship between this settlement, its hinterland, and the wider ancient Near East.

CITY GATE EXCAVATION

Tell Leilan is located at the junction of the wadi Jarrah and the wadi Qatrani in the Habur Plains of Northeastern Syria (Figure 1). The city's outer fortifications rise from 5 to 15 meters above the level of the surrounding plains, extending for 3.7 kilometers and enclosing an area of 90 hectares (Figure 2¹⁰). In spring 2002, road construction resulted in bulldozer damage to the northern outer rampart fortification area where the main entrance to the city was hypothesized to be because of the depression in the circumvallation of this settlement. Excavations were conducted from 23 May 2002–21 June 2002 to extend the machine — cut and investigate the construction and utilization of this gate during the second and third millennium BC.

METHODOLOGY

When the east-facing and west-facing sections were cleaned and examined, it became apparent that the deeper west-facing section provided a good stratigraphic sequence and an opportunity to excavate in a coherent manner. The height of the fortification area, and the existing damage limited excavation to the pre-existing cut. The bulldozer cut of the west-facing section spanned approximately 30 m in length (north-south), excavations systematically studied 24 m (nearly 80%) of this cut.

Mitteilungen 9, 1996, p. 1-13; LEBEAU 1997, Op.Cit. n. 7; J.-W. MEYER, Town planning in 3rd millennium Tell Chuera, in this volume; J. UR, Surface Collection and Offsite Studies at Tell Hamoukar, 1999, in: *Iraq* 64, 2002, p. 15-43.

¹⁰ H. WEISS, 1990, Op.Cit. n. 8, p. 529.

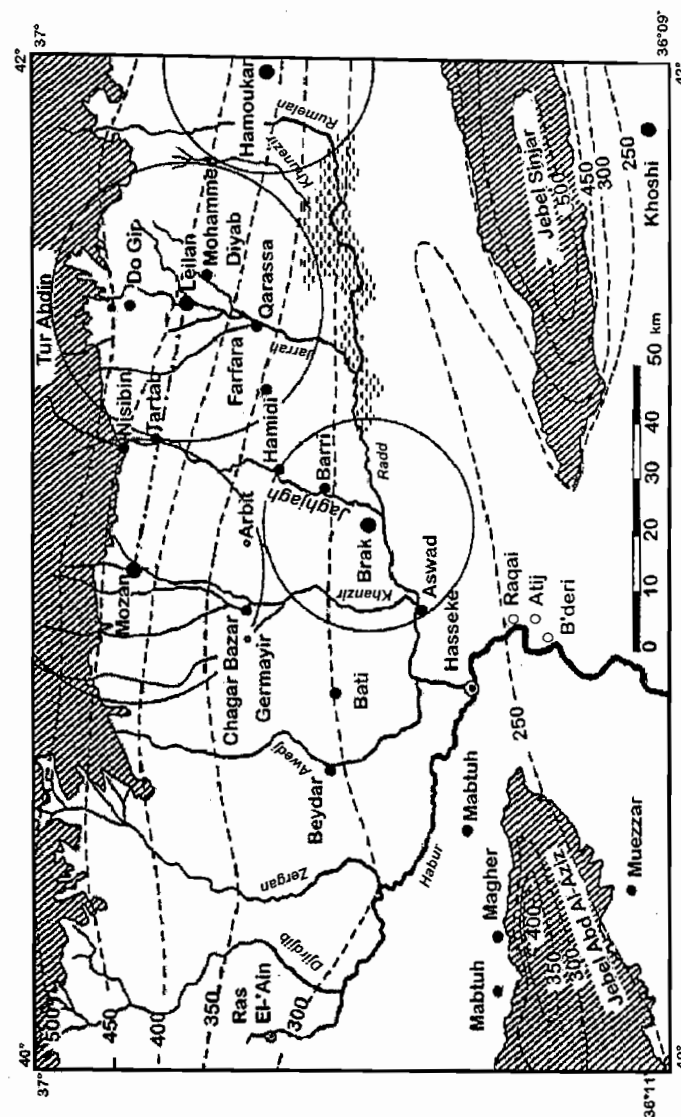


Fig. 1: Map of the settlement system of the Habur Plains, Syria between 2600 and 2200 BC. Large circles indicate sites ≥ 50 hectares. Medium circles indicate sites $10 \leq X < 50$ hectares. Small open circles are ≤ 10 hectares. Dotted lines show the modern rainfall isohyets; diagonal lines represent probable sustaining areas for each city state.



Fig. 2: Topographical Map of Tell Leilan.

The phasing and stratigraphy of the operation comes largely from the central exposed area, 9 meters long, 1 meter wide, and 3 meters deep (Figures 7 and 8). An impressive section and a series of well-defined walls in this area allowed us to create an architectural phasing sequence. Since we had previously cleared the area west of the central area down to virgin soil, we were able to plan the recovery stages for this excavation. Before excavation, the section was mapped using a total station, allowing us to designate excavation units and plan the ideal recovery techniques to use for each one, before removing them. This area was divided into 47 strati-



Fig. 3: Photograph of Eastern City Wall Mound.

graphic units (lots), 23 of which consist of floor material, ashy deposits, the contents of fire-installations, or other unusual deposits (such as 110, a deposit thick with burnt barley seeds). 100% of the material recovered from these deposits was either floated or dry-sieved to recover botanical materials and small remains respectively. The remaining 24 units consisted of brick collapse, walls, or other low priority contexts. 10% of the low priority lots were also dry-sieved, while 5% of these lots were floated. Soil micromorphology samples were taken from the floors of each phase, as well as from other contexts of geological interest. Because the stratigraphically excavated area was limited, great care was taken to ensure that detailed analyses were carried out. We are currently in the process of constructing a GIS, that will combine all elements of the excavation and subsequent analysis.¹¹

CONSTRUCTION HISTORY

The initial stage of this fortification system was characterized by a set of earthworks situated on a slight N-S slope (Figure 4). These consist of

¹¹ C. POTZOLU, A. MCCARTHY & L. RISTVET, *Volumes of History: Volume calculation from 3D sections at Tell Leilan City Gate Excavation*, in: K.F. AUSSERER, W. BORNER, M. GORIANY & L. KARLHÜBER-VÖCKL (eds.), *Enter the past: Proceedings of the 30th CAA conference held in Vienna, Austria, April 2003*, Oxford, BAR Reports, 2004.

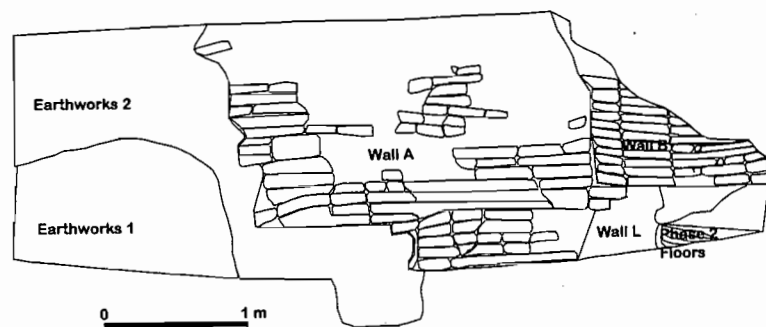


Fig. 4: Earthworks, Wall A, and Wall B, with associated floors

two artificial mounds, which were constructed from the red virgin soil of the plains in two phases. These earthworks were originally approximately 10 m thick and 3 m high. Wall A—a massive mudbrick fortification wall for the city and its gate complex—was cut into these mounds. It is assumed that these earthworks were a construction in their own right, used during the period pre-dating Wall A's construction, but they may have been built together with Wall A. In any case, this mound would have served as a *glacis* in front of this wall. Wall A was a minimum of 3m wide and is preserved to a minimum height of 2.5 m. It was constructed of alternating red and black bricks made from the calcic horizon plain soil and the black mud of the wadi Jarrah respectively. This was the main north wall of the city gate area for approximately three centuries from ca. 2600-2300 BC, until wall B, a rebuilding and enlargement of Wall A was constructed during the Akkadian rebuilding project¹². Wall B partially cuts the southern face of Wall A (Figure 4). It is built of entirely different bricks and is much smaller, only 1.04 meter thick and preserved to a height of 1.75 meters. Limited excavation revealed that this wall was buttressed by at least one short return, which added another meter to the width of this wall. Unfortunately, due to the limited nature of our exposure, we could not determine whether buttressing was a regular feature along the length of the northern wall.

