

MATERIAL WORLDS: INTERDISCIPLINARY APPROACHES TO CONTACTS AND EXCHANGE IN THE ANCIENT NEAR EAST

Proceedings of the Workshop
held at the Institute for the Study of the Ancient World (ISAW),
New York University
7th March 2016

Edited by
Arnulf Hausleiter



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Cuneiform tablet Kültepe 20a, after B. Hrozný, *Inscriptions Cunéiformes du Kultépé*, vol. I, Praha 1952, pl. cxxv
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With the utmost gratitude, I thank the authors of the volume for their extraordinary patience.

Berlin, Spring 2023

Arnulf Hausleiter

MATERIAL WORLDS: INTERDISCIPLINARY APPROACHES TO CULTURAL CONTACTS AND EXCHANGE IN THE ANCIENT NEAR EAST

INSTITUTE FOR THE STUDY OF THE ANCIENT WORLD (ISAW),
NEW YORK UNIVERSITY, 7TH MARCH 2016

PROGRAM

- 10:00 **Introduction**
ARNULF HAUSLEITER, ISAW, New York University / DAI Berlin
- 10:10 **The Old Assyrian Trade as a Model of Long-Distance Interaction in the Middle Bronze Age**
GOJKO BARJAMOVIC, Harvard University
Response: LORENZO D'ALFONSO, ISAW, New York University
Chair: NANCY A. HIGHCOCK, New York University
- 11:00 Coffee Break
- 11:20 **Production of Knowledge in Contact Zones: Mari and Tigonānum in the Old Babylonian Period**
BEATE PONGRATZ-LEISTEN, ISAW, New York University
Chair and Discussant: JONATHAN VALK, ISAW, New York University
- 12:00 Lunch at ISAW
- 13:00 **The MBA/LBA Transition at Tell el-ʿAjjul in the Light of Exchange between Cyprus and the Eastern Mediterranean**
CELIA J. BERGOFFEN, Fashion Institute of Technology, State University of New York
- Transitions in the Material Culture of 2nd Millennium BCE in North Arabia**
MARTA LUCIANI, ISAW, New York University / University of Vienna
- Discussant: ROBERT HOMSHER, Harvard University
Chair: IRENE SOTO, ISAW, New York University
- 14:15 Break
- 14:30 **Saww: The Middle Kingdom Harbor of the Pharaohs to the Land of Punt***
KATHRYN BARD, Boston University
Chair and Discussant: LISA SALADINO HANEY, University of Pennsylvania
- 15:10 Coffee Break
- 15:30 **Middle Grounds, Contact Areas, and the Assyrian Empire. The case of the Syrian Lower Euphrates Valley, Iron II period**
MARIA GRAZIA MASETTI-ROUAULT, Ecole Pratique des Hautes Etudes / Sorbonne, Paris
- 16:00 **Tell Jemmeh: Social Identity at a Cultural Crossroads**
ALICE HUNT, University of Athens, GA, Center of Applied Isotope Studies
Chair and discussant: ARNULF HAUSLEITER, ISAW, New York University / DAI Berlin
- 16:40 **Conclusions** (until 17:00)
- 18:00 Evening Lecture: **Qasr Shemamok – Kilizu in the Erbil Region: a Contact Area in Northern Mesopotamia? The First Four Campaigns of a French Mission (2010–2014)***
OLIVIER ROUAULT, Université de Lyon

* Not published in this volume.

INTRODUCTORY REMARKS

Arnulf Hausleiter

Berlin

1. Cultural contacts and exchange are constituents in human behavior – ancient and modern. Within archaeology, in particular in that of the Western Asia, the topic and related phenomena have been intensively studied during the last decennia leading to a review of the cultural and economic and also physical landscapes all over the Ancient Near East. While earlier years saw an interest in the debate on economic systems or models of ‘global’ character, such as the big households in 3rd millennium BCE Mesopotamia (*oikos*) or market-oriented economies, more recently, based on context-related approaches, the discussion of the agents of trade, exchange, and pertaining administrative processes have been addressed, adding valuable information of the actual practices of the circulation of goods. Disciplinary approaches were abandoned, and the borders between “archaeology” and “texts” – for a long time the main constituents in terms of tangible material culture, if it comes to contacts and exchange – were increasingly bridged.

The nature of the data allowed, on the one hand, for the investigation and reconstruction of ‘micro-historic’ dimensions of contacts, trade and exchange; on the other hand, theoretical models from economy, social and historical studies, such as World System or network theories have equally been used to develop reconstructive scenarios for those processes connecting “distant worlds” with each other. In this context, the major exhibition “Beyond Babylon” (Aruz *et al.* 2008) of the Metropolitan Museum of Arts, forms a significant example, widening our understanding of contacts and contact zones in Western Asia and the Mediterranean as visible in the remains of all aspects of the material culture which survived over the millennia. Nevertheless, exceptional archaeological contexts for trade and exchange, such as the Ulu Burun shipwreck, continue to be rare case studies.

In the last 20 years, the scale of the cultural, geographic, socio-economic, and, at least until now, to a lesser extent political dimensions of contacts and exchange has been substantially impacted by the inception of a systematic investigation of one of the unexplored areas of Western Asia, i.e. the inner parts of the Arabian Peninsula, from where new scientific results are currently being provided on an almost daily basis.

It is in fact new archaeological evidence from the northwestern zone of Arabia, among them the results of the work of the expedition at the oasis of Taymā³, which, next to the interdisciplinary *ambiente* of ISAW and its research focus on pre-modern economies, was one of the reasons for holding this workshop. The site, a human-made groundwater-fed oasis and major trading hub on the Arabian Peninsula (Hausleiter – Eichmann 2018), has usually been associated with the 1st millennium BCE long-distance overland trade of aromatics and other commodities. The transport of these goods, at that time, has been carried out with the domesticated *camelus dromedarius* on the “Incense Road” connecting South Arabia with the Eastern Mediterranean. In reality, this trade route was only a part of an overarching network covering the entire Arabian Peninsula. The fact that – in North West Arabia – the “complex Bronze Age to Neolithic trajectory that parallels many developments elsewhere in Arabia” (Magee 2014: 144) increasingly takes shape calls for a thorough review of previous explanatory paradigms and opens the space for new interpretations.

Since the Arabian Peninsula, covering approx. half of the 6 million km² large area of Western Asia, has been understood for many years as periphery or remote area, one further stimulus of this workshop was to investigate the connectedness (not only) of Arabia with the adjacent parts of the ancient Near East, by this questioning the validity of the center-periphery model which for long characterized the debate. In the meantime, it has become clear once again, that it served as one of the landbridges crucial for hominine dispersal all over the planet (Groucutt *et al.* 2021), while new archaeological and environmental data have been provided by recent interdisciplinary research projects on reconstructing climate change and human adaptation processes (Neugebauer *et al.* 2022).

One of the major factors of human activities is the fulfillment of material needs. Therefore, resources were identified, exploited, and traded. For a long time, archaeological research on exchange and cultural contact adopted a comparative perspective focusing on objects and artifacts, implying implicitly that they are invariable in function through time (Ulf 2014). However, the role of culture is increasingly understood as a highly dynamic and constantly subject to change. At the same time, the

formerly postulated connection of a close overlapping of ethnic entities and cultures has been abandoned. Presentday studies of contacts and exchange as well as cultural transfer are based on the concept of co-existing cultural worlds interacting with each other in contact zones (cf. Barjamovic 2018, 128, fig. 5). Instead of often decontextualized artifacts, the individual and its different social identities within groups through time are part of current research strands. Therefore, “the historical outcomes of exchange and borrowing between societies” (Wengrow 2010: xviii on the nature of “civilization”) are among the driving forces of holding this workshop.

The study of long-distance connections in Western Asia continues to include the study of archaeological materials (cf., recently for Eastern and Central Arabia, e.g. Laursen – al-Otaibi 2022), but also led to an augmented integration of archaeometric methods, such as, e.g., petrography, residue or isotope analyses, thus drawing attention to raw materials, resources, and environments, while at the same time adding to the tangible aspects of contacts and exchange (cf., e.g., Huber *et al.* 2022). Furthermore, the application of state-of-the-art remote sensing technologies transferred the reconstruction of trade routes on a new level (Städtler 2023), whereas the reconstruction of movement of people is currently object of analytical studies of ancient DNA; the investigation of climate change in this context aims at defining a larger framework for human agency.

2. Our workshop predominantly drew on the historical exploration of archaeological, textual, and archaeometric data. Specialists from these domains gathered at ISAW to discuss aspects of the history of contacts and exchange from various perspectives under the headlines of culture, economy, and politics. By focusing on a number of case studies from different regions and based on different types of sources, the workshop aimed at offering an overview on the topic, including most recent research, as well as instigating an interdisciplinary discourse of specific processes and contexts of different scales. Thereby, the subdivision of this book into five sections results from the geographic-historical horizons of research reaching from Western Asia to the Eastern Mediterranean and Egypt; it is probably not without coincidence, that the 2nd millennium BCE forms a culminating point in this book, since not only “the world of the Middle Bronze Age was vast and open” (Larsen 2008: 13), but both ancient and new research data of this period, amongst, other, are part of the current discussion.

The organization of the volume reflects the original program of the workshop (p. viii), of which each section saw an introduction, up to two main papers, and a response. Eleven papers are published in the present volume. Its first section deals with the Old-Assyrian trade between the city of Ashur and the area of central Anato-

lia, in particular the *kārum* at Kaneš (N. A. Highcock, G. Barjamovic, N. A. Highcock and L. D’Alfonso). Quite a different aspect, i.e. the production of knowledge in the Upper Mesopotamian contact zone, is debated in the second section (J. Valk, B. Pongratz-Leisten). While transitions and transformations from the Middle to Late Bronze Ages in the Levant and Arabia characterize the third section (C. J. Bergoffen, M. Luciani, R. Homsher). Old and Middle Kingdom Egyptian trade relations are discussed in the fourth part (L. Saladino Haney). At last, Iron Age interactions in the context of the Neo-Assyrian empire are thematized in the two contributions of the fifth section of the book (M. G. Masetti-Rouault, A. M. W. Hunt).

3. The *Introduction to the Old Assyrian Trade Session* by Nancy A. Highcock (British Museum) gives an overview of the changing research strategies of the Old Assyrian trade, characterized by the reconciliation of the cuneiform record and the archaeological material. This led to the study of “larger questions concerning issues of identity, cultural interaction, art and iconography, and the practice of day-to-day life in the settlement”. Secondly, drawn from the review of the dynamics between Assyrian merchants and the local Anatolian population, recent research “sought to rectify the power relationships of the two groups by models of cooperation and cultural hybridization”.

Gojko Barjamovic (Harvard University), on *States, Markets and Overland Trade in the Early and Middle Bronze Age*, departs from facts and figures of the “(probably) ... best documented example of a long-distance network” of the ancient world, i.e., more concrete: “750 annual donkeyloads”, then steers toward the bigger issues of “production, financing, transportation infrastructure, and consumption” by putting different datasets together. As to the socio-political setting, Old Assyrian trade, run by entrepreneurs, “was built on private initiative, but was dependent upon state support and facilitation”. By contextualizing the known regional commercial circuits within Anatolia and Assyria with the information on sources of raw materials, such as silver, copper, tin, on the one hand, and archaeological data from settlement history in the region on the other, the immense geographic dimension of trade networks, stretching from the Aegean to the Balkans, the Caucasus, Northern Syria, and Egypt becomes visible. The socio-political developments of 3rd millennium BCE Mesopotamia (after the downfall of the Ur III state), Syria (in particular the role of Ebla), Iran, and the Gulf constitute the base of these 2nd millennium BCE trade systems.

In their response *Dynamism and Scale in Western Asian Bronze Age Trade Networks*, Lorenzo D’Alfonso (ISAW/ NYU) and Nancy A. Highcock (British Museum) draw attention to a number of specific cases (e.g., OB Sippar and the unbalanced archaeological record at keysites

such as e.g. Ashur) and pledge for “long-distance trade [to] be analyzed within its specific context”, otherwise, “we risk losing the specificity of the goals and demands of individual polities, and therefore, their deep reasons for their political and cultural differences”.

Jonathan Valk’s (University of Helsinki) *Reflections on the Dynamics of Cuneiform Knowledge Production in the ancient Near East* consider the transmission the cuneiform scholarly tradition over the ancient Near East as part of manifest cultural contacts. The spread of cuneiform happened through “scholars in charge of tablet houses and comparable institutions [who] are known to be itinerant, moving across the Near Eastern landscape in pursuit of appropriate opportunities”.

Consequently, the “internationalism” of late 2nd millennium BCE ancient Near East, is placed into the first part of the same millennium BCE by Beate Pongratz-Leisten (ISAW/NYU) in discussing *Production of Knowledge in Contact Zones: Mari and Tigunānum in the Old Babylonian Period*. The significance of the textually attested kingdom of Tigunānum most probably arose from its location near to the metallurgical trade routes of Upper Mesopotamia and Anatolia. While underlining the fluidity of ethnic and political borders for the spread of Babylonian knowledge in spite of the political fragmentation of early 2nd millennium BCE, the difficulties in defining borders of “cultures of knowledge” are addressed. Based on the observation that the palace of Tigunānum “is the motor of the *compilation* of knowledge”, she argues in favor of the primary role of institutions in the *spread* (italics by the present author) of knowledge, analyzing divinatory texts from the palace’s library. The political alliances of the 2nd millennium BCE saw dynamic and open networks of knowledge.

While Upper Mesopotamia, Anatolia and its neighbors are discussed largely on the grounds of textual evidence, this perspective considerably changes when approaching the Levant. Starting with *The Middle to Late Bronze Age Transition at Tell el-‘Ajjul in the Light of Exchanges between Cyprus and the Eastern Mediterranean* by Celia J. Bergoffen (Fashion Institute of Technology), archaeological data (pottery) as expression of cultural identity and, if found in other cultural contexts, as evidence for contacts, play an important role for historical reconstruction. In highlighting the archaeological contexts of Tell el-‘Ajjul in the frame of regional political history and the pottery record of Cypriot wares at the site, the evidence points to a continuation of trade relations with Cyprus, regardless the increasing Egyptian incursions in the region. Based on the presence of White Slip I pottery, she follows that there was a continuation of contacts at Tell el-‘Ajjul at times, when other sites had ceded to participate to the networks of exchange.

As outlined above, until very recently, evidence for Bronze Age occupation and long-distance contacts on

the Arabian Peninsula were hardly considered in the debates of Western Asiatic exchange systems (see, e.g., Liverani 1997). Based on the results of the excavations at the oasis of Qurayyah, Marta Luciani (University of Vienna), addresses *Transitions in Material Culture of the 2nd millennium BCE: The Middle Bronze to Late Bronze Age Shift seen from Northwest Arabia*. The revised dating of stratified (Standard) Qurayyah Painted Ware (SQPW, formerly ‘Midianite Pottery’) to the transition from MBA to LBA stays in the context of large walled urban oasis settlements in the region already attested to in the Early Bronze Age. MBA-LBA painted pottery from the site constitutes an adequate tool to investigate “to which extent North Arabia was part of the greater Eastern Mediterranean continuum already at this stage”. In fact, the “transition from handmade metal skeuomorphs to wheel-finished, bichrome-painted vessels” at Qurayyah is identified as phenomenon mirrored in other eastern Mediterranean pottery productions, and connected with the technological innovation of the use of the fast-turning wheel. Nonetheless belonging to the “tapestry” of the ‘bichrome era’, “every painted assemblage wove its individual identity”. In other words, previous paradigms regarding northwestern Arabia, in particular the influence of Egypt, are now replaced by a much more balanced perspectives considering all cultural spheres involved, in which “entanglement (...) must have affected both sides”, i.e. the eastern Mediterranean and Arabia.

In his response to C. J. Bergoffen and M. Luciani, Robert Homsher (San Francisco) deals with *Connections and Transformations in the Southern Levant during the 2nd Millennium with a view from Megiddo* focusing on “the degree of open connectivity as a catalyst for the indigenous development of complexity”. EBA trade connections between the Levant and Arabia (with resins and gemstones) may explain the longstanding connection between these areas, with Egypt to be added. These networks also allowed for a widespread distribution of technological innovation, as evidenced by the presence of Levantine-style weapons made of copper alloy at the oasis of Taymā’ at the turn of the 2nd millennium BCE. Archaeometric analyses indicate a more complex (i.e. not unidirectional pattern) of exchange regarding, e.g. the flow of metallurgical raw materials in the region. Both processes, technological innovation and the development of social complexity, in the 2nd millennium BCE, “facilitated each other as mutual forces of socio-cultural evolution”. The fundamental changes in material culture between MBA and LBA, as opposed to the manifest continuity in settlement, coincides with “socio-political reorganizations in the LB related to boundaries created by the assumed city-states (...), in turn altering the modes of ceramic productions and creating a more controlled economy”.

Similar to the discussions of cultural contacts in Western Asia, the consideration of the Red Sea trade was often limited to the Egyptian perspective. Lisa Saladino

Haney (Carnegie Museum of Natural History, Pittsburgh), in her contribution on *Power and Prestige: Egyptian Red Sea Trade During Old and Middle Kingdoms and its Place within the Royal Redistributive Network*, offers a detailed overview on the state-controlled trade of commodities over centuries which contrasts “the more entrepreneurial spirit present in some areas of the Near East in the period”. The wider scope of her contribution, however, lies in the interest to debate the cross-cultural network of differing trade mechanisms. Next to the array of written and arthistorical sources from Egypt, archaeological sites at the eastern coast of Egypt, among them Mersa Gawasis, offer precious complementary information on the infrastructural challenges of the sea-based trade as do the Red Sea conferences of the last years.

Turning towards 1st millennium BCE Syro-Mesopotamia and the Levant, two contributions raise the issue of cultural identity on the background of a dense archaeological and historical documentation. Maria Grazia Masetti-Rouault (École Pratique des Hautes Études / Université Paris Sciences et Lettres), *Middle Grounds, Contacts Areas, and the Assyrian Empire. The Case of the Syrian Lower Euphrates Valley, Iron II Period* in her historical-political analysis, applies on the Middle Euphrates a different explanatory model than in Western Syria and the Lower Euphrates, where Assyria and Babylonia occupied territories for economic reasons. The “parallel colonization” at the southwestern flank of the Assyrian empire, she proposes to read “as a more complex and ‘private’ – as opposed to ‘public’, i.e. state driven phenomenon, and as an answer to economic and social needs in the respective metropolises”. On a theoretical level, the ‘Middle Ground’ model would allow for cultural encounters and joint projects among different identities in this particular context.

Alice M. W. Hunt (University of Georgia), *Tell Jemmeh: Social Identity at a Cultural Crossroads*, in combining anthropological and material science, understands “material culture as the dynamic medium through which relationships and identities are negotiated, established and maintained”. Closer investigation of a specific bowl of 8th–7th century BCE Assyrian Palace Ware (PW), identified as “the ceramic version of the *adê* bowl” (most probably of the same ritual connected to the renewal of loyalty oath to the god, land, and king of Ashur) at Tell Jemmeh revealed considerable technological and morphological differences to PW in the homeland or the annexed territories of the Assyrian empire. Size, manufacture and especially its surface treatment with red slip – regionally attested at Samaria Ware – suggest that the community at Tell Jemmeh “values the social identity of being considered cosmopolitan, by both themselves and other cultural audiences”, thus having status as the only social value and semiotic meaning, thus transforming the Assyrian standards into own cultural reference systems.

4. While these introductory remarks aimed at offering an initial overview on the content of the volume, the contributions themselves invite the readers to specific discussion of particular contexts and research questions.

As a tentative synthesis of the workshop and the contributions of this volume, some major trends can be recognized: the geographical dimension of (mainly, but by no means exclusively) 2nd millennium BCE cultural contacts and exchange networks within Western Asia reaches far beyond the boundaries of the contact zone “Ancient Near East” as defined so far, and other systems were operating in adjacent regions (Egypt, Arabia as well as Iran, Central Asia, Africa, India and South Asia). Thus, the Western Asiatic networks are also part of larger ones. At the same time, it has become clear, that a closer look on single case studies of specific datasets of material culture is important for improving our understanding of specific dynamics (such as continuities or discontinuities in settlement/occupation) and the scale of contacts and exchange. Thereby, interdependencies of landscapes and environment, socio-economy, politics, technological innovation, public and/or private actors as related to cultural contacts can be traced, analyzed, and reconstructed on a detailed level. The density of data of 1st millennium BCE Mesopotamia contrasts the still fairly unbalanced datasets available in different regions during the Bronze Age, at the same time, offering most detailed insights into the interplay between political systems and different cultural adaptation processes. Finally, a major conclusion from the contributions is the observation that the perspectives of all participants in the complex exchange relationships and their respective cultural contextualisation are and must be increasingly being taken into account.

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I. OLD ASSYRIAN TRADE

INTRODUCTION TO THE OLD ASSYRIAN TRADE SESSION

Nancy A. Highcock
London

The long distance trade of raw materials and other goods throughout the ancient Near East is evident from the Neolithic period (Cauvin *et al.* 1998), but the human agents behind such trade only become visible with the proliferation of textual records recording such activities in the 3rd millennium BCE. The professional designation of merchant (Sum. DAM.GÀR; Akk. *tamkārum*) appears across a spectrum of textual genres including lexical lists and royal inscriptions, and by the Ur III Period (2111–2004 BCE), records directly relating to their activities and movements provide the first concrete evidence for their position both within the royal administration and outside of it, as they formed far reaching socio-economic networks through their roles as state agents and as private entrepreneurs (Garfinkle 2012). The merchant as a social actor is further fleshed out in the records of the early 2nd millennium in the archives of urban centers such as Nippur, Sippar, Babylon, and Mari (Leemans 1959, 1960; Harris 1975; van de Mieroop 1992; Seri 2005; Charpin 2004). It is clear from these archives that merchants participated in local trade and long-distance ventures, continuing the expansive intercultural interactions that had existed in the ancient Near East and beyond for millennia.

The richest merchant archives from this period, however, come not from the well-documented cities of Mesopotamia, but from the city of Kaneš (modern day Kültepe) in central Anatolia. Kaneš was the main center for the long-distance trade network established and maintained by merchants from the northern Mesopotamian city-state of Aššur some 1000km to the southeast. These “sons of Aššur” travelled by donkey caravan from their mother city to trade tin and wool for silver and gold in addition to running the copper trade within Anatolia itself. They established around 40 different trading settlements across the central Anatolian plateau, though a minority of these settlements can be definitively identified with sites in the archaeological record (Barjamovic 2011). Kaneš is the best known due to 70 seasons of archaeological research at the site and to the nearly 24,000 cuneiform texts excavated from Assyrian and Anatolian private archives in the lower town settlement (Özgüç 1950, 1953, 1986, 2003; Kulakoğlu and Kangal 2010, 2011; Atici *et al.* 2014). Indeed, these records provide not only the most data for long distance trade in the ancient world, but also comprise the bulk of our knowledge concerning the

Assyrians and their Anatolian contemporaries during the Middle Bronze Age. The texts date to two distinct periods of Assyrian occupation in the lower town: Level II, when the vast majority of the texts were produced, dates from the mid-20th century to late 19th century BCE and Level Ib, beginning when the settlement was re-established after a devastating conflagration and lasting until the end of the 18th century BCE when the Assyrian presence in Anatolia came to an end.¹

Assyria during the early 2nd millennium BCE was a small, contained state defined by the city of Assur itself, located on a high promontory of the western bank of the Tigris River just north of the confluence between the Tigris and Lower Zab. The city plan is less well known for the Old Assyrian Period due to the extensive building projects of the later Middle and Neo-Assyrian periods. Apart from a handful of school texts and several royal inscriptions, all textual evidence for Old Assyrian society was produced by the merchants in the form of letters, economic records, legal cases, treaties and a small number of literary texts. Subsequently, the political history and cultural practices of Assur in the early 2nd millennium are often viewed through the *camera obscura* lens of the long-distance trade system. This necessary approach has often garnered the conclusion that the Old Assyrian trade network, founded upon the venture trade of many independent actors able to travel to, and settle in, foreign territories, was a unique phenomenon in the ancient Near East. Indeed, the first publications of the Old Assyrian evidence helped spur scholars to question previous models defining ‘ancient’ vs. ‘modern’ economies and to progress the debate concerning private vs. public elements in larger economic systems of the ancient Near East. Several seminal studies on the mechanics of the trade and the structures of Old Assyrian society have been produced since the first methodical excavations of Kaneš commencing in 1948 and the field has since expanded to include a broad research agenda encompassing multiple perspectives on Assyrian and Anatolian history (Larsen 1967, 1976, 2015; Veenhof 1972, 2008; Dercksen 1996, 2004; Barjamovic 2011).²

¹ See Barjamovic *et al.* 2012 for a comprehensive approach to the Old Assyrian chronology; for the discussion of chronology based on tree-ring data see Manning *et al.* 2016.

² See Michel 2021 for bibliography updated until 2019.

In recent years, several new, important, and interconnected, research agendas have emerged from the rich dataset provided by the cuneiform record and the archaeological material excavated from Kaneš/Kültepe and related sites in Anatolia. One trend has involved reconciling these two streams of evidence as they have often been considered separately by scholars working from within their own fields. In addition to reconstructing the complex and interconnected archives of both Assyrian and Anatolian merchants,³ recent studies have also utilized both text and object in addressing several larger questions concerning issues of identity, cultural interaction, art and iconography, and the practices of day-to-day life in the settlement. Several of such studies can be found in the published proceedings of the biannual Kültepe International Meetings (Kulakoğlu and Michel 2015; Kulakoğlu and Barjamovic 2017; Kulakoğlu, Michel and Öztürk 2020; Kulakoğlu, Kryszat and Michel 2021) and in the volume 'Current Research at Kültepe-Kanesh: An Interdisciplinary and Integrative Approach to Trade Networks, Internationalism, and Identity', which represents the initial culmination of these efforts and forges a path forward for future research (Atici *et al.* 2014).

Another research stream has been dedicated to disentangling earlier assumptions about that dynamics at play between the Anatolian natives and the Assyrian merchants. These approaches have cast off the label 'Colony Period' for this era in Anatolian history and instead have sought to rectify the power relationships between the two groups through models of cooperation and cultural hybridization as opposed to those steeped in imperial exploitation (Stein 2002; Lumsden 2008; Michel 2014a; Larsen and Lassen 2014; Yazıcıoğlu-Santamaria 2017; Hefron 2017). Part of this process involves examining the evidence from the Anatolian side and defining the Assyrian merchants as one set of people operating within the greater diverse and fluctuating landscape of central Anatolia.⁴ Instead of rendering the Assyrian trade network as a foreign system imposed upon a local geography, this approach embeds the Assyrian merchants within this landscape that included stakeholders from the Anatolian city-states and further abroad. This model can then be expanded in scale to describe the Assyrian long-distance trade as just one of many interlocking systems in which the Assyrians were just one group interacting with the inhabitants of the Anatolian city-states and abroad. As the next paper will demonstrate, the Old Assyrian network is not an isolated phenomenon but an integral part of wider networks of material and knowledge exchange in the early 2nd millennium BCE.

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STATES, MARKETS AND OVERLAND TRADE IN THE EARLY AND MIDDLE BRONZE AGE

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The Old Assyrian commercial system probably constitutes the best documented example of a long-distance trade network from the ancient world.* It is known through the exceptional survival of some 23,000 merchant records written on clay tablets that came out of the private archives of at least five hundred Assyrian traders living at the site of Kültepe (ancient Kaneš) in Central Turkey.¹ The closest structural parallels to these records are found in the medieval town archives of the North Italian city-states and in the Cairo Genizah.

The basic principles governing the exchange have been known for more than fifty years (Garelli 1963; Larsen 1967; Veenhof 1972), but only recently have the three important parameters of geography, chronology and volume become sufficiently well established to help anchor the analysis (Barjamovic 2011; Barjamovic *et al.* 2012; Stratford 2017). Alongside a shift towards the study of commercial archives in their entirety (Michel and Garelli 1997; Larsen 2010, 2013, 2014; Veenhof 2010, 2017), this new framework sets important ramifications for an assessment of the intensity of commercial activities. A conservative estimate of the Assyrian trade during the best-attested period 1895–1865 BCE can now be set at 750 annual donkey-loads from Aššur to Anatolia (Barjamovic 2018). This corresponds to several tons of tin and thousands of high-value fabrics. Trade in such volumes raises important questions of production, financing, transport infrastructure, and consumption.

I have elsewhere argued that the sources as we have them make sense only if we infer the existence of an extensive structure of supporting institutions and industries that are otherwise invisible in the texts (Barjamovic 2018). We know that the Assyrians sold most of their donkeys upon arrival in Anatolia. This raises the question of who bred, fed and trained in the excess of one thousand animals needed by the merchants each year. Similarly, we must ask who produced the required saddling and leather goods. And how about the thousands of highly valuable textiles themselves? Who tended the flocks, plucked, washed, combed, weaved and dyed the

fiber, and where and how? And what about transport? We know that hundreds of donkeys passed through inns in Syria and Anatolia each year. Who produced the food for the animals? Where did the workforce come from? How was the trade monitored and guarded? How did the maintenance of physical infrastructure, taxation and the proceeds from the traffic affect local economies?

The Old Assyrian archives demonstrate that the Anatolian circuit did not stand alone. We see the contours of a system that could function the way it did only if there were a series of other commercial circuits surrounding it. The Assyrian system of trade linked at least two other networks – one that entered Assur from the south and east, and another one that stretched west from Purušhaddum (Barjamovic 2008). Only this can account for the large volume of goods that passed annually through the hands of the Assyrians and explain why Purušhaddum in particular constituted such a large market for their trade goods. It was not due to its size or its location close to silver mines as has formerly been proposed (e.g. Larsen 1967: 94 n. 47; Larsen 1976: 104; Veenhof 2008: 150–151; Forlanini 2008: 64–65). It is because of its key position on a route that controlled access into the next trade circuit. Similarly, this explains why certain regions appear to be completely absent from the Assyrian records, such as Northwestern Syria, Cilicia and the southern half of the Konya Plain (Barjamovic 2019). These were presumably out of bounds for the Assyrian traders.

We know something about how this system came into being. Drafts of political and commercial treaties survive to show that trade was based on mercantilist principles of protectionism similar to the later Hanseatic League or the Italian commercial circuit in the Flanders. Like those two later examples, the Assyrian trade went over land, and was based on permanently stationed agents and protection provided by the polities transited by the traders in return for taxation. In some territories, the Assyrians were successful in setting up treaties of transit. Other areas allowed both transit and trade. And yet others forbade access to Assyrian merchants, presumably because they belonged to other monopolies.

The advantage of such a system is that it minimizes risk and replaces insurance. It eases finance and transport, but requires a strong institutional and polit-

* I am grateful to Robert McC. Adams for our inspirational conversations in 2013 and 2014 that led on to some of the topics explored in this article. It publishes a talk given in 2016 for which the final draft was submitted in 2017. Only bibliographic updates have been possible since then.

¹ For a detailed introduction see Larsen 2015.

ical component to negotiate and uphold. This we can't expect would have existed everywhere and at all times. It depends on a compatibility of institutions and social organization between the parties involved that cannot have applied universally. In fact, it seems likely that the system reflected in the Assyrian sources of the 19th century BCE depended on the fragmented nature of the political scene during the period.

