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## Seven Generations Since the Fall of Akkad

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## The Development of Underdevelopment?

### Imperialism, Economic Exploitation and Settlement Dynamics on the Khabur Plains, ca. 2300-2200 BC

In 1913, Rosa Luxemburg described the violent conditions for the incorporation of African and Asian peasantries into European empires as follows: “Each new colonial expansion is accompanied, as a matter of course, by a relentless battle of capital against the social and economic ties of the natives, who are also forcibly robbed of their means of production and labor power,” (Luxemburg 2003: 370-1). Luxemburg’s analysis calls attention to the violent collision of modern capitalism’s worldwide markets, efficient transportation and effective communication networks, with alternative social and economic systems. Although her emphasis on the different economic and social conditions of pre-imperial systems distinguishes her from many of her contemporaries, her critique of imperialism is broadly similar to those of Hobson, Lenin and Frank, notwithstanding their different positions on the political spectrum. 19<sup>th</sup> and 20<sup>th</sup> century imperialism, despite the civilizing mission emphasized by its proponents, was deadly to the world’s poor, resulting in the deaths of perhaps 50 million people in the last quarter of the 19<sup>th</sup> century in three El Niño droughts and famines immeasurably worsened by free markets in which grain was exported from starving India to pay for imperial adventures in South Africa and Afghanistan (Davis 2001). Indeed 19<sup>th</sup> century empires and 20<sup>th</sup> century neo-imperialism has been blamed for the development of underdevelopment and the creation of a permanently disadvantaged “third world” (Frank 1966).

Clearly, ancient empires were not modern empires, and there is a great gulf separating the “relentless battle of capital” in the 19<sup>th</sup> century and the very different political and economic organization of pre-modern societies. Yet empires do display certain diachronic regularities and a metropolitan center that demands tribute or taxes from much of its periphery is generally seen as one of them (Doyle 1986: 19). “Empires,” according to one characterization, “were first and foremost tributary structures, and much of the limited energy at their disposal was devoted to ensuring adequate supplies of cash, labor and agricultural produce from the areas under their control” (Woolf 1992: 283). Despite this, little attention in the Near East has been paid to the material signature of this economic system or its consequences for people living within and beyond the borders of empire. I will argue, based on evidence from administrative texts, glyptic, surface survey and excavation that the first Ancient Near Eastern empire, the Akkadian (ca. 2300-2200 BC, fig. 1), was indeed imperial, and that moreover its extractive nature had differential consequences for people within its periphery, allowing some people to benefit economically and leading to the impoverishment of many others. Moreover, sensitivity to the complex interactions between subjects in the core and peripheries – and an acknowledgment of the complex material consequences of empire – can provide new insight into Mesopotamian societies.



## The Material Signature of Empire

Over the past twenty years, the Akkadian empire has been the subject of a number of attempts to formulate an archaeology of empires. Situated on what Roger Matthews eloquently describes as “the chronological faultline between archaeology and history,” the Akkadian empire has proven difficult to identify archaeologically (Matthews 2003: 152).

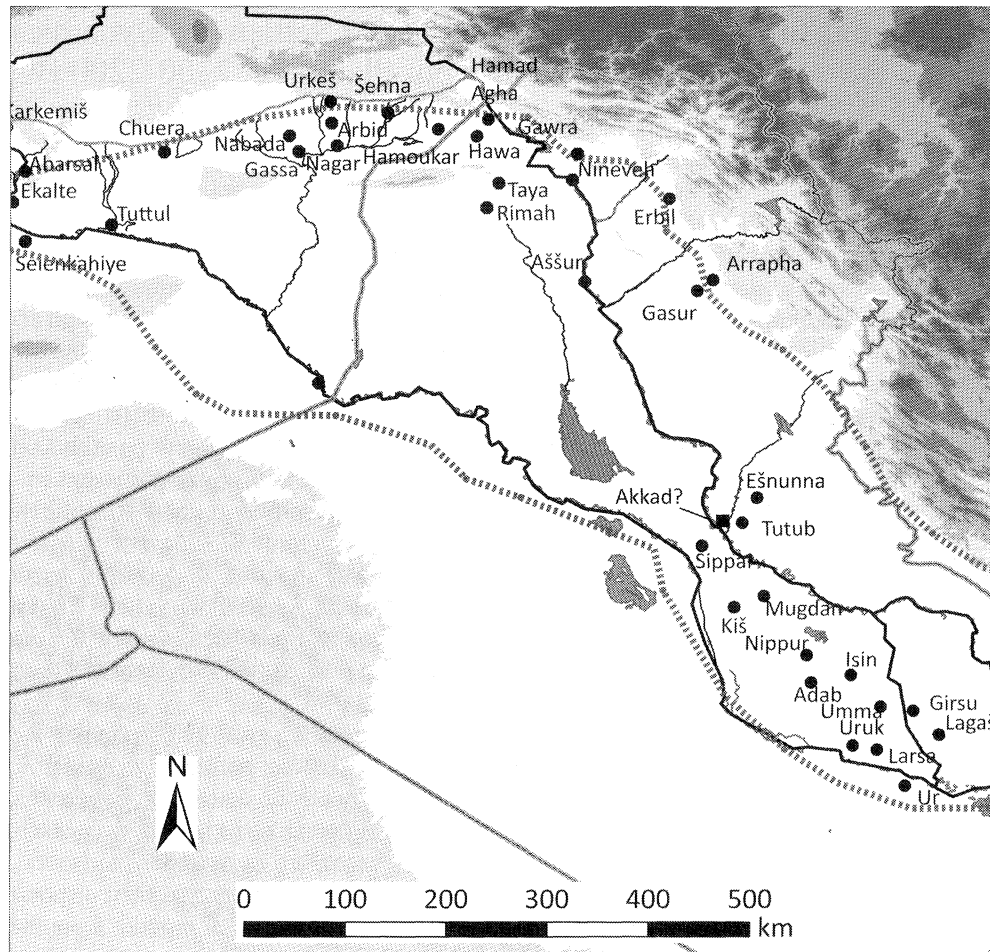


Figure 1: The Akkadian Empire, ca. 2300-2200 BC.