¹² See PUTZOLU et al. 2004 (Op.Cit. n. 11) for the calibrated radiocarbon dates from phases 1, 2, 3, 3a, and 5a, which give a roughly 150 (2600-2450) year span for the use of this wall prior to the construction of Wall B. Phase 6 is dated to roughly 2300 BC by its Leilan IIB assemblage.

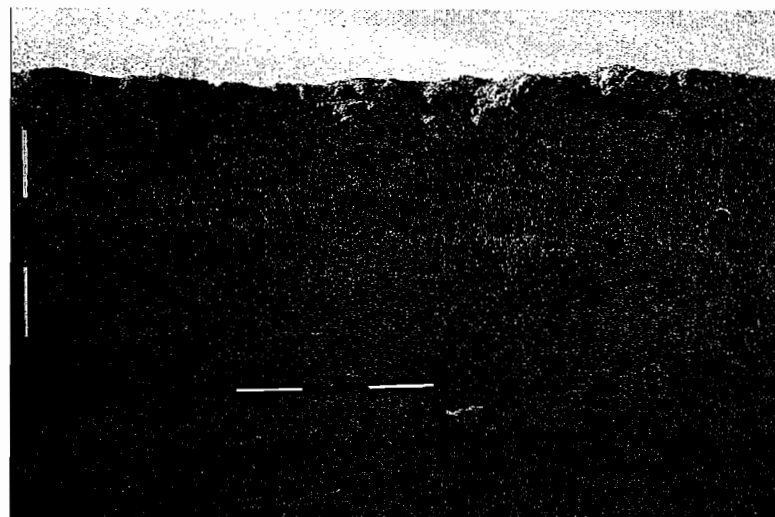


Fig. 5: Photograph of Southern Area, Op. CG. A indicates Wall K, Phase 6-7 (Akkadian). B indicates stepped baked-brick platform, Phase 6-7 (Akkadian). C indicates hiatus deposit, Phase 8 (Post-Akkadian).

On the southern side of the mound, a similar type of construction can be observed, which probably reveals the southern limits of these fortifications (Figure 5). An east-west wall, Wall K is 3 meters wide and delimits the apparent southernmost extent of the City Gate complex. This wall appears stepped to the north in the same way that Wall A is stepped to the south (Figure 5: A). The bricks appear to parallel those used in Wall B and can be stratigraphically dated to the Akkadian phase (2300-2200 BC). As the area to the south of Wall K was not excavated we could not examine whether or not this wall was also constructed with a *glacis*, or if it was a rebuilding of an earlier wall. Directly north of Wall A a baked-brick, possibly stepped, platform was recovered, which also probably dates to the Akkadian phase (Figure 5: B). Between Wall A and W-K lay a series of spaces, alternately roofed and open air, which formed the administrative quarter of the city gate complex during the third millennium.

FUNCTION

Our excavation revealed 9 phases of the city gate complex, dating from the mid-third (Period IIIId, terminal Ninevite 5) to the early 2nd millennium

Phase Number	Leilan Designation	Phase Description	Associated Contexts
9	Period I	2 nd Millennium Earthwork Rampart	0
8	Habur Hiatus I	Post-Akkadian Hiatus	1-2
7	Period IIb	Post Wall D	101, 3-6, 7, 8, 17, 20-21, 27
6	Period IIb	Wall B - Wall D	102, 103.1-5, 104, 132, 133, 139, 140, 24, 26, 49
5A	Period IIa	Post-Wall C	106, 108, 109, 110, 111, 11, 13, 25, 28, 9, 10
5	Period IIa	Wall C - Baked-brick Platform	105, 112, 113, 115, 116, 117, 118, 119, 141, 142, 13, 14, 18, 29, 30, 31, 38
4	Period IIa	Wall C - Wall E	120, 121, 122, 123, 134, 32, 33, 16, 19
3A	Period IIa	Tanour 125 - Wall E	124, 125.1-2, 134.1, 143, 144, 34, 39,
3	Period IIa	Wall G - Wall E	126, 127, 35, 42, 51
2	Period IIIId	Wall A - Wall I - Wall G	128, 129, 135, 36, 45
1	Period IIIId	Initial	130, 146, 147, 46, 48 (Virgin soil is 131 and 37)

Fig. 6: Table 1: Description of Phases.

(Period I, Habur ware) (Figures 7 and 8). The evidence of the first 6, which roughly span the centuries between 2600-2200 B.C., Leilan periods IIIId-IIb (Figures 5, 7 and 8), will be considered in light of the emergence and early experiences of urbanism at Tell Leilan. We can define four major changes in the division of space during phases 1-6, all of which probably reflect changes in the administration of the city and its hinterland as a whole. These include the use of this area during the construction of the external fortification walls, its use as a series of alternately open-air and roofed offices, its use as an open-air quarter, and finally, its reuse as an administrative area. Individual elements, however, persist through several phases. These include fire-installations, carefully prepared floors, and administrative artifacts, particularly sealings, the latter of which have been found in each of these six phases, which suggests that this area's function was managerial throughout the second half of the third millennium.

Phase 1 dates to the building of the wall complex and is characterized by a few small scattered fireplaces, one of which was constructed with a small firebreak. This phase included some of the only faunal remains

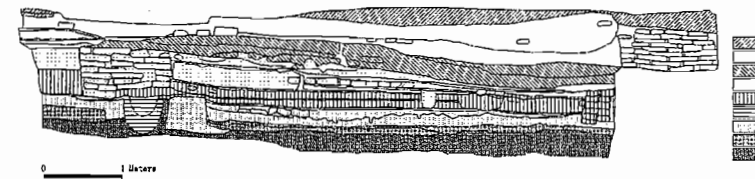


Fig. 7: Phases 1-7 in section 1.

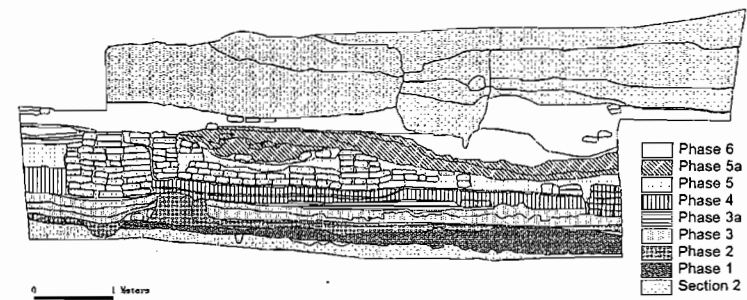


Fig. 8: Phases 1-7 in section 2.

found during excavation, as well as a few broken container sealings, showing only the impression of basket weave and knots. The pottery includes several examples of late excised Ninevite V designs, as well as Ninevite V fingernail impression patterns.

This area was quickly converted into government offices once Wall A, the northern fortification wall, was completed. Internal structures, which relate to a series of concentrated ashy deposits and tanurs, were built up to partition the space between the two fortification walls. Wall I, ca. 70 cm wide, is built of mudbrick, preserved two courses high. It returns off of Walls L and G, two pisé walls, the former being placed immediately adjacent to Wall A (Figure 10, Figure 9: E). A clear series of floors ran between Wall G and Wall L in the section, however due the excavation limits these could not be carefully explored (Figure 4). Wall G also served as the boundary of a sort of 'ash tip' into which a series of ash deposits and burning episodes were confined.