A characteristic trait of the Old Assyrian system seems to be its high degree of political and economic specialization, made up as part of a package that included technologies of collective governance, literacy, diplomacy, communication and financing. This went hand in hand with a developed system of agency and legal mediation. Commerce was built on private imitative, but was dependent upon state support and facilitation. The small size of the polity effectively meant that the same group of individuals shared the roles of agents, financiers and legislators. All actors were closely related in terms of kinship, which meant that a system could be built on mutual trust instead of competition (Yoffee and Barjamovic 2018). This is an important observation for the present context, since it allows us to define the entire city-state of Assur as a single corporate entity in external competition with a number of similarly organized political units.

For the purpose of this volume, it is important to emphasize that the overall pattern of mobility and the traded volume was by no means unique to the Assyrian corporation. There are traces of other commercial networks active in Anatolia at this same time that can ultimately be linked up with Syria, the Aegean, Egypt, the Caucasus, and the Balkans (Barjamovic 2018). These routes and their development can be traced from the EBA and suggest the gradual establishment of what was essentially a multi-layered and multi-centered structure of interlocking circuits, which, in spite of not being in direct touch, formed an interdependent organism in which events at one end affected conditions at the other. Developments in the material record can be used to support the notion gained from the Old Assyrian texts that commercial structures built up during the late 3rd millennium primarily by state actors led to an explosion in the use of metal in common households just after 2000 BCE.

A seemingly swift adaptation of technological innovations in metal production, including furnace-based smelting, and the introduction of draft induction and intentional fluxes, allowed a large-scale production of 'true' alloys from complex ores. There were several important complementarities knitting together highlands and lowlands, but bronze was apparently one of the most fundamental. Resultant military advances grew in geographic scale and impact, culminating beyond the alluvium in a wide-ranging, if still relatively transitory, Akkadian expansion (Steinkeller 2020).

Records from Ebla dated to the 24th century BCE yield references to huge amounts of silver that can almost only have originated in Turkey (Ezer 2014; Kulakoğlu 2017; Barjamovic 2018, 2019), and it now seems clear that the rise of grand palatial buildings in Central Anatolia in the 25th century BCE – including those at Yassıhöyük, Kültepe and Karahöyük – should be linked to a dialectic development of political centralization and long-distance trade indirectly evidenced at Ebla (Archi 2017).

This picture fits with the growing corpus of research produced by Efe, Erarslan, Şahoğlu and others (Şahoğlu 2005; Efe 2007; Erarslan 2011; Sarı 2012), which tracks deep qualitative changes in settlement structure, pottery assemblages, routes and exchange patterns in the Euphrates Valley and Western Anatolia around this time. When a single text at Ebla mentions 2.4 tons of silver in bars (ARET VII, 401 and cf. Archi 2017), then this has serious implications for the political and economic infrastructure of the region that produced the metal. As in the Old Assyrian example, we must reconstruct a network of settlements, production sites, and polities able to manage the mining, processing and transport. In this example, the silver would have been refined out of some 200 tons of ore in a process that would have required up to ten times as much firewood.

The centers that managed such operations can't have been trivial players. Yener's work in Niğde Province has identified hundreds of mining galleries and ore processing sites, giving us a detailed picture of the conditions under which metallic ores were retrieved and refined (Yener 2000). But silver ores associated with ancient workings have been found in several other locations along the southern Taurus fold.² Copper was even more readily available; large source areas include the Pontus and Ergani (DeJesus 1980; Barjamovic 2011, §5.1; Yener *et al.* 2015). One text from Ebla mentions 1850 lance heads of bronze and 3680 lance heads of copper (ARET III, 95), another talks of 1000 lance heads of bronze and 250 *martu*-swords (ARET III, 777). The tin for these objects probably came from Anatolia (Yener 2000; Lehner 2014; Yener 2015; Johnson *et al.* 2017), although eastern sources could also be in play (Nezafati *et al.* 2009; Thornton 2009).³

During the late 3rd millennium, rulers of the south came to govern increasingly autocratic formalized managerial structures. The northern alluvial regions were occupied and subjugated, and a fluid mix of cultural dominance with mercantilism, inter-dynastic weddings and military invasions extended Mesopotamian political authority, at least occasionally, over much of Syria and highland Iran. Public works included an emphasis on extensive physical infrastructure of canals, roads and strongholds, and probably also regime-imposed

² Cf. Barjamovic 2011, n. 1544 for a summary of the sources.

³ For early Iranian silver, cf. Nezafati and Hessari 2017. For early Caucasus, cf. Courcier 2014; Kvachadze and Shanshashvili 2016.

waterborne tribute and commerce. Tens of thousands of administrative records of the Ur-III state in particular, though remaining obscure in many respects, point to new levels of oversight and dimly hint at larger strategies of statecraft (Steinkeller 2017, §1.7).

The late 3rd millennium brings into focus a decisive shift most immediately evident in a greatly enlarged regional scale of integration, upward from the lower Mesopotamian alluvium, not merely in geographic magnitude, but in intensity of contacts interconnected with technical and economic complexity, and in the increasing tempo of change itself. These developments appear paralleled in the circulation of tin and tin-bronze, and may even have been its most decisive, precipitating feature (Laursen and Steinkeller 2017; Steinkeller 2020).⁴ Moving by land and watercourse, Ur-III representatives, messengers, and partially state-subsidized merchants seem to have been almost continuously in motion with little regard for formal political boundaries. With royal support they did much to establish imported Anatolian silver as a growing standard of exchange, and to manipulate its circulation to the benefit of the palace (Ouyang 2013).

A major tin source close to Mesopotamia that would be capable of supplying the entire sphere of interaction still eludes us. Possible, but not yet adequately known candidates have been identified in Turkey and in the Zagros mountains of Iran (Helwing 2009). References to much larger findings in distant Central Asia are more forthcoming (Muhly 1985; Alimov *et al.* 1998; Cierny 2002; Parzinger and Boroffka 2003; Cierny and Weisgerber 2003; Thornton 2009). Afghanistan already features as a known source of lapis lazuli and other gemstones well back into the 4th millennium BCE, and the geographical origin of tin used in bronze objects dated to the late 3rd millennium from Hissarlik on the coast of Anatolia has been traced to sources as far away as east Kazakhstan north of the Chinese frontier (Stöllner *et al.* 2011). It seems plausible, therefore, that the growth of large urban centers in Southeastern Iran, such as the site complex at Jiroft, reflect trade connections that are not otherwise directly visible in the material record (Steinkeller 2014; 2016).

During the late 3rd millennium, Iran, Anatolia, Central Asia and the Gulf coalesced into powerful political and population centers in their own right. This allowed the formation of long distance overland and maritime networks of exchange as well as the required extraction of metal on a hitherto unseen scale. Seen from Mesopotamia, places as far apart as the Persian Gulf, Central Asia, Anatolia and Egypt became viable trading partners and suppliers in an exchange seemingly based on a combination of metal and textiles, but with a series of other luxury products (Biga and Steinkeller 2021). The quasi-industrial model of intensive agriculture and textile

production developed and refined in Southern Mesopotamia during the 3rd millennium, apparently culminating in the system of the core Ur-III state, allowed a surplus production of high quality fabrics in particular, which alongside an apparent explosion in population (and hence labor) came to act as a power engine in a mechanism that ultimately linked the entire Old World. As argued by Rahmstorff (2011), the weight systems in use during the late 3rd millennium from the Aegean to the Indus, though following local standards, converged and were synchronized with each other probably as a result of an interconnected, large-scale trade.

Certainly, by the last half of the 3rd millennium, tin moved from Mesopotamia via the cities of Mari and Ebla in Syria in the direction of Egypt (Biga 2014; Biga and Steinkeller 2021), while links between the Anatolian coast, Thrace and the islands grew stronger and increasingly complex (Şahoğlu 2008; Erkanal and Şahoğlu 2016; Özdoğan 2016). Ur-III, with its standing armies and organized bureaucracy, messenger networks, and sophisticated water transport, seemingly was a forceful early exponent of demand for tin and bronze. The interest of the dynasty was apparently to amass its own supply of Anatolian silver as the publically recognized, monopolistic basis and instrument of its power.

It seems that the routes established and consolidated by the Ur-III state in turn came to constitute a pattern followed by its successors. Its demise and the ensuing political fragmentation may even have led to an increase in trade. This fluid, contested setting could have encouraged independent efforts of miners, merchants, transporters and state authorities.

Often in economic history, ‘regime change’ has been a compelling force for innovation. The breakdown of constrictive, authoritarian systems of rule across geographically large areas would have facilitated the growth of new networks of smaller mercantile communities, that then could come together through extensive, overlapping networks of procurement. In effect, we seem to see in the successful expansion and rationalization of a major new technology the source of a basically new mode of much wider, pan-regional integration.

The Isin-Larsa/Old Assyrian period, even though it involved structural devolution in many socio-political features, broke through the rigidities of Ur-III statecraft and caused an amplified exploitation of and trade in material resources. There was vigorous and venture-some development of the urban centers on the major trade routes out of Mesopotamia, including Mari, Ebla, Hahhum and Carchemish in Syria, and Kaneš, Durhumit, Wahšusana and Purušhaddum in Anatolia.

Returning once more to the Assyrian caravan accounts, we find in them the documentation of one such great trade route and its auxiliaries. It is unclear under what

⁴ For the importance of textiles, cf. Wilkinson 2014.

commercial monopoly the regions beyond the Assyrian zone of trade may have belonged, but possible candidates include the MBA incarnation of Ebla. A few Assyrian texts refer to merchants coming from that city to procure copper in Anatolia (Barjamovic 2018). That the Assyrians weren't alone in trading in Anatolia is supported by the discovery of a handful of texts at Kültepe, that are neither Assyrian nor local Anatolian (Hecker 1996; Michel 2010). They use a language, layout and ductus radically different from the Old Assyrian one, and seem linked to the scribal traditions of Syria. Also the personal names in those texts appear to be Hurrian and Amorite. And yet, they deal with the exact same mundane matters as their Assyrian counterparts: trade and legal disputes.

The Assyrian commercial monopoly on Kaneš appears to have been restricted to the trade in tin, which means that one can imagine competing networks of traders in other commodities active there as well. We have evidence from the same period for merchants from the Babylonian city of Sippar involved in trade as far away as Susa in Iran and at Emar, Carchemish and Haššum on the Euphrates (Barjamovic 2018). Closer to Kaneš, the renewed excavations at Tilmen Höyük have produced sealings of merchants coming from Sippar (Marchesi 2013), while nearby Alalakh is currently yielding finds that also plug it into the Syro-Anatolian interaction sphere.

Finally, excavations at Acemhöyük show that this site had close connections to Syria via a network that probably wasn't Assyrian. Sealings belonging to Šamši-Adad I and Aplahanda of Carchemish, which were attached to goods that ended up at Acemhöyük, were mixed in with exotica that had likely come there via Cilicia and the Konya Plain (Veenhof 2017; Barjamovic 2020). These include raw materials and luxury objects from as far away as Egypt in the form of an elaborate textile and hippopotamus ivory (Aruz *et al.* 2008; Lassen 2014: 260). Closer to home, raw tusks of Indian Elephant (probably from the Syrian subspecies) were found at the site (Deniz *et al.* 1991).

Obsidian discovered in Minoan sites on Crete but sourced to have come from the Hasandağ just next to Acemhöyük is a silent hint of a traffic running in the opposite direction (Carter and Kilikoglou 2007). More tantalizing clues to long-distance trade patterns include the finds of Anatolian-type pottery as far away as the 19th-century BCE necropolis at Golubovo in Bulgaria (Leštakov 2002).

A trade network originating at Ebla would explain the occasional mention of Eblaites in the Assyrian texts, as well as the presence of tablets written in the North-Syrian ductus at Kültepe. It would also give some background to a clause in the law stele of Assur, which forbids Assyrians to pay for goods in gold to Babylonians, Hurrians and Amorites (Hertel 2013: 75). All three groups were seen as competitors, and since gold as currency seems to have been reserved for payments into temple funds, it was not to be used to pay foreigners.

Ebla's function as a trading emporium that connected the traffic of raw materials and finished goods from the Mediterranean littoral down the Euphrates to the cities of Sumer and Akkad is well established for the 3rd millennium. Its commercial contacts with Egypt has also long been recognized, although a direct and systematic trade with the distant Nile Kingdom was proposed only recently (Biga and Roccati 2012; Biga 2014; Biga and Steinkeller 2021). Ebla supplied Egypt via a place called Dugurasu with commodities, such as tin and lapis, in exchange for gold, ivory and other African luxuries. Importantly, this contact with Egypt did not cease after the Early Bronze Age, as evidenced by the presence of Egyptian objects dating to the Middle Kingdom Period found at Ebla.

Another major player was Sippar on the Euphrates. Texts found at the site record the traffic in some of the same items known from the Assyrian sources, including *kutānum*-textiles, *amūtum*-metal, and lapis lazuli (al-Rawi and Dalley 2000). They also reflect a direct trade between Sippar and ports to the south and east, like Ešnunna and Susa, and refer to the existence of commercial procedures comparable to those known from the Assyrian records, such as payments made into temple funds.

A merchant colony of traders from Sippar is attested in Susa comparable to the Assyrian settlements in Anatolia (Walker 1980; Veenhof 2004). An archive recently published by de Boer adds some actual detail to the organization of the caravan trade in the south (de Boer 2021). All these records, which are contemporaneous with the bulk of the Assyrian archives from Kültepe, link the city of Sippar to the routes that brought tin across the Zagros and down the Diyala River, and refer to a trade network based on caravans and permanently stationed agents that shipped tin from the east and tons of copper from Dilmun along the Euphrates via Mari into Syria. The presence of merchants from Sippar in Mišlān on the Middle Euphrates further supports the notion that this city was a central player in a network that supplied the Levant with goods from Iran and the Gulf (Charpin 1989).

A final clue that the fall of the Ur III state led to major changes in the trade network comes from animal bones found in household waste deposits from sites as far apart as Turkey and the Southern Levant. While it appears that bronze did not venture far beyond the large public institutions prior to 2000 BCE, this situation appears to have changed abruptly at the beginning of the Middle Bronze Age, as suggested by analyses of cut-marks on animal bones conducted by Haskel Greenfield. His published work has concentrated on sites in Israel (Greenfield 2013), but his on-going studies of material from the Upper Tigris region in Anatolia produce similar results. The Early Bronze assemblages of animal bones from domestic contexts across a number of sites suggest that about 90% of the processed fauna was butchered using stone implements and that only some 10% of the animals were carved by metal tools. The pattern reverses in

layers dating to after 2000 BCE so that 10% of the bones bear the markings of stone tools, and 90% are cut with metal. If this finding can be further corroborated by data over the coming years, it suggests that metal implements entered common household contexts quite abruptly and supports the notion that the large quantities of tin and copper recorded in the Assyrian texts were part of a geographically wider shift in patterns of commerce and consumption. Perhaps the change in the status of bronze from being a palatial luxury to becoming a household resource was ultimately an effect of the aggressive commercial agenda of the Ur-III state. Certainly it appears to coincide with the establishment of the trading system evidenced in the records from Kültepe a couple of generations later.

Kültepe provides the single solid dataset for postulating the existence of a high-intensity trans-regional commercial circuit just after 2000 BCE. It also shows that this circuit cannot have been alone, and indirectly proves the existence of a voluminous production and manufacture on local and regional scale. It brings evidence for the existence of an interlocking system of commercial networks that formed a supra-regional, multi-centered, and interdependent structure. This structure allowed Central Asian sources of tin and Anatolian and Omani sources of copper to travel in a large enough volume to cause a shift in butchering on a household level reflected as far apart as the Upper Tigris and the Southern Levant. On an even broader scale the horizon links the Aegean and Arabia, Nubia and the Caucasus, Central Asia and the Balkans and allows us to interpret archaeological evidence of an international exchange whose volume and intensity is set into context and proportion by the Old Assyrian records.

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DYNAMISM AND SCALE IN WESTERN ASIAN BRONZE AGE TRADE NETWORKS

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A response to Gojko Barjamovic's contribution can only start by acknowledging the impressive level of innovation within the creative research stream he has produced in the years following the publication of his monograph on the political geography of Middle Bronze Age, and to a substantial extent, Late Bronze Age, Anatolia (2011). The term "research stream" has been chosen deliberately for as a scholar working within such a supposedly niche field, or *Orchideenfach*, like Assyriology, Barjamovic has reached out to creative minds from both within and beyond the field, integrating the work of archaeologists, historians and economists into his own research. Such collaboration has benefitted these other fields in turn and demonstrated the impactful contributions that the rich textual record of the early 2nd millennium BCE can bring to other areas of study. The volume edited by Barjamovic and archaeologists Levent Atici, Fikri Kulakoğlu, and Andrew Fairbairn, *Current Research at Kültepe-Kanesh: An Interdisciplinary and Integrative Approach to Trade Networks, Internationalism, and Identity* (2014), represents such a culmination of these efforts and forges a path forward for future research.

This research stream developed by Barjamovic is not entirely self-generated of course, as it is founded upon nearly a century of precise study of the thousands of tablets from Kültepe-Kanesh,¹ carried out from at least two generations of scholars from Turkey, France, Germany, The Netherlands, and prominently, Denmark. When the Kanesh tablets² became available to the academic community, the long dormant Old Assyrian trade network awoke and reached the interest of researchers outside ancient Near Eastern studies for the first time. Leo Oppenheim's contribution to Columbia economist Karl Polanyi's volume, *Trade and Markets in Early Empires* (1957), as well as Polanyi's own analysis of the Old Assyrian trade itself (1957: 17–26), impacted models of ancient economies for the next 30 years and continued to resonate even in the years beyond (Adams 1974: 246–248; Garfinkle 2012: 5–27). Over the last fifty years, through the substantial work

of translation and the subsequent historical syntheses, scholars such as Garelli, Larsen, Veenhof and Dercksen have provided powerful interpretative reconstructions of a trade system whose complexity and socio-political implications were fully unexpected for the pre-classical Near East. Even in the latter 20th century, western scholarship was still permeated by lingering evolutionary models of social complexity, and the Middle East was viewed through the lens of immutable economic and political stagnation predicated by Marx's Asiatic mode of production. The Old Assyrian record, ripe with examples of innovative trade mechanisms and enterprising merchants, opened a breach in both systems of thought.

The overall picture Barjamovic offers in this paper has absorbed and reorganized these thoughts, but more importantly, potentiates the work of those scholars through an interdisciplinary and inclusive approach. The innovative side of his approach, beyond his own 'Assyriological' reconstruction of the trade routes of the Assyrian commerce in Anatolia, derives from two changes of perspective: the introduction of quantitative analyses, and perhaps more crucially, the decision to study the Old Assyrian material as both embedded in its own historical context, but also as productive case study for greater understanding of how long-distance trade operated in the human past.

The quantitative aspect will be addressed first. It had long been clear that the cuneiform tablets from Kültepe offered very rich documentation for studying both the flow of goods between Aššur and Anatolia and from beyond the borders of Mesopotamia proper into southern Mesopotamia and up into Aššur. However, it was Veenhof's careful publication of the list of eponyms from Kültepe (2003), followed by refinements in chronology (Barjamovic *et al.* 2012; and very recently Manning *et al.* 2016) that finally allowed researchers to produce a diachronic chart of the transactions taking place at Kültepe. Furthermore, Barjamovic's reconstruction of the mercantile routes across northern Mesopotamia, Syria, and the Anatolian plateau (2011), bound these transactions to the physical landscape. With the axes of time and space at last entrenched, the Old Assyrian trade could be grounded in the greater context of early 2nd millennium trading networks.

¹ Cuneiform texts contemporaneous to the texts from Kanesh Level Ib were also discovered at Alişar and Hattuşa-Boğazköy. See Dercksen 2001. One rather uninformative tablet was discovered at Kaman-Kalehöyük under the direction of Professor Sachihito Omura.

² The archaeological excavations at Kültepe were directed by Tahsin Özgüç from 1948–2005 and have been continued under Fikri Kulakoğlu since 2006.

However, the textual and archaeological evidence leaves space to alternative views about the big picture offered by Barjamovic in his contribution. This derives not from a denial of his results, but from a different evaluation of them, made possible by the simple fact that a big picture in ancient history always builds from the way individual scholars integrate the known data to fill in the gaps created by the unavoidable loss of much basic information. The points we wish to discuss are not linked with his reconstruction of the overall mechanics of the Old Assyrian trade, to which we fully subscribe and quote again here below:

“A characteristic trait of the Old Assyrian system seem to be its high degree of political and economic specialization, made up as part of a package that included technologies of collective governance, literacy, diplomacy, communication and financing. This went hand in hand with a developed system of agency and legal mediation. Commerce was built on private initiative, but was dependent upon state support and facilitation.”

(Barjamovic, this volume: 14)³

The study of the quantitative data requires, per Barjamovic, that the trade is not limited to the Aššur-Kaneš axis and Anatolia: this system represents the *visible* portion of an extensive long-distance trade, traceable to the Early Bronze Age, from Europe and the Eastern Mediterranean to West Asia, including Egypt and the Arabian Peninsula, into Iran and Central Asia (Potts 1990; Frachetti 2008; Zettler and Horne 1998; Wright 2010; Pittman 2013). Indeed, current excavations and research at Kaneš itself are highlighting earlier interactions between central Anatolia and western Anatolia, Syria and Mesopotamia (Ezer 2014: 11–22; Kulakoğlu and Öztürk 2015). Furthermore, the quantity of goods moved yearly between Kaneš and Aššur requires that a similar, spectacularly complex and substantial trade be postulated for myriad other polities located within such a vast area. Additionally, highly complex and well-connected auxiliary industries, often left out of the Old Assyrian texts, must have also existed: pastoralists, miners, farmers, and others provided the materials that fed the entire trade system.⁴ For the sake of clarity, it should be stated that some of these conclusions are based on interpretations of data that other colleagues do not necessarily agree upon, such as role of Purushaddum and its silver trade mentioned in Barjamovic's paper (Forlanini 2008; Forlanini 2012). This notwithstanding, and even though the overall view offered reconstructs many passages beyond the data we see, the

ways in which these networks and industries interlocked is still unclear. Though the reconstruction is very consistent, coherent and plausible, the mechanics of such networks may well be tied to the particular social and political boundaries of these interacting and competing regions.

The data from Sippar, whose influence over northern Mesopotamia and Syria is well attested for the 2nd millennium BCE (van Koppen and Lacambre 2008/2009: 151–153), serves as an excellent case study for similar systems operating in the south and de Boer's analysis of an unpublished archive is very welcome. In addition to the existence of a similar *kārum*-system and operating trading procedures with regards to the south and east, the interactions between Sippar and Aššur should also be emphasized. For example, a text from Sippar includes several loans which occurred in the city of Assur and even mentions weights belonging to the 'house of the city', an institution only attested in Old and Middle Assyrian texts and seemingly unique to Assur (Walker 1980: 16–17; Seri 2006: 145; Dercksen 2000: 137; Dercksen 2004: Part 1). One of the merchants involved in these loan contracts, a certain Warad-Sîn, was an Assyrian who married and settled in Sippar, acting as an important agent in the exchange of goods between the south and Aššur (Veenhof 1991: 297–303). Such merchants and their activities provide the social landscape for which we can begin to ground the less tangible features of these other trade systems. Equally, the existence of parallel, sometimes possibly concurring circuits from Mesopotamia into Anatolia, has become increasingly more evident archaeologically (Marchesi 2013), and is implicit in other types of Assyrian texts. The clear Assyrian hostility towards 'the Akkadians' (i.e. those from Babylonia), present in a treaty between the *kārum* Kaneš and an unknown Anatolian ruler⁵ (Veenhof 2008: 186–187), and the Assyrian royal decree to keep gold out of the hands of 'Akkadian, Amorite or Subaraean' (Veenhof 1995: 1733) are clearly protectionist initiatives.

Furthermore, the scale of such long-distance trade in the south and in Syria is less clear. The Assyrians founded around 40 settlements across the Anatolian plateau and recent studies have placed the number of Assyrians living in the lower town of Kaneš during the earlier Level II period at 500–800 persons, or between 14% and 27% of the population at both ends of the possible spectrum (Hertel 2014; Michel 2014: 72).⁶ Even if one assumes that Kaneš was the largest community of Assyrians in Anatolia, the number of merchants living in the 23 known *kāruns* and 15 smaller trading posts (*wabartums*) must have comprised a fairly sizeable segment of Aššur's male

³ Here we would add that commerce was built on private, *family-based* initiative. Kinship ties were clearly of fundamental importance to the shape of the mercantile firms and to the overall structures of Old Assyrian society and governance. Multi-generational firms are less visible in the Old Babylonian evidence (Harris 1975: 260). The Old Assyrian texts, however, provide a clear picture of how members of the same family firm corresponded and divided the labor and profits of long-distance trade (Larsen 2002; Larsen 2007).

⁴ See Atici *et al.* 2014 for one such approach to other types of industries that arose alongside and sustained Assyrian trade network.

⁵ Kt n/k 794.

⁶ These percentages are based on Hertel's estimate of 3000–3500 residents in the lower town and the numbers of Assyrians are based on onomastic data which of course, can be problematic. Furthermore, the high level of mobility inherent to the merchant lifestyle make it difficult to estimate the number of traders living in Kaneš and other settlements at any given time.

population. It should be noted, however, that Aššur, a small self-contained city-state, is archaeologically poorly understood for the Old Assyrian period and thus it is difficult to determine the city's population size though estimates range from 5000–8000 inhabitants (Veenhof 2008: 40; Veenhof 2010: 48). It is known, however, that the city was 55ha in area during the 13th century BCE when Assyria was expanding its imperial ambitions: even at this size it was still less than half the size of Kaneš (Barjamovic 2014: 60). The relatively small size of Aššur compared to centers in Anatolia and southern Mesopotamia, when coupled with population estimates at Kaneš, indicate that perhaps 10% of the population was travelling through Kaneš at some point during the height of the trade network in the early-mid 19th century BCE. Factoring in the other settlements and outposts only boosts this number. The magnitude of the Old Assyrian trade is impressive, both in quantities of goods and mobile people: the organization and mechanisms of the system may be similar to those of cities like Sippar, but the scale of the venture remains literally 'extraordinary'.

This increase in scale seems related to the particular socio-political organization of the city of Aššur itself. Despite the fact that the *kārum*-system is also present at southern Mesopotamian cities like Sippar, the overall structure of Assyrian society, as reflected in the textual record available to us at least, is markedly different in that the king, never referred to as a LUGAL/šarrum like his southern counterparts, is largely missing from the historical record. The Assyrian texts, of course, are from the perspective of the city's merchants, but the 'City Hall' (*bēt ālim*) serves as a unique institution in this period and one that facilitated the long-distance trade in Anatolia. The 'City Hall' (Dercksen 2004), as demonstrated by its seal, was closely linked to the patron deity of the city (Dercksen 2004: 90–91), and served as the 'economic and financial heart' of the city (Veenhof 2010: 39), whereas the 'City Assembly' carried out most of the legal decisions concerning the merchants and their activities. The king was clearly part of such decisions as evident in his decrees to the *kāruns* (Veenhof 1995: 1733), and involvement in legal decisions, while southern Mesopotamian cities also featured various non-royal authorities (Seri 2006); nonetheless, the merchant community in Aššur seems to have experienced a greater share of independence and decision making than its counterparts in other places. The elements of mercantile collective action and non-royal power sharing are present in the south, but at Aššur they seem to run deeper within the very fabric of society. Such a heterarchical configuration allowed for the particular scale and flexibility in development of long-distance trade in Aššur.

Even if one accepts the spread and the scale of the long-distance trade, it does not require that the geographic extension and quantity of goods traded remained constant throughout the Middle Bronze Age and even less so for the Bronze Age more generally. The research

on the Early Bronze Age in western and central Anatolia has greatly advanced in the last 15 years (Düring 2011: chapter 7; Bachhuber 2015), but compared to developments in other areas of Western Asia, such as northern Mesopotamia and southern Levant, the region requires much more data from excavations to reach persuasive conclusions. With the work of Turan Efe (2007) and Aslıhan Yener (2007), among others, the existence of a main west-east trade route connecting the Aegean with northern Mesopotamia through the Cilician Gates is plausible and even likely, but the quantitative impact and the time-span in which they were active escape us almost completely. Moreover, that this route was interconnected with other coeval ones, from Egypt to Elam and beyond, is possible but not certain. Though such contemporaneous systems are demonstrated during the period of early 2nd millennium Aššur, and it seems reasonable that in other historical phases this could have been the case. It would be surprising if all long distance routes were synchronically active and interconnected during the entire Bronze Age. Equally, it would be surprising that actants, demands, organizations and institutions and the distribution of force and violence – all determinant components of trade (e.g. Klein 2000; North 2005; North *et al.* 2009), would not vary significantly through time.

Even in the case of Aššur, the textual output detailing such a high flow of goods reaches its zenith during a 30-year period (1889–1859 BCE), which could indicate that the fragility of the involved institutions and organizations was unable to structurally support the volume and complexity of that trade in the long run. After a brief hiatus in the 1830s BCE, the Assyrians resumed their activities in Anatolia though the texts from Kaneš during this period (Level Ib) signal a shift in the fortunes of the Assyrian traders. The lower volume of trade (and texts) attributed to Level Ib is one more clue about the dimensions of this trade over time, and could be related to a phase in which Assur was under the control of a Šamši-Adad's Amorite dynasty, who may have been more interested in competing for territorial control in Upper Mesopotamia than in sustaining its role as a major trade hub. Other factors that could cause sharp shifts in the volume and overall structure of trade include the materials themselves. For example, the impact of long distance trade of metals in the development of the kingdom of Ur III, or, earlier in pre-Sargonic Ebla, is undeniable. The diffusion of the bronze technology surely had a tremendous component in defining the borders between communities, and in enhancing the level of conflict between them, particularly in Anatolia. However, reconstructing an uninterrupted flow of tin and copper is based on a presumption of continual growth (for population and consumption), which is not the case everywhere, nor does it take into account the reuse of bronze which would impact consumption rates significantly.