Much of this is predictable. Several well-attested empires, including the first millennium Achaemenid empire, had little impact on the material culture of their domains (Matthews 2003, Kuhrt 2001, Briant and Bouchardat 2005). The political and economic relationships that metropolitan centers have with their peripheries do not always affect many of the materials we retrieve in excavation. No widespread style of “imperial” pottery ever developed in the Akkadian empire, in contrast to the Inkan (D’Altroy, Lorandi and Williams 1998), Hittite (Glatz 2009), Urartian (Zimansky 1995) or Assyrian empires (Postgate 2010), although certain mass-

produced bowls were probably requisitioned by the state in both Northern and Southern Mesopotamia (see below).<sup>1</sup> Of course, the lack of a widely-recognizable, standardized pottery assemblage is hardly unusual, several empires including Sassanian Iran (Mousavi and Daryae 2012), Mali (MacDonald et al. 2011), and Vijaynagara (Sinopoli and Morrison 1995; Sinopoli 2003) exercised no control over pottery manufacturing and were characterized by diverse regional ceramic styles. Although an Akkadian imperial style did develop in several media, including sculpture, script and glyptic, in some cases this style only emerged in the latter part of the period (Matthews 1997: 1). This highlights another challenge for the archaeology of empires; our gross chronologies do not often allow us to identify patterns on a sub-centennial scale. The Akkadian empire lasted little more than a century, and its nature and the level of its control over dependent territories no doubt varied during much of that period. Like any other society or political formation, empires are always in the process of becoming, and considering an empire from the position of its greatest power, clearly “[masks] crucial processes of re-establishment, re-negotiation and re-definition of dominance relationships” (Glatz 2009: 128)

Yet these difficulties are not insurmountable. Indeed, there are several ways in which the Mesopotamian archaeological record of the third millennium is uniquely suited to this analysis. At the most basic level, an empire is “a relationship of political control imposed by some political society over the effective sovereignty of other political societies,” (Doyle 1986). Following this definition, we can distinguish an empire archaeologically through the materialization of imperial administrative practices. Although political control is difficult to perceive in many archaeological situations, in Mesopotamia we have a rich administrative material culture. Evidence from administrative buildings, tablets and sealings gives us direct evidence for the political practice of imperialism, unlike documentation from most pre-modern empires, where these practices must be inferred from indirect sources such as pottery, ancient art or historical texts.

Administrative artifacts have played an important role in theories of the emergence of political hierarchies (Johnson and Wright 1975), the nature of administrative practice (Gibson and Biggs 1991; Gibson and Biggs 1977), long-distance trade (Algaze 2005), and cultural contact (Pittman 1999). Within Assyriology, of course, the analysis of administrative texts has been critical for understanding Mesopotamian imperialism. Yet archaeologists do not always consider the potential of administrative texts, as opposed to other parts of the textual record, nor do they analyze them the way they would other material sources. In discussions of the Akkadian empire, historians and archaeologists tend to cite royal inscriptions and later historical traditions in order to reconstruct the political history of this period, and to lump the administrative texts in with these other documents, if they consider them at all (Westenholz 1999; Van de Mieroop 2007). The problems of these historical sources are well-known: the royal inscriptions are propagandistic and formulaic, while the later myths of the Akkadian kings reflect the context in which they were written rather than the one they purport to depict (Michalowski 2010; Liverani 1993). The presence of Akkadian glyptic and administrative texts in administrative buildings in Southern Mesopotamia, along the Tigris and on the Khabur Plains is significant precisely because they are administrative in nature. Economic texts were not written for posterity, but instead were produced and discarded by official institutions. Of course, this does not mean that these records are unproblematic. Some of the

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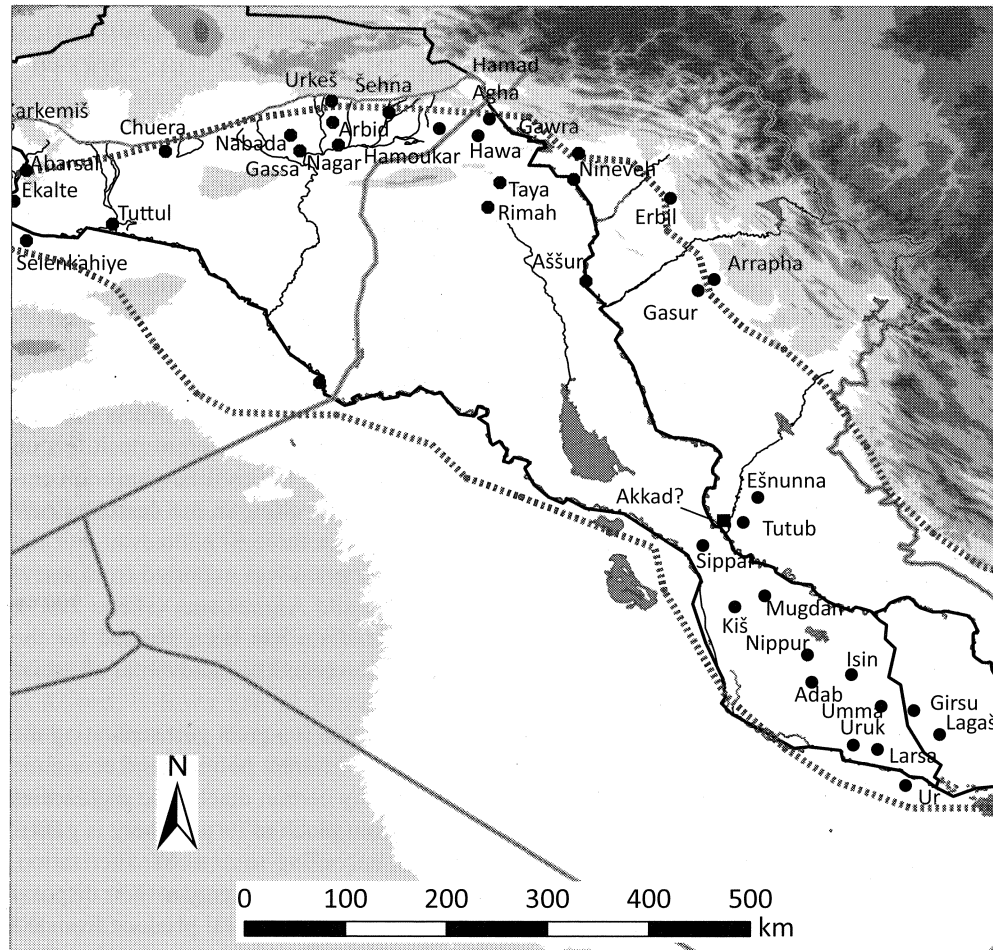


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documents were written for higher authorities and reflect estimations or desired outcomes rather than actual occurrences (Foster 1993: 1; Foster 1982). Other documents are probably internal memos and lack the contextual information which would be necessary to make sense of them. Reconstructing the administrative system that produced these documents is thus not straightforward, given the incomplete nature of the record, and often, their lack of archaeological context. Nonetheless, these artifacts provide unique insight into the political and economic processes that underwrote the Akkadian empire.

Considering the consequences of the relationship between the capital of Akkad and its various peripheries requires identifying how local, socio-political, cultural or economic strategies and organizations changed as part of the broader relationships of empire. Although conquest, domination and asymmetry are essential to structuring those relationships, empire is a dialectical process, one where certain subordinate groups can advance their own interests and/or resist imperial pressure (Morrison 2001; Gosden 2004; Lyons and Papadopoulos 2002; Glatz 2009). Extensive survey and excavation in Northeastern Syria allows us to consider how local practice was transformed as part of this process. We can see changes in production strategies and decreasing access to the means of production at the household level, as well as some evidence of household resiliency through an examination of settlement patterns, household archaeology and zooarchaeological and archaeobotanical analysis.