The subsequent phase, 3, saw these three walls go out of use when the area immediately south of Wall A was converted into a small walkway between the northern fortification area and the new partitioned space. The focus of this area shifted south, to the ash tip, with the construction of

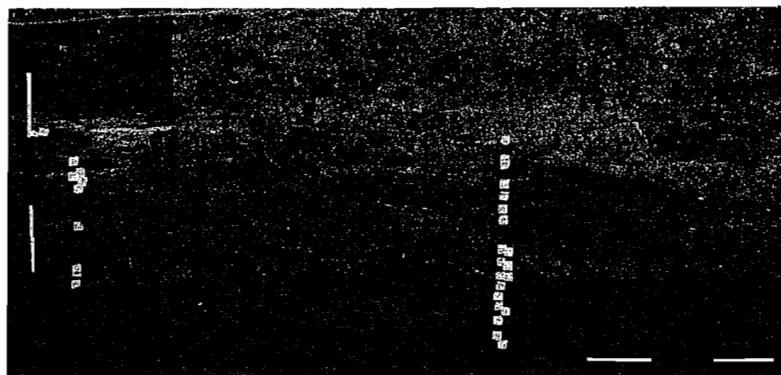


Fig. 9: Photograph of Section 2, Op. CG. A indicates Wall C, Phases 4 and 5. B indicates the Fire Installation, Phase 5. C indicates lot 121, a Phase 4 floor. D indicates the Ash Tip, Phases 2-3. E indicates Wall G, a Phase 2 pisé floor. F indicates lot 103, a Phase 6 tanur.

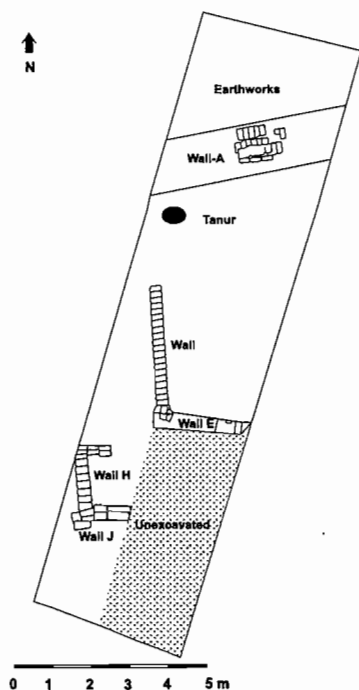


Fig. 10: Plan of Phase 3.

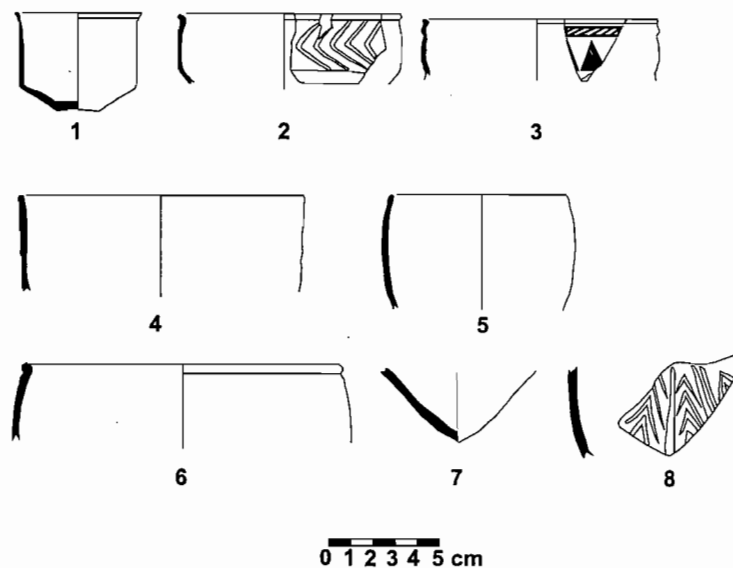


Fig. 11: Fine Ware Cups from Phases 2 and 3, Op. CG. 1) Op. CG, Phase 3, lot 42. d=6, wheel made, interior and exterior 2.5Y7/2, occasional black mineral temper. 2) Op. CG, Phase 2, lot 45. d=10. wheel made, interior and exterior 2.5Y7/2, occasional black mineral temper, incised. 3) Op. CG, Phase 2, lot 45. d=11, wheel made, interior and exterior 2.5Y7/4, fine, no visible temper. 4) Op. CG, Phase 2, lot 45. d=14, wheel made, interior and exterior 5Y8/3, fine, no visible temper. 5) Op. CG, Phase 3, lot 42. d=8, wheel made, interior and exterior 2.5Y7/2, fine mineral temper. 6) Op. CG, Phase 2, lot 45. d=15, wheel made, interior and exterior 2.5Y8/2, fine, no visible temper. 7) Op. CG, Phase 3, lot 42. Wheel made, interior and exterior 2.5Y7/2, fine straw and mineral temper. 8) Op CG, Phase 3a, lot 39. wheel made, interior and exterior 5Y8/3, fine, no visible temper, incised.

several partitioning walls. These low dividing walls were all made of bricks, unlike the pisé constructions of the previous phase. They are generally narrow, usually just one brick wide (33 cm), and preserved to a height of one or two bricks. Although the walls dividing this area are built, torn down, and new ones are constructed between phases 2 and 3, the area does not change in character. The ashy material was presumably deposited while this building was in use, for Wall E — in the south of the stratified area, was placed atop ashy deposits — and more ashy deposits run between it and Wall F.

The ashy deposits between these partitions contained an intriguing assemblage of artifacts, which suggests the administrative nature of this area. We recovered fifteen sealings bearing "early dynastic designs," and several more with rope, leather, and basket impressions. Nearly all of the sealings were originally attached to leather bags, baskets, or other types of rope-tied containers. Overall, the majority of reverse impressions imply that in the City Gate precinct objects of a transportable nature were commonly unsealed and inspected. Furthermore, the presence of other clay objects, particularly a balled strip of sealing clay, suggests that in addition to removing seals, new seals were administered here. The tiny tablet fragment recovered from this area provides further evidence for the bureaucratic function of the city gate.

These two phases are also characterized by a restricted pottery assemblage, which consists of a few types of fine-ware cups. Just three rim types make up 72%-83% of these assemblages (Figure 11: rims 1, 5, and 6). Bases are round, pointed, or mini-flat. During phase 2, a few of these sherds were decorated with Ninevite V excising, but by phase 3 this element of design had almost entirely disappeared, though rim and base forms stayed the same. These cup types are a common element of pre-Akkadian pottery assemblages all over Northern Mesopotamia¹³ and particularly at Leilan.¹⁴ The restricted nature of these sherds coincides nicely with the non-domestic nature of the city-gate occupation; few sherds related to cooking or storage vessels were unearthed here. Faunal evidence, pottery slag, and kiln wasters were similarly absent from this level—despite the presence of two built fire-installations.

The fourth phase marks a subtle rethinking in the use of this area, although its function probably did not change. The thick ash layers that characterized the previous two phases disappear. A large northern wall, Wall C, 1.1 m wide, was constructed and a thick plaster floor was laid (Figure 9: A, C). A sealing and two clay tokens indicate that this area retained its administrative function. Two rounded basalt slingshot bullets were also found in this level, no doubt relating to the defensive function of this precinct.

¹³ H. KÜHNE, *Die Keramik vom Tell Chuera und ihre Beziehungen zu Funden aus Syrien-Palästina, der Türkei und dem Iraq*, Berlin, Gebr. Mann, 1976, Abb. 101-141; J. OATES, Some Late Early Dynastic Pottery from Tell Brak, in: *Iraq* 44, 1984, p. 206.

¹⁴ G.M. SCHWARTZ, The Ninevite V Period and Current Research, in: *Paléorient* 11(1), 1985, p. 53-70, Fig. 6, 1-6; H. WEISS & L. CALDERONE, The End of the Ninevite 5 Period at Tell Leilan, in: H. WEISS & E. ROVA (eds.), *The Origins of Northern Mesopotamian Civilization: Ninevite V Economy, Society and Culture*, (Subartu 9), Turnhout, 2003, p. 13-15, Appendix 3.