The new world-system approach to long-distance interconnected trade networks can be a powerful interpretative grid for pre-classical economy in and beyond Western Asia but it should be built so as to embed the fragility of early political systems well reflected in the emic view of the ancient Mesopotamians,⁷ and explored by anthropologists (Feinman and Marcus 1998; Yoffee 2005), and historians of the ancient Near East (Liverani 1988; van der Mierop 2007; Richardson 2012; d'Alfonso 2008). Trade in ancient Western Asia is based on the existence of many sub-regional routes continually reorganized around changing ports and agendas. Such uncertainty and dynamism is not antithetical to the view that long-distance high volume trade was the main principle underlying the economy of all polities of Western Asia during the Bronze Age, but it leaves little room for those other industries discussed previously. Models reconstructing agro-pastoral productivity for greater extent of Ancient Western Asia demonstrate that the region was sustained by a subsistence economy (this was particularly true for Anatolia, where the ratio sowing – harvesting was 1:3 to 1:4; Schachner 2011): how could this productivity sustain a high volume of circulation of goods in periods of distress and drought?⁸

Even more significantly, postulating the overarching existence of interconnected networks, we risk losing the specificity of the goals and the demands of individual polities, and therefore, the deep reasons for their political and cultural differences. Analyzing the strategies of accumulation of goods in EBA Anatolia, Marcella Frangipane (2012) has recently pointed out that in West and Central Anatolia 'political economy' was built upon wealth accumulation and hoarding of metal objects and jewelry. On the other hand, in the Upper Euphrates and northern Mesopotamia, we encounter polities characterized by the amassing of staples in large granaries and ritual redistribution of meals. That in both cases long distance interconnected trade was the main operative economic activity is questionable. Again, long-distance trade must be analyzed within its specific context and though similarities are clearly apparent between the Old Assyrian system and others, they are subject to environmental, political, and economic factors that may fluctuate greatly from region to region and even city to city. These observations do not discount the model presented by Barjamovic for the early 2nd millennium BCE, but rather add complexity to his overarching picture. The geographic and quantitative dimension of trade in the Bronze Age ancient Near East, presented by Barjamovic is a new paradigm for all researchers interested in ancient economies, and its interpretation will stay open to mul-

tiple views and debates. His ability to integrate archaeological and geo-archaeological research with the texts from Kaneš, and other related archives, to the already rich quantitative material, and widens the perspective to other possible venues in which scholars can contribute to the overall picture.

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⁷ Such as the *Lament for the Destruction of Ur* (Samet 2014) or the *Curse of Agade* (Cooper 1983).

⁸ Indeed, there is an Old Assyrian letter from a woman, Tarām-Kūbi in Aššur to her husband Innāya in Kaneš complaining of a famine that has taken the city and left her with no recourse, i.e. silver, for buying barley. She laments the fact that her husband did not even leave her bracelets and rings to use as payment (CCT 3: 4; Michel 1991: no. 3).

- CCT 3 = Smith, S. 1925. *Cuneiform Texts from Cappadocian Tablets in the British Museum Part III*. London.
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II. CUNEIFORM KNOWLEDGE PRODUCTION IN CONTACT ZONES

REFLECTIONS ON THE DYNAMICS OF CUNEIFORM KNOWLEDGE PRODUCTION IN THE ANCIENT NEAR EAST

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The transmission of the cuneiform scholarly tradition in the ancient Near East over a period of roughly three millennia is a key feature of ancient Near Eastern history. This enduring tradition¹ comprised not merely the use of the cuneiform writing system, but also the replication of particular modes of textual production, the replication of particular texts, and engagement with particular genres, notably the lexical list.² Within centuries of its early development in late 4th millennium southern Mesopotamia, cuneiform scholarship spread through much of the ancient Near East, manifesting in upper Mesopotamia and Syria long before the end of the 3rd millennium. At different moments, cuneiform scholarship and its attendant scribal culture penetrated into Anatolia, the Caucasus, Iran, the Levant, the Arabian Peninsula, and Egypt. The extraordinary longevity and geographical spread of cuneiform raises important questions about the mechanisms that inform the production and transmission of cultural knowledge.

Participation in the cuneiform scholarly tradition was predicated on facility with the cuneiform writing system and familiarity with certain core texts and scribal practices. Such facility and familiarity in turn presuppose extensive training in cuneiform literacy and protracted exposure to particular texts and genres. There is extensive evidence of precisely this sort of training in Mesopotamia in the Old Babylonian period. Attempts have been made to reconstruct the scribal curriculum in some detail (Veldhuis 2004: Chapter 4; Tinney 1999; Delnero 2010). Student tablets attest to a progression from simple writing exercises to the reproduction of sophisticated texts. Education in Old Babylonian Mesopotamia was concentrated in the institution of the tablet house (Sumerian É-DUB-BA-A, Akkadian *bīt tuppim*), generally a private home where a learned scholar would teach students cuneiform to varying levels of proficiency – possibly their own children and maybe a few others, as was the practice in other specialist crafts (George 2005). At some sites, and notably in Nippur, multiple tablet houses coexisted. Each one appears to have had its own way of doing things, diverging slightly from its peers. In Late

Bronze Age sites outside of Mesopotamia a similar mode of scribal training prevailed, as is documented most clearly in Ugarit (van Soldt 1995) and Emar (Cohen 2009; Rutz 2013). Although the tablet house recedes from the textual record by the 1st millennium BCE, scribal education at this time does not appear to have been altogether different in character (Gesche 2001).³

In all times and places where the cuneiform scholarly tradition is attested, there were a number of formidable barriers to participation in this intellectual project. First, access to advanced education was limited by the relatively small number of qualified scholars who were in a position to take on junior apprentices in addition to their own relatives. Second, the economic costs of scholarly instruction over a period of many years will have been beyond the means of all but a small minority. Third, in most times and places there was a limited demand for the skills of advanced cuneiformists, and thus limited potential for profitable employment. Fourth, from at least the end of the 3rd millennium onward cuneiform scholarship was conducted in languages that were frequently quite distinct from the vernacular of the scholars in question. Proficiency in the cuneiform scholarly tradition demanded not only knowledge of Sumerian – a language isolate no longer spoken by the end of the Old Babylonian period – but also of stylized forms of Akkadian that could differ significantly from the vernacular dialects of scholars or be altogether foreign to them, as it was in places like Ugarit, Hattuşa, and Amarna. The chasm between the linguistic knowledge required by cuneiform scholarship and the vernacular of the scholars themselves heightened the esotericism and inaccessibility of advanced education. Because of such barriers, engagement with cuneiform scholarship was simply not an option for the vast majority of people in the ancient Near East.

Cuneiform scholarship was the preserve of a small elite, but it nevertheless served to meet an existing demand. Evidence of the Old Babylonian tablet house

¹ The notion of a “stream of tradition” is discussed in Oppenheim 1960 and 1977: 13–23; cf. Robson 2011.

² For more on the role of the lexical list in cuneiform scholarly thought (so-called *Listenwissenschaft*), see van de Mieroop 2016: Part 2; for a detailed study of the history of lexical lists see Veldhuis 2014.

³ See also Maul 2010 for an overview of one particular collection of tablets from Neo-Assyrian Aššur, and pp. 202–217 in particular for a study of the relationships between junior and senior scribes in the production of this collection. The tablets from Sultantepe/Huzirina also point to the assembly of collections of scholarly tablets by scholarly families unbound to any single institution: Pedersén 1998: 178–180.

and its successors indicates that advanced education was decentralized. Educational institutions were autonomous, controlled directly by neither palace nor temple. Even so, the underlying curricular unity of advanced education and the nature of many curricular texts – often temple hymns or texts glorifying kings – indicate that scribal masters were conforming to an established curricular agenda attuned to the needs and desires of the principal consumers of their work, namely temples and palaces. Such coordination is evident in the overall paleographic and orthographic consistency of tablet house texts, so that texts from Nippur do not vary significantly from their contemporary equivalents in Sippar, Ur, or Uruk. Indeed, official texts like royal inscriptions and hymns everywhere adhere to recognizable standards. Despite the geographic, cultural, and individual differences that divided them, and notwithstanding local idiosyncrasies and innovations, cuneiform scholars across the ancient Near East produced texts that demonstrate remarkable unity in their faithfulness to a common tradition.⁴

Many of the scholars who were in charge of tablet houses and comparable establishments are known to have been itinerant, moving across the Near Eastern landscape in pursuit of appropriate opportunities. It is in this way that cuneiform is thought to have spread through the region: scholars regularly relocated to those places where they were in demand, sometimes setting up educational institutions and training a new generation of scholars equipped to perpetuate the cuneiform tradition in a way that was adapted to local circumstances. Cuneiform scholarship flourishes wherever those with financial means harbor an appetite for the output of cuneiformists. In other words, scholarship is largely dependent on the willingness and ability of others to pay for it. The chief sources of such patronage are generally palaces and temples,⁵ precisely the loci of surplus resources that could be redirected to sustain the work of scholars. Although scholars tended to serve the great institutions of the ancient Near East, they enjoyed some authority in their relationship with the institutions that employed them. They were, after all, proprietors of a prestigious tradition. Cuneiform scholars were the exclusive masters of an important ideological tool. As long as the potency and cultural centrality of this tool were recognized by

elites, the work and expertise of scholars could count on interest and support. This supply and demand model of scholarship was reinforced by enculturation: scribal education served to shape the cultural register of important segments of the elite, binding together disparate people through shared cultural discourse, experience, and knowledge, thereby bolstering the perception of cuneiform scholarship as the common intellectual project of Near Eastern high society.

Cuneiform knowledge production in the ancient Near East can thus be understood as a precarious feedback loop. On the one hand, there was demand among elites for the skills of cuneiform scholars, bolstering the status and prestige of the cuneiform scholarly tradition. On the other hand, the scholars who sustained this tradition had to sustain demand for their skills, perennially making the case that they were essential to the proper functioning of government and the maintenance of the sociocultural order. If either demand for cuneiform scholarship flagged or the appeal of the tradition waned, the entire structure weakened. When the feedback loop suffered repeated and sustained disruption in the course of the 1st millennium BCE, cuneiform scholarship – having strutted and fretted its hour upon the stage – wilted away and exited stage left.

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⁴ Such faithfulness can be understood in part through the model of enculturation articulated in Carr 2005, according to which scribes are educated in and made to memorize and perform texts that are regarded as having some cultural value, both in their own right and as models for the sorts of texts that a scribe might be called upon to produce for the royal court or for the temple. By being educated in such texts, scribes become imbued with and are turned into bearers of a cultural tradition that informs their identity and worldview. The fact that many standard tablet house texts are not attested in other contexts supports the notion that there was a special class of educational texts that advanced processes of enculturation.

⁵ And yet it is also clear that knowledge is sometimes produced and transmitted outside of an institutional context. In Kanesh, for instance, a handful of ritual texts have been recovered in the private houses of Assyrian traders, for which see Barjamovic 2015. Even if institutions are the principal consumers of knowledge, it must be borne in mind that there is also private demand.

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PRODUCTION OF KNOWLEDGE IN CONTACT ZONES: MARI AND TIGUNĀNUM IN THE OLD BABYLONIAN PERIOD

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When discussing internationalism in the ancient Near East, Assyriological scholarship has generally focused on the Late Bronze Age and the Club of Great Powers that included Egypt, the Hittites, Mitanni, Babylonia, and Assyria.¹ This perspective has, however, been increasingly challenged by the continuous publication of the thousands of documents found in the palace of Old Babylonian Mari, which reveal a network of far-ranging alliances and shed light on the campaigns undertaken by the kings of Mari in pursuit of the expansion of their territory. Such large-scale interconnectedness between Mesopotamia, Northern Syria, and into Anatolia can be traced back at least to the 4th millennium BCE in the development of trade networks along the Euphrates and Tigris rivers formerly known as the “Uruk Expansion” (Algaze 1993; Stein 1999a, 1999b, and 2004). Interconnectedness with Southern Mesopotamia is evident in the archaeological discoveries and written traditions of Mari, Ebla, the Hābūr Basin, and Urkesh, and was enforced by the territorial control and administration of the Akkad Empire (Buccellati 2003; Michalowski 2003; Quenet 2005; Foster 2016: 50–89). By the 18th century BCE, major powers had established their territorial control: Aleppo, the capital of the kingdom of Yamhad, Mari in the region of the Middle Euphrates, the kingdom of Upper Mesopotamia between Ekallatum on the Tigris and Šubat-Enlil, and the kingdom of Ešnunna in the Eastern Tigridian region (Lafont 2001). These powers not only operated as political and economic centers but equally comprised institutions of learning and cultural knowledge.

Preliminary steps toward this agglomeration of major kingdoms are already apparent in documents from the time of king Yahdun-Lim at the end of the 19th century BCE. The territorial interests of the first major king of Mari extended as far as the Mediterranean Sea to the West, into the Habur triangle in the North, and into the Tigridian area in the East (Charpin and Ziegler 2003: 38–40). Yahdun-Lim established an alliance with the king of Ešnunna² and fought battles with Šamši-Addu of the Upper Mesopotamian kingdom in the vicinity of Nagar/Tell Brak, located in the Eastern Hābūr triangle. A let-

ter written by an official to King Zimrilim mentions the politics of alliances of his predecessor in the region of Ida-Maraš. He advises the king as follows:

A.1098

And write to the “fathers” of Ida-Maraš and to Aduna-Addu so that they come to you. Kill the donkey of alliance and speak with them forthrightly. Take these people into your hands because your pasture lands are located in their districts. Send your messengers regularly to Aduna-Addu. Before, when Yahdun-Lim went into this region, he made gifts to the fathers of Ida-Maraš. His pastures did well. There was no treachery and no mistake. You must now follow the example of your father (Dossin 1938: 109).

The letter reveals the very interesting phenomenon of fluid boundaries, with pastures lying in areas that were controlled by other rulers. As already noted for the Amarna period by Mario Liverani in his book “Prestige and Interest” (Liverani 1990: 89) and posited by Bertrand Lafont for the Mari period (Lafont 2001: 227), boundaries were not defined as stark dividing lines but rather as lists of settlements politically and economically oriented toward specific royal palaces, especially in terms of the census, both for purposes of taxation and of conscription for military campaigns. Such a process of “agricultural intensification and extensification” involves the breaking down of local boundaries in order to extract tribute or taxes. It has been reconstructed by Lauren Ristvet for the Radd marsh west of Tell Brak as early as the time of the empire of Akkad, in line with the model of processes occurring simultaneously in Southern Mesopotamia (Foster 1993). On the other hand, Dominique Charpin has demonstrated that there was an awareness of boundaries when it came to the circulation of messengers, nomads, and merchants, and that the notion of fluidity must be limited to the areas of the steppe and the desert (Charpin 2004; see also Ziegler 2009).

Collection of taxes and conscription appear to have driven Yahdun-Lim’s expansion into Ida-Maraš and the region of the Balih River. Yahdun-Lim’s control over the region of the Middle Euphrates towards Tuttul and the affluence of the Balih river as well as into the Hābūr triangle and the Jebel Sinjar region resulted in the division of this territory into four districts (*hašsu*), headed by the provincial capitals of Mari, Terqa, Sagarātum, and

¹ This article was submitted before the publication of George *et al.* 2017. I would like to express my gratitude to Nele Ziegler for her most valuable comments and observations.

² This alliance is mentioned in the letter of king Ibal-pi-El of Ešnunna to King Zimrilim, A. 1289+ (Charpin 1991).

Qatṭunān. As observed by Marta Luciani, archaeological remains are scarce in these administrative centers. This suggests that in contrast to the Middle Assyrian period there was at this time no agricultural exploitation of the Hābūr region (Luciani 1995), and thus that the collection of taxes and conscription remained the chief motivations for expansion. Beyond the territory under Mari's direct administrative control there was the region of the Banks-of-the-Euphrates (*Ah-Purattim*), along with a series of vassal entities (*namlaktum*) in the Hābūr Plain and the region of Jebel Sinjar (Lafont 2001: 218–219).

It is Mari's firm control over the Hābūr that must have enabled Yahdun-Lim to enforce vassalage on the kingdom of Tigunānum, located far to the north in the Upper Tigris region.³ The interest of the kings of Mari in concluding an alliance with a kingdom that was located at such a great distance cannot have developed in the absence of a particular motivation. To my mind, the political nature of Tigunānum as a kingdom of some relevance can only be explained on the basis of the region's metallurgical resources. Perhaps Tigunānum either controlled the access route to the Ergani mines – as did Urkesh in the 3rd millennium – or in fact Tigunānum controlled the area of the mines itself. Tigunānum was known to the Hittites as Tikunani or Tikunan, and, according to the annals of Hattusili I, its ruler Tunip-Teššub sent a silver chariot to the Hittite king (Miller 2001).

In recent decades, Tigunānum has drawn attention in the field of Assyriology because numerous tablets originating there have entered the antiquities market through clandestine excavations. Tigunānum was already known from texts in the archives from Shemshara and Mari (Eidem 1992: 16–21), as well as from the famous Tikunani-letter sent by Hattušili I to the king of Tigunānum (Salvini 1994 and 1996; Durand 2006; Miller 1999: 412–422; Hoffner 2009: 75–80). The so-called Tikunani-Letter was sent by the Hittite Great King to king Tuniya of Tikunani, otherwise known as Tunip-Teššub, and in the letter Hattušili I proposes a common campaign against Hahhum, which, according to Jared Miller, was located in the region of Lidar Hüyük, i.e. on the eastern banks of the upper Euphrates. Hattušili I suggested that he would attack Hahhum from the west, and that the king of Tigunānum should attack the city from the east. This strategy makes perfect sense if the kingdom of Tigunānum encompasses the triangle between Siverek, Ergani, and Bismil in the uppermost mountainous reaches of the Tigris, north-northwest of the Habur basin (Eidem 1992: 20; Charpin 2000; Miller 2001: 410–429). Because many of the texts from Tigunānum either mention the name of Tunip-Teššub, the ruler of the kingdom and a contemporary of Hattusili I, or are categorized as belonging to

the palace of Tunip-Teššub, they can be dated to around 1630 BCE according to the Middle Chronology.

Some of the Tigunānum tablets that appeared on the antiquities market have since disappeared, while others have ended up in the Schøyen Collection and other private collections and have either been published or are in the process of being published by Andrew George. Colophons on these tablets reveal that they belonged to a palace library. Andrew George has concluded on the basis of his own research and W. G. Lambert's notes – Lambert saw several hundred tablets in the late 1980s and early 1990s – that the contents of the library consisted primarily of administrative texts “reporting the palace's management of its flocks, weaving and metalworking” (George *et al.* 2017). Other texts published so far include a prism, dated by a *līmu* in Assyrian fashion, which lists personnel of King Tunip-Teššub. The editor of the text, Mirjo Salvini, notes the political-geographical context as reflected in references to “the cities of Hahhum, Zalpar, Nihrija, Eluhut, Huršanum, Ašnakku, and Burundi” (Salvini 1996: 11), many of which were waystations on the trade route from Assur to the west. On the basis of W. G. Lambert's notes, Andrew George was able to add the place names Karanā – west of Nineveh – and Ilansura, Idaramaš, and Šehna in the Habur triangle to this list (George *et al.* 2017).

Additional letters will be published by Andrew George in his edition of administrative texts from the Schøyen collection. Other texts include an old Babylonian version of the lexical list *Urra* tablet XV–XVI, which has been published by Civil (Civil 2010: 127–128). Last but not least, there are several divinatory and ritual texts, which are the focus of the present article.

Divinatory and ritual texts belong to the repertoire of texts that constitute cultural memory and identity. Given that such cultural practices are attested in written sources throughout the ancient Near East from the 3rd millennium onward, Tigunānum's library is of great importance to the history of knowledge for several reasons:

- (1) It is important for the history of libraries in Mesopotamia. While numerous Old Babylonian palace archives have been found that contain letters and economic and administrative texts, the attestation of divinatory and ritual texts in a palace library of this period is rare, Mari being one of the few exceptions;⁴

³ See Charpin's quotation from an unpublished letter (A.1182) which dates to the reign of Zimrilim but mentions an alliance between Mari and Tigunānum under king Yahdun-Lim (Charpin and Ziegler 2003: 50 n. 188).

⁴ In southern Mesopotamia, literary texts have so far only been discovered alongside practical texts in the palace of Sinkašid in Uruk (Cavigneaux 1982) and the palace of Enlil-bani in Isin (Sallaberger 1996: 179 n. 16). In both cases the relevant texts are school tablets attesting to scribal training. In Uruk, they include sign lists, syllabary A, an excerpt from a hymn in praise of Iddin Dagan, a votive inscription for Ninurta, a tablet containing a dialogue between dog and fox, and a version of Proto-Ea that differs from the curriculum in Nippur. The Isin collection of school tablets includes lexical texts, among them an excerpt of Proto-Ea which like other school texts from Isin deviates from the Nippur tradition (see Wilcke 1987: 93; Sommerfeld 1992: 151–152), as well as a fragment from *Enki's Journey to Nippur* and lentil-shaped tablets with personal names.

- (2) The importance of the library further lies in the fact that it identifies the institution of the palace as the primary motor for the compilation of knowledge;
- (3) It is of primary importance to the spread of Babylonian knowledge into the far North of the ancient Near East, indicating cultural interaction across political and ethnic boundaries. During the Old Babylonian period, the ancient Near East comprised a dense web of numerous kingdoms that were constantly forming alliances and fighting each other, fashioning a very dynamic but also fragmented political landscape. Fragmentation and political boundaries did not, however, “impede social and cultural exchanges in any significant way” (Koppen and Lacambre 2008–2009: 152). Examples of cultural interaction beyond political borders can be seen in the paleography of the texts of Ešnunna and Sippar, for instance, as they demonstrate extensive similarities. Likewise, Yahdun-Lim, inspired by the school of Ešnunna, undertook scribal reforms at Mari at some point during his reign (Charpin 2012). Already in the mid-3rd millennium Mari served as a cultural hub between Mesopotamia proper and Northern Syria, as shown by its role in the transmission of cuneiform and other forms of cultural expression to the kingdom of Ebla, including particular themes of royal self-presentation centered on the treatment of the enemy and extispicy and divinatory techniques.

There was, consequently, great cultural fluidity, and it is difficult if not impossible to define the boundaries of cultures of knowledge (*Wissenskulturen*; Fried and Kailer 2003); indeed, the interest in and acquisition of knowledge always occurs beyond political and cultural borders. In the following, I would like to approach the dynamics of the development and transmission of knowledge in more precise terms and demonstrate that such dynamics – like the dynamics of expansion in the political arena – are institutionally driven. Nārām-Sîn’s scribal reforms toward the end of the Akkad Dynasty and the scribal reforms undertaken by Yahdun-Lim offer two examples where we can clearly show that the institutional initiative for such innovations was centered in the palace. The epistemic practice of divination as attested in Early Dynastic Ebla offers another great example for the palace as the powerful motor driving the development and organization as well as the control and distribution of knowledge.

The earliest evidence for divination performed on the liver can be found in Early Dynastic Profession Lists from Fara⁵ and Abu Salabikh⁶, which include professional titles such as *máš.šu.gíd.gíd* “to reach the hand into the lamb” or “to touch the lamb”, referring to the practice of extispicy performed on a sacrificial lamb or goat.

Contemporary royal inscriptions of king Ur-Nanše of Lagash mention the use of extispicy, as indicated by the wording “to choose by means of extispicy”, Sumerian *maš pà*, for the installment of a certain official as the spouse of the goddess Inanna.⁷ Another royal inscription of Ur-Nanše contains an incantation to the reed for ritual purposes. In this incantation the god Enki pronounces a favorable verdict (*éš.bar*) to ensure its efficacy in a dedication ritual. This favorable divine verdict probably also occurred on the basis of extispicy, as is illuminated by later texts in which *éš.bar* equals Akkadian *purussû* “divine verdict”; the verdict is generally communicated by the sun god and decoded from the signs in the liver.⁸ Contemporary with the southern Mesopotamian evidence, administrative texts from Northern Syrian Ebla, near to modern Aleppo, mention not only the *haruspex* (Bonechi and Catagnoli 1998), but also indicate the use of immense numbers of lambs for extispicy performed on behalf of the palace. The administrative records demonstrate that this method of divination was practiced on a large scale on behalf of the court and also point to the king’s sponsorship and patronage of the craft. Also from Ebla is the first extispicy report in a letter (Fronzaroli 1997; Coser 2001), which can be considered a forerunner to the reports from Mari.

Several centuries passed before the practice of divination resulted in the production of the divinatory liver models from the so-called *šakkanakku* period, i.e. the end of the 3rd and beginning of the 2nd millennium BCE, thus overlapping partially with the end of the Ur III period and surviving its collapse by several decades. The inscriptions on these liver models come in various formulations, suggesting that the diviners were still experimenting with the written framework for their technique. There are three distinct formulas: (a) ‘omen (*amūt*) + royal name,’ with the omen referring to the constellation of signs as depicted in the liver model; (b) ‘when (*inūmi*) + event’; and (c) ‘if (*šumma*) + event’ (Glassner 2000).

The important feature of these liver models for the reader is that they presuppose a combination of image and text, i.e. the omen is represented by the physical form of the liver, which is different in all 32 liver models kept at the Louvre (Pongratz-Leisten 2015, 364). The written text, by contrast, contains the apodosis – a statement of what such a liver omen portends. Regarding the use of different verbal tenses, namely preterite and present, it is intuitive to assume that texts using preterite verbal forms had a distinct purpose. This purpose has generally been identified as didactic. Their function can, however, equally be read as paradigmatic, like that of the entries in the omen compendia. This seems particularly obvious for the historical omens found on these models. The fact that these liver models have been found in Zimrilim’s and Yasmah-Addu’s palace together with rituals, legends,

⁵ MSL 12, 15 l. 63.

⁶ MSL 12, 19 l. 130.

⁷ RIME 1, Ur-Nanše E1.9.1.17 iii 3-6.

⁸ RIME 1, Ur-Nanše E1.9.1.32 iii 1-3.

incantations, and compositions in Hurrian language reveals that both of these kings had an interest in “constructing historical continuity between these reigning kings and earlier dynasties at both Mari and in Mesopotamia generally” (Ristvet 2015: 119).

From the time of Zimrilim we have several omen reports that occur in letters written by the haruspex to Zimrilim and his sons,⁹ and a fragmentary list from Mari dating to the ninth year of Zimrilim’s reign reveals the large quantities of sheep that were used monthly for the king’s decision making:

M. 11293¹⁰

- Month IV	x+67 sheep
- Month V	429 sheep
- Month VI	441 sheep
- Month VII	561 sheep
- Month VIII	707 sheep
- Month IX	604 sheep
- Month X	370 sheep
- Month XI	451 sheep
- Month XII	513 sheep

Such numbers are easy to explain given the range of situations that required divination to facilitate the decision-making of the king: every military action, including the departure of troops on campaign, the conquest of cities, and queries for the wellbeing of garrisons; every political action, including the appointment of officials; every cultic action, including certain offerings, the journeys of gods, and repairing divine statues; and every ominous sign that originated in the divine sphere.

It is only in the later Old Babylonian period, probably at the end of the 18th or in the 17th century BCE, that there is evidence for the first *omen series* related to extispicy and astrology (Goetze 1947). The composition of these series reveal a theoretical approach to omen practice.

The divination texts from Tigunānum dating to the late Old Babylonian period are interesting insofar as they include only one extispicy report. The other texts all belong to series. The purpose of omen series, which include phenomena that cannot be observed and – while related to the observable – are anchored in speculation, goes beyond pure epistemic practice. They reveal an interest in the organization and transmission of knowledge and so are scholastic products. Along with the professional commitments of the diviners working for the ruler of Tigunānum, this kind of scholarly pursuit is crucial to understanding the dynamics of library building that occurred some two hundred years later at Boğazköy and other northern Syrian political centers like Ugarit and Emar, and in the 1st millennium BCE in Assyria and Babylonia. Such academic elaboration on epistemic prac-

tice further reveals that this kind of professional expertise must have already enjoyed royal patronage for some time.

The omen series from Tigunānum not only demonstrate a broad familiarity with divinatory techniques practiced in Mesopotamia proper, but also included techniques that are not attested in the south. The divinatory texts include monstrous birth and miscarriage omens, extispicy, examination of a sheep confined overnight, examination of the hooves and fetlocks of a butchered animal, the gallbladder, the plumage of a bird, and a bird’s heart dropped into water, and teratomancy. All of these texts have been published by Andrew George in his volume on the divination texts from the Schøyen Collection (George 2013: 101–128 and 285–319). Among these divinatory techniques, that of confining a sheep overnight and then observing its behavior in the morning and the examination of the hooves and fetlocks of a butchered sheep, the plumage of a bird, and a bird’s heart dropped into water are alien to Mesopotamian practice proper. They belong to a tradition that was indigenous to the North and probably part of Hurrian or Hittite cultural practice. The bird’s heart plays a role in an offering for Teššub and Hebat and interestingly also occurs in a Neo-Assyrian ritual.¹¹ Generally, bird omens do not play a major role in the Mesopotamian written tradition, but they might have represented an affordable alternative to the cost of an entire sheep for the performance of extispicy; it is first attested in Old Babylonian Mari (Maul 2003–2005: 85–86 § 12; Maul 2013: 131–153). Moreover, as observed by Andrew George, some of these tablets display unconventional writing and Hurrianisms that reveal the local nature of the textual production. Given the obviously local nature of some of the omen practices in Tigunānum, it seems that Annelies Kammenhuber’s suggestion that all divinatory practice in Boğazköy were adopted from Mesopotamia must be reconsidered (Kammenhuber 1976: 59–65).

Although we are still lacking the archaeological evidence for Tigunānum and consequently for the library itself, the colophons in divinatory texts reveal that these tablets were written in the palace by an individual named Šamaš-muštēšir, scribe-diviner, son of Lu-Nanna/Awīl-Sîn, scribe-diviner, grandson of Sumti-Erah. As observed by Andrew George, “the scribe’s ancestry reveals a family apparently of Amorite background, whose members were given (or adopted) southern names in keeping with their profession as cuneiformists” (George 2013: 102). Several omens are identified as omens of Kuzzi and once of Dammu. Kuzzi was “the writer of at least two tablets of monstrous birth omens, one human, the other divine” (George 2013: 103), and he “can be identified accordingly as an authority active in forming local divinatory tradition. Šamaš-muštēšir copied out many texts redacted by Kuzzi, including four in the same year, and was perhaps

⁹ See, for instance, ARMT II 22, Dossin 1951: 46–48; ARMT V 65 (= ARM 26/1: 226–227 no. 88 and LAPO 18 no. 950); ARMT II 97 (= ARM 26/1: 226 no. 87 and LAPO 18 no. 945); Parpola 1983: 486–492.

¹⁰ ARM 26/1: 37.

¹¹ Haas 1994: 660–661 and Menzel 1981, T 92.

Kuzzi's student. He was already competent, in Tunip-Teššub's third year, to write the report of an extispicy carried out in the palace grounds. The same two names appear in the Hurrian fragment from Tigunānum published by Salvini. It is tempting to suppose that the text refers to the self-same individuals known from the divinatory texts, especially when Gernot Wilhelm has proposed that the passage in which they appear is the tablet's colophon (George 2013: 104–105). Andrew George also notes that Kuzzi of Tigunānum could be the same individual attested by that name in Alalakh VII, where a Kuzzi is known to have married a priest's daughter, indicative of some social standing in the society of Alalakh (Lauinger 2008: 199 and 2015: 46 n. 9; 82; 180; 181 n. 30; 390–391). As George writes, "in light of his purchase of birds and of Kuzzi's connection with bird divination at Tigunānum (...), it is tempting to speculate that all the above mentioned attestations of Kuzzi refer to the same individual who would then have been a prominent and well-connected diviner specializing in the procuring, feeding and extispicy of sacrificial birds in Tigunānum, Alalakh and perhaps other towns of north Syria" (George 2013: 105).