## Administrative Buildings

The clearest evidence for the Akkadian empire beyond Southern Mesopotamia is the Naram-Sin palace at Brak (ancient Nagar), a provincial, administrative center famously built out of bricks stamped with the fourth Akkadian king's name. This building, which encompassed nearly one hectare, consisted of storage rooms arranged around central courtyards. Within its magazines, Mallowan uncovered stores of cleaned barley, suggesting that procuring, storing and redistributing goods were probably its main functions (Mallowan 1947: 63-4). The recent excavations at the Akkadian Administrative Building at Tell Leilan (ancient Šeḫna) have revealed another example of provincial architecture with a similar archaeological signature (Weiss et al., this volume: 163). Outside of the Khabur Plains, the only provincial administrative building that has been excavated is the Northern Palace at Tell Asmar (ancient Ešnunna) (Frankfort 1933; Delougaz et al. 1967; Gibson 1982).<sup>2</sup> This palace also consisted largely of storage rooms containing quantities of grain built around courtyards, and was the source of many of the site's Akkadian tablets. The plans of finds from these three provincial administrative buildings indicate that the officials housed within them were concerned with collecting and storing materials, particularly grain, and strongly suggest that procuring such staples was a major political activity.

## Texts as Artifacts

Akkadian administrative texts provide further evidence for official involvement in various aspects of the provincial economy. The archival sources for the Old Akkadian period include approximately 4700 tablets from 16 sites (Hasselbach 2005: 17). Although these texts are only a fraction of the sources available for the following Ur III period, they nonethe-

2 It is likely that part of an Akkadian period administrative building was exposed at Gasur, but the small size of the sounding makes this impossible to confirm (Starr 1939: 18).

less provide good evidence for administrative practices, particularly state interests in land holdings, harvest divisions, and labor. They are written in a ductus and language that tends to be uniform, although different hand-writings and styles may be distinguished, occasionally corresponding to document types (Sommerfeld 1999). The vast majority of Akkadian administrative texts come from southern Mesopotamia, and many of them were purchased on the antiquities market in the 19<sup>th</sup> century. We do, however, have excavated texts from the Diyala that were found in the Northern Palace at Asmar, illustrating the institutional context of many documents. Furthermore, nearly all of the northern Mesopotamian administrative texts – from Gasur, Aššur, Šeḫna, Nagar and Urkeš – have been found in excavations of official buildings. In addition to archives belonging to small and large institutions (often called “Household” and “Great Household” archives), there were also Akkadian private or family archives in the south (Foster 1982). In contrast, in northern Mesopotamia, documents may have only been used within an official context.

The texts testify to the interests of the state in marshalling agricultural surplus and labor, assuring that tribute and taxes flowed to the Akkadian metropole. The institutional archives demonstrate that administrators could control vast amounts of land, most of which was distributed among parcel holders for subsistence or lease and was subject to royal accountability and taxation (Steinkeller 1981; Foster 1993). Texts document that accountable portions were estimated, measured, shipped and stored. A certain percentage of each harvest was sent to Akkad, the capital, along with livestock and or animal products (Foster 1993; BIN 8, 267, 276, 280).

In addition to administrative texts concerned with land, there are stelae that monumentalize large scale land sales or donations (Gelb, Steinkeller and Whiting 1989). A stela from Girsu disposes of 133,979 hectares, an extraordinary domain which was five to six times the size of the total land under cultivation by the crown in the Ur III province of Lagash. According to Akkadian taxation estimates, this tract would have yielded enough grain to fill 101,256,000 sila bowls of rations (Foster 2011: 130)

Although this system is best documented in the south, there are enough records to indicate that it operated along the Tigris and on the Khabur Plains as well. The best evidence comes from Gasur (modern Yorgan Tepe), near Arrapha, and consists of 222 administrative texts belonging to a small institution in this city (Meek 1935). Like the southern Mesopotamian records, the Gasur texts focus on land and agriculture, recording the holders of land parcels, recipients of threshed barley, and recipients of milled barley or rations, and laborers for work assignments (Foster 1987: 105). Two tablets record the shipment of commodities, in this case oil and lard, to Akkad presumably via the Tigris, linking this system to the capital. Texts at Gasur also use the Akkadian mensuration system, perhaps indicating that the administration introduced it here as part of the imperial apparatus.

The documents from Brak are few and fragmentary, however, they seem to reflect a similar pattern of administration. The better preserved of these documents include a list of workers from several centers on the Khabur Plains, a list of sheep and wine delivered from many of the same centers, and rations of barley distributed to different personnel (Eidem, Finkel and Bonechi 2001: texts 14, 20 and 16 respectively). Some of these tablets were found in a courtyard at the Naram-Sin Palace, underlining their institutional context. A bulla found here that had been sealed by the governor of Gasur attests to connections between these cities (Matthews 1997: seal 317). Another indication that Nagar could have been tied into this imperial system comes from a tablet from Sippar that records the receipt of 40,800 liters of barley, and thousands of liters of emmer wheat from Nagar as part of a private delivery (Sommerfeld, Archi and Weiss