During the fifth phase, the function of this area shifted due to the construction of two features, an enormous, 4 meter wide, purpose-built fireplace in the north, and a baked-brick platform to the west and south (figure 9: B). Both of these features along with a drain suggest that this area was now open-air. The baked bricks of this platform were heavily worn and difficult to articulate in plan, probably a result of considerable traffic. This platform may have formed the surface of the road entering Tell Leilan, or at least entering the gate, while the huge fireplace, just south of Wall A, may have served as a sort of signaling device.

Thick deposits of trash, including one studded with burnt barley grains, were dumped on top of this pavement. This trashy accumulation probably indicates a short period of disuse. Soon afterward, in phases 6 and 7 (Period IIb) the city gate area was rebuilt. A new northern defensive wall (Wall B) and a new southern dividing wall (Wall D) were constructed during phase 6 with three floors. Standard Leilan IIb Sila bowls and a simple stamp sealing, made by the decorated base of a cylinder seal, date from this phase. A round fire-installation with a diameter of 1.2 meters was built against Wall B (Figure 9: F). It is likely that it served the same purpose as the 4 m wide fire installation built against Wall C during the previous phase.

During phase 8, the city gate precinct was suddenly abandoned along with the rest of the city. This collapse is interpreted as a function of a 70-80% decline in precipitation from the high of the mid-third millennium.¹⁵ This drop in precipitation has been found in paleoclimate proxies across Western Asia¹⁶

¹⁵ H. WEISS, Beyond the Younger Dryas: Collapse as adaptation to abrupt climate change in ancient West Asia and the Eastern Mediterranean, in: G. BAWDEN & R.M. REY-CRAFT (eds.), *Environmental disaster and the archaeology of human response*, (Maxwell Museum of Anthropology, Anthropological Papers 7), Albuquerque, N.M., 2000, p. 75-95.

¹⁶ M. BAR-MATTHEWS & A. AYALON, Late Quaternary Paleoclimate in the Eastern Mediterranean Region from Stable Isotope Analysis of Speleotherms in Soreq Cave, Israel, in: *Quaternary Research* 47, 1997, p. 155-168; G. LEMCKE & M. STURM, δ18O and Trace Element Measurements as Proxy for the Reconstruction of Climate Changes at Lake Van (Turkey): Preliminary Results, in: N. DALFES, G. KUKLA & H. WEISS (eds.), *Third Millennium B.C. Climate Change and Old World Collapse*, (NATO ASI Series I. 49), Berlin, 1997, p. 653-678; M. BAR-MATTHEWS, A. AYALON & A. KAUFMAN, Middle to Late Holocene Paleoclimate in the Eastern Mediterranean Region from Stable Isotopic Composition of Speleotherms from Soreq Cave, Israel, in: A.S. ISSAR & N. BROWN (eds.), *Water, Environment and Society in Times of Climatic Change*, Amsterdam, 1998, p. 203-214; M. BAR-MATTHEWS; A. AYALON, A. KAUFMAN & G. WASSERBURG, The Eastern Mediterranean Paleoclimate as a Reflection of Regional Events: Soreq Cave, Israel, in: *Earth and Planetary Science Letters* 166, 1999, p. 85-95; H.M. CULLEN, P.B. DEMENOCAL, S. HEMMING, G. HEMMING, F.H. BROWN, T. GUILDERSON & F. SIROCKO, Climate

and further afield.¹⁷ At Op. CG, this abandonment is recorded by the accumulation of a meter thick dust deposit that is the stratigraphical equivalent to the hiatus deposits previously sampled in the Leilan lower town (Figure 5: C).¹⁸

CIRCUMVALLATION AND POWER

Archaeologists have examined the connection between the rise of monumental architecture and the rise of the state since V. Gordon Childe.¹⁹ A time-tested way to understand the relationship between monumental architecture and state control is to consider the amount of time and (skilled and unskilled) labor necessary to mobilize to build it. The number of people the state could divert from subsistence activities like agricultural production to construction work reflects the amount of capital that the state could manage for its own benefit. Historically, large-scale building projects, which demand seasonal labor from a large percentage of a city's, or a region's workers serve to unite them and establish a sense of corporate identity.²⁰

In the past twenty years, such approaches have been derided as the worst kind of determinism.²¹ For Mesopotamia, however, rather than representing a foreign viewpoint that may obscure understanding of unique cultural developments, this approach may represent an emic perception. By the Old Babylonian period (2100-1600 BC), students were trained in practical mathematics, using problem texts which focused on the number of "man-days" necessary for projects like building irrigation canals, making and carrying bricks, and constructing earthworks.²² Already in the third millennium, scribes wrote down similar mathematical problems

Change and the Collapse of the Akkadian Empire: Evidence from the Deep Sea, in: *Geology* 28, 2000, p. 379-382.

¹⁷ M. STAUBWASSER, F. SIROCKO, P.M. GROOTES & M. SEGL, Climate change at the 4.2 ka BP termination of the Indus valley civilization and Holocene south Asian monsoon variability, in: *Geophysical Research Letters* 30(8), 2003, 7/1-7/4.

¹⁸ WEISS et al. 1993, Op.Cit. n. 8.

¹⁹ V.G. CHILDE, *Man Makes Himself*, New York, The American Library, 1951.

²⁰ L.J. VALE, *Architecture, Power, and National Identity*, New Haven and London, Yale University Press, 1992.

²¹ J.D. MOORE, *Power and Architecture in the Ancient Andes*, Cambridge University Press, 1996, p. 1-3.

²² E. ROBSON, *Mesopotamian Mathematics, 2100-1600 BC: Technical Constants in Bureaucracy and Education*, (Oxford Editions of Cuneiform Texts), Oxford, Clarendon Press, 1999.

for administrative rather than pedagogic purposes.²³ Quantitative labor management in cuneiform documentation can be traced back to the EDIII period, coincident with the construction of the Leilan city wall.²⁴ The evidence of pre-literate numerical tablets suggests that accounting was at the heart of the Mesopotamian urban revolution. It seems fitting to consider some of the manifestations of this revolution from the vantage point of expenditures of human capital.

Although no text survives which relates specifically to building the fortification wall at Leilan, we can calculate labor and ration expenditures by analogy with other mathematical tablets. M.288, a mathematical text from Mari, gives us information about the overheads involved in building earthwork fortifications; it contains the volumetric measurements of the earth needed for each side of a lower town city wall as well as the number of workers necessary for this construction.²⁵ According to M.288, one man can dig and pile up 2.25 m³ of earth each day for a fortification. If we assume that the original earthworks were 10 meters wide at their lowest point, 2.5 meters wide at their highest, 5 meters tall, and 3400 meters long, then this initial construction would have taken 51,388.89 man-days.²⁶ Given a likely population of between 5400 and 18,000 people in 90 hectare Tell Leilan, the maximum number of adult males at the disposal of the Leilan authorities probably varied between 1080 and 3600.²⁷ Even using the lower figures, this wall could be built

²³ M.A. POWELL, Two notes on metrological mathematics in the Sargonic period, in: *Revue d'Assyriologie* 70, 1976, p. 116-23; J. FRIBERG, Mathematik 531-85, in: D.O. EDZARD (ed.), *Reallexikon der Assyriologie und vorderasiatischen Archäologie*, Berlin/New York, 1987-1990, p. 531-585.

²⁴ ROBSON 1999, Op.Cit. n. 22, p. 165.

²⁵ D. CHARPIN, Données nouvelles sur la poliorcétique à l'époque paléo-babylonienne, in: *MARI* 7, 1993, p. 196.

²⁶ These numbers are, of course, no better than estimates, based on the surviving earthworks. These only measure 3 meters in height; I have added the additional 2 meters to account for area that may have been lost to erosion or truncated.