In addition to the local nature of some divinatory practices and the Hurrianisms in the language of the texts, certain cultural features stand out as well. One is the mention of the mountains Nanni and Hazzi in an omen tablet that includes eleven omens derived from the internal organs of a sacrificial animal called "shepherd."¹² Mount Hazzi plays a central role in the Hurrian "Song of the Sea", "performed in connection with the cult of Mt. Hazzi" (Rutherford 2001). It has been identified with Mount Saphon or Mount Cassius north of Ugarit and is considered to be the seat of Teššub. The evidence of Tigunānum is important insofar as the reference to Mount Hazzi in the omen text predates the ritual evidence in the Hurrian texts, and thus attests to the existence of a Hurrian mental map that included the region of Ugarit as early as the Old Babylonian period. Mount Nanni has been identified with Erciyes dağı near Kayseri, i.e. in the region of ancient Kanesh (del Monte and Tischler 1978: 280), or with the Anti-Cassius (Schwemer 2001: 228 n. 1579 with further bibliography). Both mountains – Cassius and Anti-Cassius – were associated with the storm god Addu, who is depicted as standing on two mountains (Porada 1984: 485).

Beyond reflecting a Hurrian mental map, the same divinatory text has another interesting feature. This is the reference to Nergal's weapon in one of its apodoses, which reads:

If the top of the "shepherd" is full of holes: in the field (in the campaign on) which we are going, the enemy will inflict a defeat on me; in town, Nergal will inflict a

weapon of destruction on the land. (George 2013: 296 § 2)

While the sacrificial animal called "shepherd" is unknown from Mesopotamian omens, there is an interesting intertextual link with the inscriptions of Naram-Sin, king of Agade, with regard to the weapon of Nergal:

RIME 2, *Naram-Sin* 2.1.4.26

- i 1-10) Whereas, for all time since the creation of mankind, no king whosoever had destroyed Armanum and Ebla,
- i 11-20) the god Nergal, by means of (his) weapons opened the way for Naram-Sin, the mighty, and gave him Armanum and Ebla.
- i 21-29) Further, he gave to him the Amanus, the Cedar Mountains, and the Upper Sea.
- i 30-ii 1) By means of the weapons of the god Dagan, who magnifies his kingship, Naram-Sin, the mighty, conquered Armanum and Ebla.

The notion of Dagan's weapon playing the decisive role in the king's military achievements also features in Yahdun-Lim's *Disc Inscription*, in which the king introduces himself as follows:

Yahdun-Lim, son of Yaggid-Lim; king of Mari, Tuttul and the land of the Haneans;
The powerful king (*šarrum dannum*), who controls the banks of the Euphrates.
Dagan proclaimed my kingship and handed me a powerful weapon, "Destroyer of Kings Hostile to me."
(Sasson 1990 and RIME 4, E4.6.8)

Such intertextuality bears vivid testimony to the interconnectedness of scholars working in the service of the court. It is interesting to note that the omens of the bird's heart, monstrous births, and human stillbirths all relate to matters relevant to the king and to military campaigns in general, demonstrating that Kuzzi was working directly in the service of the king.

In addition to Hurrian features, some of the omen tablets also exhibit features known from later medical and omen tablets from Boğazköy and Middle Assyrian Assur, such as the indentation of lines that is typical of omen tablets written in north Mesopotamia and its periphery (George 2013: 105). In addition to Assyrian and Assyrianizing forms such as *wurkum* instead of *warkum*, *wurdum* instead of *wardum* etc, the tablets also demonstrate some Northwest Semitic influence, such as the use of the term *našru* instead of *erû* for "eagle." As observed by Andrew George, "the tablets' rubrics and colophons themselves give clues to the geographical origin of the texts written on them. An explicit mark of northern – specifically north Syrian – origin is the rubric on three tablets that attributes the preceding texts to *Adad bēl Halab* "lord of Aleppo" (Klengel 1965 and George 2013: 105). This indicates that the texts were composed in the place where the powerful storm god of Aleppo was the patron deity of divination (Schwemer 2001: 211–237). Such evidence again supports the assumption that scholarly knowledge

¹² George 2013: 296–298, no. V § 6 26: Appendix Nos. I–XVII. Further Divinatory Texts from Tigunānum from the papers of the Late W. G. Lambert.

was transmitted from Babylonia via Mari further north and northwest.

On a small scale, the preponderance of divinatory compendia among what we generally classify as literary texts in the palace library of Tigunānum is exceptional for the Old Babylonian period and anticipates a constellation of genres that recurs again only in the libraries of Nineveh. Like in Neo-Assyrian Nineveh, this textual balance reflects the chief concern of the scholarly experts, who used divinatory techniques primarily to facilitate the political decision-making and other activities of the king. Because of their “academic” character, the divinatory texts of Tigunānum represent an important stage in the transmission of divinatory knowledge in Mesopotamia more broadly. Diachronically, the 16th century texts from the first Sealand Dynasty (Dalley 2009) constitute the next body of evidence for scholarly divinatory production in the service of the king, and the first such body after the collapse of the Old Babylonian dynasty. To my mind, the combination of texts relevant to cultic practice with scholarly texts, the mixture of traditionally known Mesopotamian practices and local practices, and the central role played by experts of Hurrian background in Tigunānum illuminates the dynamics of library building that are later apparent in Boğazköy. There, the tablet collections contained tablets that were imported from Mesopotamia, Assyro-Mittanian tablets that were written somewhere in Mitanni or Assur under Mitannian control and were brought to Boğazköy during Suppiluliuma’s campaign, and tablets that were exercises written by Hittite scribes of the Imperial period (Viano 2015: 389). Some interesting commonalities between Tigunānum and Boğazköy have recently been observed by Daniel Schwemer (2014: 126). The use of the Sumerian sign ŠĒ for Akkadian *ana* and of the Sumerian sign UD for Akkadian *šumma* link the inscriptions of a liver model found at Boğazköy with the late Old Babylonian version of *šumma izbu* from Tigunānum (George 2013: 123–125 and pls. 50, 51), and thus attest to an Upper Mesopotamian scribal tradition (Schwemer 2014: 127).

The palace library of Tigunānum contains three further ritual tablets that have not yet been published, due to their fragmentary nature and the fact that they are difficult to understand. I would like to express my gratitude to Andrew George, who made Lambert’s notes on these texts available to me.

One ritual (Folio 7626) involves the king and Ištar, some kind of a meal (*ukultum*), a performance by a singer, the lighting perhaps of a torch, and a ceremony in the gate.¹³ Another one is a *Ritual for Ištar Lady of Ninet* (Folio 7630: *pa-ar-ši ša dIš-tár bēlet(nin) u^{ru}Ni-ne-et^{ki}*). The city of Ninet is attested in the Mari archives and has been iden-

tified as Nineveh (Ziegler 2005 with further bibliography). Accordingly, this ritual must have been dedicated to Ištar-Šauška. As Andrew George observes, “the presence in Tunip-Teššub’s palace of a ritual for the patron deity of Nineveh speaks for a close cultural and religious connection between Tigunānum and Nineveh.” The ritual involves a procession to a city, and, on the first day, an unidentified group of people either bring something to completion or pay or deliver something in full (*ú-ša-al-la-mu*). For the second day, mention is made of silver and the mixing? of flour and wine (*[m]a-àš-ha-tum ka-ra-na ú-ba-al-lu-ú; uballū* should probably be understood as a corrupt form of *uballilū*). They send something (*ú-ša-ap-pa-ru*, otherwise not attested in the D-Stem, perhaps referring to the mixture of flour and wine), they sit down (*ú-uš-ša-bu-ma*), and they are feasting. They do not give something ... and they are feasting. The text is written by a person named Kirissu son of Habiašu and dated to the twelfth day of the month Tiri, when the *limmus* were Aliabu and Ihlip-gišiar, and the king was Tunip-Teššub.

The third ritual is the best preserved (Folio 7627-7628, 8200-8201). According to the description of W. G. Lambert, it is a one column tablet inscribed on both sides. Only the bottom part survives, so that both the beginning and end are lost. About 33 consecutive lines are preserved in part, describing a festival over several days; the account of the end of the first day, of all of the second and third days, and of the beginning of the fourth day is preserved. The participants include the diviner, a singer, and the king. Offerings are made to several deities including Šin, Adad, Nergal, and Enlil. In addition to the offerings, the same ceremony is performed every day: the king receives a silver ring that he returns the next day and which is then given to the diviner. Subsequently, the diviner and the singer perform the ritual act of binding together their hands with something made of wool.

These texts are of interest to the history of ritual in Mesopotamia because there are very few Old Babylonian rituals that feature the king as the central participant in the ritual performance. Corresponding evidence is found not in southern or central Mesopotamia, but rather in Syria and later Assyria, particularly in Mari and in the much later Neo-Assyrian state rituals. The cultural horizons of Tigunānum, Mari, and Assyria are linked by the fact that their ritual calendar includes festive rituals that focus on the figures of the king and Ishtar, manifesting through ritual performance that the king reigned by virtue of the love of the goddess and was thus publicly sacralized in his office.¹⁴

Read together, divinatory and ritual texts from Tigunānum reveal that the principal deities in the cult of that city must have been the storm god and Ishtar, as these divinities figure most prominently in both genres.

¹³ This cultic locale links the Ishtar ritual from Tigunānum with the ritual dedicated to Eshtar of Irradan from Mari in which a ritual performance likewise takes place in the gate of the temple of Eshtar (Durand and Guichard 1997: 59–63).

¹⁴ Note that the colophon of the tablet of the ritual dedicated to Eshtar of Irradan from Mari emphasizes the focus on the ritual action of the king (*tuppi isikti šarrim*; Durand and Guichard 1997: 23).

This pairing is also reflected in the Old Assyrian Sargon Legend found at Kültepe (Pongratz-Leisten 2015: 152–157 with further bibliography), as well as in the later curse formulas of the Middle Assyrian king Adad-nirari I (Pongratz-Leisten 2015: 159). Tigunānum and Assyria thus belonged to the same cultural horizon.

The central position of the diviner of Tigunānum compares with the situation of the diviner Asqudum at the court of Zimrilim of Mari (Charpin 2011), who married into the royal family and undertook political missions on behalf of the king. Another example that comes to mind is the diviner's family in Late Bronze Age Emar, who, as the highest religious authority, was responsible for organizing the cult and the festive ceremonies of the city (Fleming 2000; Cohen 2009).

As a whole, the evidence discussed above points to the fact that political and cultural centers like Mari, Ešnunna, Halab, and Tigunānum¹⁵ belonged to a larger network – not only of political alliances, but also of knowledge: knowledge in the direct service of rulership and scholarship. This network did not consist of closed societies, but was instead receptive to cultural innovations that were driven by institutional needs.

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¹⁵ This connection of Tigunānum with the Upper Mesopotamian Kingdom is further apparent in the usage of the calendar, which demonstrates great similarity with the calendar of Šamši-Addu (Charpin 2013).

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III. TRANSITIONS AND TRANSFORMATIONS IN THE LEVANT AND NORTHERN ARABIA

THE MIDDLE TO LATE BRONZE AGE TRANSITION AT TELL EL-‘AJJUL IN THE LIGHT OF EXCHANGES BETWEEN CYPRUS AND THE EASTERN MEDITERRANEAN

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According to textual references as well as the evidence from the Ulu Burun shipwreck, copper and tin were among the most important commodities circulating in the eastern Mediterranean during the 2nd millennium BCE. The distribution of the economically secondary Cypriot pottery, however, remains the principal and disproportionately significant indicator for reconstructing Late Bronze Age trading networks because of its ubiquity. Considered diagnostic of the Late Bronze Age in Canaan, these products were an integral component of the culture, as evinced especially by the frequency of Base Ring containers in burials (Bergoffen 2001b).¹ At Tell el-‘Ajjul, the unique combination of quantity, variety and contextual distribution bespeak the familiar role of Cypriot vessels and their contents in everyday life, and demonstrate that this town was a port of entry for Cypriot goods in Canaan from the beginning of Late Cypriot I.

Tell el-‘Ajjul’s Cypriot assemblage comes mainly from W. M. F. Petrie’s excavations (Petrie 1931, 1932, 1933, 1934; Petrie, Mackay and Murray 1952). Fischer and Sadeq’s 1999 and 2000 field seasons have expanded the corpus, though the individual sherds have not yet been published. The quantitative analyses of their material, however, has been taken into consideration in this article (Fischer and Sadeq 2000, 2002). With respect to methodology, it is recognized that individual occurrences of Cypriot vessels are of no use for dating Canaanite sites, since Cypriot chronology depends for its absolute dates on finds of Cypriot pottery abroad. But Late Cypriot relative chronology is well developed, and it is therefore methodologically acceptable to correlate stratified sequences of imported Cypriot pottery to set up and synchronize Syro-Palestinian chronologies. Furthermore, research into regional differences as well as diachronic changes in the types of imported wares and styles may help future researchers to illuminate continuities or shifts in trading networks.

The most important feature of the Cypriot assemblage from Tell el-‘Ajjul is the collection of Proto White Slip and White Slip I, which is still unparalleled elsewhere outside

of Cyprus. This fills a gap in the sequence of Cypriot ceramic exports to the Levant in Late Cypriot IA as well as pointing to regional differences in trade between Cyprus, Egypt and Canaan during the late Hyksos Period to early XVIIIth Dynasty (Bergoffen 2001a, 2002). As pointed out below, however, the suggested dating for this stage of relations between Cyprus and Tell el-‘Ajjul, has repercussions for the latter’s chronology, which could in turn obviate Tell el-‘Ajjul’s identification as Sharuhén. This essay also calls attention to the co-existence and close proximity of the two major regional centers, Gaza and Tell el-‘Ajjul, and suggests that the interconnectivity of these towns and their smaller satellites was based on functional differentiation, possibly systematized under Egyptian authority.

The Middle to Late Bronze transition in Canaan saw important changes in the region’s urban civilization. Many towns, especially in southern Canaan, were destroyed and either not reoccupied or reoccupied after a gap and then rebuilt on a smaller scale (Weinstein 1981, 1991). If the destructions resulted from the depredations of the Egyptian army expelling the Hyksos from Egypt and then pursuing their foe into Canaan, we would have an invaluable historical peg for dating the post-destruction phases. But the only documented campaign in Canaan associated with the founding of the XVIIIth dynasty was Ahmose’s capture of Sharuhén, in southwestern Canaan, between his 18th and 22nd years, following his conquest of the Hyksos capital at Avaris / Tell el-Dab‘a in the Eastern Delta (Wilson 1950: 233). During the Hyksos era, Tell el-‘Ajjul was a prosperous commercial center, strongly fortified and strategically located, with a sheltered port near the mouth of the Wadi Gaza. One could understand why the Egyptians might want to seize this town to gain a foothold in Canaan as soon as possible after establishing control in the eastern Delta. But are the burnt layers at Tell el-‘Ajjul evidence of Egyptian aggression, and if Ahmose was the one who inflicted this damage during his siege of Sharuhén, could Tell el-‘Ajjul then be identified as Sharuhén?

After Ahmose, there is no further mention of Egyptian campaigns in southern Canaan until the reign of Thutmosis III (Redford 1979: 273–279). Other factors unrelated to Egyptian incursions such as accidental fires or decades-long, local conflicts could also have resulted in

¹ At Alalakh, Red Lustrous Wheel made (RLWM) bottles were the preferred container in burial offerings. There was a marked pattern of deposition in the graves that Woolley excavated, with RLWM bottles found, often in pairs, in the majority of the burials (Bergoffen 1995: 34).

destructions. Opting for the latter, Bunimovitz attributed the decline of the Middle Bronze Age centers mainly to a “continuous process” of internal competition and conflict that had existed since their inception (Bunimovitz 1995: 323–324). If, in spite of these arguments, Tell el-‘Ajjul’s destruction layers are equated with those at other Canaanite sites, and these are ascribed to Egyptian incursions at the beginning of the New Kingdom, then we would have to explain why the imported Cypriot pottery sequence at this site cannot be correlated with what has been observed everywhere else in the Levant. The question should also be raised as to Tell el-‘Ajjul’s continuing role and viability in the Gaza region after the Egyptian conquest, and once Gaza became the Egyptian administrative headquarters in southern Canaan – by the time of Hatshepsut, if not earlier.

Although there are destruction levels at Tell el-‘Ajjul, the post-destruction phases do not follow the pattern observed at other Canaanite sites. From approximately Middle Bronze IIB to Middle Bronze IIC-Late Bronze I, Tell el-‘Ajjul was the largest fortified city in southern Canaan, originally covering an estimated 30 acres or approximately 12 hectares, with a protected anchorage in the estuary of the Wadi Gaza, well-suited for Mediterranean trading vessels. Rich in gold and silver, the town’s wealth was no doubt based on its foreign trade, as evidenced by the assemblage of Cypriot pottery as well as goods from other lands. Development began with the excavation of a fosse, probably a dry moat, on three sides of the tell, with the wadi on the southwest. Only vestiges of ramparts were found and nothing of the wall that must have stood on top of them. The moat was about 19.5 feet deep and 30 feet wide – a formidable obstacle for attackers. It seems that the palace at the north end of the tell was erected at the same time as the moat’s excavation, since it was built on a base of sandstone blocks evidently quarried from the fosse. Palace I had a large central courtyard with small rooms ranged round it, typical of Syro-Palestinian courtyard palaces of the Middle and Late Bronze Ages. This building was burnt and covered by ashes and rain-washed earth and the much smaller Palace II was erected over its ruins. The fortress-like Palace III, which incorporated some of the walls of Palace II, is thought to belong to the time of Thutmose III. Most of the city houses and streets that Petrie excavated were on the south and southeast sides of the tell. He defined two main building phases, Cities III and II, with City I consisting of mere traces on the surface. Like Palace I, City III was burnt, and Albright (1938: 71) therefore suggested that these burnings were related. But there is no stratigraphic connection between the two areas, and the differences in the Cypriot pottery assemblages associated with each suggests that the destructions were not contemporary. Moreover, while Palace I was replaced by a far more modest structure, the same is not true for City III, where the following building period, City II, provides evidence of continuity and growth. Tell el-‘Ajjul therefore does not fit the picture observed at other sites, since it was neither

abandoned nor reduced in size following the burning of City III. There was no long-term, negative impact as at other sites, but, on the contrary, City II was an extensive town of long streets and generous houses whose varied contents reflected the prosperity of their owners. The late Middle Bronze to early Late Bronze ceramic repertoires of Cities III and II are broadly similar, mainly differentiated by the Cypriot pottery, which also marks the progress of the town’s maritime trade (Bergoffen 1989).

The concentration of Hyksos Royal name scarabs at Tell el-‘Ajjul, its wealth, and its strategic location relative to both overland and maritime trade routes, make it easy to imagine that this was the principal Hyksos center in southern Canaan and therefore Ahmose’s prime military target (Weinstein 1981: 8–10, and 1991: 107–108). Thus, many scholars, following Kempinski (1974) and Stewart (1974: 63) would identify Tell el-‘Ajjul as Sharuhēn. The other candidates proposed, Tell Far‘ah South (Albright 1929, 7) and Tell Haror (Rainey 1993), cannot compete with Tell el-‘Ajjul in strategic location, precious metal hoards, or quantity and diversity of imported goods. In spite of all the features that recommend Tell el-‘Ajjul, however, there is still no indisputable evidence for definitively identifying it with Sharuhēn.

By the late Hyksos period, Tell el-‘Ajjul was actively involved in trade with Cyprus, but the repertoire of ceramic imports here is different from what has been found at Tell el-Dab‘a / Avaris, the Hyksos capital in the eastern Delta. Foreign goods arrived at Avaris in sea-going ships that sailed up the Pelusiac Nile branch to the town and docked in one of the natural basins that formed its harbors (Forstner-Müller 2010: 117–119, fig. 12). Ahmose’s predecessor, Kamose, described how he plundered hundreds of ships here, seizing the luxuries they contained (Habachi 1972: 37). Although Cypriot products are not specifically mentioned in the Kamose inscription, Avaris was certainly importing Cypriot goods at the time, as attested by the quantities of Middle Cypriot White Painted pottery in the Hyksos levels at Tell el-Dab‘a (Maguire 2009: 41, table 3). As in Egypt, trade between Cyprus and Canaan during the Middle Bronze Age is marked by the arrival of White Painted wares, first as a trickle in Middle Bronze IIA and gradually increasing in quantity throughout the period (Johnson 1982: 60, 62; Maguire 1990, Wolff and Bergoffen 2012). But in contrast to Tell el-Dab‘a, there are very few White Painted vessels from Tell el-‘Ajjul, possibly due to regional differences in Cypriot pottery development and foreign trade (Merrillees 1971; Manning 1999: 185). White Painted ware was characteristic of southeastern Cyprus but much less popular in the northwest where, by contrast, Proto White Slip and bichrome painted White Slip I hemispherical bowls decorated with a frieze of ladder-lattice framed lozenges around the rim, seem to have been at home (Bergoffen 2001a: 151–152). These last are not well represented in southeastern Cyprus. Both have been found at Tell el-Dab‘a but in very small numbers. Where

datable, the contexts belong to the late Hyksos period (Bietak and Hein 2001). This leaves Tell el-^cAjjul as the sole locale in the Levant or Egypt where Proto White Slip and the above-described White Slip I style are relatively well represented. Broadly speaking, then, during the Middle Bronze to Late Bronze transitional period, which overlaps with the late Hyksos period in Egypt, Tell el-Dab^a / Avaris traded primarily with southeastern Cyprus, while Tell el-^cAjjul received goods from the northwestern part of the island. In this way, competition was avoided.

The Cypriot pottery imports found in Tell el-^cAjjul's City II indicate that this phase overlapped in time with Late Cypriot IA:1. On Cyprus, the pottery styles marking the transition to Late Cypriot IA are Proto White Slip and Proto Base Ring. These occur together with styles that carry over from the end of the Middle Cypriot era, including White Painted V, Monochrome, Red on Black, White Painted Wheelmade, Bichrome, and Black Slip wares, among others (Åström 1972: 676–677, 700–701). The latter are characteristic of both Cities III and II, but Proto White Slip and Proto Base Ring only first occur in City II. Four Proto White Slip sherds came from City II chambers and a fifth vessel from a City II intramural tomb (Bergoffen 1989: catalogue nos 1009, 1011, 1012, 1023 and 1025).² A Proto Base Ring beak-spouted jug was also found in a City II intramural burial (Bergoffen 2001b: 41–43). Proto White Slip and Proto Base Ring wares are quite rare outside of Cyprus and the twenty-one Proto White Slip sherds from Tell el-^cAjjul constitute the bulk of all exports in this style in the eastern Mediterranean. Given the rarity of the ware and the fact that it is not possible to determine how long Proto White Slip was produced in Cyprus before it found its way into Canaan, it would be rash to correlate Late Cypriot IA with the beginning of City II simply because no Proto White Slip sherds were found in City III! On the basis of synchronisms with Tell el-Dab^a however, and other Canaanite sites, we can deduce that City II was occupied in the Late Hyksos period. At Tell el-Dab^a, Proto White Slip sherds were found in both a tomb and settlement contexts dated to the last Hyksos phase, D/2 (Bietak and Hein 2001: 172, 187–188). Tell el-Dab^a Level D/2 also yielded all the other Cypriot wares found in Tell el-^cAjjul's City II, but in smaller quantities and excluding Plain White Wheelmade ware. As already noted, the Cypriot assemblage at Tell el-Dab^a was dominated by White Painted ware (Maguire 1990: 26, 41, 155). Single instances of Proto White Slip have been found elsewhere in Canaan in Middle Bronze IIC contexts at Achziv, Megiddo, Tel Ridan and Ashkelon, (Oren 2001: 127–133; Bergoffen 2018).³ Occurrences of Proto Base

Ring outside of Cyprus are negligible. There are probably still hardly more than the four sherds listed by Gittlen (1977: 156–157), one of these from Tell el-^cAjjul, plus a fifth not included there, the complete beak-spouted jug mentioned above.

When was Palace I destroyed? If Tell el-^cAjjul was Sharuhen, Ahmose could be the culprit, but the brief mention of his siege and capture of the city does not record any accompanying destruction, and every burnt layer on a site is not necessarily caused by enemy attack. The real problem though is that Ahmose's campaign would have been too early to account for the Cypriot pottery found in Palace I, based on the present dating of White Slip I and Base Ring I. Aside from the complete Canaanite storage jar in the bathroom, which Albright dated to MB IIC, there was no other diagnostic local pottery and altogether few finds (Albright 1938: 69–70). White Slip I and Base Ring I, however, still extant and labeled, came from chambers of Palace I and Petrie reported many more than the few surviving specimens (Petrie 1932a: pl. XXXVII). This is very problematic because neither White Slip I nor Base Ring I have been found elsewhere in Canaan before the later part of Late Bronze I, in the 15th century. Outside of Tell el-^cAjjul, White Slip I is rare in Canaan, but Base Ring I was quite common, with a wide distribution, especially of juglets, which were often included in burials. Oren (1969) argued that while there may be the odd, earlier appearance, Base Ring I vessels arrived in Canaan largely in the 15th century. To explain the anomalous chronology at Tell el-^cAjjul, Epstein suggested that the too-early White Slip I and Base Ring I must be attributed to the city's status as a major port, and as such “among the first to receive the flow of Cypriot imports” – the flow referring to the Late Cypriot pottery styles that became increasingly common in Canaan in the 15th century, reaching their peak frequency in 14th (Epstein 1966: 176–177). But the styles characteristic of Late Cypriot IA and therefore marking the start of the “flow” are only found in significant numbers in Canaan at Tell el-^cAjjul. This is why Sjöqvist thought that the town held a privileged role in Cypriot foreign trade at that time (Sjöqvist 1940: 162). The easiest solution is to date the end of Palace I to Late Bronze I.

As for the end of the City III, it was surely too early for Ahmose and, as noted above, since City III was not stratigraphically related to Palace I, the destruction layers over each need not be contemporary (Stewart 1974: 62–63).⁴ It is possible that Palace I continued longer, into and even beyond the time of City II, which was not destroyed, leaving life at Tell el-^cAjjul to continue peacefully into the

² Bergoffen 1989: catalogue no. 1017 comes from a level that may be ascribed to the destruction debris between Cities III and II. Oren 2001: 137–138 includes additional Proto White Slip sherds, not listed here, from the Bergoffen 1989 catalogue. These require a more detailed re-evaluation and discussion of the City II sub-phases, which will appear in Bergoffen forthcoming.

³ Oren (2001: 132) mentions an unpublished sherd from Pythian-Adams' soundings, Level IV (phase O), but the location of this sherd was not noted. It was not located among the material from Pythian-Adams'

soundings published in Bergoffen 1988, which included one Proto White Slip sherd whose find spot was not recorded (163: fig. 2:1).

⁴ Stewart's postscript on the chronology of Tell el-^cAjjul, in which he concluded, *contra* Albright (1938), that the destruction of the earlier city could not be dated to the time of Ahmose I's campaign, was written in 1957 (Stewart 1974: 120, n. 1).

period of City I.⁵ There was no White Slip I from City II, but many sherds were found on the surface, presumably from the ruins of City I.

The large collection of White Slip I from Tell el-ʿAjjul has permitted some refinements in stylistic analysis that may help to elucidate the very early appearance of this ware in Palace I. The assemblage numbers some 186 sherds from Petrie's excavations, with a further 67 from Fischer and Sadeq's sounding, bringing the total to 253 White Slip I sherds (Bergoffen 1989, forthcoming; Fischer and Sadeq 2002: 38). Elsewhere on Canaanite sites – if it occurs at all – White Slip I vessels number fewer than ten sherds and, where datable, these belong to the 15th century, probably later than the bulk of the collection from Tell el-ʿAjjul (Bergoffen 2002). A unique feature of the collection from Tell el-ʿAjjul is the thirty-two White Slip I sherds with a frieze decoration of ladder-lattice framed lozenges. The cross-hatching of the ladder lattices is diagonal, as on Proto White Slip (although less markedly so), rather than the vertical hatching typical of White Slip I. Ladder-lattices as a framing motif are however far less common in White Slip I than a pair of parallel lines. The use of ladder-lattices and diagonal cross-hatching suggest that the style is transitional from Proto White Slip. Outside of Tell el-ʿAjjul, Tell el-Dabʿa has yielded only the above-mentioned, single White Slip I sherd decorated in this style, from a debris layer, and two sherds were found in southern Canaan at Tell Farʿah South, one that could be ascribed to the Middle Bronze IIC to Late Bronze I gateway (Bietak and Hein 2001: fig. 3, 8204M, 180; Petrie 1932b: LXXII, 2; Bergoffen 1989: no. 1326, pl. 197; Bergoffen 2001: 150). Almost all the other White Slip I sherds from Canaan were executed in the “Wavy Line style”, whose frieze is bordered by parallel lines. This style, conversely, is only represented by two sherds from Tell el-ʿAjjul (Bergoffen 2002: 28, 36–38). The inescapable conclusion is that Tell el-ʿAjjul's White Slip I assemblage is earlier than the scattered sherds from the rest of Canaan, and represents an import horizon that is not found at other sites either because they were destroyed and abandoned at that time or because the corresponding levels remain unexcavated. Most probably then, the Ajjul White Slip I material, including the sherds from Palace I, belong to the Middle Bronze IIC to Late Bronze I transition that is, the mid- to late 16th century.

Both archaeological and textual evidence indicate that by the early 15th century, before Thutmose III's first campaign of his independent reign, the Egyptians had been organizing a network of settlements in the environs of Gaza. As we have seen, Sharuhēn was conquered at the beginning of the XVIIIth dynasty while Gaza, in Thutmose III's annals, is referred to as “That which the ruler had

seized”, implying that it was captured before the beginning of his independent reign (Alt 1944: 9; Redford 1967: 60–62). This is underscored by Thutmose III's account of his first campaign, in which he claimed to have made the 240 km journey from Egypt's eastern border to Gaza in a mere nine to ten days, indicating that by that date Gaza was already a secure terminus for the North Sinai route (Wilson 1950: 235, n. 10 and n. 16). Further, Al-Moghraqa site I, located a mere 500 meters north of Tell el-ʿAjjul, and clearly a satellite of the latter, has yielded evidence suggesting the presence of an Egyptian royal funerary cult in the region dated to the time of the coregency of Thutmose III and Hatshepsut. It consists of Egyptian clay funerary cones, unique in Syro-Palestine, some stamped with Hatshepsut's prenomen, others with Thutmose III's (Steel *et al.* 2002: 939, 2004a: 322–323, figs 3–4, 2004b: 64). The excavators suggest that these may have been originally fixed on some kind of official funerary building. The presence of royal funerary cones in the region jibes well with Gaza's special status as Egyptian regional capital in Canaan and later, during the XIXth dynasty, as the site of one of only a handful of purely Egyptian cultic centers east of the Delta, this one dedicated to “the veneration of the national god Amun in close connection with the King” (Wimmer 1990: 1096–1097). It is against this regional development, with Gaza as the favored royal capital, that we may understand the continuing prosperity of Tell el-ʿAjjul, whose port made it one of the principal nodes in the regional system.

Gaza was the Egyptian administrative capital in Canaan and terminus of the North Sinai route, but modern buildings cover the site and its archaeological remains are known only from Phythian-Adams's soundings (Phythian-Adams 1923a, 1923b). The earliest phase of the ancient walled city that he reached yielded Cypriot White Slip II and Base Ring II sherds and local wares characteristic of Late Bronze II. The city's founding has therefore been dated to the 14th century, although the literary evidence, cited above, suggests that it was already established ca. 1500. In Miroschedji and Sadeq's view, there was always only one great city in this area: in the Middle Bronze Age, Tell el-ʿAjjul replaced the formidable Early Bronze Age site at nearby Tell es-Sakan, only to be superseded by Gaza in the Late Bronze Age (Miroschedji and Sadeq 2000: 101). But the archaeological evidence from Tell el-ʿAjjul indicates that the latter did not occur before the beginning of the Iron Age and, in view of their proximity, Gaza and Tell el-ʿAjjul must therefore have co-existed in a complementary relationship for several centuries.