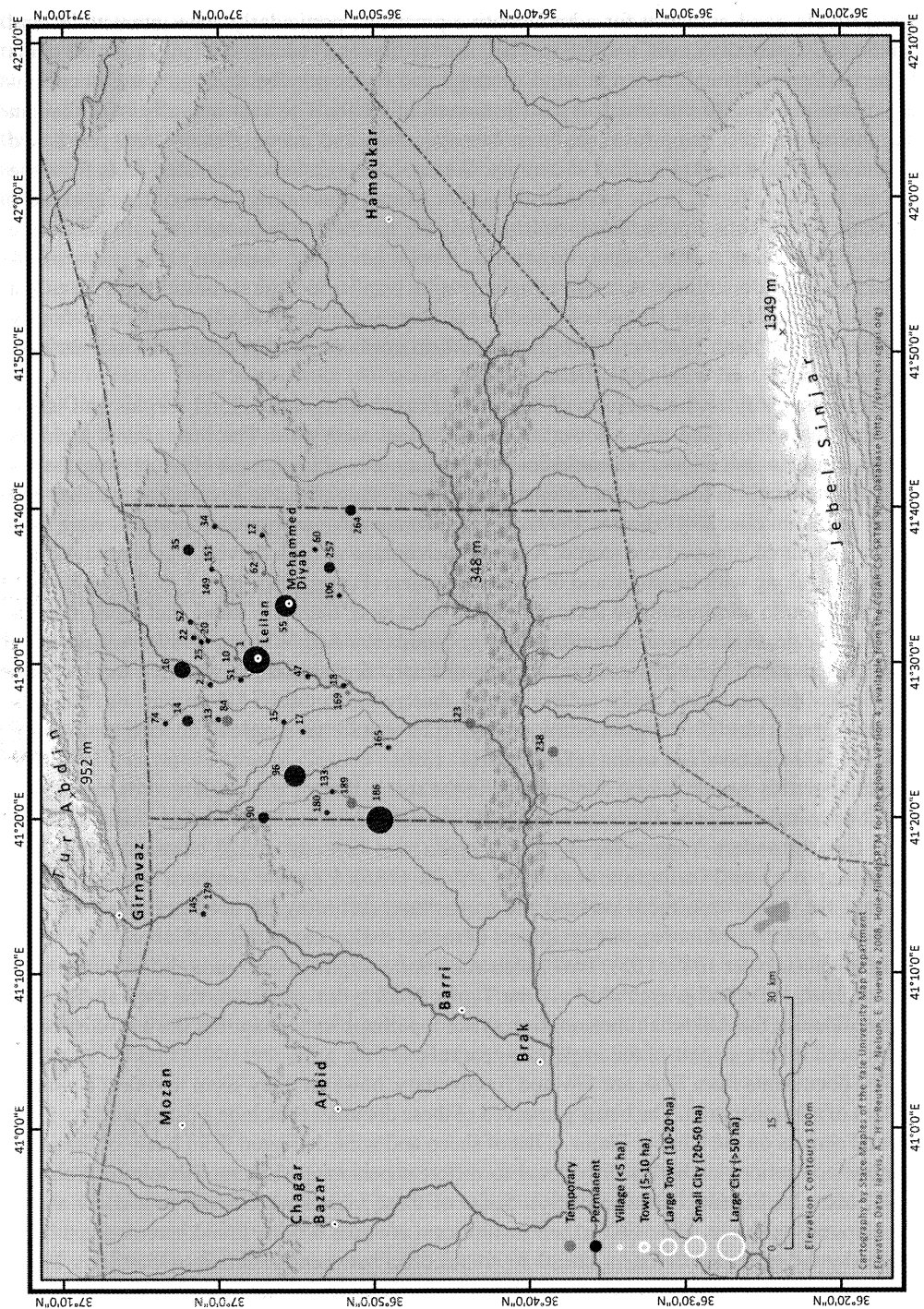


Figure 2: Leilan Regional Survey, period IIa (2500-2300 BC).

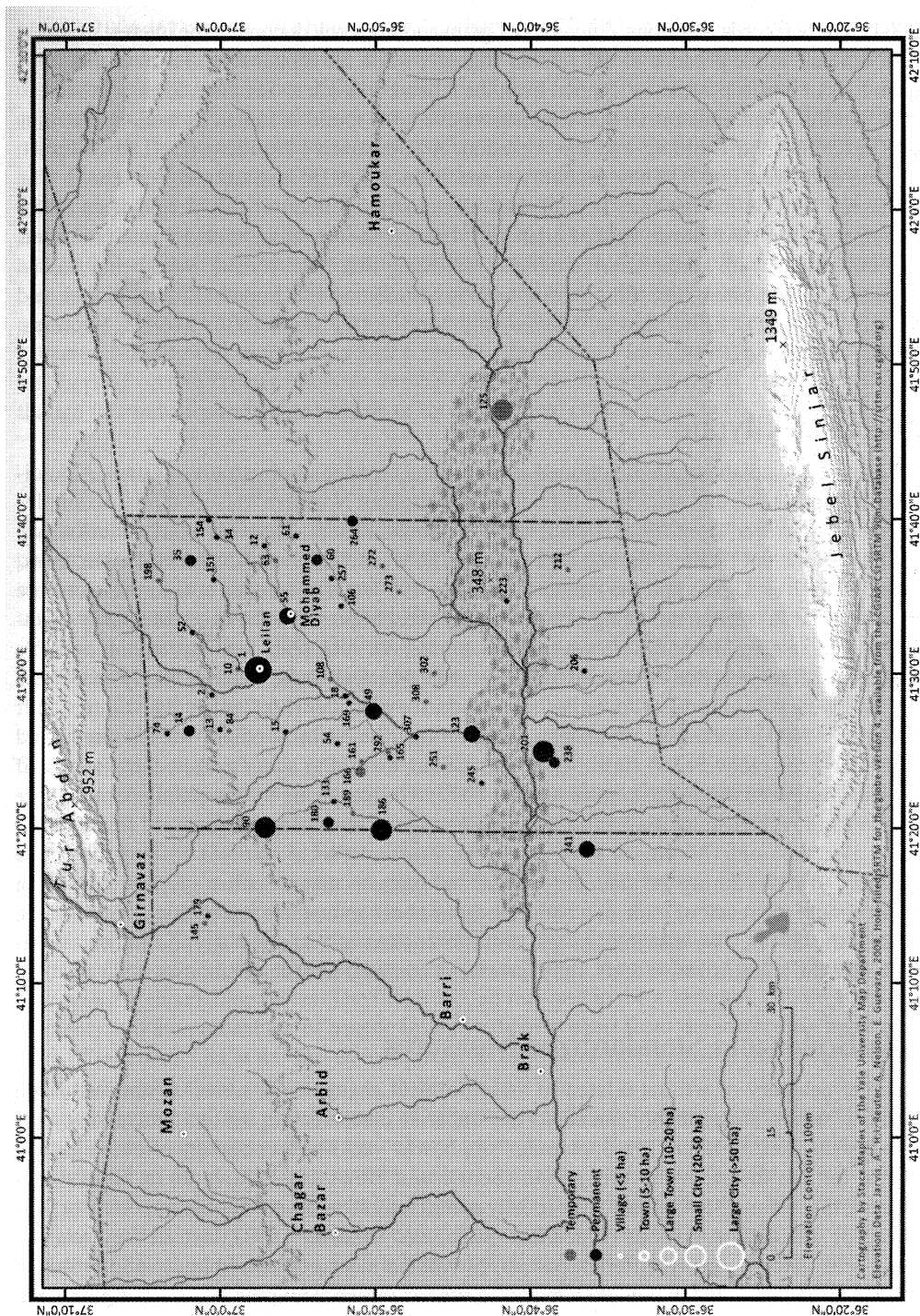


Figure 3: Leilan Regional Survey, period IIB (2300-2200 BC).

2004). These records of rations, deliveries of grain and livestock document the interest of Akkadian officials in the produce of the Khabur triangle, while the Sippar text illustrates that large quantities of produce could be shipped from the Khabur triangle to Southern Mesopotamia.