²⁷ These population estimates assume that the population of Leilan was somewhere between 60 and 200 people per hectare and follow WEISS 1986, Op.Cit. n. 9; T.J. WILKINSON, Demographic Trends from Archaeological Survey: Case Studies from the Levant and the Near East, in: *Long Term Demographic Trends in The Mediterranean Basin*, J.L. BINTLIFF & K. SBONIAS (eds.), 1999, p. 46-48; T. WILKINSON, Regional approaches to Mesopotamian archaeology: The contribution of archaeological surveys, in: *Journal of Archaeological Research* 8(3), 2002, p. 247. I have consistently followed Weiss in using the lower estimates, but note that much higher population estimates (248-1205 people per hectare) have been derived from excavation analysis at Abu Salabikh, Iraq (J.N. POSTGATE, How many Sumerians per hectare?— Probing the anatomy of an early city, in: *Cambridge Archaeological Journal* 4(1), 1994b, p. 47-65). The estimates of the corvée labor workforce are based on the assumption that the adult male population of Tell Leilan

in 45 days, if the entire male population were to work on its construction—and 90 days if only half the available workforce were put on this construction project. Although obviously imprecise, these calculations suggest that the construction of the original earthworks probably lasted less than one summer (the off-season for agriculture in Northern Mesopotamia), and was probably a response to a specific threat.

The excavated third-millennium wall from Leilan, however, combined both earthworks and built walls. Although the original earthworks may have been quickly constructed, the planning and execution of Wall A was a much more difficult process. Texts from the Ur III and Old Babylonian periods from Southern Mesopotamia provide exhaustive detail on work rates and salaries for people involved in every stage of building brick constructions: from the initial steps necessary for brick manufacture (digging, molding, and mixing the clay²⁸) to completing the structure (delivering the bricks, mixing the mortar and laying the bricks²⁹).

Wall A, assuming that it is 3 meters wide, 5 meters high and 3400 meters long, would require 9,590,400 bricks.³⁰ Constructing this number of bricks would take 30,710 man days³¹, carrying them over a distance of 180 nindan (1080 meters) would take an additional 106,560 man days, while laying the bricks and mixing the mortar for the wall requires a final 35,520 and 3,145 man days respectively. According to Ur III and Old Babylonian labor coefficients, these tasks would take 175,935 man days, and cost the palace 447,219 liters of barley, assuming that these workers

would have been, at most 25% of the total population. At most, 80% of this population may have been available as labourers during the lull in the growing season. An even lower figure may be more reasonable.

²⁸ ROBSON 1999, Op.Cit. n. 22, p. 78-79, Haddad 104.

²⁹ ROBSON 1999, Op.Cit. n. 22, p. 153-156.

³⁰ Height is once again an estimate. The calculation is based on figures given in ROBSON 1999, Op.Cit. n. 22, p. 59, table 4:2. This wall would have a volume of 55,500 m³ or 3083.333 sars. Only 5/6 of the volume of this wall would be bricks, while 1/6 would be mortar, so the volume in bricks would have been 2466.667 sars (ROBSON 1999, Op.Cit. n. 22, p. 68). A brick sar is a standard measure of 720 bricks, while the brickage of type 3 bricks is 5; 24 [5.4], resulting in 9,590,400 bricks. These calculations are based on standard size 20X10X5 finger half-bricks (Powell's type 3 bricks), which roughly correspond to the 33X17X8 cm bricks used in this wall. Although, a certain number of 33X33X8 cm bricks (whole bricks, Powell's type 8 bricks) were also used, the excavation was not large enough to calculate how these bricks were worked into the fabric of the structure; thus, this tentative reckoning only uses the more common size of bricks (M.A. POWELL, Metrological notes on the Esagila tablet and related matters. Appendix II: bricks as evidence for metrology, in: *Zeitschrift für Assyriologie* 72, 1982, p. 119).

³¹ This uses the combined coefficients of digging, mixing and molding the bricks, which give 1.5 m³ of earth as the amount which can be processed by one man in a day (ROBSON 1999, Op.Cit. n. 22, p. 75; 165, table 9.12).

were paid 2.55 liters of barley a day (3 anzam, the daily rate most frequently attested at Ebla³²).

With a workforce of 1080 men, such a construction would take 163 days, a period of time longer than the seasonal lull in agriculture. Although the original earthwork wall could have been slapped together during one summer, building Wall A would have either taken longer or required more labor. If it were necessary to finish this wall in a short period of time, Leilan officials would have had to recruit workers from other towns in the region. In the second millennium, in times of need, city governors recruited workforces from outside settlements. When thirty meters of the wall in Saggartum, a settlement on the Habur, gave way, Yaqqim-Addu requested that 200 additional workers be sent from the district of Terqa so that the wall could be consolidated in 10 days.³³ This letter emphasizes the ephemerality of mud-brick architecture, which requires constant care and upkeep. In all periods of Mesopotamian history, building and maintaining city walls, like building and maintaining canals was an integral part of corvée work. The true cost of the city wall must take into account maintenance as well as initial construction outlays.

The construction of the city wall also required skilled labor: architects, overseers, paymasters, and of course, the scribes who wrote out the mathematical tablets, which have proved so useful for this reconstruction. Another letter from Yaqqim-Addu emphasizes the importance of architects for building projects:

"In this area there are no masons. A long time ago, you sent me Dagan-ašaya, but even when this man was alive, he didn't know how to do anything... Now, there is no mason for Dur-Yahdun-Lim, for Saggartum, and for the two palaces. Please, give the orders and send me an intelligent mason who can keep the two palaces and the two city walls in repair!"³⁴

Another Mari official, complaining about the lack of skilled workers, focused on the city's need for physicians and architects: "There are neither doctors nor masons [here]. If the city wall collapses, there won't be any one who specializes in fortifications! If a stone hits a man's head, there won't be any doctors!"³⁵ When building fortifications, architects

³² L. MILANO, Barley for Rations and Barley for Sowing, in: *ARET II 51 and Related Matters* (Acta Sumerologica 9), 1987, p. 180.

³³ After J.-M. DURAND, Documents épistolaires du palais de Mari, in: *Littératures anciennes du Proche-Orient, Tome I*, Les Éditions du CERF, Paris, 2002, p. 300-301, 165, ARM XIV, 24.

³⁴ After DURAND 1998, Op.Cit. n. 4, p. 632, 818, ARM II, 101.

³⁵ After DURAND 2002, Op.Cit. n. 33, p. 303, 167, ARM II, 127.

and engineers were needed to calculate the angle of the earthworks, construct firm and solid foundations for the walls, and to help calculate the material used. The pattern of contrasting red and black bricks used in Wall A, as well as the suspected buttressing of Wall B attests to the aesthetic sense of these Subarian architects.

Overseeing the construction or even the repair of a wall was an administrative nightmare, precisely because fortifications were costly and both ideologically and symbolically essential to the city. Four letters from Kibri-Dagan, the governor of Terqa, report on repair work on that city's gate. This administrator clearly found the repair work fraught with anxiety; the first letter, announcing the collapse of the main gate tells us that, "After reflection, I said to myself, 'I'll wait until my lord [Zimri-Lim, the king of Mari] should come, so that he may take direction of this work and design the plan of the grand gate. I cannot myself undertake this work without the approval of my lord.'"³⁶ The close involvement of Zimri-Lim in these enterprises underlines the significance of even small undertakings, like rebuilding the main gate at Terqa. Mesopotamian kings brag in their royal inscriptions of building, and rejuvenating city walls.³⁷ The emphasis on this repair work, and its frequency, may be represented archaeologically at the Leilan city gate by the extraordinary number of building phases (1-6), which transpired over a period of just 150 years.

Building fortifications flaunts the wealth and power of a city or empire. Nevertheless, although impressing onlookers can be desirable, it cannot explain the reason for the construction of fortifications. The primary function of city walls is defensive.³⁸ From Sargonic inscriptions onward, the

³⁶ After DURAND 2002, Op.Cit. n. 33, p.296, 161, ARM III 11.