During the 14th and 13th centuries, Tell el-ʿAjjul was still a thriving port in spite of the dominating presence of the hypothetical Egyptian fort, Palace III, built on the highest point of the town over the remains of Palaces I and II, and the establishment of an Egyptian administrative capital at Gaza. The size or character of Tell el-ʿAjjul in that period is indeterminate, since it is known only from

⁵ Although a number of scholars take as given that City II was destroyed, this writer has searched in vain for any mention of such destruction in Petrie's publications. Perhaps this confusion began with Albright's “We may conjecture that the city was destroyed by the Canaanite rebels about 1470 BCE...” (1938: 72 and 123, n. 58).

surface remains badly damaged by erosion and plowing. The burials in the cemeteries at the foot of the tell, however, evince the town's continuing prosperity as a maritime trading center. Following the practice observed in the Late Bronze I graves, the Late Bronze II burials were equipped with at least one Cypriot vessel, usually a small container (Bergoffen 2001b). This demonstrates continuity in trading relations with Cyprus and concomitantly, continuity in ritual, funerary practices. Not infrequently, the graves also contained Egyptian stone vessels, various metal objects, jewelry and other valuable items, not the kind of repertoire one might expect if Tell el-^ʿAjjul had become an impoverished backwater.

City I – or maybe a completely denuded City 0 – could have continued well into Late Bronze II. Whatever its size by then, Tell el-^ʿAjjul was still very active in foreign trade. At least one hundred and thirty Cypriot pottery sherds were scattered over the surface of the tell, including White Slip II and Base Ring II (Bergoffen 1989). These wares begin to appear in Canaan in the late 15th century but are most common in 14th century contexts. A Mycenaean IIIA2 late chariot krater fragment, dating to the mid-14th century, was also found over a wall of one of the City II buildings, and as mentioned above, there are many tombs datable to the 14th century in the city's cemeteries (Petrie 1934: 2, XLVI).

It is likely that the most important factor in Tell el-^ʿAjjul's eventual decline at the end of the Late Bronze Age was not political but ecological: the silting up of its estuary choked the town's port. A new port was established in the Iron Age nearer the mouth of Wadi Gaza at Tell al-Sannam (Clarke and Steel 1999: 223). There are a few Iron Age burials in Tell el-^ʿAjjul's cemeteries but in general, the evidence for occupation in this period is scant. Compounding the loss of income resulting from the demise of its anchorage, Tell el-^ʿAjjul's marshy surroundings may have become infested with malaria, as often happened in Petrie's day. For those who did not succumb to the disease, this could have been the tipping point to move to a healthier spot where they could also make a better living. Naturally, the diminishing population would have occasioned further economic decline.⁶

In conclusion:

1. During the Hyksos period, Avaris and Tell el-^ʿAjjul developed and maintained their own independent trading relations with different regions or cities in Cyprus. Whether Tell el-^ʿAjjul was Sharuhen or not, the early XVIIIth dynasty incursions in southern Canaan had no appreciable negative impact on the city's foreign trade,

nor did the establishment of an Egyptian base of operations in Gaza. After the Egyptian conquest, Tell el-^ʿAjjul continued to flourish as an integral member of a regional system of localities situated in close proximity to one another and performing different functions. Gaza was Egypt's ceremonial and political capital in southern Canaan while Tell el-^ʿAjjul was the region's port of entry and market place for imported goods.

2. The presence of Proto White Slip but not White Slip I in Tell el-^ʿAjjul's City II, in spite of the quantities of White Slip I found on the surface, together with the local Middle Bronze IIC to Late Bronze I pottery repertoire point to a terminal date for City II in Middle Bronze IIC or the transitional Middle Bronze IIC to Late Bronze I period. This would leave the destruction of City III too early for Ahmose.

3. The very large collection of White Slip I pottery at Tell el-^ʿAjjul in styles hardly found elsewhere in Canaan, but conversely including very few instances of Wavy Line Style, the most widely distributed type elsewhere, indicates that the assemblage represents a phase of relations between Cyprus and Canaan during the Middle Bronze to Late Bronze transition when political conditions interrupted the distribution of these styles to other sites. Base Ring I also first appears in this assemblage, but the material is too fragmentary to permit further comment.

4. While the identification of Tell el-^ʿAjjul with Sharuhen makes sense in terms of the town's wealth and strategic importance, linking the destruction of Palace I to Ahmose's siege of Sharuhen would necessitate raising the date for the first appearance of White Slip I and Base Ring I in Canaan to before the start of the XVIIIth dynasty.

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⁶ There is no evidence for the health of the city's inhabitants since the osteological remains from the burials that Petrie excavated were in a very poor state of preservation due to the acidity of the soil. The remains, formerly preserved at the Israel Antiquities Authority, were handed over in the mid-1990s to the Orthodox religious authorities to be reburied (Joe Zias, pers. comm., October 31, 2009).

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TRANSITIONS IN MATERIAL CULTURE OF THE 2ND MILLENNIUM BCE: THE MIDDLE BRONZE TO LATE BRONZE AGE SHIFT SEEN FROM NORTHWEST ARABIA

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Introduction¹

Knowledge of the 2nd millennium BCE in NW Arabia has enormously grown in the last decade and more so in the very last couple of years (Luciani 2016b; 2018; 2019; Hausleiter and Eichmann 2018). While our results are still preliminary at best, it is not too early to start scrutinizing the new data and focus on their meaning for the local transition from the Middle to the Late Bronze Age and what this tells us about the role NW Arabian oases played in the wider frame of the Levant during this age. The material cultural evidence is complex and obviously comprises different assemblages of artifacts. In the frame of this paper, I want to focus my attention on pottery. Metallurgy and metal artifacts are discussed elsewhere (Luciani 2019; 2021; Luciani and Alsaad 2018; 2020).

In this article, I shall argue six main points: **(1)** based on a new set of radiocarbon determinations from both Qurayyah and Taymā³, it is now possible to prove that both oases were settled during the entire 2nd millennium BCE. A contemporaneous occupation also in the third major oasis of the Hejaz, Khuraybah/Dadan (Al-^cUla) is suggested on the basis of comparable pottery recently published (Luciani 2018: 422 fn. 125). **(2)** The famous painted pottery, known in the past as ‘Midianite Pottery’ (Parr *et al.* 1970: 225; Rothenberg and Glass 1983) or Qurayyah Painted Ware more recently, had its origins significantly earlier than reputed until now, i.e., in a timeframe ranging from the late 17th to the early 15th cent. BCE as opposed to the 13th–12th century BCE. We now call this earliest of bichrome productions *Standard Qurayyah Painted Ware* (SQPW).² **(3)** The SQPW pottery

manufacture developed *locally* by expanding themes and motifs attested on the so-called Barbotine Pottery, i.e. by transitioning from those metal skeumorphs to bichrome painted decoration. **(4)** Embracing bichrome painted decoration, featuring both geometric and naturalistic motifs – as attested in SQPW – is not an isolated phenomenon in this local region but, on the contrary, it is mirrored and shared by multiple pottery manufactures throughout the Eastern Mediterranean: i.e., Cypriot and Levantine Bichrome Ware and earliest Cypriot bichrome White Slip I Ware, Chocolate-on-White Ware, and even Egyptian New Kingdom painted pottery, all originating and developing roughly contemporaneously (i.e., around the turn of the first half to the second half of the 2nd millennium BCE).³ Often the stylistic shift is accompanied and sustained by the process of introducing a systematic use of the potter’s wheel. **(5)** Two-color chromatism, motifs and syntax of the SQPW painted decoration reveal that SQPW producers must have been acquainted with the above-mentioned Mediterranean pottery groups, even if we lack any evidence of direct imports in North Arabia for this time frame. Although SQPW did not develop in isolation, its producers did not fashion outright imitations of Levantine prototypes **(6)** but rather an original repertory, one capable of re-elaborating in its folds explicit visual references to contemporary assemblages while remaining unique.

Notwithstanding the fact that our knowledge of North Arabia during the 2nd millennium remains comparatively limited, this period, like elsewhere in the Levant, seems to have witnessed significant changes at least in the economic structure of the oases if not in their social organization.

1. The second millennium BCE in Northern Arabia

Since 2014 a Saudi Arabian-Austrian project is devoted to the archaeological exploration of the Northern Hejazi

¹ I wish to thank Arnulf Hausleiter for organizing a very stimulating workshop and, in chronological order: Sarah T. Vilain, Lindy Crewe, Stephen Bourke, Peta Seaton, Eliezer Oren, Peter Fischer, Zeidan Kafafi, Robert Mullins, Celia Bergoffen and Leila Badre for providing me with references and/or illustrations. The core of this paper was conceived and written in 2017 when the early 2nd millennium data was a novelty. The prolonged publication time has allowed me to refine and correct initial views.

² The traditional label ‘Qurayyah Painted Ware’, now often used non-specifically for all and any presumably Hejazi painted wares of different periods (e.g. Kleiman *et al.* 2017: 251), risks being misleading and needs to be overhauled by the more precise definitions, such as the one used here: *Standard Qurayyah Painted Ware* (= SQPW) for its earliest occurrence. In Qurayyah, therefore, we now use SQPW only for the pottery from the kiln in Area A and QPW (= Qurayyah Painted Ware) only for not-yet-stratigraphically attested painted series, chronologically younger than SQPW. For other specific definitions for later (down to

the Iron Age!) painted assemblages attested in the oasis, see Luciani *in press*: table 1.

³ The chronological span of these phenomena was surely broad and protracted. Our parallels are not meant to be understood as perfect synchronisms but rather suggest a general frame for these developments. Future detailed chronological information will eventually lead to a fine-tuning of the chronology of this process.



Figure 1a: Localisation of Qurayyah (Luciani 2021: fig. 1)

oasis of Qurayyah. This is just the last of a series of new projects furthering the archaeological investigation of North Arabia. The Saudi Arabian-German project at Taymā' (Hausleiter and Eichmann 2018), at the fringes of the Nafud desert, and Saudi excavation at Khuraybah (Al-Said and Al-Ghazzi 2013–2014), ancient Dadan, in the oasis of Al-ʿUla, are significantly changing our understanding not only of the date of the incipient phases and the formation processes of these large settlements but most of all of

the material cultural make-up of the 2nd millennium BCE, south of the better known Southern Levantine regions.

In Qurayyah – a several hundred hectares large settlement east of the Hisma range, an oriental offshoot of the Hejaz (Fig. 1a), just 45 km due south of the Jordan-Saudi Arabia border – previous investigations being restricted to surface surveys (Parr *et al.* 1970; Ingraham *et al.* 1981; Hanisch-Gräfe *et al.* 2008) or very limited, punctual excavations,⁴ had not produced independent, reliable dates for the material culture recovered. The new research project, while pursuing an overall, systematic investigation of the formation, duration and demise of the settlement and its functioning in the desert environment (Luciani and Alsaud 2018; Luciani 2019 and 2021), has set out firstly to establish a dependable chronological frame for the site.

In three of the seven main excavation areas (B-C and M) (Fig. 1b), we could establish the presence of human occupation already starting with the early 3rd and continuing into the 2nd millennium BCE. Based on multiple radiometric determinations (Tab. 1),⁵ we have the evi-

⁴ Activities by the King Saud University, Riyadh and by the Saudi Commission for Tourism and National Heritage. They remain unpublished.

⁵ Five of the seven dates are from samples from primary contexts uncovered in Area M (Tab. 1 nos. 1, 3–5 and 7–9) and two from secondary deposits (Areas C and R). The radiocarbon age from Area C was measured on a large olive tree trunk sample (courtesy R. Neef, Naturwissenschaftliches Referat an der Zentrale, German Archaeological Institute, Berlin). This assay (QU.C.116.S.1) comes from a secondary context, stemming as it does from aeolic sand deposits on top of the Area C burials (see Luciani and Alsaud 2020). However, it tells us that human occupation on the site took care of olive cultivation throughout the 3rd millennium, even before the metallurgical activities were ongoing. Olive tree branches resulting from pruning were used as fuel for (s)melting in Area M. Not only the radiometric measurements from Area M but also the OSL dates in four key locations of the site (Areas E, F, J and G) confirm that the entire settlement started in the early 3rd millennium BCE (29th–26th cent. calBCE) (Luciani 2019 and and Lüthgens *et al.* 2023).

No.	Laboratory	Sample ID (Area.SU)	Material	δ ¹³ C,‰	¹⁴ C age, years BP	±	pMC	±	(OxCal v4.2.4) CalBCE date 2σ
1	UGAMS 28583	QU.M.562.S.2	Charcoal (<i>tamarix</i>)	-25.08	3690	25	63.17	0.19	2192–1981
2	Poz – 79322	QU.C.116.S.1	Charcoal (<i>olea</i>)	n/a	3785	35	n/a	n/a	2340–2050
3	UGAMS 52102	QU.M.593.SK.1.S.1	Bioapatite (skull frgm)	-12.83	3900	20	61.53	0.18	2466–2299
4	UGAMS 52101	QU.M.887.ID1.S.1	Bioapatite (skull frgm)	-11.78	4000	20	60.81	0.17	2572–2468
5	UGAMS 35789	QU.M.566.S.2	Charcoal (<i>populus</i>)	-26.22	4010	25	60.67	0.18	2576–2473
6	UGAMS 43026	QU.R.1228.S.7	Charcoal (<i>tamarix</i>)	-25.32	4040	20	60.5	0.17	2621–2488
7	UGAMS 35792	QU.M.873.S.2	Wood (<i>tamarix</i>)	-24.13	4050	25	60.37	0.17	2833–2487
8	UGAMS 35791	QU.M.870.S.4	Charcoal (<i>tamarix</i>)	-24.93	4060	20	60.34	0.16	2835–2492
9	UGAMS 35790	QU.M.864.S.1	Charcoal (<i>tamarix</i>)	-26.61	4070	25	60.22	0.18	2849–2492

UGAMS = Center for Applied Isotope Studies, University of Atlanta, Georgia; Poz = Poznan Radiocarbon Laboratory.

Table 1: Dates for the earliest settlement in Qurayyah, stratified from Area M on the Rock Plateau (nos. 1, 3–5, 7–9) and in secondary deposition in Area C (no. 2) and Area R (no. 6)

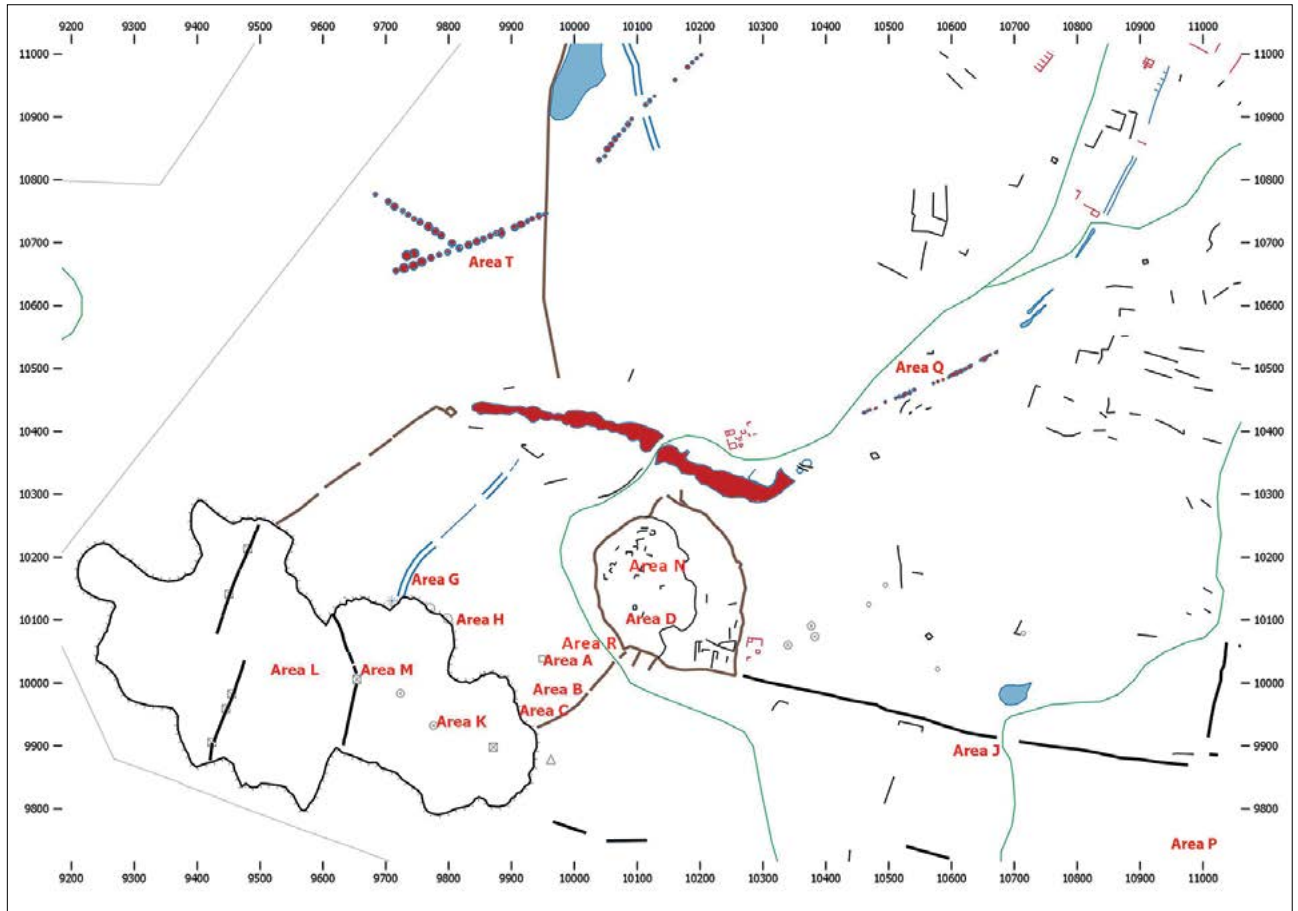


Figure 1b: Schematic plan of the western part of the site of Qurayyah with excavation areas (modified from Luciani 2019: fig. 2)

dence of an early settlement⁶ in the first half of the 3rd millennium calBCE (Tab. 1 nos. 7–9), its continuation in the middle of that millennium (Tab. 1 nos. 6 and 2) and a specific installation for metallurgical production from Area M, localized on top of the so-called Rock-Plateau in Qurayyah in the final centuries for the 3rd millennium calBCE (Tab. 1 no. 1). Olive tree cultivation seems to have been a feature of the subsistence strategy of the oasis already in these early times.⁷ An occupation chronologically overlapping the metallurgical production is now

⁶ For the first half of the 3rd millennium dates see Luciani 2021.

⁷ Even if distinguishing wild from cultivated taxa remains a challenge, it is very likely that our finding indicates cultivation rather than exploitation of wild olive trees, friendly communication R. Neef. Findings of olive branches in the lower layers of Area M seem to suggest that olive trees were exploited already during the first half of the 3rd millennium calBCE, see Luciani 2019 and 2021.

documented in Qurayyah in Area B (and comparatively in Area C), where a burial building has produced two ¹⁴C dates that place it in the late 3rd millennium down to first half of the 2nd millennium BCE (Tab. 5). A mid-2nd millennium use of the site is again proven in Qurayyah by four radiometric measurements from Area A (Tab. 2), while Late Bronze Age burial activities are confirmed by two ¹⁴C dates also stemming from Area A (Tab. 3). A final Late Bronze transition to Early Iron Age is now attested in Area R (Luciani 2019). With the latter we can say that Qurayyah was settled and/or used as burial ground throughout the entire 3rd and 2nd millennium BCE. Several dates confirm through radiometric dates a continuous occupation of the oasis (in Areas D, H, K and R) down to the 1st century calBCE (Luciani 2019).

No.	Laboratory	Sample ID (Area.SU)	Material	δ ¹³ C,‰	¹⁴ C age, years BP	±	pMC	±	(OxCal v4.2.4) CalBCE date 2σ
10	UGAMS 35787	QU.A.647.S.1	Charcoal (<i>tamarix</i>)	-24.75	3140	25	67.69	0.2	1495–1308
11	UGAMS 24108	QU.A.36.S.5	Charcoal (<i>tamarix</i>)	-25.95	3250	25	66.73	0.23	1611–1453
12	UGAMS 24107	QU.A.34.S.1	Charcoal (<i>tamarix</i>)	-25.86	3310	25	66.21	0.22	1658–1516
13	UGAMS 35786	QU.A.633.S.1	Charcoal (<i>ordeum</i>)	-21.74	3270	25	66.58	0.21	1617–1498

Table 2: Dates of use of the kiln in Area A

No.	Laboratory	Sample ID (Area.SU)	Material	$\delta^{13}\text{C},\text{‰}$	^{14}C age, years BP	$\pm$	pMC	$\pm$	(OxCal v4.2.4) CalBCE date 2σ
14	UGAMS 24106a	QU.A.31.S.4	Bioapatite (right femur, adult)	-13.56	2970	25	69.11	0.22	1274–1112
15	UGAMS 24106c	QU.A.31.S.4	Collagen (right femur, adult)	-18.62	3000	25	68.81	0.22	1375–1128

Table 3: Date of the burial inside the abandoned firing chamber of the kiln, Area A

No.	Laboratory	Sample ID Area.SU)	Material	$\delta^{13}\text{C},\text{‰}$	^{14}C age, years BP	$\pm$	pMC	$\pm$	(OxCal v4.2.4) CalBCE date 2σ
16	UGAMS 28582	QU.A.288.S.4	Charcoal (seed)	-23.84	3010	25	68.75	0.2	1381–1131

Table 4: Date of the abandonment of the kiln, Area A

No.	Laboratory	Sample ID (Area.SU)	Material	$\delta^{13}\text{C},\text{‰}$	^{14}C age, years BP	$\pm$	pMC	$\pm$	(OxCal v4.2.4) CalBCE date 2σ
17	UGAMS 24109	QU.B.90.S.4	Bioapatite,(adult humerus)	-13.51	3330	25	66.05	0.22	1685–1531
18	UGAMS 28579a	QU.B.325.S.1	Bioapatite, (skull fragment)	-15.06	3660	25	63.43	0.19	2135–1952

Table 5: Dates of the use of the burial building B-B1 in Area B

Research in Taymā' started over a decade ago and has succeeded in reconstructing an encompassing and detailed picture of this important oasis (Hausleiter and Eichmann 2018; also Tourtet et al. 2021). Here, human occupation appears to date back possibly millennia *before* the attestations in Qurayyah and to continue seemingly uninterrupted throughout the 3rd and early 2nd millennium BCE with metal weapons (Hausleiter and Zur 2016; Hausleiter *et al.* 2018) identical to those found in late Early Bronze and early Middle Bronze Age Levant, as well as with pottery manufactures such as Red Burnished Ware, Barbotine Pottery and Qurayyah Painted Ware (Hausleiter 2014) that are well attested also in Qurayyah. Since even the Early Iron Age is documented in Taymā', a complete settlement continuity from at least the late 3rd into the 1st millennium thus covering the entire 2nd millennium BCE seems to be proven on this site, too.

While no stratified radiometric determinations are known for the site of Khuraybah, in the oasis of Al-^cUla, the publication of the first seven campaigns (Al-Said and Al-Ghazzi 2013–2014) and a specific study on the pottery (Al-Shehry 2014) from this third major North Arabian settlement confirm that at least Barbotine Pottery (Luciani 2018: 422 fn. 125) and Qurayyah Painted Ware (Intilia 2016: 214), these typical Northern Hejazi, 2nd millennium BCE, ceramic productions, are attested. Therefore, we now have evidence that this settlement, too, was occupied in this period.

The investigations in Dumat al-Jandal, the fourth major oasis of North Arabia, located to the northeast of all other sites mentioned above, indicate the presence of

mid-1st millennium BCE pottery fragments at the earliest (Loreto 2017) for the time being. An occupation during the 2nd millennium may not be confirmed at this stage, though for location and limited depth of the stratigraphy reached so far, earlier dates should not come as a surprise in the future.

In sum, research in the last years has radically changed our reconstruction of the human occupation of the northern part of Arabia. From a picture of this area as an impenetrable desert region, where Mesopotamian kings first ventured during the full Iron Age with camels and well-structured armies, or at the earliest where major, foreign, West Asian and North African power players such as Egypt, induced settlement formation during the late 2nd millennium BCE, to one of a region where oasis cultivation and permanent settlement thrived well before the domestication of the dromedary, already during the Early Bronze Age at the latest, if not before.

It is now, therefore, possible to look at the Middle to Late Bronze Age transition, i.e. the mid of the 2nd millennium BCE, as a phase of fully developed settlements, walled 'urban' oases (Luciani 2021) even in these supposedly remote areas south of the Southern Levant. By looking at one class of evidence – pottery – we can try to establish to which extent North Arabia was part of the greater Eastern Mediterranean continuum already at this stage. In fact, by their very nature of bulk commodities, ceramics (Luciani 2014b; 2021 and in press) are liable to illustrate closer, more direct contacts if compared with value-added goods, such as metal artefacts, as visible in, e.g., bronze weapons deposited in graves (see below).



Figure 2: General view of SPQW pottery firing kiln in Area A, from the north and the east (Photos: T. J. Rickards and D. M. Blattner)

2. A new date for the beginning of the earliest of Qurayyah Painted Wares, i.e. SQPW

In the past, in the absence of any radiometric determinations, the discussion on these North Arabian oases in the Late Bronze Age – both for what concerned their genesis as for what pertained their “cultural affiliation” – revolved around the evaluation and dating of a rather widely attested class of painted pottery. In the time and vogue of biblical scholarship, this material was first called Edomite (Glueck 1967), then Midianite pottery (Parr *et al.* 1970: 225; Dayton 1972; Rothenberg and Glass 1983; Hashim 2007; Kafafi 2014a) – a name that, at times, persists to this day (Rothenberg 2019). Since 1988, it is more correctly known as Qurayyah Painted Ware (Parr 1988: 73–74).⁸ The name per se was not meant to imply that every single specimen was necessarily produced in the oasis of Qurayyah. More simply, this site became name-giving since it was the first one where the greatest number of these sherds was documented. On the surface of Qurayyah, pottery firing kilns and ceramic slag of the same brand could be detected in large quantities. Here, this ware seemed at home both because it constituted the absolute majority of pottery found, it was associated with a large kiln/pottery workshop area and because of the specific nature of the mineral inclusions in its fabrics, i.e. shale typically found in the Northern Hejaz (Rothenberg and Glass 1983: 68).

Peter Parr immediately understood this pottery to be Late Bronze Age in date (Parr *et al.* 1970: 238) and the discovery of substantial quantities thereof in the so-called Egyptian temple at Site 200 in Timna, Israel, prompted a date in the 13th to 12th centuries BCE. It should not be forgotten, nonetheless, that this chronology bases exclusively on the inscriptions of Egyptian Pharaohs Seti I through Ramesses V recovered in Timna.⁹ Since then an important discussion has been raging on the *final* date of

use of this material.¹⁰ However, little has been said about its *initial* date or the nature of its genesis.

Our 2015–2017 systematic, stratigraphic excavations of a pottery firing kiln¹¹ and its surrounding workshop area in Qurayyah – dubbed Area A (Fig. 2)¹² – has now produced the largest repertoire of decorated and simple ware¹³ SQPW (Standard Qurayyah Painted Ware) ever documented systematically in the frame of a controlled excavation of a primary context. The assemblage included the material correlates of all phases of production: unfired vessels, painted and plain simple ware pottery, overfired and regular pottery, wasters, clinkers, slag and fuel.

SQPW is a wheel-finished, monochrome or bichrome (occasionally polychrome) painted pottery, featuring both geometric and figurative motifs (Figs 3, 4, 7, 9a, 10a–b, 11a, 12, 14a–b. d–e and d).¹⁴ Typically, the painted decoration may be found both on the vessels’ inside and outside. Different finer and coarser wares may be used for a variety of vessels. Clear traces of colour zoning (Rothenberg and Glass 1983: 103) are recognizable throughout and surely indicate a not-yet-achieved complete control of the firing process.

¹⁰ For a recent critical review of the evidence for an Early Iron Age date see Intilia 2016 and Luciani 2018: 424–425 fn. 138.

¹¹ Quite obviously the Area A kiln is only one within an area heavily strewn with wasters and slag. At least 2–3 and as many as five additional double chamber kilns (“Six kilns were visible from the surface evidence of ‘exhaust’ chimneys”, Ingraham *et al.* 1981: 73) are located in this area east of the Rock Plateau (Parr *et al.* 1970: 240 and pl. 39; Al-Masry 1975: Fig. 85: top right; Ingraham *et al.* 1981: 73 and pl. 92C). Geo-magnetic prospections also indicate that this feature is part of a one-hectare-large area, covered with remains of pyrotechnological installations.

¹² I wish to acknowledge David Michael Blattner and Andrea Intilia for carrying out the excavation operations in this area.

¹³ Because the more striking sherds were painted, this pottery repertoire as a whole, has been called “Standard Qurayyah Painted Ware”. With this name, however, we indicate also the non-painted, simple ware specimens as well as the occasional incised or ridged exemplars that come from the aforementioned kiln and are made of the same fabrics and/or shapes as the painted specimens and clearly define a single assemblage. For the ratio between painted and non-painted vessels, see Luciani 2016a: 42.

¹⁴ See also Luciani 2019: Fig. 10 and in press: Fig. 7.

⁸ But see our more precise definitions above, fn. 2 and Luciani in press.

⁹ Cfr. Avner 2014 for a reassessment of the Timna stratigraphy and Luciani 2018 for the chronological contextualisation of QPW in Timna.



Figure 3: SQPW pottery sherds from the kiln in Area A (a–e) and from the surface south of Wall ‘D’ (f) in Qurayyah (Graphics: T. J. Rickards, L. Machel, C. Kainert, D. Klainscek. Photos: M. Adelhofer, M. Luciani)

An exhaustive presentation of this material goes well beyond the scope of this article but the specimens compare directly to those¹⁵ found on sites ranging from Taymā’ (Hausleiter 2011: Fig.8) to Timna to Amman and Khuraybah. Noteworthy and unprecedented in the study of this ceramic class is that for the first time we could submit for radiometric measurement four organic samples: two overlapping, short-life samples of the fuel used in the firing of the SQPW kiln, in Area A, i.e. indicating the phase of activity of the kiln. These samples (QU.A.36.S.5 and QU.A.34.S.1) have produced two coherent, superimposed ¹⁴C calBCE dates pointing to the late 17th or at the latest the early 15th century calBCE (Tab. 2 nos. 11–12) as date of manufacture. Two additional samples confirm this chronological frame (Tab. 2 nos. 10 and 13)¹⁶. While these chronological determinations are significantly higher than those accepted so far for QPW (i.e.,

‘Midianite Pottery’), not only are they internally coherent but they are supported by the fact that the dates from burial (Tab. 3) activities *after* the dismissal (Tab. 4) of the kiln are decidedly younger than those for its activity phase. Moreover, these high dates tally both with radiometric measurements for SQPW layers attested in Taymā’ (Luciani 2014a, 2018: 421) and from Site 2 (Erikson-Gini 2014) in Timna, i.e., the one site of the Wadi Mana’iyeh plexus that features the highest amount of QPW pottery, after Site 200. By comparison, the pottery from the famous Hathor temple/shrine in the latter site is more similar to pottery from the Area R excavation in Qurayyah or “Area R Painted Ware”, i.e., ARPW 2-3, which dates to the final part of the 2nd millennium BCE (late 13th to first half of the 10th century calBCE) (Luciani 2019: 141) and is thus significantly younger than SQPW.