A handful of administrative text fragments have been found at Leilan as well, in the ruins of The Unfinished Building and the Akkadian Administrative Building (De Lillis-Forrest, Milano and Mori 2007). They probably come from a similar institutional household. The same can be said for the few, unpublished administrative texts of this period from Aššur (Neumann 1997). At Gasur, Brak, Leilan and Aššur school texts were also found in various contexts, along with administrative tablets, indicating that local scribes were being trained in this imperial system, attesting to long-term investment in this region (Eidem, Finkel, and Bonechi 2001; De Lillis-Forrest, Milano, and Mori 2007; Meek 1935: 216-22; Neumann 1997; Sallaberger 2011).

## Akkadian Glyptic

Like texts, Akkadian glyptic functioned as part of the broader administrative system. Akkadian seal impressions and seals have been found throughout Northern Mesopotamia. Examples have been retrieved from Aššur, Gasur, Gawra, Habuba Kabira, Nineveh, Mari, Selenkahiye, Munbaqa (ancient Ekalte), Hamad Aga as-Sagir, Bi'a (ancient Tuttul), Mozan, Leilan, Brak, Rimah and even Ugarit and the Amuq (Matthews 1997). Of course, as seal impressions are found on various media, including exports, a single seal impression does not necessarily establish Akkadian administration. However, large numbers of such seals, sealings on non-portable objects and the presence of special sealings such as royal seals, make it likely that these artifacts were part of broader Akkadian administrative practices (McCarthy, this volume: 217; McCarthy 2011). Akkadian royal seals are well-distributed in Southern Mesopotamia and have also been recovered at Gasur, Brak and Leilan, testifying again to the centralization of political practices within the empire (Zettler 1977). Unlike during the preceding period, there are no local Akkadian styles, instead, the same range of styles and subjects are found in the north as in the south (Matthews 1997: 191). The absence of local motifs is striking, given the diversity of styles during the preceding period and suggests that Akkadian glyptic in the north is not simply the result of trade or a common cultural oecumene, but has political significance (McCarthy 2011). The distribution and cultural context of Akkadian glyptic indicates that they, like the administrative texts, may have been confined to official contexts.

## Sila Bowls and Standardized Measures

Another category of artifact related to these political changes is a series of standard sized beakers, which are probably linked to the imperial measurement system and perhaps ration distribution. Northern Mesopotamia, "sila-bowls" or Akkadian beakers resemble earlier forms, but are distinctive to this period (Senior and Weiss 1992; Rova 2011; Ristvet and Quenet, this volume: 193). They were locally manufactured and were neither imports, nor produced by attached workshops (Blackman, Stein, and Vandiver 1993), instead they seem to have been made by many different potters. In volume measurement, ubiquity and probably function, they parallel the conical bowls of southern Mesopotamia which are common from the Early Dynastic to the Akkadian period, although the two types of bowls differ in shape and height. At Nippur, in area WF, conical bowls make up 54% of all recorded sherds (Mc-

Mahon 2006: 61); while sila bowls make up between 22-40% of the assemblage at Leilan. Both sila bowls and conical bowls are wheel-made, mass-produced shapes, with similar rim diameters (Senior and Weiss 1992: fig. 4; McMahon 2006: 63). It seems quite likely that conical bowls are the vessels that are documented in the archival texts regarding pottery manufacture. In general, potters do not receive rations, but institutions do order large numbers of vessels from them, 3000 in the case of an tablet from Umma (Senior and Weiss 1992: 19, Donbaz et al. 1982, Foster 1993: 33), and perhaps 4080 “sila” bowls in a document in the Baghdad museum (Steinkeller and Postgate 1992: 26). Documents often mention sila bowls, and it appears that they served various official functions (CAD Q: qû B 1(a)). In Southern Mesopotamia, Akkadian officials probably continued to use the same conical bowls as their predecessors had, while in Northern Mesopotamia, they placed orders for vessels of similar capacity, but allowed potters to adapt a pre-existing form. Since institutions did use large numbers of certain types of pottery vessels, their needs influenced pottery production even though this industry remained outside of direct political control.

### Agricultural Intensification in the Leilan Regional Survey

The administrative buildings, documents, glyptic and official pottery found in Northern Mesopotamia suggest that the Akkadian empire sought to concentrate land in the hands of the crown, officials and dependants, maximize agricultural production, and facilitate the shipment of agricultural products to Akkad. Three major shifts in land-use from period IIa (2500-2300 BC) to period IIb (2300-2200 BC) in the Leilan Region Survey area may be explained in terms of these policies promoting increased agricultural production: 1) an increase in the number of small settlements and a change in distribution of population; 2) the abandonment of villages close to major cities, creating a swathe of agricultural land around each centre; and 3) the foundation of 14 new settlements in the steppe south of the 350mm rainfall isohyets (fig. 2 and 3). It is possible, of course, that these changes have alternate explanations, but the connections between changing land tenure and land use and settlement patterns has been well established (Wilkinson 2003; Ristvet 2005).

During period IIb, the number of sites in the 1650 km<sup>2</sup> survey area increased from 42 to 55, while the settled hectareage remained basically the same, decreasing only slightly from 405.66 to 396.72. Thirteen of these sites had fewer than five identifiable sherds, leading us to mark them as possible or temporary occupations, while the rest each contained more than five securely dated diagnostics. The first trend, an increase in the number of village-sized settlements and the percentage of people living in them is clear from the increasing number of sites of less than 5 ha in the survey area, from 26 to 39, and the increasing percentage of total hectareage which these sites make up, from 15% to 21%.

The second trend, the abandonment of villages around larger centers probably occurred as part of a new emphasis on direct agricultural production by these centers. Qotba Tahtani, site 51, which had previously been within Leilan's sustaining area was abandoned, while only two sherds were found on the nearby Rehaya, site 10, perhaps indicating a temporary occupation. Additionally, the abandonment of Dogir, site 16, previously a 16 hectare town and a cluster of sites on the nearby wadi Siblih, as well as the diminution of Mohammed Diyab, also gave Leilan access to new fields. The nature of settlement at Tell Ahmed (189), the village adjacent to Farfara (186, fig. 4), also shifted during this period, and the two sherds found here may represent a temporary occupation. Farfara itself seems to have shrunk in size, and