³⁷ See references in A.K. GRAYSON, *Assyrian Rulers of the Third and Second Millennium BC* (RIME), Toronto, 1987.

³⁸ Archaeologists have also posited that city walls were built to serve as protection against flooding, as at Tell ed-Der (H. GASCHÉ, *Premières recherches archéologiques* 29-52, in: L. DE MEYER, H. GASCHÉ & R. PAEPE (eds.), *Tell ed-Der I: Rapport préliminaire sur la première campagne* I, Leuven, 1971; R. PAEPE, H. GASCHÉ & L. DE MEYER, *Sounding B: The surrounding wall of Tell ed-Der in relation to the regional fluvial system*, in: L. DE MEYER (ed.), *Tell ed-Der II: Progress Reports* II, Leuven, 1978, p. 1-35; H. GASCHÉ & R. PAEPE, *The surrounding wall of Abu Habbah (Sippar) in relation to that of Tell ed-Der and to the regional fluvial system* 37-52, in: L. DE MEYER (ed.), *Tell ed-Der: Sounding at Abu Habbah (Sippar)* III, Leuven, Peeters, 1980; H. GASCHÉ, J.A. ARMSTRONG, S.W. COLE & V.G. GURZAYDAN, *Dating the Fall of Babylon: A Reappraisal of Second Millennium Chronology* (Mesopotamian History and Environment, Series 2), Ghent, Belgium & Chicago, IL, University of Ghent and Oriental Institute, Chicago, 1998). There is no evidence that the Wadi Jarrah or the Wadi Qatrami ever presented such a threat, nor are the Leilan fortifications oriented towards the wadis.

razing of a city's wall served as metonymy for the defeat of the city.³⁹ The monumentality of these defense-works suggests both that the city contained something worth defending and had the power to defend itself.

If the primary function of walls is defensive, the primary function of gates is control. Gates emphasize the political and economic sovereignty of a city. The administrative artifacts retrieved from the office space between the northern and southern fortifications suggest that the city gate was used as a toll point that controlled ingress and egress on a daily basis for the inhabitants of the city, visitors, and their goods. Old Assyrian and Old Babylonian texts mention taxes in silver and barley that were collected at the city gate by gate-keepers⁴⁰. Simply having the resources to station officials at the gates to inspect all-comers signals the wealth and power of the nascent city.

The city gate was not simply an expression of the power of the city, whether to defend itself or to levy tolls. Two second millennium letters from Leilan indicate that the city gate functioned as a public area, where policing and juridical activities took place. The city gate was the place where fugitives and escaped slaves were caught and held (*abullum kalûm*), a fact which highlights its connection to law enforcement within the city and region.⁴¹ In other Old Babylonian texts, oaths were administered and lawsuits were decided at the city gate.⁴² The city gate may also have been where goods were bought and sold after the duties on them were paid. In the Old Babylonian texts from Leilan, "*rêbitum*", "town square" was used for a fortified city.⁴³ This synecdoche probably originated from terming the open, public area in front of the city gate, "the square", over time, the two expressions became synonymous. This suggests that the two Mesopotamian civic institutions for which we have textual evidence were linked with city gates.

Building and staffing the Leilan city wall and gate would have required a massive mobilization of labor. Mobilizing this workforce positively

³⁹ See references in D.R. FRAYNE, *Sargonic and Gutian Periods (2234-2113 BC)* (RIME), Toronto, 1995.

⁴⁰ CAD A, Op.Cit. n. 5, p. 87, 88; VAS 7 54:10 "from the revenue of PN's field, the impost (due from) him for the gate toll, which was received by PN2, PN3 and PN4, the gatekeepers of Dilbat," (LÚ.KA.GAL) (CAD, Ai, Op.Cit. n. 5, p. 88, "ša abulli). Building: bricks to be delivered *ina muhhi nabalkatti ša* KA.GAL on the ramp of the city gate, Babylonian Inscriptions in the Collection of James B. Nies, BIN I 126:8.

⁴¹ J. EIDEM, *The Royal Archives from Tell Leilan 1: Old Babylonian Letters and Treaties from The Lower Town Palace*, Yale Tell Leilan Research, London and New Haven, in press.

⁴² CAD B, Op.Cit. n. 5, p. 21.

⁴³ EIDEM, in press Op.Cit. n. 41, text 81.

reinforced both the nascent government and the emerging sense of large-scale communal identity. The need for skilled masons, scribes, and administrators helped to entrench the Mesopotamian school and administration. Practical problems encountered in these building projects stimulated the invention of mathematics and other predictive sciences.⁴⁴ The constant maintenance needed by these fortifications (as well as other monuments) boosted the development of taxes in grain and labor, which may have been collected by the newly instituted gatekeepers. City walls protected cities, and were themselves maintained by the populace, who used them as civic centers. At the same time the administration necessary to build and staff the city wall and city gate reinforced royal power. In this way, the construction of the city wall and the daily administration of the city gate were associated with the appearance of many of the archaeologically recognized facets of state formation.

CONCLUSION: THE TELL LEILAN CITY GATE IN CONTEXT

The construction of the city wall during the mid-third millennium, coincident with the construction of the 75 ha lower town at Leilan, emphasizes the urban-planning which accompanied the rise of this city. The well-constructed city wall complex, with its wide walls built of contrasting bricks, reflects the carefully laid streets and planned neighborhoods of the lower town.⁴⁵ The process of urbanization and expansion that this settlement underwent at 2600 BC caused a multilevel change in site organization. Settlement on the Acropolis shifted from mixed residential and public structures to focus on public buildings and possibly high status dwellings. On the Leilan Acropolis, the separation between the settlement and the plain is vertical, imposed by the height of the tell, and emphasized in certain areas (the western side of the Acropolis) by the construction of fortifications.⁴⁶ After the lower town was built, no element separated the settlement from the surrounding plains. The new city wall

⁴⁴ ROBSON 1999, Op.Cit. n. 22, p. 191.

⁴⁵ WEISS 1990b, MDOG, Op.Cit. n. 8; H. WEISS, "Civilizing" the Habur Plains: Mid-Third Millennium State Formation at Tell Leilan, in: P. MATTHIAE, M. VAN LOON & H. WEISS (eds.), *Resurrecting the Past*, Leiden, Nederlands Historisch-Archaeologisch Instituut voor het Nabije Oosten, 1990.

⁴⁶ G.M. SCHWARTZ, A Ceramic Chronology from Tell Leilan, Operation 1, in: *Yale Tell Leilan Research*, New Haven, 1988; WEISS & CALDERONE 2003, Op.Cit. n. 14.

marked the boundary between the city and the external world. This tightly controlled border both cut off the inhabitants of Leilan from their fields, and provided a clear separation between this site and the villages of its hinterland.

The Leilan survey has established that the urbanization of Tell Leilan did not lead to a total depopulation of its countryside, as was the case at Warka.⁴⁷ However, the urbanization of this site drastically revised its relationship to other settlements in the area and promoted the emergence of a multi-level site hierarchy. Prior to the emergence of Leilan as a regional center, the site system around Leilan had centered around four similarly sized—15 ha towns, Leilan (1), Dogir (16), Tell Aid (90), and Tell Mohammed Diyab (55)—all located within 15 km from Leilan (Figure 12). At this time, Leilan only comprised 13% of settled hectares in a rectangular region 30 km wide, 50 km long centered on this site. This relationship shifted drastically, and Leilan comprised 42% of all settled hectares after it became a city. The same period saw a slight reduction in the number of overall sites. Villages were abandoned, and populations were relocated to Leilan and the new 15 ha site of Tell Farfara to the southwest (186) (Figure 13). As a result only 31% of settled hectares were comprised of villages, as compared to 57% in the immediately preceding period. In fact, we are almost certainly underestimating this trend towards urbanization.