If we can pinpoint the appearances of pottery at the initial (SQPW) and final part (ARPW 2-3) of the Late

¹⁵ For a recent synthesis see Intilia 2016.

¹⁶ The low date of sample QU.A.647.S.1 could either indicate a protracted use of the kiln or be akin to the age of its dismissal (see Tab. 4).

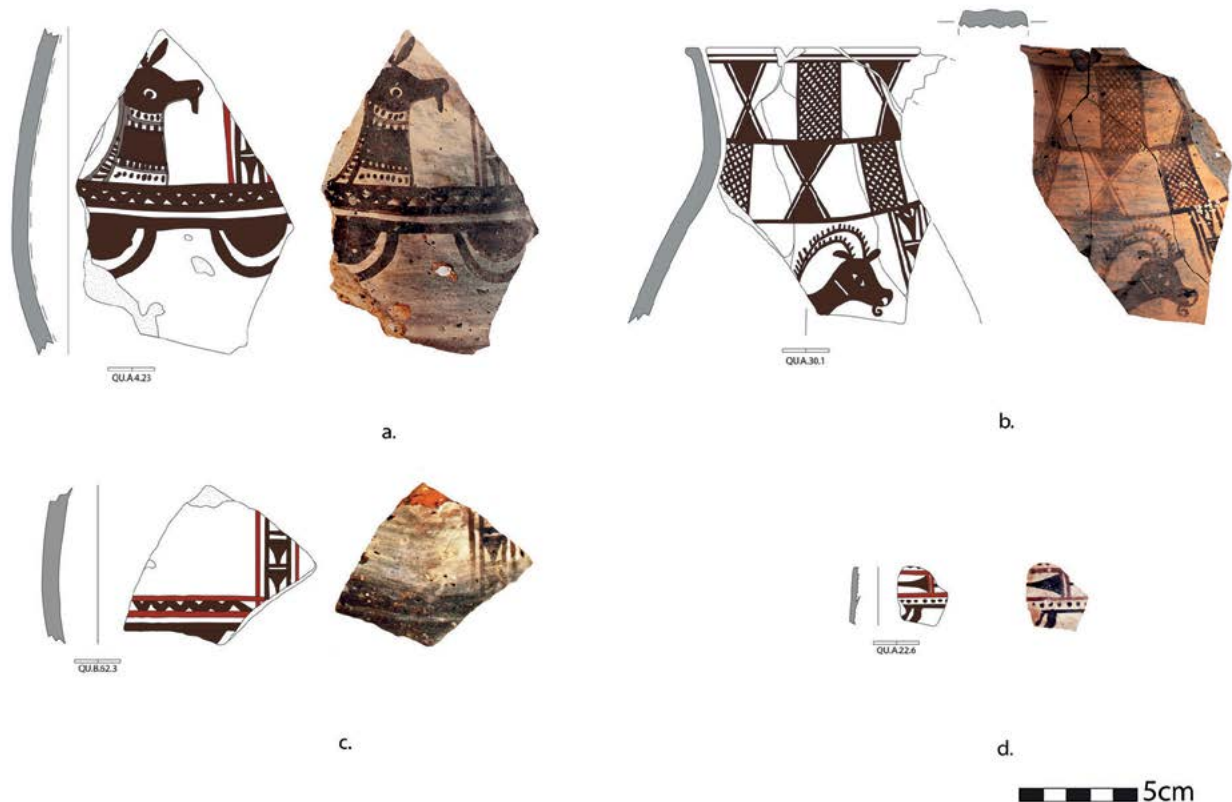


Figure 4: SQPW pottery sherds from the kiln in Area A (a–b, d) and from Area B (c) in Qurayyah (Graphics: T. J. Rickards, L. Machel, C. Kainert, D. Klainscek. Photos: M. Adelhofer, M. Luciani)

Bronze Age in Qurayyah, several gaps remain in our knowledge (Luciani in press).

But the important fact is: as has turned out to be the case for the so-called “Tayma Painted Ware” (Bawden and Edens 1988; Bawden 1983), QPW was never a single assemblage. Therefore, we have singled out *multiple, chronologically distinct Painted Wares* from Qurayyah (Luciani 2019 and in press) that we can safely attribute to different time frames and that therefore now require new labels.¹⁷ The (bichrome) painted pottery tradition on the site goes on for over a millennium, even well into the final Iron Age, constantly developing new motifs and shapes.

The verdict is still not out on the entire duration of the earliest of Qurayyah’s painted pottery productions, the one we now call SQPW. Crucial is that our new determinations tell us that at least the incipient manufacture of this ceramic started *well before* the end of the Late Bronze Age, as usually thought, rather at its beginning before the mid of the 2nd millennium BCE, in the transitional phase

between the Middle Bronze Age and the following, early part of the Late Bronze Age. This is not a mere shift in chronology but one that, by pointing to a different temporal frame also changes its broader cultural context and has, thus, the potential to alter the basic understanding of the phenomenon.

3. A genetic link between SQPW Ware and Barbotine Pottery

Not only the new radiometric measurements but also an earlier pottery group attested in Qurayyah induce us to shift perspective. Results of the surveys in Qurayyah showed that a quantitatively minor part of the pottery findings from the surface was represented by an altogether different ware, which was called Barbotine Pottery because of its applied and relief decoration.¹⁸ In the last five years, we have excavated two very elongated stone buildings, one in each of two areas (Areas B and C)¹⁹, containing human remains and different burial goods, among them pottery. The vessels in both buildings

¹⁷ Therefore, the fine chronology of the pottery generally described QPW “Qurayyah Painted Ware”, found in the Greater Levant (Intilia 2016) needs to be re-assessed and disentangled on the basis of the new chronological data from Qurayyah and especially in view of the numerous painted pottery series discovered at the site. The painted pottery from Qurayyah was likely exported abroad also significantly later than the Late Bronze Age down to the Iron Age (Luciani in press).

¹⁸ Though this pottery had been found in older surveys (Parr *et al.* 1970: Fig. 17:2; Inghram *et al.* 1981: Fig. 79:1–6) it had not been understood as a series independent from ‘Midianite Pottery’.

¹⁹ Area B, responsibility of the Austrian team and Area C, headed by the Saudi team, see Luciani and Alsaud 2020; Luciani *et al.* 2018.



Figure 5: Burnished Wares and Barbotine pottery from Area B in Qurayyah
(Graphics: T. J. Rickards; L. Machel, C. Kainert; Photos: M. Adelhofer, D. Ücğül, M. T. Jakob)

are similar to each other even if the great variety of decorations indicates that no standardization processes had intervened yet. The repertory features mostly hand-made, white, red or brown, polished ‘tea’ pots or small, globular jars with applied bands, knobs and pellets and/or deeply grooved wavy lines (Fig. 5).²⁰ It is known as both (Red) Burnished Ware and/or Barbotine Pottery.²¹ With their shiny, lustrous surfaces, reddish colour and applied knobs, these pottery vessels are meant to be, I believe, skeuomorphs of metal, copper-based originals. They are

mostly monochromatic red or brownish and highly polished. The white-on-red two colour effect resulting from using a white paste for relief decoration²² must have been, starting from a certain moment,²³ intentional (Fig. 7f).

Two ¹⁴C dates (Tab. 5) from the bioapatite of the human bones from the building in Area B have indicated that the burial complex was in use from the late 3rd to

²⁰ This description, too, is severely limited due to space constraints (for more see Luciani 2019: Fig. 9, Luciani in press: Fig. 6; Luciani *et al.* 2018: 192–193, figs 9–10, and Luciani and Abualhassan 2022). A comprehensive presentation of the material will have to wait for the excavation of Area B to be completed.

²¹ A clear distinction between these two designations is desirable but has not been yet attained.

²² While we have extensive evidence that the white appliqué paste was covered over and burnished like the entire surface of the vessel, at the latest with the application of e.g. white rosettes (Fig. 7f) the bichrome, appliqué design was pursued deliberately.

²³ It is entirely possible and even likely that within the Barbotine Pottery range there are chronologically different groups and that the white-on-red group is a later development of the earlier Red Burnished Ware (Hausleiter 2014) but we still lack well-stratified contexts to prove it.

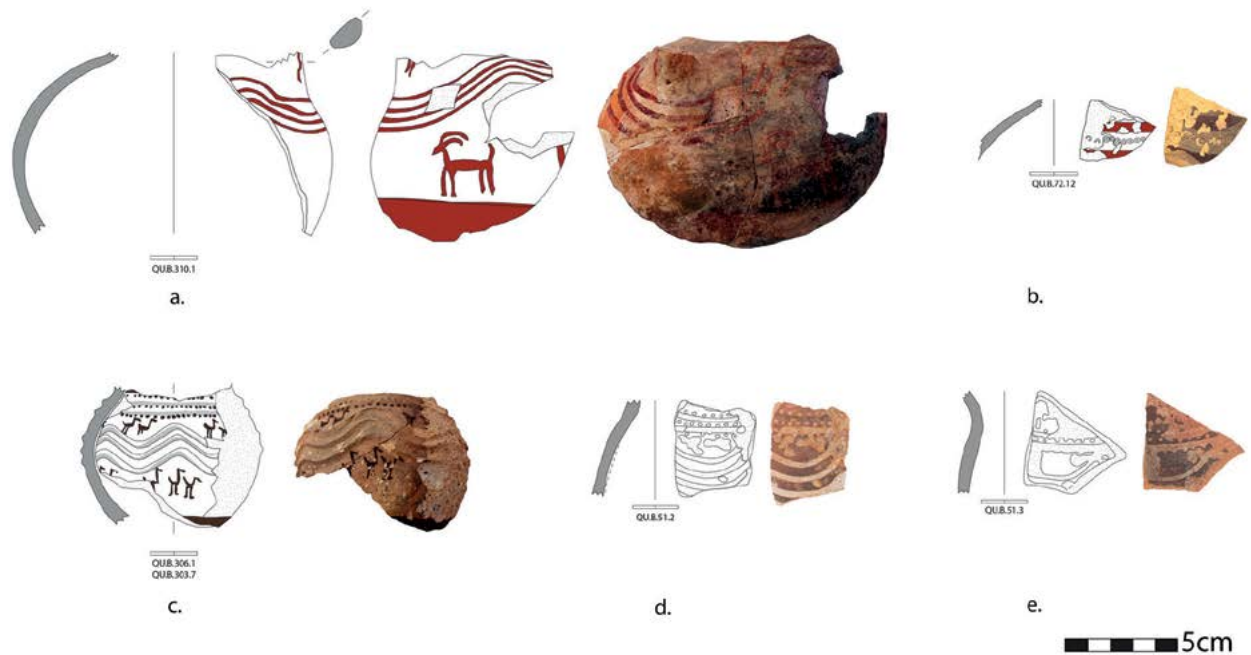


Figure 6: “Transitional” Barbotine-SQPW pottery sherds from Area B in Qurayyah
(Graphics: T. J. Rickards, C. Kainert, D. Klainscek. Photos: M. Adelhofer, D. Ügcül, G. Gattinger)

the first half of the 2nd millennium calBCE, down to the very late 17th or even first half of the 16th century calBCE. These chronological determinations align with radiometric measurement and stratigraphy excavated in Square Q3 in Taymā³, a sequence that frames the appearance of Red Burnished Ware and Barbotine Pottery to the phase before the inception of SQPW (Luciani and Machel forthcoming).²⁴

Red Burnished Wares are known from contemporaneous burial buildings from the cairn complex F 19 in Mada’in Salih (Abu-Azizeh 2015; Abu-Azizeh *et al.* 2020), from Khuraybah/Al-‘Ula (Al-Said and Al-Ghazzi 2013–2014: 113 Fig. 108: 89–90) and from Al-Nasim (Hausleiter 2015: Fig. 6), Rujum Sa‘sa‘ (Al-Hajri 2002: pl. 3.8: A, 3.14: A; Al-Hajiri 2011) and Tal‘a (Hausleiter 2014: Fig. 25l and Fig. 5a)²⁵ in Taymā³. Both Mada’in Salih and Al-Nasim also feature ¹⁴C dates in the very late 3rd and first half of the 2nd millennium BCE (Abu-Azizeh *et al.* 2020: 16; Hausleiter and Zur 2016: 153).

Understanding the Red Burnished Ware or better the Barbotine Pottery and the incipient SQPW as two chronologically close and stratigraphically subsequent²⁶

productions has sparked the question about their potential genetic link.

Both in the Area B and the Area C buildings, even if the majority of exemplars are to be described as “classical” Burnished Wares/Barbotine Pottery, we see the occasional “Transitional Barbotine-SQPW” vessel. While keeping the typical Barbotine globular shape and the relief wavy lines, these specimens added details in painted decorations: dots instead of the studs and pellets formerly appliquéd (Fig. 6c) and started to expand the decorative motifs to the representation of animals (here ostrich) through painting. Painted decoration could be added to other Barbotine/Burnished Ware decorations, such as impressed dots imitating pellets (Fig. 6b). Finally, the entire decoration could be made by painting the old Barbotine motif instead of incising it or applying it in relief and other popular animals such as the ibex were added (Fig. 6a). From the same Area B stem also fragments where the white-on-red pattern of the Barbotine tradition is realized with a white relief so low that it has for all purposes become a painting, mixed with details, which are executed exclusively with white paint (Fig. 6d–e).

This transition and experimentation is carried over and attested in the subsequent Area A kiln with the production of white appliqué Barbotine Pottery adding finger-painted decoration (Fig. 7a–e).²⁷ The earliest

²⁴ There may be some outliers in the radiometric determinations of the samples from this sequence. However, the date for Barbotine Pottery seems to be localized either to between the 20th and the 17th or to late 17th to first half of the 15th century BCE, in any case *before* the local earliest dates for (S)QPW (second half 15th–14th century BCE). Two dates for Red Burnished/Barbotine Pottery from Taymā³ come also from Square W 41 (17th–16th and 15th–14th century BCE), see Hausleiter 2014.

²⁵ From Tal‘a, as in the Arabic caption. Area E, as in the English caption, is a typo.

²⁶ But we cannot exclude that production and use of Barbotine Pottery continued and co-existed with SQPW, when the latter started to make up the major share of the assemblage. In any case, the fact that the

latest possible dates for Red Burnished/Barbotine and the earliest for SQPW (final 17th and first half of the 16th century calBCE) overlap is a confirmation of the above presented sequence.

²⁷ It is interesting that, though no formal resemblance exists, a similar process in the experimentation of painted decoration techniques –

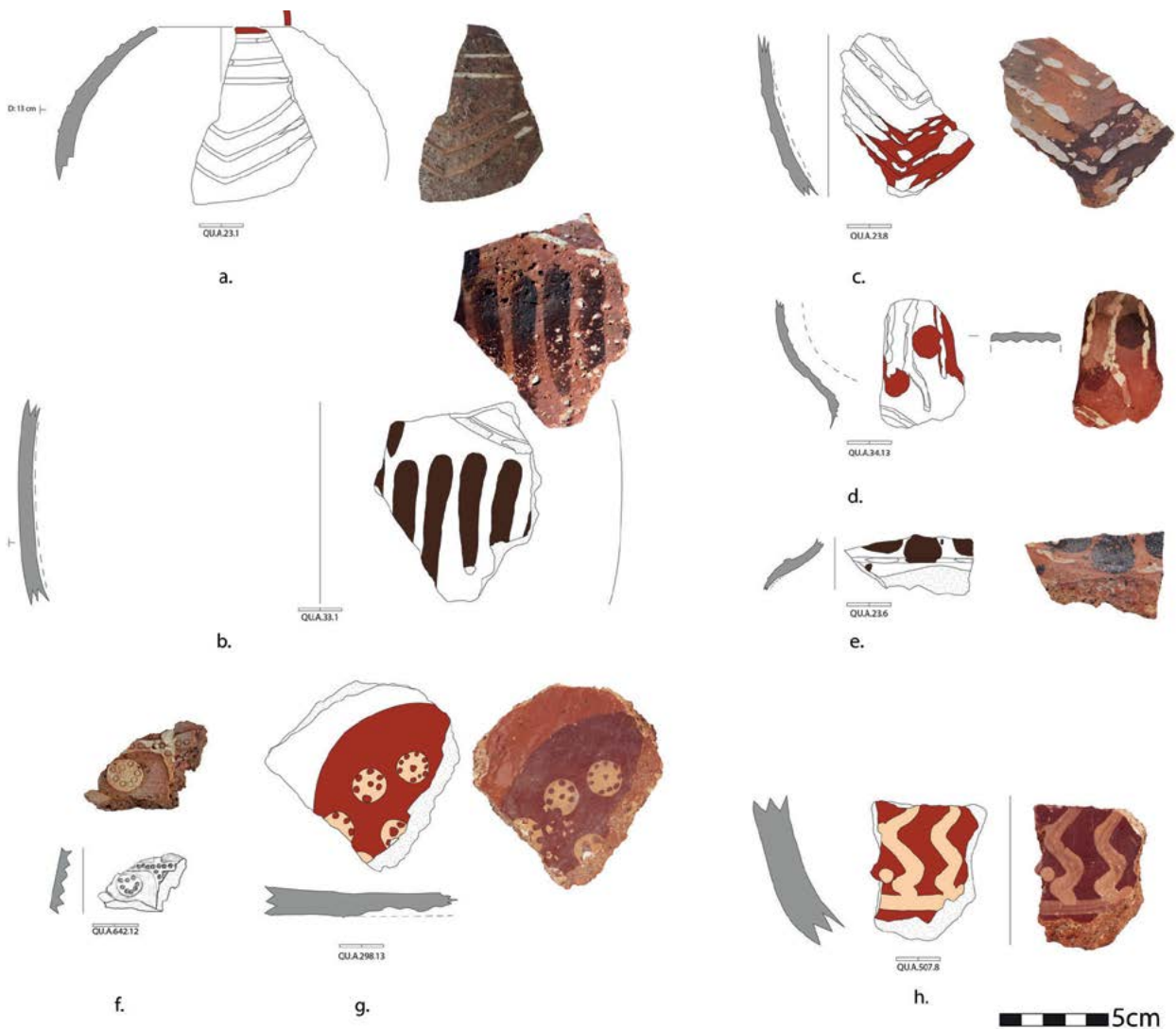


Figure 7: a–e: Finger-painted-and-white appliqué Barbotine pottery from the kiln in Area A in Qurayyah;
 f. Barbotine with applied rosette; g–h. White-on-red painted (g. is an imitation of f.)
 (Graphics: T.J. Rickards, C. Kainert, D. Klainscek. L. Machel. Photos: M. Adelhofer, S. McGlone)

attempts at exclusively painted decoration insist on the two-color chromatism with white-on-red exemplars (Fig. 7g–h) featuring prominently (Luciani and Abualhassan 2022: Pl. 2.3. middle) and clearly imitating Barbotine specimens (Fig. 7f). The variety of the painted motifs attested in the later SQPW shows that from the initial technical innovation of substituting relief decoration with painted patterns on the usual globular shapes, a very original idea developed and unfolded, ultimately producing an extremely rich repertory of new decorations and vessel shapes. Contextually, the potter's wheel²⁸

first a “splash” of colour and then bichrome/polychrome motifs – is attested in a comparable time range as part of the development leading to Egyptian New Kingdom painted pottery (Holthofer 1977: 55–57, pl. 13 no. 3 and Aston 2006).

²⁸ Detailed research is needed to understand whether we are dealing with a wheel-throwing or wheel-shaping procedures (for a discussion in the case of Cypriot pottery see Crewe 2007: 210–211) or just wheel finishing of substantially coil-made pots (as proposed by Kalsbeek and London 1978: 49. However the Yotvata vessels clearly belong to the later phase and would compare with our ARPW 2–3, not SQPW and therefore address another historical frame).

came to be used in the SQPW production not only sporadically, as was the case for the “Transitional Barbotine Pottery-SQPW”, but systematically.

The transformation from appliqué white-on-red Barbotine to similar motifs (wavy lines, dots) into bichrome painting is well attested also in Taymā²⁹, where a number of vessels²⁹ maintain Barbotine shapes but feature SQPW painting or prove to the existence of “lace” appliqué³⁰ decoration that we later see as painting on SQPW.

²⁹ TA 11945.17, TA 14534.43, TA 11903.3, TA 11468.4, see Luciani and Machel forthcoming. (Plate: “Transitional pottery”).

³⁰ I mean the Barbotine featuring white appliqué decoration in the shape not just of wavy lines and studs but also flower-shaped pellets combined with rich linear patterns. This seems more typical of Taymā³⁰ (e.g. Hausleiter 2014: Fig. 5a and Fig. 24: l–m) but is present also in Khuraybah (Al-Said and Al-Ghazzi 2013–2014: 113 Fig. 108:89–90). It is now attested also in Qurayyah (Luciani and Abualhassan 2022: Pl. 2.18.a and here Fig. 7f) however, significantly, not from the graves but from the SQPW pottery production kiln in Area A. This may be a hint that this production was later than Red Burnished Ware and accompanied SQPW manufacture, at least initially.

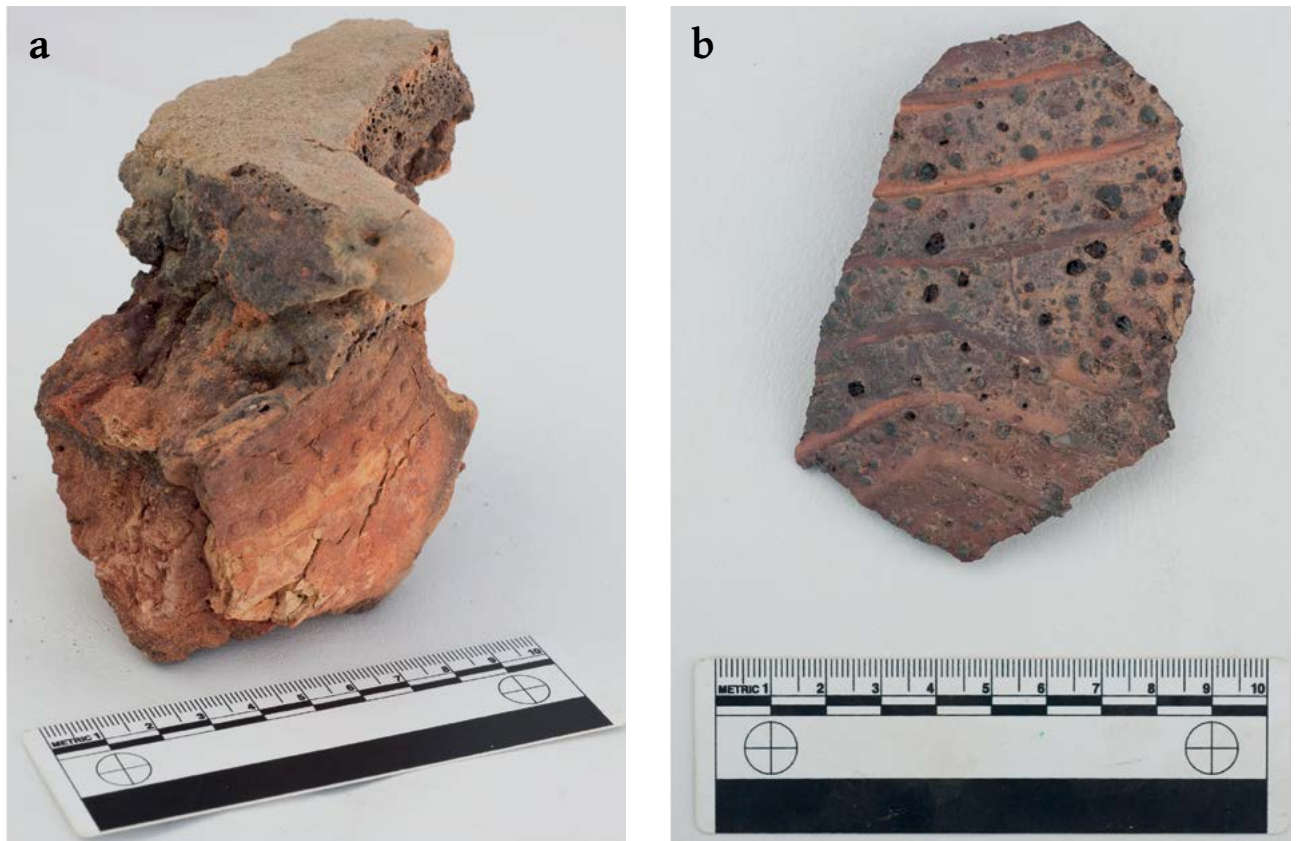


Figure 8: a. One half of a slag (kiln wall?) [QU.A.1.F.1] incorporating a Burnished Wares pottery sherd;
b. overfired Barbotine pottery exemplar [QU.A.29.2] (Photos: M. Adelhofer)

I have discussed elsewhere how one bichrome painted specimen of QPW from the Timna temple – where, to my knowledge, no Barbotine Pottery is attested – appears to reproduce through polychrome painted design instead, the zigzag and flower-studs decoration found on a Barbotine ‘tea’ pot from Taymā’ (Luciani 2018: 423 Fig. 3).

Not only finding these transitional specimens clearly points to the development of the SQPW ceramic as being an indigenous, home-grown process, both in Qurayyah and in Taymā’. Further evidence is provided by the presence in our Area A pottery kiln of two halves of a slag (kiln wall?) incorporating a Barbotine Pottery sherd and several overfired Barbotine Pottery exemplars (Fig. 8a–b). These artefacts, being as they are single instances within the SQPW-producing kiln, may be (a) residual and belong to a chronologically preceding, Barbotine production phase or (b) contemporaneous with the SQPW activities and represent the last specimen of an “old” ware, lingering on during the time of major SQPW manufacture.

Be this as it may, they prove that at some point in time, manufacture of Barbotine Pottery, too, had occurred in Qurayyah, likely in the vicinity of the SQPW kiln.³¹ These

traces, therefore, strengthen the interpretation pointing to a genetic link between the two local pottery manufactures between the first and the second half of the 2nd millennium BCE.

4. Mirrored transitions in the Eastern Mediterranean

If we try to contextualize this transition from hand-made metal skeuomorphs to wheel-finished, bichrome-painted³² vessels, both chronologically and in a wider geographic horizon, we immediately realize that the development of similar painted decorations is by no means a phenomenon unique to Northern Arabia but one mirrored in several Eastern Mediterranean productions. Cypriot and

³¹ Underneath the Area A kiln (SU 17) the remains of a previous one (SU 1054) are visible: Luciani and Asiri 2022: Pl. 2.3.c–d. Moreover, the Area A kiln is only one of a complex of at least over half a dozen pottery furnaces.

³² Of course, all these pottery assemblages (Cypriot and Levantine Bichrome Painted Wares; Cypriot White Slip I; Chocolate-on-White; Egyptian New Kingdom Painted Pottery) contain both bichrome and monochrome painted decoration. The ratio between the two chromatisms (bichrome/monochrome) has not yet been investigated in detail. The type of motifs and the pattern created by dark (bichrome/monochrome) on buff colours suggests to me that painted specimens may have been skeuomorphs of sewn leather containers (especially visible in Cypriot White Slip I vessels). The more complex, bichrome figurative motifs seem to relate to patterns woven into textiles (as feasible by the “true promiscuity of pottery which acted as a nexus for influences coming from many parts of the object world” Gosden 2005, 206–207). This may be an index of the changing role of these different productive activities (metallurgy vs leather/textile).



Figure 9: a. Bichrome SQPW jar from Area A, Qurayyah (Graphics: L. Machel, C. Kainert. Photos: D. Üçgül);

b. Bichrome painted from Megiddo Tomb 1100A (Guy – Engberg 1938, frontispiece and pl. 46:16);

c. Egyptian Bichrome painted jar (Oren 2019, pl. 4.1.9:2 and photo 4.1.1:6);

d. Chocolate-on-White jar from Tomb 62 at Pella (courtesy of S. Bourke © Pella Excavations, University of Sydney; Photo: modified from <https://jaraad.wordpress.com/2012/12/20/picture-jordan-dar-as-saraya/>)

Levantine Bichrome Ware(s) (Epstein 1966; Artzy 1973; 2001; Tschegg *et al.* 2008; Hein 2001a; 2001b; 2015; Hein and Stidsing 2013), Cypriot White Slip I (Bergoffen 2001; 2002 and this volume) and Chocolate-on-White,³³ just as Egyptian New Kingdom bichrome painted pottery, all emerge at the turn from the final part of the Middle Bronze Age and to the beginning of the Late Bronze Age,³⁴ i.e. roughly around the 17th-16th century calBCE.

³³ Fischer 1999; 2003 with ¹⁴C dates pointing to the Middle to Late Bronze Age transition as time for the emergence of this ware (the earliest C-o-W is, fittingly, bichrome).

³⁴ In Cyprus the transition from Middle Cypriot to Late Cypriot is earlier than in the Levant but the important onset of LC wares is witnessed with

Contextualising SQPW in the wider setting of Levantine pottery production is not meant as a precise parallel for our repertory. While each of these manufactures has unmistakable vessel shapes and painted decorative motifs and each is, in every sense of the word, distinct and autonomous, it is difficult to imagine that the ‘bichrome painted revolution’³⁵ should have taken place

the full LC I period (Crewe 2007). For the debate on synchronisms in the chronology of 2nd millennium Eastern Mediterranean see Manning *et al.* 2014 and Bietak 2016.

³⁵ For the relationship and development of monochrome paint from the earlier bichrome on Cypriot WS specimen not due to taste but technology, see Steel 2010: 108. It is also interesting to see that L. Crewe (2007: 223) considers Bichrome (and Plain White) to be a “‘foreign’ form



Figure 10: a–b. Bichrome SQPW tankards from Area A (a.) and from the surface of the so-called “Pottery Dump” (b.) both from Qurayyah (Graphics: T. J. Rickards, C. Kainert, D. Klainscek. L. Machel. Photos: M. Adelhofer, S. McGlone); c. Calcite (alabaster) one-handed jug, The Cesnola Collection, Accession Number: 74.51.5107 (Metropolitan Museum API Open Access) d. Bichrome White Slip I tankard from Maroni, Cyprus, Tomb 28 (courtesy of the © Trustees of the British Museum)

in these neighbouring lands and the island of Cyprus approximately contemporaneously and yet completely unconnected to and ignoring one another. As will be detailed below, characteristic signatures present in the locally-conceived and homegrown North Arabian SQPW pottery are witness of its sharing distinctive features with contemporary bichrome productions from distant but apparently not completely foreign shores.

But the change in decoration style was not a superficial, isolated feature. It was accompanied – or even technically made possible – by a second, technological innovation: the introduction of widespread use of the potter’s wheel. The fact that these transformations in the

production processes are reflected in a tandem around the Mediterranean further underlines our argument.