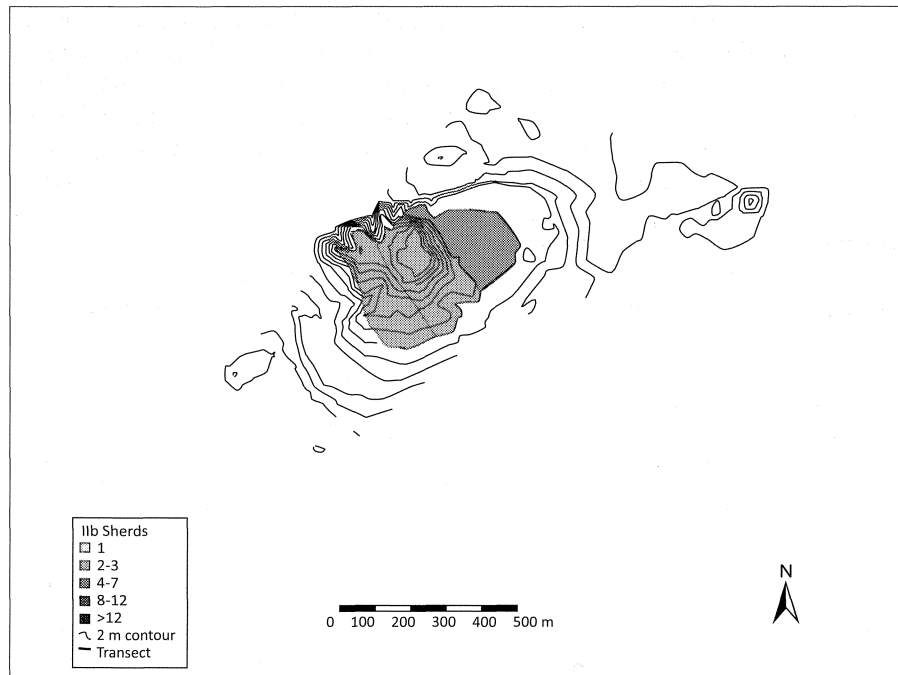


Figure 4: Farfara, site 186.

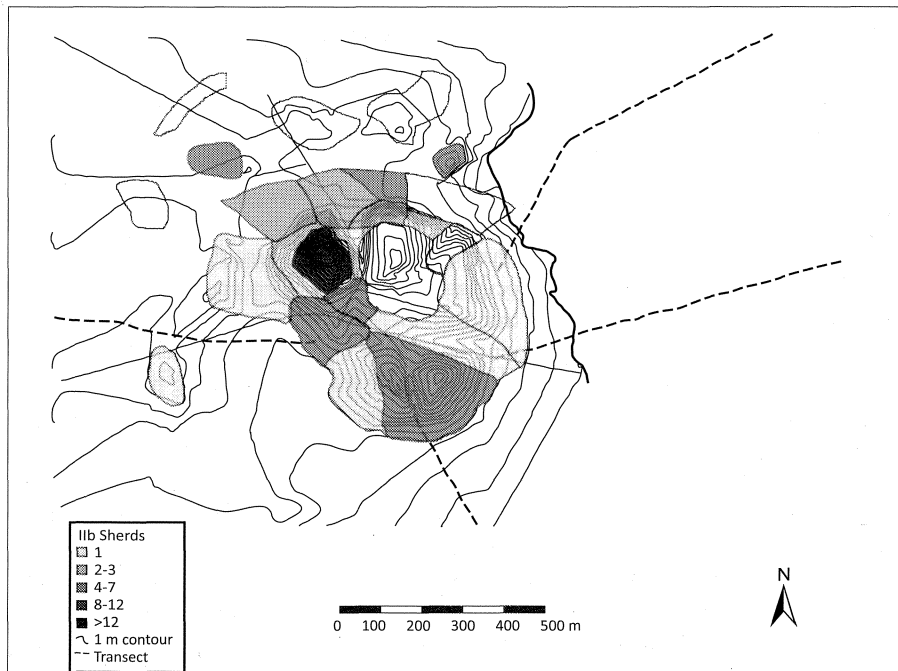


Figure 5: Aid, site 90.



was only half of the 88 ha of period IIa. It is possible that something similar happened around Aid (90, fig. 5), which doubled in size during this period to 20 hectares, and which may have benefited from the abandonment of Koubeiba (96).

The third trend, the sudden expansion of settlement in the steppe south of Farfara (186) illustrates a new emphasis on exploiting the agricultural resources of this more arid area, below the 350 mm rainfall isohyet. The establishment of Qarassa (49) and three attendant villages, 54, 166 and 292, represents the northernmost example of this phenomenon, which also included the foundation of four other villages.

In the Radd marsh, one of the largest historical wetlands in Syria, the new settlement focus is even clearer. During period IIa, only one site was located here, and only four sites could be found within two kilometers of the limits of this wetland. During period IIb, the number of settlements increased dramatically, to ten settlements within this marsh, and 15 within two kilometers of it (fig. 6). Despite the low rainfall in this area, it is likely that in the third millennium BC this marsh was extensive and may even have been a lake, as it was during the Old Babylonian period (ARM 26/2 258; Ristvet 2005).

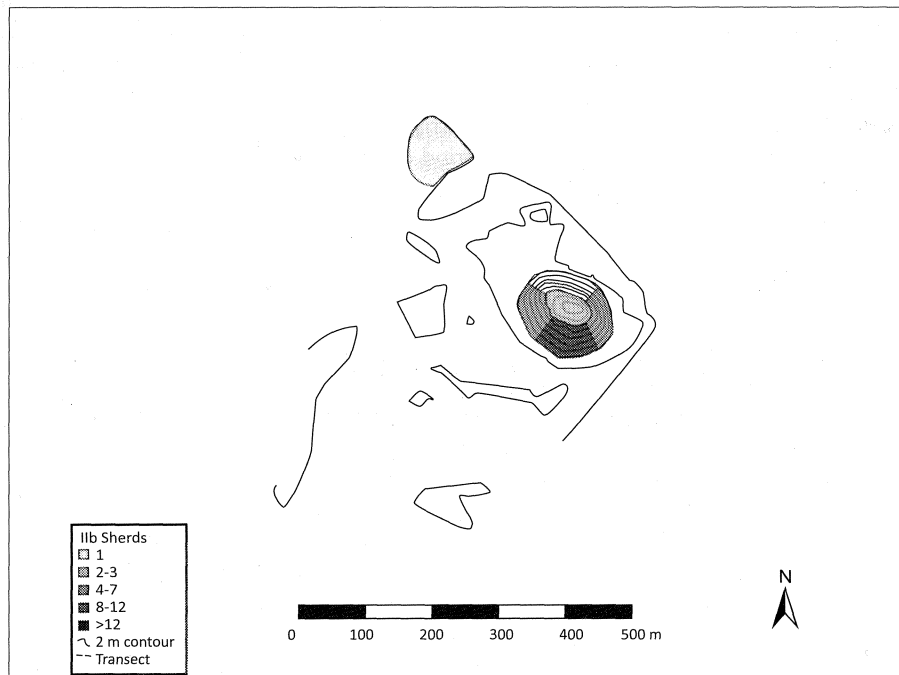


Figure 6: Hansa, Site 201.