The construction of the city wall practically and symbolically highlighted Leilan's new dominant role on the Eastern Habur plains. The massive building activity necessary to create the city wall, the planned neighborhoods of the lower town, and the cultic complex on the Acropolis Northwest required millions of mudbricks, and tons of barley to recompense the workers. Previous surveys have noted that the subsistence fields of Leilan overlap with, and sometimes encircle, other sites. Qotba Tah-tani, site 51, must have been dependent on Leilan, while the subsistence fields of Mohammed Diyab probably overlapped with those of Leilan, underlining the interdependence of these two centers.⁴⁸ This means that

⁴⁷ G.J. STEIN & P. WATTENMAKER, The 1987 Tell Leilan regional survey: Preliminary report 5-18, in: N. MILLER (ed.), *Economy and Settlement in the Near East*, (MASCA Research Papers in Science and Archaeology, Supplement Volume 7), Philadelphia, University of Pennsylvania, 1990; G.J. STEIN, Segmentary states and organizational variation in early complex societies: A rural perspective, in: S.E. FALCONER (ed.), *Archaeological Views from the Countryside*, Washington DC, 1994, p. 10-18.

⁴⁸ STEIN & WATTENMAKER 1990, Op.Cit. n. 47.

Leilan Period IIIc (ca.2800-2600 BC)

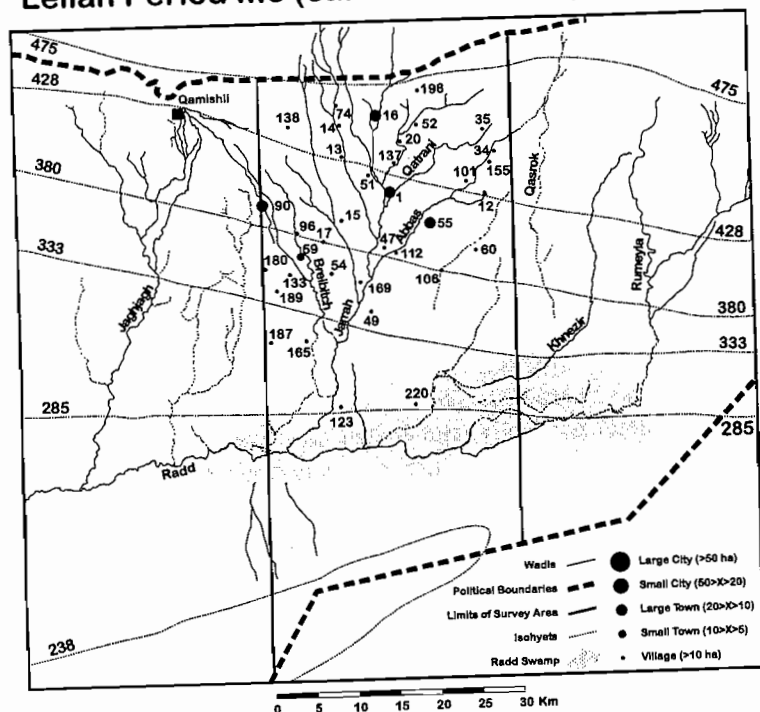


Fig. 12: Leilan regional survey, period IIIc.

the mudbricks and barley necessary to fund these monumental building projects must have come from a number of villages and towns in the region, not just Leilan. The variation in the bricks used for Wall A, which were manufactured both from wadi clays and calcic horizon plain soil, may relate to their provenience. During later periods, kings demanded a certain number of bricks from their vassals for major building projects to be delivered at the city gate.⁴⁹ The same process may have been part of the probable regularization of trade/tribute relationships between regional settlements and Šeḫna that accompanied the appearance of monumental construction and urbanism. The urban revolution did not simply trans-

⁴⁹ BIN 1 126:8 (Op.Cit. n. 40) lists that bricks are to be delivered "ina muhhi nabalkatti ša KA.GAL" on the ramp of the city gate (CAD A/1, Op.Cit. n. 5, p. 83).

Leilan Period III d (ca. 2600-2500 BC)

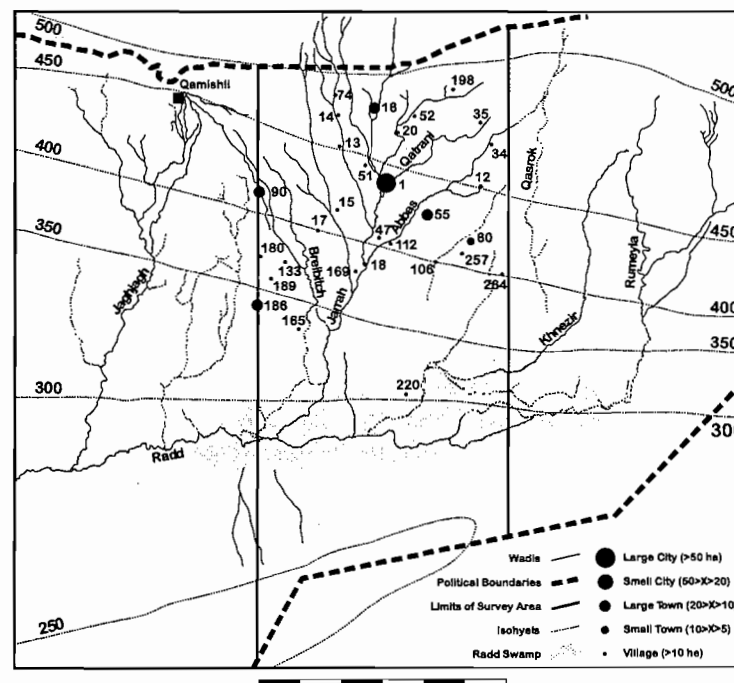


Fig. 13: Leilan regional survey, period III d.

form relationships within the emergent city, it also changed village life forever by instituting an urban/rural dichotomy.

The act of building a wall is a response to external stimuli. In order to understand the construction of this wall and the urbanization of Leilan, we must reflect on Leilan's place in the Habur Plains, the dry-farming districts of Northern Syria and Northern Iraq, and Syro-Mesopotamia more generally. Evidence from the city gate suggests that urbanization in dry-farming Northern Mesopotamia resulted from widespread conflict and cooperation between emerging centers, as well as contact with and emulation of Southern Mesopotamian Early Dynastic city-states. To understand the probable form that these two processes took, and how they contributed to the formation of states in Northern Mesopotamia, we must consider what preceded them.

The Ninevite V period, the centuries preceding these developments, has been characterized as one of complex pre-state societies.⁵⁰ The construction of large storage facilities, the elaboration of drinking vessels, and ornate funerary rites have been construed as archaeological remnants of a redistributive economy focused on feasting, a sort of third millennium version of Pacific Northwest potlaches.⁵¹ Ninevite 5 society developed after the spread of Uruk outposts into North Mesopotamia and Southern Anatolia and their collapse; it represents the adoption of certain southern Mesopotamian technologies (the wheel; the plough), cultural traits (funerary banquets), and likely economic and political systems.⁵² These were not reproduced on the same scale, or in the same way as in Southern Mesopotamia, but were instead combined with local traits in a process of acculturation. The social and spatial organization of the Leilan region, with scattered villages grouped around small (15 hectare) towns located 6.5-15 km apart, was probably a microcosm of a more general organization of Northern Mesopotamia.⁵³ There is some evidence of long-distance trade, as well as more mundane contacts between these centers, but they are limited. The excavated sites do not show evidence of defensive architecture, suggesting limited, peaceful relations.

The widespread construction of fortifications at approximately 2600 BC signals the close of this peaceful phase and the beginning of a period of intense regional competition. The long construction history of the Leilan city wall suggests that this phase was protracted. The series of raids and campaigns waged by competing city-states may have been similar to those that occurred in Southern Mesopotamia at the same time. The percentage of hostilities that were "local" as opposed to those which involved Southern Mesopotamian powers is unknown.