5. A shared visual language?

As is already apparent from the preliminary publications of Standard Qurayyah Painted Ware, this assemblage is very distinctive and clearly to be differentiated from others created in the “Bichrome era” (Kalsbeek and London 1978: 54). Specific partitioning or framing motifs such as [1] a horizontal band of small red squares with a black dot in the middle (mostly covering the neck-to-shoulder connection of a jar, here on Fig. 9a); [2] the row of hanging semi-circles, small to large, simple or multiple and concentric, monochrome or bichrome (mostly on the shoulder to body connection) on small, medium and large beakers, juglets, globular and elongated jugs and

finish” even if produced in Cyprus as opposed to traditional Cypriot form/finish being Red/Black Slip and White Painted. Kalsbeek and London (1978: 49) speak of the “Late Bronze Age school of bichrome ceramic decoration”.



Figure 11: a. Bichrome SQPW jar with figurative metope (lion) from Area A (Graphics: T.J. Rickards, C. Kainert, D. Klainscek, L. Machel. Photos: M. Adelhofer, D. Ücgül);
 b. Bichrome jar with figurative metope (human and lion) from Tell Irbid (Kafafi 2014b: fig. 4, by kind permission of Z. Kafafi);
 c. Levantine Bichrome Ware from the “treasure” in Beirut (modified from Badre 1997: fig. 20:2; courtesy of L. Badre with P. Antaki and H. Charaf; drawing R. Yassine)

jars, **Figs 3a–f; 4a, c? and d; 10b; 12 a–c**); [3] vertical or horizontal dividing bands of superimposed wedges **Figs 4a–d**; [4] vertical black spikes painted from the top of the neck of a jug,³⁶ framed at the bottom by a thin horizontal

line with small vertical strokes (as here on **Figs 11a; 12a–c**³⁷) [5] different hanging lotus and other flowers, some

³⁶ This decoration motif is visible, without the lower, horizontal framing, on the rim-to-neck of Egyptian New Kingdom drop-shaped pottery jars (Neues Museum Berlin, Schliemann collection and Ägyptisches Museum und Papyrussammlung ÄM 14412) and faience bottles (Petrie 1906: 146:1–2) down to Sudanese Nubia (Holthoer 1977: pl. 17 no. 185/286:1 and pl. 49 no. 3). The shape of these vessels is different and in size they are 2–3 times larger than the jugs from Qurayyah. For a similar motif on rhyta from Saqqara (BM EA 67175), Abydos (Tomb D11 MFA 00.702) and Tuna el-Gebel (BM EA 22731), see Ayers 2020.

³⁷ See also Luciani 2018: 406–407 table 1: 3 for a specimen from Tell Khelifeh; Parr 1982: 128 Fig. 1:5 for an exemplar from Tell el-Far‘ah South and Intilia 2016: 202–203 and Fig. 14:1 for one from Tell el-‘Ajjul [Ajjul 32.1942]. The 16th century date for early WSI in Tell el-‘Ajjul (Bergoffen this volume) and the presence of this jug (here Fig. 12b) fit very well with the timeline established by ¹⁴C dates in Qurayyah and provides a potential venue where early bichrome WSI may have been seen by SQPW producers, see below Fn. 50 (even if QPW jug [Ajjul 32.1942] was found in an LBA grave that contained also Base Ring II wares, possibly dating to the 14th–13th century BCE). — The short neck jar from Jericho (Bonfil 2019: 102, Fig. 1.3.8. no. 10) is also very similar in shape and adds a row of triangles from the neck on the vessel’s shoulder as here: these, however seem to be red instead of black.



Figure 12: a. Bichrome SQPW jar from Taymā⁷ (TA 526; courtesy of DAI Orient Department, Taymā⁷ Project. Photo: M. Cusin);
 b. SQPW jar from Tell el-‘Ajjul (Graphics C. Bergoffen and D. Klainscek, Photo: C. Bergoffen; by kind permission of the IAA);
 c. Bichrome SQPW jar from Area M, Qurayyah (Graphics: T.J. Rickards, C. Kainert, D. Klainscek. Photos: S. McGlone)

with curls (Figs 3d; 9a; 10b and 14a–b)³⁸ and [6] the most typical, the bichrome rail: two thin parallel red lines with perpendicular black “rungs” painted over³⁹ (Figs 3a–d; 10a? and b; 12c; 14a–b and c?⁴⁰) to name just a few, are diagnostic and not found elsewhere in this period. They characterize this pottery manufacture as original, independent and unique.

³⁸ This motif (specifically as in Fig. 14b) is attested also on a large, double-handled deep bowl (Rose 2007: 76 no. 274) from New Kingdom Amarna. Its cross-hatched decoration, however, is considered atypical of Egyptian pottery and supposedly imitating Cypriot prototypes.

³⁹ This decorative motif remains very vital in Qurayyah, notwithstanding clear changes in style and proportions, also in the ARPW 2-3 pottery of the final Late Bronze Age.

⁴⁰ The black-and-white photo does not allow to distinguish details. It is possible that this (Mullins and Yannai 2019: 251) is a SQPW bowl not a bichrome Chocolate-on-White?

However, SQPW, while clearly producing local shapes⁴¹ and motifs, originally developed by expanding previous Barbotine appliqué decoration, at the same time made extensive use of 2nd millennium BCE Mediterranean syntax, such as developing bichrome patterns on metopes, subdividing metopes through vertical bands of rhombuses⁴² (Figs 9a and d; 11a and 14c–d), subdividing the shoulders of jars with triangular patterns, placing figurative representations of humans or animals in the metopes (Figs 11a–c) or using the trellis decoration (Figs 4b and

⁴¹ SQPW shapes are local, but they, too, are clearly a novelty in this period if compared to the Barbotine repertory. The new shapes such as carinated bowls (Fig. 14a–b and e), tankards (Fig. 10a–b) and drop-shaped vessels (Fig. 3c–d) are closer to their Levantine (Fig. 14c), Cypriot (Fig. 10d) or Egyptian (Fig. 10c) counterparts than to any shape attested in the Barbotine assemblage.

⁴² Or lozenges, in P. Parr’s (1988: 74) parlance.

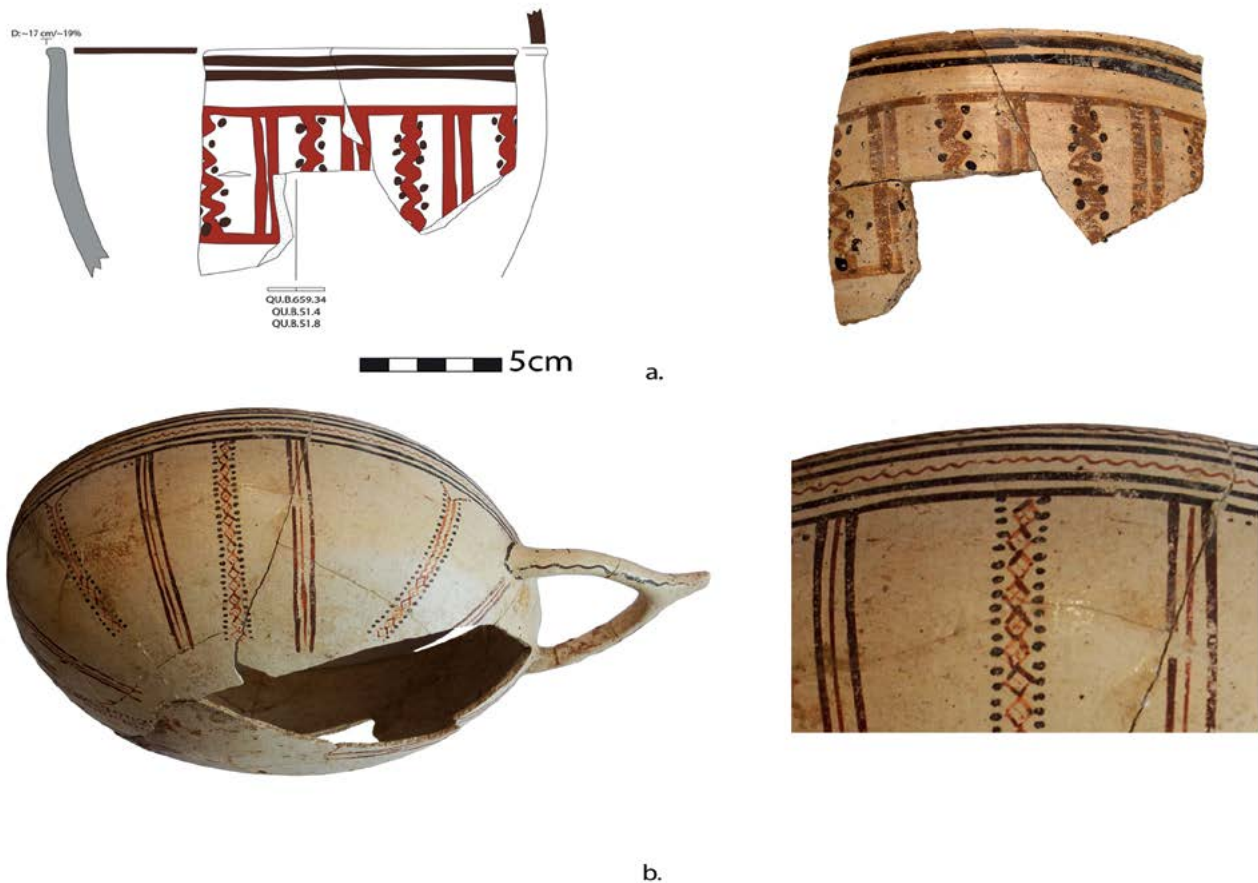


Figure 13: a. Bichrome QPW deep bowl, intrusive from Area B, Qurayyah (Graphics: T.J. Rickards, C. Kainert, D. Klainscek. Photos: B. Spindelberger);

b. Bichrome White Slip I from Pit P, Hala Sultan Tekke, Cyprus

(Fischer and Bürge 2016: 51–53; fig. 22: 1; Fischer and Bürge 2017: 164–165; fig. 7:3; by kind permission of P. Fischer)

14b).⁴³ While most of these comparisons are generic, they are too wide-spread in the Eastern Mediterranean and synchronic to be judged fortuitous or completely unrelated to those other pottery traditions (Luciani 2018: 423–424). This general decorative makeup was the “Bichrome era” tapestry onto which every painted assemblage wove its individual identity.⁴⁴

The combination of a tankard shape (Fig. 10a) with vertical partitions obtained through ladder-lattice motifs (Fig. 10b), though not identical, in the combination of overall vessel shape, pattern of decoration and hues is very strongly evocative of contemporary White Slip I

productions from Cyprus and Egyptian alabaster vessels⁴⁵ (Fig. 10c–d). The localization of metope and the animal in the frame of a bichrome SQPW jar from Qurayyah (Fig. 11a) while never an imitation, recalls closely Levantine Bichrome Ware, such as the krater from Beirut with bichrome Bull with Fish motif, even if the depicted animals are different (Fig. 11c) or the one from Irbid, featuring the more germane theme of a lion hunt (Fig. 11b).⁴⁶

Another case in point, though chronologically later than SPQW, is the QPW bowl⁴⁷ alternating reddish zig-zag vertical decorations with framing dark points with a light brown/reddish vertical double line, both starting from a double line in darker colour. This motif, notwithstanding

⁴³ But also chevrons and running spirals (Figs 3e; 11a and 14e).

⁴⁴ Kalsbeek and London 1978: 54 correctly point out: “Traditional works on style emphasize individuality of form and decoration; petrological analysis stresses ‘skilled workmanship’ and praises a highly-developed technology”. These authors have mostly looked at the technology and tried to assess the level of expertise of the potters who made the two ‘Midianite’ vessels. However, it should not be forgotten that the pots found at Yotvata, Wadi Arabah, apparently featuring a very low level of know-how, are to be dated to the final Late Bronze Age or Early Iron Age I. Therefore, the observations on those two specimens should not be extended to previous (e.g. SQPW) pottery productions.

⁴⁵ Here Fig. 10c and Hankey 1974: 171–173, Fig. 2 no. 15; Bounni *et al.* 1998: 70–71 and Fig. 128 nos 4–5.

⁴⁶ Kafafi 2014b for a detailed discussion of the depiction on this vessel.

⁴⁷ This painted bowl ([QU.B.51.4-5]) so resembling WSI does not come from Area A – where the activities of the kiln may be dated via radiocarbon to the transition between the Middle and the incipient Late Bronze Age –, but from neighbouring Area B, in itself an older burial building, possibly as intrusive sherd. While we cannot yet propose a precise date for this vessel, it is surely later than SQPW and may therefore fit well with a Cypriote WSI synchronism (see below Fn. 49 and 50).



Figure 14: a–b. and d. Bichrome SQPW bowls from Area A, Qurayyah;
 c. Bichrome Chocolate-on-White from Megiddo Area BB Stratum IX
 (Loud 1948: pl. 54:18; Mullins and Yannai 2019: pl. 3.47 no. 5, courtesy of the Israel Exploration Society)

differences⁴⁸ with the Cypriot exemplars, is so evocative in detail design, chromatic make-up, syntax, and overall set-up on the vessel of bichrome White Slip I hemispherical bowl specimens (**Fig. 13a**)⁴⁹ as to suggest that potters in Northwest Arabia – possibly through the intermediary role of a coastal site like Tell el-‘Ajjul?⁵⁰ – must have been familiar with those Cypriot productions.⁵¹ Specific echoes of Egyptian productions, both drop-shaped pottery jars and painted motifs, such as painted vertical partitioning lines made of small black squares and bichrome triangles (**Fig. 9c**), horizontal bands with circles, or decorative patterns on faience vessels (Parr 1988) are visible on other, selected SQPW specimen, as well.⁵²

6. Conclusion

Being acquainted with the above-discussed Mediterranean including Egyptian pottery groups and material culture meant that the indigenous impulse for manufacturing SQPW did not develop in complete isolation. The local execution seems to have enjoyed a degree of inspiration from foreign assemblages. However, this very moderate blending in or incorporating of single, diagnostic signature elements on a shared bichrome syntax and canvas, while proving a high-level awareness of contemporary productions, indicates a strictly controlled process that picked-and-chose only selected elements and tended to emphasize otherness and difference, while just echoing commonalities. It is the perfect embodiment

of “entangled materiality” (Stockhammer 2013) where the elements of resistance are displayed as strongly as the ones of acceptance. The practices of entanglement (Stockhammer 2013; Bader 2013) attested by the material from North Arabia, never induced SQPW producers to fashion outright imitations⁵³ but rather ‘familiar –but-unique’ assemblages.

Our data on the social and economic organization of the oasis is still too limited to allow us to forward precise hypotheses on how the process of contact and exchange, our specific brand of entanglement, worked: who was involved, where it took place, etc. However, we would like to underline that entanglement surely must have affected both sides, if to differing degree, involving and impacting, therefore, also the counterpart.⁵⁴

Discussing purity and hybridity of cultures⁵⁵ on the basis of different pottery assemblages depends heavily on the as-yet unproven equation: *one pottery repertory = one (ethnic group) people*, something that in Bronze Age Eastern Mediterranean still relies entirely on significantly later written sources, thus unverifiable for the past.⁵⁶ While it is possible to characterize an assemblage by registering, e.g., which shapes and decoration motifs occur more often, this of course does not tell us who the people were and how “pure” their culture was. I believe we should allow for multiculturalism (van Pelt 2013: 3), enabled by connectivity among different communities, to have constituted the default and interconnectedness coupled with intentional choices to have played a significantly larger role than previously thought. I hope to have shown above the many instances where the pottery preserves material correlates of these actions.

Moreover, performative behavior and social ranking mechanisms (Luciani 2014b: 13 and Fn. 32 above) are likely to have played just as a significant role – or even greater – than ‘culture/ethnicity’ in the production, use and adoption of tableware and storage containers.⁵⁷ Cooking pots and food preparation techniques, furthermore, may overlap with yet different networks from the ones visible through the analysis of decorated tableware.

Qurayyah lies inland, in a desert landscape at a significant distance from the Mediterranean and we have not found any direct imports of Late Cypriot wares in North

⁴⁸ Not only the shape of the vessel but also the fact that the double lines (both horizontal and vertical) are triple in the White Slip I exemplars represent different details. The QPW pattern seems to be framed at the bottom, something not found in the Hala Sultan Tekke vessel presented here as comparison but attested elsewhere in the WSI repertory (Bergoffen 2002: 28 and Fig. 3, upper right corner)

⁴⁹ This particularly similar exemplar comes from Pit P of the new excavations at Hala Sultan Tekke, Fischer and Bürge (2016: 51–53, Fig. 22:1 and Fischer and Bürge 2017: 164–165, Fig. 7:3). The latter propose a rough date for the pit where the WSI vessel comes from, in the 15th century BCE. However, they underline – as was the case for neighbouring and possibly related Tomb 2 (Karageorghis 1976) – how these determinations, stemming as they do from depositions/tombs that have been re-opened and re-used a number of times, fail to be very precise. Residual, i.e., older material is clearly recognizable (Fischer and Bürge 2017: 164).

⁵⁰ See above Fn. 37. As Bergoffen 2001 and this volume underlines, Tell el-‘Ajjul received very early, remarkable amounts of early Late Bronze Age Cypriot imports. It is, e.g. the site with the highest amount of Proto White Slip, White Slip I and Bichrome Ware in the entire Levant.

⁵¹ At the Amman Airport site (Hennessy 1966a and 1966b; Kafafi 1983; Hankey 1974, 1995; Seaton 2001 and Mumford 2015) Cypriot pottery and QPW were actually found together. However, this must have happened at a later time than the 16th century BCE, possibly starting with the 15th century BCE (Mumford 2015: 109, but the structure continues to the very late LBA, featuring also local and Mycenaean pottery).

⁵² Oren 2019, pl. 4.1.9:2 and photo 4.1.1:6 and here **Fig. 9c**. This vessel is an Egyptian specimen found in the Levantine site of Tell el-‘Ajjul. It is interesting that even for this series it has been suggested by some scholars (ibid.: 270) that shape and design were inspired by Cypro-Levantine Bichrome Ware. The relationship between SQPW and Egyptian productions will be developed in a different study. It should be noted that some motifs, such as the one on the Luciani and Alsaad 2018: Fig. 5d are also found in Late Bronze Age glyptic, see Porada 1947: pl. XVI, no. 295.

⁵³ For a recent attempt to discuss and define the concept of “copy” see Stockhammer and Forberg 2017.

⁵⁴ As may be possibly detected on the bowl from Amarna, Egypt, mentioned above (Fn. 38) or even in the bowl from Megiddo, here **Fig. 14c**.

⁵⁵ I consciously prefer to avoid the label of hybrid for (S)QPW pottery, one that was used by P.J. Parr many years ago (1988), before this term was refunctionalized within post-colonial studies theory. For hybridity’s role in present-day theories of cultural mixture, see van Pelt 2013: 3–4.

⁵⁶ See Homsher this volume, 79 for a similar critique.

⁵⁷ As Gosselin 2000: 208 points out “artifacts and chaînes opératoires, like individuals and social groups, are not clearly bounded and monolithic units, but complex, dynamic and profoundly mixed constructions”.

Arabia (yet?). It is, therefore, difficult to unravel the dynamics of this contact. For now, we know that SQPW, while reaching coastal sites such as Tell el-ʿAjjul (Luciani 2018: 423 Fig. 3), does not seem to reach Egypt⁵⁸ even if Egyptian productions must surely have been known in Arabia. The imitation through painted pottery of more expensive manufactures such as glass or faience is likely indicative of the needs of sub-elites or better substitute elites (Luciani 2014b and Fn. 52 above).

Taking a step back and looking at the periods preceding the LBA, we notice that a remarkable degree of connectivity⁵⁹ must be reconstructed as the underlying process accounting for patterns of material culture. It is now established that (late EBA and early) MBA metal weapons such as fenestrated axes were present in greater numbers in Taymāʾ (Hausleiter *et al.* 2018) at the fringes of the Nefud desert than e.g. in Syrian sites such as Ebla. Copper (alloyed) double-rivet daggers from Qurayyah find their best comparisons⁶⁰ with exemplars found in Tomb 911D in Megiddo. And the similarities of these daggers with specimens from Bayt al-Mujali, Madinat Bahaʾis (Yemen) point to Qurayyah being a possible hub of far reaching connections, well before the transition to the LBA.

The quality of the link between the EBA/MBA phase of import/imitation of metal weapons deposited in so-called ‘warrior’ graves and the LBA era of the production of bichrome painted pottery is significantly different, as if North Arabian communities decided to upgrade interconnectedness and connectivity (Luciani 2018: 426–427 and fn. 145) and display a more thorough participation into the Levantine world, felt and displayed down-to-the-pottery. Obviously, the more recent and deeper entanglement could only expand because of pre-existing connections. The visible and desirable connections, however, did not push to complete obliteration of the indigenous production.

The MB-LB transition in Cyprus has been defined as the period in which “the island became fully integrated into eastern Mediterranean trading networks” (Crewe 2013) but in this case too, it is clear that significant contacts with Egypt and the Levantine coast were extant

already during the Middle Bronze Age.⁶¹ While general phenomena like the spreading of a systematic use of the pottery wheel (Crewe 2007; 2010) and a prevalent shift from red polished to bichrome painted decoration (Steel 2010: 108) in Cyprus are similar and roughly contemporaneous to those attested in Qurayyah, synchronisms are not precise and too much remains to be studied in North Arabia to allow elaborating on the comparison much further. Nonetheless, it is important to remark that, even if we do not have any evidence of import of foreign goods in this age, Qurayyah and North Arabia clearly stepped up their entanglement in Eastern Mediterranean affairs and were increasingly integrated into the system, even while constantly re-affirming diversity. Whether we are dealing with a trade system or other levels of connection and different social or consumption practices (Luciani 2018: 428) is early to tell for now.

For Cyprus, Lindy Crewe has convincingly argued “the initial impact of integration into Eastern Mediterranean trading systems precipitated an attempt by sectors of the population to acquire the accoutrements of ‘urban’ living, including the introduction of a range of Levantine-inspired vessels of standardized and simplified appearance, particularly associated with new communal consumption practices” (Crewe 2007: 209).⁶² I believe that SQPW production was a similar attempt to fit into the general texture of Levantine (including Egypt), 2nd millennium BCE (esp. bichrome) painting practice. However, Northwest Arabian oases never abandoned the markers of their uniqueness and otherness in their pottery production. To which extent “development of a wheelmade technology in particular is [to be] associated with economic specialization and mass production within an urban context” (Steel 2010: 106) or on the contrary “craft specialization may have developed initially as a bottom-up” strategy (Schoep and Knappet 2004: 27) remains to be investigated for the North Arabian region. “The consensus is that wheelmade pottery developed in Cyprus within a climate of foreign contact and exchange of ideas; however, the mode of transmission is unclear” (Steel 2010: 109).⁶³

Given the strongly home-grown character of the SQPW pottery innovation, also for the Northern Hejaz, it is uncertain which process brought to the spread of the use of the wheel.⁶⁴ However, if it is true that the

⁵⁸ Intilia 2016: 186, 201, *passim* and Fig. 1 indicated Bir el-ʿAbd, on the Egyptian Delta as the westernmost site with attestation of QPW specimens. However, “the 3 worn sherds from Bir el-ʿAbd, which were identified visually as ‘Midianite’ (Oren 1973 and Rothenberg and Glass 1983: 83) proved upon subsequent examination to be of standard Bir el-ʿAbd marl” [E. Oren, email communication 09/03/2017]. Because of the development from local wares, the references to bichromy design and to some typically Greater Levant motifs, SQPW need not have been transmitted through Egypt (contra Parr 1982: 130) nor just have imitated Egyptian prototypes (e.g. in faience, Parr 1982: 129 fn. 22 and *idem* 1988: 74), even though a clear awareness of Egyptian pottery is obvious. See above Fn. 36 and 38.

⁵⁹ See Luciani 2016a: 22 and fn. 16 and also Homsher this volume, 79 on the degree of open connectivity as a proxy for the indigenous development of social complexity.

⁶⁰ Weapons discussed in Luciani *et al.* 2018. For Megiddo see Guy and Engberg 1938: pl. 122; for Bayt al-Mujali see Edens 2002: 86–87, Fig. 92-6.

⁶¹ Maguire 2009 and different contributions in Hein 2009.

⁶² But for the varieties of technological solutions (regionalism and persistence of traditional identities) as well as the political organizations that may be reconstructed in Cyprus see also Steel 2010. L. Crewe (2007: 209) also continues “However, lacking the urban infrastructure with which the introduction of wheel-forming technology is otherwise associated, the Cypriot response appears to be unique for the Bronze Age eastern Mediterranean”. Investigation of the specific brand of urban structure and ‘infrastructure’ is in its infancy in Qurayyah and the Northern Arabian oases. For further discussion, see Luciani 2021 and *in press*.

⁶³ More in detail on different possibilities, including palace-controlled exchange of artisans, Crewe 2007: 225–226.

⁶⁴ Supposedly it “requires extensive interaction between potters” (Crewe 2007: 211) and *ibid.* p. 225: “the transmission of fast wheel

“manufacturing technique is the most deeply internalized aspect of production, resistant to change and embedded in social identity” (Gosselain 2000: 193),⁶⁵ then we need to clearly define the modalities and extent of the spreading of this innovation. Be this as it may, seemingly by the 16th–15th century calBCE, pottery production in Qurayyah is a multi-kiln, specialized-area enterprise, with pottery furnaces occupying at least one hectare of the site in extension (Luciani *et al.* 2015)⁶⁶ and clay production installations strategically distributed in large areas of the settlement (Luciani 2019).

It is important to underline that this data, while shining a spotlight on the MBA-LBA transition, is evidence from only one class of material. In Qurayyah or elsewhere in North Arabia, for that matter, we do not have yet obtained stratified or otherwise detailed information on e.g. settlement layers corresponding to the LBA kiln production area. Nor is any data on the organization of settlement in this period available from either Taymā' or Khuraybah. Therefore, any more in-depth interpretation of the ceramic production evidence would be unwarrantedly speculative. Do the transformations visible in the pottery record correspond to a radical change in the structure of the oasis of Qurayyah?

It increasingly appears that the ‘urban’ character of the oasis (i.e.: expanded size, monumental architecture, complex agriculture, metallurgical production) had developed already in the Early Bronze Age (Luciani 2021). How did the transition to the SQPW in the early LBA change this asset? The details of the phenomenon will require a large scale systematic analysis of the entire site.

Cyprus and North Arabia were both connected to the major entities of the Greater Levant and Egypt. But all these polities feature very differing socio-political structures: Cyprus was organized in “a series of complex chiefdoms, demonstrating no more than two levels of control” (Steel 2010: 107),⁶⁷ the Levantine coast in small kingdoms and cities interacting with Egyptian expansionism. In North Arabia we seem to have a population concentrated in oases of remarkable extension, with specialized pottery manufacture and monumental architecture, i.e., settlements possibly ‘urban’ in character⁶⁸ and

well connected with the outer world. How hierarchical, how centralized⁶⁹ this system might have been, needs to be established by further research.

In the pottery record of the Levant and Syria the MBA to LBA transition is one of continuity – so much so that discerning e.g. a break in the simple ware assemblages is rarely possible (Luciani 2014b; 2014c; Mullins and Yan-nai 2019: 151). Also architecture seems to feature no significant interruption (Homsher this volume, 86). On the contrary, the discontinuity in social practices (Steel 2010: 109) implied by the development of a new technology and new style of decoration in pottery does seem to make itself visible in Tell el-‘Ajjul, just like in Cyprus and North Arabia. Despite the latter two’s lack of hierarchical political structures of the type of a state and a supra-regional power, like Egypt or similar to the small city-states of the Levantine coast, this transition is a testament to the ability of these not necessarily heterarchical⁷⁰ communities to connect and partake of the consequential transformations of the central phase of the 2nd millennium BCE.

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technology cannot be explained by occurrences of imported vessels but must have occurred through the interactions of potters”. But now see also Choleva *et al.* 2020.

⁶⁵ Crewe 2007: 211 citing Gosselain’s (2000) enthoarchaeological work in Africa.

⁶⁶ For an interpretation see Luciani 2016a: 41 and fn. 123. For previous assessments, see Tebes 2014b: 188.

⁶⁷ And then *ibid.* further on “very little evidence for a hierarchically organized state” and p. 112 “highly skilled potters working with regional workshops ... a heterarchical system of production ... small groups of independent workshops ... no indication that urban elites controlled production ... it is possible that urban elites controlled the circulation of these wares” in the LC II period.

⁶⁸ With the due differences with the Syro-Mesopotamian situation, see Luciani 2021 for this discussion. In North Arabia we still do not have recognizable written administration and central institutions (palace/temple).

⁶⁹ Tebes 2014a: 4–12 describes it as the “Qurayyah chiefdom” but localizes it chronologically in the Early Iron Age. See Luciani 2016a: 48 fn. 170. See also Tebes 2007 for pottery production.

⁷⁰ But see Homsher this volume, 79.

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CONNECTIONS AND TRANSFORMATIONS IN THE SOUTHERN LEVANT DURING THE 2ND MILLENNIUM WITH A VIEW FROM MEGIDDO

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From a Levantine perspective, how should we interpret such phenomena as the urban oases in north Arabia? Are these sites and societies outside of, on the margin of, or part of the Levant? I suggest that when it comes to understanding the Levant during the 2nd millennium BCE, perhaps we need to reassess how to conceptualize the physical and cultural geography of the region. It is by no means necessary to draw new boundaries, rather allow for broader spatial connections across a vast, continuous landscape than those perpetuated by modern geopolitical borders or even longstanding historical paradigms. Despite their utility, by constantly relying on our discrete cultural, geographical, and chronological boundaries to categorize the ancient world, we archaeologists and historians risk the self-deception that these categories are more than practical tools. A line on a map is no more real than the words we use to describe a group of people or cultural phase, yet we use these tools to manage an overwhelming amount of complex data that is a mere sample of the ancient world we study. Our reliance on the historical record and over-emphasis on major cultural “centers” over their “peripheries” tends to overlook the connective structures that facilitate the development of complex societies, particularly in regions like the Levant.

As a result, many prevailing explanations for social transformations are biased by culture-historical notions of exogenous origins by the diffusion of populations and material culture. This mode of interpretation draws superficial distinctions between cultures, trying to perceive strict (and convenient) dichotomies that may not exist in reality. For example, a nearly century-old explanation for the advent of complexity (i.e., urbanism) in the southern Levant at the beginning of the Middle Bronze Age (MB) is the migration of so-called Amorites from Syro-Mesopotamia via the northern Levant (for a critique, see Homsher and Cradic 2017, 2018). The assertion that any – let alone many – inhabitants of the MB southern Levant can be identified as belonging to a single cultural or ethnic identity places far too much emphasis on scant textual evidence and is built on several problematic assumptions.

Naturally, no such convenient group should be evoked to explain socio-cultural transformations that occurred over multiple generations and across a large and varied landscape. Models of wholesale diffusion

of material culture into the southern Levant (and elsewhere) gets us nowhere in terms of understanding the local, long-term development of MB social complexity. Understanding what occurred during the MB in the Levant requires sophisticated theoretical approaches to urbanization, innovation, and economy. Only as an afterthought should we speculate about ethnicity, politics, or historical correlates – and do so with extreme caution and critical engagement with the available sources (e.g., Kamp and Yoffee 1980).