The settlement of this marsh may be a response to changing political and economic circumstances. It is possible that during period IIa, Brak and Leilan lay at the center of two kingdoms and that the unoccupied Radd marsh served as a buffer zone between these polities. The kingdom of Nagar, is well-known in the epigraphic sources from Nabada and Ebla. The same sources refer to many of Nagar's dependent cities, but not to Šeḫna, despite the fact that excavations and survey attest to its large size and importance (Sallaberger 2011). If Šeḫna lay at the center of a competing kingdom, it could be hidden from the Ebla texts by

Nagar. After the Akkadian conquest, administrative documents from Tell Brak indicate that this city was now dependent on Nagar. This political reorganization may have encouraged the rapid settlement of this former buffer area.

Alternatively, settlement of this area could be part of the same process of agricultural intensification and extensification, perhaps in response to increasing levels of tribute or taxation. Benjamin Foster has noted that in Southern Mesopotamia, Sargonic practice broke down local boundaries as part of the new agricultural regime (Foster 1993: 31). We may see a similar process at work, since settlement within and near the limits of this marsh probably created new tracts of arable land. The Radd may also have provided water for supplementary irrigation, and possibly even for transportation in this area. The produce of this area could easily have been shipped overland from the edge of the marsh to Brak, at the confluence of the Jaghjagh and the Radd, just 30 km west.

Geoarchaeological studies of the Jaghjagh and Jarrah rivers reveal that they also had greater, more persistent flows in the third millennium (Deckers and Riehl 2007). The Jaghjagh would still be a perennial river today, if it were not for damming and irrigation. The Jarrah, on the other hand, is dry except in periods of heavy rainfall, but may have been perennial in the recent past (Deckers and Riehl 2008). Certainly, in the Old Babylonian period, texts from Karana describe the Jarrah as a river with delicious fish, and this was probably also the case in the third millennium BC (Dalley, Walker and Hawkins 1976: text 42). It is possible that both rivers saw either the introduction of irrigation or canalization in the late third millennium BC, perhaps coincident with this period of imperialization, although the evidence is equivocal (Deckers 2011). If the Jaghjagh was navigable during this period, as we know it was in late antiquity (Bowersock, Brown and Grabar 1999: 606), this would have enabled the provincial capital at Brak to take advantage of low-cost river transport along the Jaghjagh, Khabur and finally Euphrates.

## The View from the Periphery: Provincial Centers and Households

Like the administrative texts, the settlement data document a period of agricultural intensification and structural changes like canalization that may have made revenue procurement more efficient. Taken together, the two lines of evidence emphasize the importance of administrative control and resource extraction. Yet we are still left with the question of how this affected the inhabitants of this empire. The Akkadian textual record does not include direct information that bears on this question as there are no private documents from the north and very few from the south. Excavations at the Akkadian Administrative Building on the acropolis and a worker's neighborhood in the Lower Town South at Tell Leilan, however, provide insight into how the urban elite and the masses negotiated these processes. A comparison of animal bones, plant remains and pottery reveals clear differences in the archaeological signatures of these synchronously occupied areas. Diachronic analysis of both areas may indicate increasing divergence between the experiences of the elite and everyone else during Leilan IIb.

The Akkadian Administrative Building was a locus for grain processing, storage and redistribution (Weiss et al., this volume: 163). Nearby, a cultic platform and a food preparations facility formed parts of this administrative precinct, 1600 m<sup>2</sup> of which has been exposed. In contrast, the Lower Town South is a 600 m<sup>2</sup> exposure of a neighborhood at Leilan of small houses and workshop areas along either side of a large, planned street. There are two phases of occupation within this area that date to period IIb, phase 5 (earlier) and phase 4 (later)

(Senior 1998; Weiss et al. 1993; Weiss 1990). During phase 5 portions of at least four houses were found on the west side of the street, with large ovens and/or grain storage bins and an additional house was excavated on the east side of the street (Weiss 1990: Abb. 9). Architecture from phase 4 is poorly preserved, but a pottery workshop is located on the east side of the street, and a few poorly-constructed houses appear to be located to the west. Remains of a number of sila-bowl wasters indicate that this workshop produced large quantities of this ubiquitous form.

Zooarchaeological analysis reveals key differences between the two areas in diet and resource availability. Faunal analysis in the official quarter demonstrates that Leilan elites enjoyed large quantities of sheep and goat. Ovicaprids comprised 62% of the Acropolis sample, compared to pig, 22% and cattle, 8% (Zeder 1995: 29, Zeder 1998: 574). In the Lower Town, in contrast, pigs dominated the faunal assemblage, moreover their proportion increased markedly between phase 5 and 4 from 47-63%. The complete skeletons of two piglets suggest that pigs were raised in sties in this neighborhood and not brought in from elsewhere (Weiss et al. 1993: fn 30). This disparity suggests that the elite and non-elite populations had substantially different diets, or access to different resources.

The archaeobotanical evidence provides further insight into how Akkadian imperialism may have affected different populations. Very low ratios of cereal to chaff from the Lower Town imply that houses here received pre-cleaned cereal stores, probably from a central storehouse. At the same time, the high ratios of pulse-seeds, absent from samples taken on the Acropolis, suggest that these houses supplemented cereal rations with private sector agriculture (Weiss et al. 1993). In contrast, the Akkadian Administrative Building appears to have been receiving unthreshed grain, probably as taxes (Smith, this volume: 225). Evidence for forage stored here might also correspond with the larger percentages of sheep, goat and cattle, as opposed to pigs, kept in the vicinity.

The evidence from the pottery may also reflect how sectors of the site were incorporated into the economy differently. Storage jar sherds make up a very small percentage of the Lower Town assemblage, less than 0.6%. In contrast, they make up 3.8% of the Acropolis Northwest assemblage, providing further evidence for institutional storage and redistribution, as opposed to household storage. Perhaps similarly, "sila-bowls" are almost twice as common in the Akkadian Administrative Building, making up 40% as opposed to 22% of the assemblage. In contrast, shallow, inturned, curved sided bowls, probably used as serving bowls, are far more common in the Lower Town South, making up 14.32% versus 6.5% of the assemblage.

Do these data from Leilan illustrate the development of underdevelopment? Perhaps. Certainly in the Lower Town South, phase 4 architecture is notably poorer than phase 5, perhaps indicating worsening conditions. Moreover, the decreasing access of non-elite residents to higher-status sheep and goat may be significant. Similarly, if cleaned cereal crops and sila bowls do indicate a ration system, then it seems likely that these residents now received rations, and may have had less access to land. Yet some of these trends may also be interpreted as evidence of urban resiliency in the face of political and economic change. The larger numbers of pulses in the Lower Town South, for instance, may highlight an alternative source of protein and nutrition under the control of the residents of the house. Similarly, since pig-raising is rarely subject to state control, domestic animal-husbandry probably contributed an important part of the diet (Zeder 1998b).