⁵⁰ G.M. SCHWARTZ, The Ninevite V Period and the Development of Complex Society in Northern Mesopotamia, in: *Paléorient* 13(2), 1987, p. 93-100.

⁵¹ G.M. SCHWARTZ, Mortuary Evidence and Social Stratification in the Ninevite V Period, in: H. WEISS (ed.), *The Origins of Cities in Dry-Farming Syria and Mesopotamia in the Third Millennium BC*, Guilford, 1986, p. 45-60; SCHWARTZ 1987, Op.Cit. n. 50; J.D. FOREST, The Ninevite 5 Culture: Its Nature and its Origins, in: H. WEISS & E. ROVA (eds.), *The Origins of Northern Mesopotamian Civilization: Ninevite V Economy, Society and Culture*, (Subartu 9), Turnhout, 2003, p. 563-585.

⁵² FOREST 2003, Op.Cit. n. 51, p. 563-585.

⁵³ H. WEISS, F. DELILLIS, D. DEMOULINS, J. EIDEM, T. GUILDERSON, U. KASTEN, T. LARSEN, L. MORI, L. RISTVET, E. ROVA & W. WETTERSTROM, Revising the contours of history at Tell Leilan, in: *Annales Archeologiques Arabes Syriennes Cinquentaenaire*, 2002.

The diversity of sealings uncovered at the city gate, with comparanda from many areas of the Near East, from Susa, to Fara, to Ebla, as well as from nearby Brak and Beydar, reveal that increased (non-hostile) contact accompanied this rise in warfare. These sealings parallel the Early Dynastic glyptic previously recovered at the Leilan Acropolis.⁵⁴ The city gate's position as the controlling point for any traders who would enter Leilan, as well as Leilan's position astride a prominent east-west exchange route, help explain the varied designs found in this area.

The range of motifs includes three geometrical designs, reminiscent of the "Piedmont Jemdet Nasr" style, and eight representational impressions, many of which are local copies of Southern Mesopotamian motifs. The two most common sealings, with 2 and 3-4 impressions respectively, represent combat scenes. The most popular of these impressions, L02-27B, occurs on the only non-container sealing found at the city gate. This sealing shows an angular figure moving toward the right, with a grotesquely long left arm, and a right arm holding a dagger or a sword (figure 11). It was found on a door seal, suggesting that it was made by a seal wielded by a Šeġna official. This warlike imagery may be appropriate to both its quasi-military context, at the city gate, as well as to the newly militarized society of Northern Mesopotamia. This emphasis on militarization apparent in the representational impressions accompanies the emerging complexity at the city gate. It has been suggested that in the context of Ninevite V glyptic, a mix of geometric and naturalistic seals might represent the complex, four-level hierarchy associated with early states.⁵⁵

It seems as though urban centers in Northern Mesopotamia arose in response to multiple stimuli, both local and foreign. Increased contact on numerous levels, ranging from peaceful to warlike exchanges, accompanied, and may have partly fueled, this transformation. The emphasis on warfare is reminiscent of Carneiro's hypothesis that warfare, encouraged by limited agricultural land, results in relationships of subordination and thus in the emergence of large territorial states and settlement hierarchies.⁵⁶ However, the emerging states were not Southern Mesopotamian

⁵⁴ D. PARAYRE, Tell Leilan 1985: the glyptic, in: H. WEISS (ed.), *1985 excavations at tell leilan, Syria*, (American Journal of Archaeology 95), 1990; D. PARAYRE, La glyptique de l'époque "ninvite 5" découverte à Tell Leilan, in: H. WEISS & E. ROVA (eds.), *The origins of north mesopotamian civilization: ninevite 5 chronology, economy, society*, eds. (Subartu 9), turnhout, 2003.

⁵⁵ G.M. SCHWARTZ, The Ninevite V Period and the Development of Complex Society in Northern Mesopotamia, in: *Paléorient* 13(2), 1987, p. 97.

⁵⁶ R. CARNEIRO, A Theory of the Origin of the State, in: *Science* 169, 1970, p. 733-738.

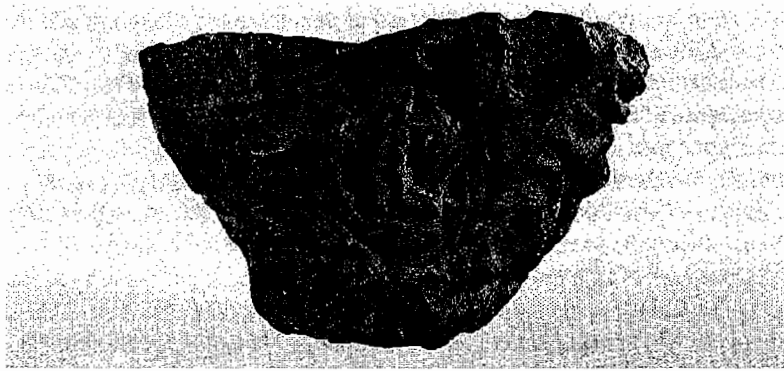


Fig. 14: Sealing L02-27B.

vassals; nor was their formation a direct response to Southern Mesopotamian aggression or long distance trade.⁵⁷ Similarly, the urbanization of Northern Mesopotamia did not see the rise of large, territorial states or empires; rather, it saw the creation of competing city-states like Ebla, Mari, Nagar, and no doubt, Šeḫna, with their smaller vassal states (Halab, Beydar, Mohammed Diyab, and Do Gir) which paralleled the situation in the south. Nevertheless, persistent warfare may have stimulated some of the features of urbanism and state formation visible in the archaeological record such as fortifications and the agglomeration of a population into one, easily defensible center.⁵⁸

In order to maintain such centers, early Northern Mesopotamian rulers adapted local administrative techniques and borrowed others from the urbanized south. State emergence reflected an acculturation process similar to that described for the preceding Ninevite V period, during which certain (mainly technological) elements of Southern Mesopotamian culture (such as writing) were quickly incorporated into Northern Mesopotamian societies, while other (mainly iconographic) elements were emulated, and given new culturally determined meanings.⁵⁹ This is the

case for the locally crafted, Early Dynastic II inspired cylinder seals found at the city gate (Figure 11).

It is important, however, not to overestimate the dominance of Southern Mesopotamia; inventions and cultural traits spread both ways. The same period which saw the rise of complex states in Northern Mesopotamia saw a reorganization of Southern Mesopotamian city-states, embodied in the rise of palaces and the elaboration of a distinct royal ideology.⁶⁰ The archaeological and epigraphic evidence from the third and second millennium in Northern Syro-Mesopotamia emphasizes the primacy of the palace and the relative unimportance of the temple, in contrast to the Southern Mesopotamian experience. Evidence from the Ninevite 5 period suggests similarly elaborated chiefdoms as the precursor of this Northern palace-centered society. As Nicholas Postgate emphasizes, "it may not be coincidental that Palace A at Kish, with its columns, has a distinctly northwestern look to it".⁶⁰ It may also not be accidental that the construction of this palace is concurrent with secondary state formation in Northern Mesopotamia.

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⁵⁷ H. WEISS, *Ninevite 5: Periods and Processes*, in: H. WEISS & E. ROVA (eds.), *The Origins of Northern Mesopotamian Civilization: Ninevite V Economy, Society and Culture*, (Subartu 9), Turnhout, 2003.

⁵⁸ Joyce Marcus and Kent Flannery suggest warfare as the precipitating factor behind the sudden urbanism of Monte Alban in Oaxaca, Mexico (J. MARCUS & K.V. FLANNERY, *Zapotec Civilization: How Urban Society Evolved in Mexico's Oaxaca Valley*. *New Aspects of Antiquity*, London, 1996).

⁵⁹ WEISS 1990b, *Op.Cit.* n. 8; Weiss *Op.Cit.* n. 57, 2003.

⁶⁰ POSTGATE 1994, *Op.Cit.* n. 5, p. 137-141.