Beyond Leilan, there are other signs of increasing disparity in wealth in Northern Mesopotamia, particularly in the disappearance of average-sized houses and the appearance of

mansions and shanty towns (Pfälzner 1997: 260). At Chuera, one sumptuous house – *Steinbau V* – was built atop the remains of three houses from the previous period (Pfälzner 1997: 260). Part of another large house dating to the beginning of phase 5 at Arbid had a sherded paved courtyard, storerooms and reception rooms. Other, small houses were built up against it (Bielinski 1998: 213-5; Bielinski 1999: 283). House W1 – the “mansion” at Taya – dates to late in this period (Reade 1971: 96). In contrast, excavations at Mozan, Brak and Ġassa al-Garbi have also revealed neighborhoods of small, poorly-constructed houses, like those at Leilan (Pfälzner 2001: 106, Dohmann-Pfälzner and Pfälzner 2001: 110; Oates, Oates and McDonald 2001: 61-62). Increasing income inequality is a classic sign of the development of underdevelopment.

## Conclusion

If we follow Woolf and Doyle and define empire as “a relationship of political control” and “a tributary structure” then at least under Naram-Sin, the Akkadian empire was an empire. The analysis of several classes of administrative artifacts suggests that the chief economic goal of this polity was resource extraction, particularly of staples. In the north, Akkadian policies displaced population and introduced technological innovations in an effort to increase agricultural production. The surplus thus generated was transported to imperial storage and redistribution centers such as the Naram-Sin palace at Brak. A percentage of these goods then made their way to Akkad, where they financed building projects and a standing army (Foster 1982; Liverani 1993). The consequences for many people in northeastern Syria were similar to those Rosa Luxemburg would critique four thousand years later. The new policies disrupted many, but not all, pre-existing social and economic ties, and inhabitants were left with ration bowls, decreased access to high status goods, and a new set of overlords.

## Appendix 1: IIB Survey Pottery

The Leilan Period IIB assemblage, which is used as a proxy for Akkadian conquest in Northern Mesopotamia, was defined first through excavation and statistical analysis in the Acropolis Northwest, Lower Town South and City Gate at Leilan (Schwartz 1988, Senior 1998, McCarthy and Ristvet N.D.; Ristvet and Quenet, this volume: 193) The analysis of the Leilan survey pottery for the third millennium was undertaken by Monica Arrivabeni (Arrivabeni 2010), Elena Rova, and Lauren Ristvet (Ristvet 2005). The following nine types were considered particularly diagnostic of this period in the survey, especially when they were found in association:

- 1) Sila-bowls/Akkadian beakers. They are EJZ types 83-86, where they are generally attested in EJZ4a-b (Rova 2011: 69). They are also well-attested in Brak M (Oates, Oates, and McDonald 2001: fig. 394, 439, 440), Taya VIII (Reade 1968: Pl. LXXXV: 17), and in the late Akkadian assemblage at Hamoukar (Ur 2002: Fig. 12:2).
- 2) Inverted, shallow bowl rims. These are fairly shallow bowls with curved walls and flat bases, in fine or medium, mineral-tempered fabrics, without the more pronounced internal beads or inturning of EJZ 4c and 5 examples (Ristvet and Quenet, this volume: fig. 7: 68, 70, 75). This is JZ Type 91 or 92, attested in EJZ 4 and into 5 (Rova 2011: 70), and is also attested in Brak M (Oates, Oates, and McDonald 2001: fig. 431, 922-931), Taya VIII (Reade 1968: LXXXIV: 10), and Mohammed Diyab XII (Nicolle 2006: fig. 7-7: 11).

- 3) Braided, cable decoration or “relief bands with diagonal impressed slashes” (Ristvet and Quenet, this volume: fig. 16a, fig. 9: 87. This is JZ type 115, where it is considered common from EJZ IVb-EJZ V (Rova 2011: 72), and is also attested in Brak M (Oates, Oates, and McDonald 2001: fig. 452, 1416-22) and Mohammed Diyab XI (Nicolle 2006: 7-13: 1).
- 4) Small jars, mixed temper with out-turned squared rim and an incised line on the inner mouth (Ristvet and Quenet, this volume: fig. 4: 39). This is EJZ type 101, where it is considered particularly diagnostic of EJZ 4b (Rova 2011: 70).
- 5) Flat, solid pedestal base. Although hollow pedestal bases are common in IIId-IIa, the solid examples, which can be rather heavy, date to IIb (Ristvet and Quenet, this volume: fig. 6: 59, 64-5). This is EJZ type 87 and it is attested in EJZ4a-b (Rova 2011: 69). They are also typical of Brak M (Oates, Oates, and McDonald 2001: fig. 441, 1184-96).
- 6) Everted, coarse storage jar rims with an incised exterior line (Ristvet and Quenet, this volume: fig. 1: 10). This is EJZ type 103 (Rova 2011: 71) and is also attested at Brak M (Oates, Oates, and McDonald 2001: Fig. 452: 1413-4).
- 7) Small jar bottle with long neck and rounded base. This is not a particularly common type at Leilan or in the survey area, but it is present and is restricted to IIb (Ristvet and Quenet, this volume: fig. 6: 63). This is EJZ type 97 and is attested in EJZ4a-b (Rova 2011: 70).
- 8) Large bowl with inturned, outside-folded rim. It is also attested at Leilan IIc, but in much smaller numbers (Ristvet and Quenet, this volume: fig. 10: 99-100). This is EJZ type 94 and is attested in EJZ4a-b (Rova 2011: 70).
- 9) Simple rim, curved side cup with string cut base (Ristvet and Quenet, this volume: fig. 6: 57-8, 60. This is EJZ type 55, with a span from EJZ3b-EZ4 (Rova 2011: 68). It also occurs in Brak M (Oates, Oates and McDonald 2001: fig. 437: 1086).

Sites larger than 1 hectare were generally divided into a number of collection units based on topography. Site sizes for each occupational phase are based on the presence of well-dated pottery in collection units.

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For the past twenty years, the Khabur Plains of northeast Syria have been a testing ground for the Akkadian collapse c. 2200 BC and remnant post-Akkadian occupations. On May 2, 2012, a workshop for the presentation and discussion of the latest archaeological data was convened in Warsaw, at the 8th International Congress for the Archaeology of the Ancient Near East. The fifteen research papers from that conference present the analyses and perspectives from eight excavated sites, Arbid, Barri, Chagar Bazar, Brak, Mohammed Diyab, Leilan, Mozan, and Hamoukar, and two regional surveys. The new data include the Tell Leilan high-resolution radiocarbon chronology for the Akkadian collapse, an Akkadian palace built within the shell of a destroyed pre-Akkadian palace, The Unfinished Buildings at Tell Leilan and Tell Mohammed Diyab, the terminal occupations at Tell Brak, Chagar Bazar, Hamoukar, Arbid, Mohammed Diyab and Leilan, quantified regional settlement distributions across the Akkadian collapse, measured paleobotanical data for imperial Akkadian and remnant post-Akkadian agriculture, and documentation for the collapse of the imperial Akkadian administration.