Among the many problems with culture-historical paradigms is that they ignore deeper social structures and long-term trajectories that better approximate real-world phenomena. Even a preliminary assessment of the material culture distributed across the Eastern Mediterranean and Near East during the 2nd millennium BCE clearly demonstrates an unprecedented multi-directional movement of people, ideas, and objects (e.g., Falconer and Savage 1995; Gerstenblith 1983; Tubb 1983). Scholarship continues to illuminate an increasingly complex understanding of exchange mechanisms during this period. Rather than being discrete phenomena, patterns of settlement, trade, and technology are interrelated, exerting positive feedback on one another, and fundamentally rely on (and inform us about) the deep and widespread connections that underlie the societies under consideration. We do ourselves a disservice by focusing on the dots on otherwise blank maps, whereby we are blind to the complex array of connective tissue binding Bronze Age societies across the Eastern Mediterranean and Near Eastern world.

The purpose here is to appeal for a more nuanced attitude toward the major social transformations in the southern Levant than is commonly adopted, focusing particularly on the degree of open connectivity as a catalyst for the indigenous development of social complexity. I begin with a *longue durée* perspective in order to contextualize the MB transformations early in the 2nd millennium BCE within a discussion of settlement patterns, movement of important commodities, and technological innovation. In contrast, I will highlight the transition between the MB to Late Bronze Age (LB) as a period when more rigid political structures appear to constrain innovation and instead emphasize a narrow mode of elite consumption. Whereas the discussion will be rather

general, I will cite specific examples from the site of Tel Megiddo.

Background and Development of the Middle Bronze Age

Perhaps one of the most conspicuous manifestations of MB culture and social organization is urbanism. Among the most archaeologically visible phenomena, one can trace varied social trajectories toward urbanism and discuss other interrelated aspects of social complexity, such as specialization and economy. The first experiments with urbanism in the southern Levant occurred in the Early Bronze Age (EB) during the first half of the 3rd millennium BCE. This system gradually disintegrated and came to an end by ca. 2500 BCE (Höflmayer *et al.* 2014; Regev *et al.* 2012a; 2012b), transitioning to the so-called Intermediate Bronze Age or EB IV.

What caused this disintegration of society? As Greenberg (2017) puts it, this transition appears to be the ending point of a prolonged, region by region, abandonment of early EB towns once their nascent state-building began to unravel. While urbanism continued to flourish in many parts of the northern Levant (cf. Schwartz 2017), the EB IV transition in the south resulted in dispersed settlement in rural and marginal environmental zones characterized by small, unfortified, single-period dwellings that seem to have used mixed subsistence and economic strategies – basically combinations of dry farming and pastoralism (Dever 1997: 287; Prag 2009: 81–82). These settlements may in fact be the “rural” remnant of the EB system (Chapman 2009: 5), in which traditional mobile pastoral economies coexisted with towns in a small-scale economy with ever-increasing modes of social mobility as an alternative to urbanism (Greenberg 2017).

Although occupational breaks did occur, it appears that urban sites were not necessarily abandoned completely or consistently across the region, and there appears to be some continuity of urbanism at sites in Transjordan, such as the fortified site of Khirbet Iskandar (Richard and Long 2007, 2009). An unusual example in Cisjordan is Megiddo, where some continuity is demonstrated. Here, the early EB IV features a northern Levantine temple *in antis* founded with an Egyptian-style foundation deposit (Adams 2013: 95–100; 2017; Loud 1948). This phenomenon demonstrates not only some degree of continuous activity at the site, but some continuity of engagement with both the northern Levant and Egypt. Recent investigations suggest that the IB material remains at Megiddo are far more extensive than the original excavators assumed in the 1920s and 1930s, and features attributed to Strata XIV and XIII include several sub-phases spanning the late-IB and early MB I. The case at Megiddo may not be typical, but it at least challenges the notion of a complete break from EB urbanism and overnight revolution at the start of the MB.

Meanwhile, many urban sites in the northern Levant thrived and underwent a realignment of society during the EB IV. In western Syria and the northern coast of Lebanon, there appears to be settlement continuity throughout the EB IV, including contacts with Egypt and Mesopotamia (Akkermanns and Schwartz 2003: 233–246; Genz 2012). The corridors of interaction between the northern and southern Levant did not cease with the collapse of urbanism in the south, rather they may have shifted their orientation between the urban core in inland Syria and the dispersed settlements of the south. Interregional interactions between the north and south involved a wide range of cultural and technological exchange (D’Andrea and Vacca 2015: 52), despite no apparent integrated settlement or cultural system shared between the two regions (Kennedy 2016: 2).

Not only was the EB IV a much longer period than previously assumed, beginning in the 26th century, but the concept of a pastoral-nomadic interlude fails to encapsulate the diverse and long-term local settlement and subsistence patterns in the southern Levant. Increasingly, surveys and excavations are identifying new EB IV sites. In the Jezreel Valley, for example, EB IV sites now exceed the number of known EB II–III sites (Finkelstein *et al.* 2006; Finkelstein and Langgut 2014, table 3). The emerging interpretation of EB IV subsistence strategies is more complex than previously assumed, with unsurprising regional variability. In wetter areas in the west and north, the investment in the cultivation of orchards may have been important (Prag 2014; Langgut *et al.* 2016), with the largest number of villages in the fertile Jezreel and Hula Valleys.

The purpose of summarizing the EB IV as a prelude to the MB is simply to emphasize the long-term trajectories and diverse subsistence patterns from which MB complexity emerged. Most important are three observations: (1) the population was dispersed throughout the landscape, yet extending into marginal areas previously unoccupied; (2) the range of subsistence patterns seems to be diverse and adaptable; and (3) despite being relatively small and dispersed, these societies were nonetheless well connected, with a network of connections extending across the entire landscape. Thus, the developments that occurred early in the MB were facilitated in a large part by this widespread, interconnected, and adaptable social network already in place.

The transition from the EB IV to MB was gradual, and the chronology for the beginning of the MB I (terminology here follows MB I, II, III rather than MB IIA, IIB, IIC) in the southern Levant is a matter of ongoing revision. Following the recent ‘high chronology’ based on radio-carbon data (e.g., Falconer and Fall 2017; Höflmayer 2017; Kutschera *et al.* 2012), dates here reflect the start of the MB I in the southern Levant to the 20th century (ca. 2000) BCE, and the transition from MB I to II around the second half of the 19th century (ca. 1825) BCE. With few excep-

tions, the transition from EB IV to MB I was continuous throughout most of the Levant. As such, scholars have emphasized cultural conservatism (Kennedy 2015: 209), and transformation rather than replacement of material culture (Iamoni 2014: 19). In fact, it should be argued that the conspicuous transformations leading to urbanism primarily related to the adaptation of mainly *social* complexity and organization (i.e., scale, intensity, structure), but not necessarily to substantive changes in *cultural* phenomena.

The earliest evidence of MB I material is somewhat limited and mostly derives from burial assemblages and small-scale settlements, much like the EB IV. Settlement activity associated with the early MB appears to have been located along the most interactive nodes of communication through the landscape along the coastal plains and inland lowlands. These settlement areas, which in many ways differed from the core areas of EB urbanism, were probably more oriented to coastal influence and interaction than their predecessors (Greenberg 2002: 108). As noted by Maeir (2010: 141) the background for the initial stages of urbanization in the Jordan Valley is of importance, since it would appear that this region was affected by intensive contacts with the outside world through inland trade networks – the very same long-term connections inherited from the EB IV. From the earliest evidence for MB I settlement activity, it becomes clear that settlement location, as well as material culture, reflect impetus toward connections: (1) maritime, via the Coastal Plain, (2) inland, via the Rift Valley, and (3) via lowland valleys.

Among the hallmarks of MB sites are the earthen ramparts that were constructed to surround, support, and extend settlements. In outward appearance, such earthworks were probably somewhat similar, yet they varied in size, construction, and function, usually relative to each site's local topography and constructional constraints (Burke 2008: 49ff.; Homsher 2013: 71–75). The innovation of such style and technology as implemented in the southern Levant cannot be simply reduced to diffusion from Syria. Rather, there was a complex set of shifting socio-cultural norms and values during this period of urban transformation that would have defined the “ideal-type” urban settlement that go much deeper than the merely defensive function of this architecture (e.g., Bunivovitz 1992; Finkelstein 1992; Greenberg 2002: 108; Herzog 1997: 132–133; Uziel 2011).

The transition between the MB I and II, the period of full-blown MB material culture throughout the southern Levant, dates around the second half of the 19th century BCE. Thus, the transformation to widespread urbanism and many other aspects of material culture used to define the MB developed over a span of generations. Many consider this MB I–II transition to be the zenith of “classic” MB culture and settlement, as well as regional incorporation into the MB cultural *koiné* (e.g., Maeir 2010:

145; Burke 2008: 160; 2014). A key characteristic of the full-blown MB was the construction of rectilinear earthen ramparts, which were built at some of the largest sites, and appear to have been established relatively simultaneously in the northern and southern Levant. City walls (curtain walls) were constructed using new architectural concepts, such as straight (as opposed to curved) wall segments, connective towers, buttresses, and multi-entry gate systems (cf. Homsher 2013: 69–82). MB sites tended to employ more regular architectural concepts than preceding and following periods, including the features listed above, as well as more standardized mud-bricks. The fact that these practices are attested throughout the region suggests shared concepts being openly transmitted through active connections.

Although monumental public buildings like palaces and temples have been documented at a few sites, they are both few and modest until later in the MB. Palaces appearing at this time in the north (e.g., Alalakh, Ebla, Mari, Qatna) are much larger in size and more complex than those in the south. In short, conventional signs of hierarchical administration are not well attested in the MB I or early MB II southern Levant. Yet the massive scale of earthen ramparts and city walls, not to mention the expansive area enclosed by such features at many sites, implies the probability of a high degree of planning and social organization amongst these societies. Looking at the cost of construction from the perspective of architectural energetics, the number of person-days required to construct the fortifications around the upper mound of Megiddo, for example, numbers at least 50,000 (Homsher 2012, 2013: 209–212). This architecture was no minor investment of resources and, as an MB site, Megiddo provides a conservative example. Megiddo was well-situated in the Jezreel Valley to interact with both coastal and inland networks, but it was not particularly large or important at this time. By comparison, sites like Ashkelon and Hazor were considerably larger, roughly five and seven times the size of Megiddo, respectively.

So how were these MB sites constructed and why in this way? As Burke (2014) would have it, some sort of Amorite political hegemony (or *oikumene*) facilitated the spread of a shared material culture, or Amorite *koiné*. Furthermore, he has argued (2008: 143) that the construction of the massive fortifications at MB sites was carried out by some sort of standing army, *corvée* laborers, and/or hired laborers. Yet there is no evidence for any such socio-political entity, Amorite or otherwise, present or capable of such oversight of activity in the southern Levant early in the MB. Furthermore, it is important to note that, although very similar, and clearly innovating shared concepts, each site in the southern Levant implements these new styles and technologies slightly differently.

Therefore, what connected these sites and their respective societies? And what compelled them to

engage in such massive undertakings? Based on varied degrees of standardization and implementation of architectural concepts, it appears that independent sites and their respective societies were organized differently. Each society implemented the new, shared MB concept of “city” by their own means. Although this urban ideology and typology may have derived from Syria or elsewhere, it was probably mediated through local peer-polity interactions in what was a very interconnected social and economic landscape. It is remarkable how open and adaptable these societies were to innovating novel concepts and adopting new technologies. If we consider the resources involved, it quite literally took villages to build a small city. The constitutive act of such massive construction projects helped facilitate and actualize new forms of complex social organization made manifest in their urban product.

Settlement Patterns and Connectivity

The degree of interaction among such sites, and the impetus for social competition, can be partly addressed by looking at the distribution of settlements during this period. Whereas various attempts have been made to classify MB settlements according to size, rank and/or function, an attractive alternative explanation for settlement distribution should focus on mechanisms of exchange, themselves facilitated by physical connection throughout the varied Levantine landscape. As already observed above, settlement patterns during the beginning of the MB appear to be oriented according to spheres of interaction, both external and internal. Along the Coastal Plain, maritime interaction would have been profoundly important (e.g., Raban 1985; Marcus 2007: 164). Sites in the Jordan Valley were well-situated for inland contact with Syria, the Jordanian Plateau, and Arabian trade networks to the southeast. Likewise, the Jezreel Valley was uniquely situated between coastal and inland exchange routes, facilitating a key connection between the two. This explains the prominence of sites such as Pella and Megiddo already early in the period, since their locations served as dynamic confluences of maritime and inland exchange systems.

In an attempt to understand settlement networks, Knapp (1989: 145) identifies strategic sites as “gateways”, which occupy interfaces between major corridors and zones of production. These gateways would interact in systems of exchange on local and international scales. In terms of the natural landscape, the distribution of sites on the Coastal Plain appear to be oriented along inland water drainages, which form the natural connections through the varied topography of the region. Observing this spatial distribution, Ilan (1995: 302) interprets “drainage-defined polities”, or a network of settlement purposefully arranged between maritime and inland nodes of interaction. According to this arrangement, sites sit-

uated along the coast probably provided access to maritime exchange, and large inland sites functioned more as central places with access to hinterland resources. Thus, the two complementary settlement types, and a chain of smaller sites in between, are conceived as belonging to one polity or economic system. Despite a rather straightforward economic structure supporting this interpretation, there is no reason whatsoever to assume any sort of *political* cohesion or intentionality behind it. At this stage of the MB, it seems that one could argue more strongly for a local, “grassroots” vitalization of exchange and settlement than for political hegemony.

Adopting the concept of “dendritic networks” (e.g., Smith 1976: 34–36) Cohen (2002: 123) suggests that the most powerful economic “center” of any settlement system would be located at one end of the network rather than in the middle, whereby lower-level centers are associated with centers of only one level higher, in a linear progression of vertical settlement organization. Implied in the dendritic system is a certain distribution of economic power and political status, both of which would be concentrated towards one end of a system. The coastal end of the network would interact with the greater system of international exchange, whereas the sites scattered along the network decrease in both size and power the further they are away from the center of economic control (Cohen 2002: 127). This model emphasizes economic power over assumed political power, as well as a network that develops from the preexisting settlement distribution.

Stager’s (2001; 2002) “port power” theory highlights the importance of long-distance maritime trade together with competitive market forces driving MB urbanization and dictating settlement patterns. The basis of this theory derives from (1) the high amount of imported ceramics and Egyptian sealings from the MB I sequence at Ashkelon, (2) mirrored by the number of Canaanite imports at Tell el-Dab’a, and (3) the evidence for maritime exchange suggested by the Execration Texts. The theory conceptualizes settlements of various orders as “markets”, all of which are connected to seaports, the highest-order market. The sequence of development begins with the establishment of a trade route, then markets situated on this trade route, followed by subsidiary markets developing around the main market(s). Market forces drive this socio-economic system by focusing resources along “funnel-shaped catchments” from the hinterland to the Mediterranean seaports and, presumably, the organization of settlements follows this trajectory both in distribution and hierarchy. Accordingly, it is the market demand and economic network that penetrate and connect diverse ethnic, cultural and political communities exerting minimal effort (Stager 2002: 361). Rather than being wielded by an overarching political or military force, power in this system was exercised through economic ties throughout a heterogeneous network. Therefore, power was achieved and yielded by those taking

advantage of inequalities between supply (hinterland) and demand (international exchange).

Although Stager narrates a compelling story, particularly based on Ashkelon, he neglects the incentive this system would offer the vast majority of agents in the hinterland supplying the basic commodities to the market. In addition to general market forces based around major commodities, nascent urban centers would facilitate craft specialization, serve as nodes for exchange, and create a system in which resources could be centrally managed. In turn, urban institutions could ultimately provide services, such as cult, security, and access to exchange, all of which facilitate and consolidate power dynamics and provide means for substantial political formations. According to this sequence, major political formations follow, rather than initiate, the development of social and economic complexity.

Of course, this system need not be limited to maritime activity along the Coastal Plain and immediate hinterlands, but applies to a much more extensive geographic area. The Jordan Valley serves as an example of a settlement system engaged in an inland network of exchange in which similar processes occurred, and the Jezreel Valley is strategically situated between both inland and coastal spheres of interaction. To this model we must now add north Arabia, which shares MB material culture and, via a network of urban oases, extends Levantine networks and connects them to hitherto overlooked external systems further afield in Arabia.

It is widely apparent that in the 1st millennium BCE Arabian incense trade was integrated into the Levantine and Mediterranean exchange networks. However, the earlier extent of these connections remains somewhat of a question (e.g., Finkelstein 1988), but should factor significantly into how we perceive connectivity throughout the greater Levantine region during the Bronze Age. Resin is an often overlooked prime-value commodity being exchanged from and via the Arabian Shield, most notably frankincense and myrrh from north Africa and Arabia. Evidence certainly exists from the 3rd millennium BCE, if not earlier, of resins being traded and consumed in mass quantities in Egypt. The two terms that are believed to have denoted some sort of resin in Egyptian texts are *ntyw* and *sntr*. *Ntyw* likely refers to myrrh from the *Commiphora* species, and was imported from the land of Punt in vast quantities from the 5th Dynasty onward (Serpico and White 2000: 884; Baumann 1960: 95). *Sntr* likely represents terebinth resin deriving from the Levant (*Pistacia terebinthus*), which has been positively identified in residues from dozens of Canaanite storage jars found in the Uluburun shipwreck (Stern *et al.* 2008).

Considering the circulation of resins in the region from the EB onward, as well as the geographic distribution of frankincense and myrrh sources, it is highly likely that resin exchange partly explains the longstanding

connections between Arabia and the Levant well before historically documented periods. Furthermore, resin is only one commodity that might help us conceptualize the networks of exchange connected with the Levant. Semiprecious stone, such as Carnelian, may very well have entered the Levant via Arabia, with antecedents in the 3rd millennium BCE (cf. Brunet 2009; De Waele and Haerinck 2006). Likewise, metals may have been exchanged between these regions (see below).

Technological Innovation

Since the distribution of settlements early in the 2nd millennium BCE appears to be oriented toward networks *facilitating* open exchange rather than political structures *controlling* closed exchange, the transformative process of MB urbanization lends itself to multivariate and heterarchical interactions of agency, as highlighted by complex systems theory. As Bentley and Maschner (2008: 246) observe: “Complex open systems, not at equilibrium, are said to exhibit *emergent properties*, which are overall patterns greater than the sum of the parts, such that the system may act coherently without domination by a central source” (cf. Holland 1998). Although this model of an open, heterarchical system may fit with the settlement activity outlined above, further evidence is needed to support such a notion of grassroots development of social complexity without any primary central agency. Fortunately, there are a number of complementary developments that contribute to the overall emerging complexity early in the 2nd millennium BCE, namely the widespread technological innovation observable in the material culture of this period, to which I will now turn.

The MB period was a time of unprecedented technological innovation across most, if not all, aspects of material culture, including the *widespread* innovation of: (1) the fast-wheel in pottery production; (2) complex metal alloying; (3) the warp-weighted loom (Barber 1991: 165, 300f.; Peyronel 2007: 26); (4) locally-manufactured ground stone objects (Sparks 1991; 2007); and (5) several architectural innovations, some of which are summarized above. These and other innovations should be evaluated in terms of the social mechanisms driving, facilitating, but also developing out of such innovation. Technology is essentially the capability derived from the practical application of knowledge particularly regarding tools, techniques, systems and/or methods of organization, whereas innovation involves the occurrence, or actualization, of technology within human society (cf. Homsher 2013: 220–221).

I advocate an approach toward technological innovation from a predominantly evolutionary perspective in order to interpret socio-cultural changes over time. Anthropological and archaeological research (e.g.,

Dobres and Hoffman 1994) demonstrates that technological evolution over time may be quite complex, and not unilinear as traditional views would have it. This approach follows a dynamic systems approach (e.g., Creswell 1996) whereby continuous transformations in technology are essentially an autonomous part of linear evolution, whereas discontinuous changes follow changes in society. From this perspective, innovation does not occur for a techno-economic advantage but for social and/or symbolic reasons (Roux 2010: 226).

In the transition from EB IV to MB, changes in ceramic production in the southern Levant resulted in the proliferation of new forms, decoration, and technology. The innovation of rotary kinetic energy as a shaping technique (with the tenon tournette) was adopted on a widespread basis only during the early MB in the southern Levant, preceded by a few centuries in the northern Levant (Roux 2015). Specialized workshops implemented the wheel-coiling technique to produce an increasing majority of vessels, ultimately resulting in a high level of standardization among MB ceramics (Besana *et al.* 2008: 135–136; Franken 1991: 76; Iamoni 2014; Maeir 2010: 109). Its adoption in the south was not merely a matter of demic diffusion by migration (e.g., Ilan 1995; Kempinski 1992), but probably as the result of complex social changes. As Luciani (this volume) observes, the 2nd millennium BCE witnessed local variations of broadly-shared styles, such as bichrome painted decoration, and parallels the technological shift to the potter's wheel.

The context of production was considerably different between EB IV and MB, marking a new socioeconomic system, not merely the technical act, instruments, or product (Roux 2013: 319–320). The changes in ceramic technology were concomitant with urbanization, whereby a particular social group of specialist craftsmen were born into new workshop contexts for production. Thus, this technology was essentially an indigenous Levantine innovation that spread on a widespread basis with the evolution of social complexity. Moreover, as Maeir (2010: 109) suggests, periods of high levels of technological development and extensive trade frameworks witness greater standardization than less economically-active periods. The implication of this widely dispersed and interactive system of production and distribution of goods is that presumed political powers and boundaries did not control or restrain it. Rather, the apparent lack of antagonistic political boundaries (Maeir 2010: 111) indicates that economic factors of production and distribution played significant roles in MB technological innovation and forming Levantine culture of the 2nd millennium BCE.

The development of metallurgy in the Levant shares a similar trajectory. After a long history of copper metallurgy in the southern Levant, the MB manifested a new era of complex metal alloying (Shalev 2009: 69). The adoption of tin-bronze and other complex alloying prac-

tices by the start of the 2nd millennium BCE comprised a leap in metallurgical innovation. Clearly, the major constraint for this complex alloying in the southern Levant was obtaining tin from sources far removed from the region (Roberts *et al.* 2009: 1017). Whether or not the acquisition of tin may have been one of several causative factors of the initiation of intensive long-distance trade throughout the Levant by the beginning of the 2nd millennium BCE, the major increase in tin-bronze during the period suggests that there were a number of complex social factors contributing towards intensified international exchange.

The increase in tin-alloying allowed specialists to create alloys using the “pure” copper ores native to the southern Levant to the same effect as other alloys (i.e., arsenical copper). It should be noted that there are only a few indications of copper production locally in the Feinan during the MB (Hauptmann 2007: 306), yet this does not preclude the likelihood of materials being acquired from here and produced elsewhere. Levantine metallurgy during this period was not limited solely to binary tin-bronzes. From the cauldron of experimentation and innovation several metals were alloyed with copper and/or tin, including lead, arsenic, and antimony. The diversity of these raw materials and their sources speaks to the far-reaching and complex systems of exchange facilitating their distribution. However, the discontinuous technological innovations were not limited to the materials alone, but allowed for the manufacture of new array of objects that became widespread across the Near East and Eastern Mediterranean.

Rosenfeld *et al.* (1997: 862–863) suggest that the innovation of these metal alloys significantly encouraged the production of sophisticated objects like figurines, as opposed to the EB, when figurines were mostly made of ceramics. Likewise, El Morr and Pernot (2011: 2619–2622) argue that Levantine craftsmen possessed a fully-mastered knowledge of alloying metallurgy in operations such as cold-working and annealing treatments, as well as accurately designing and making molds that would reduce casting defects. Evidence from Byblos shows that daggers and riveted spearheads were cast in two-piece molds, and fenestrated axes were cast in multiple-piece molds made of soft stone. The discovery of typical MB weapons (e.g., a fenestrated axe, ribbed dagger) in a so-called “warrior burial” at the site of Tayma, in north Arabia, attests to the widespread distribution of these innovations (al-Hajiri 2011: 112).

The similarities between the urban oases of North Arabia and the Levant should come as little surprise since they belong to the same network of dispersed connections. As mentioned above, several commodities flowed through this region to and from the southern Levant, including copper. A possible connection between the north Arabian oases and metal trade in the southern Levant is documented by the distribution of pottery and

metal objects. Although dating to the LB, Qurayya Painted Ware produced locally in the urban oases (Daszkiewicz 2014) has been found distributed throughout northwest Arabia, Transjordan, and Cisjordan. Most importantly, this pottery has been identified at the copper mining site of Timna and other nearby sites (Hausleiter 2014; Singer-Avitz 2014; cf. Ben-Yosef *et al.* 2012; Avner 2014). Whereas it seems very likely that copper from this region was consumed by the Arabian Oases, or at least distributed in that direction, the evidence at hand from isotopic provenience studies paints a more complex picture. Whereas transitional EB-MB metal samples analyzed from Tayma demonstrate signatures similar to ore deposits in Wadi Faynan and Oman (Hausleiter *et al.* 2018), LB samples from Qurayya possibly indicate arsenic-rich copper sources in the Arabian Peninsula (Liu *et al.* 2015). The Arabian Shield is not devoid of metals: although no clear evidence exists that they were exploited in antiquity, tin deposits exist in central Arabia (Du Bray *et al.* 1988; Weeks 2003) and tin-rich copper slags have been found at the 1st millennium BCE site of Jahar Ar-Rayhani in Yemen (Fleming and Pigott 1987).

Although these findings question the likelihood of Levantine copper being consumed in Arabia, they may indicate the opposite pattern. As evident from resins and pottery, metal and other commodities were very probably flowing from Arabia to the Levant, where it interfaced with diverse exchange networks, both sea and land-based. Yet our reconstruction of long-distance connections should not end there. If north Arabia was indeed connected to the Levantine exchange system to its northwest, which seems to be the case, then we cannot overlook the possibility of deeper Arabian connections extending this network.

In particular, antecedents to the camel caravan routes of the 1st millennium BCE may have connected north Arabia to the Arabian Gulf via such sites as the urban oases. Although dates for the domestication of the dromedary camel in western Asia remain speculative, it is plausible that domestication was well underway already in the 3rd millennium BCE. For example, genetic research shows a population bottleneck ca. 5000–4000 ya, probably coinciding with domestication (Burger 2016: 908). Likewise, archaeological evidence may point to domestication in the Arabian Peninsula as early as the 3rd millennium BCE (Köhler-Rollefson 1993: 182), such as the ca. 200 camel bones recovered (Frifelt 1991; 1995) from Umm an-Nar (ca. 2600–2000 BCE), off the Abu Dhabi coast. This assemblage contained a relatively high percentage of juvenile bones that some (e.g., Hoch 1979) have taken as an indication of domestication. Regardless of the use of domestic camels, although possible, connections across the Arabian Peninsula were probably active during this time. With the Arabian Gulf being a nexus of exchange among Arabia, Mesopotamia, the Indus Valley, and further afield (e.g., Edens 1992), we should perhaps challenge ourselves to rethink the con-

ventional paradigms of trade routes during the 2nd millennium BCE.

From urban desert oases to small agro-pastoral villages and large gateway coastal cities, as these complex interactions occurred in the southern Levant, especially driven by the economic potentials of long-distance exchange, the development of social complexity facilitated widespread discontinuous innovations of techniques old and new, local and foreign. Rather than an entrenched hierarchical political system, heterarchical competition was driven by economic potential (or market power), which created an open system for widespread technological innovation, transmission of style, and shifts in settlement. Situating the process of technological innovation and specialized production within the context of urbanization, the amalgamation of people, concepts and productive processes would have provided the final major catalyst for the socio-cultural changes that define the 2nd millennium BCE.

Shennan (2000) suggests that the most important factor in understanding culture change is population dynamics, because there is a strong element of vertical transmission in the acquisition of the techniques of artifact production. To be sure, early in the MB there was a population increase in at least a relative spatial sense – the agglomeration of many people in and around urban centers – but it remains difficult to estimate the absolute dimension of population dynamics throughout the region. The important factor to consider is that urbanization alone would have resulted in bringing people, ideas, and disparate technologies together, ultimately promoting dynamic cultural adaptation resulting in innovation. As the production of goods intensified and became more widespread, specialists gained technical knowledge through familiarity with the various properties of the materials they used and interaction with others within a developing urban context where information, skills and resources were pooled through integrated production systems. It would be during this stage of urbanization that innovation accelerated while new technological solutions developed (cf. Golden 2010: 167; Lemonnier 1993: 21).

The open technological system that seems to have prevailed during the early 2nd millennium BCE allowed such innovations to become widespread and specialized production to occur on a large-scale, resulting in standardization. An important consideration in conceptualizing this era are the organizational structures required to actualize technical innovations. The fact that a number of technological innovations appeared at the same time as the developing social complexity that resulted in urbanism is no coincidence, since both of these processes facilitated each other as mutually-constructive forces of socio-cultural evolution.

The Transition from the Middle to Late Bronze Age

Moving forward into the middle and latter part of the 2nd millennium BCE, the transition to the LB in the southern Levant witnessed varied transformations toward a more politically dominated, and in many cases, hegemonic organizational structure of society. In contrast to the beginning of the MB, the transition to the LB is slightly better understood by general historical events in the 16th century BCE, particularly the expulsion of the Hyksos from the Nile Delta coinciding with the advent of the Egyptian XVIIIth Dynasty and subsequent military campaigns in the Levant. Often linked to these historical events are a series of destructions of some MB sites in the southern Levant, marking the end of the MB, yet the chronological and historical correlations are not clear. Nonetheless, archaeologists tend to follow a range of dates for the LB IA, from ca. 1550 BCE (Ahmose's expulsion of the Hyksos and reunification of Egypt) to ca. 1479 BCE (the ascension of Thutmose III, his Levantine campaign, and battle at Megiddo).

Correlating relative and absolute chronologies for the onset of the LB throughout the Levant remains challenging and problematic (e.g., Panitz-Cohen 2014; Sherratt 2014). In the southern Levant, a major difficulty in controlling this transition – archaeologically – is a widespread absence of clear stratigraphic sequences with punctuated phases (and discrete ceramic assemblages) spanning MB III, LB IA, and LB IB. At many sites, the transition between the MB and LB is prolonged and continuous, leaving behind few (if any) traces of social or cultural change. However, this observation is not to say that time did not transpire; rather the archaeological record does not yield the typical clues that allow us to measure the passage of time, and herein lies one of the major challenges in understanding the early LB.

For example, the original excavators of Megiddo (e.g., Loud 1948: 15) noticed considerable continuity in the general architectural layout and material culture of the site in several areas spanning the end of the MB through the LB sequence (Strata X–VII). The so-called palace in Area AA, as well as the adjacent city gate, originated in Stratum X and continued in use, through several renovations, until Stratum VII, at the end of the LB. Likewise, there was considerable continuity in Temple 2048 and surrounding architecture in Area BB through these strata. However, with very few exceptions (mainly burial assemblages), a distinct horizon of LB IA material culture is virtually absent from the site. More recent investigations in Area K (Martin 2013) have gone through a sequence of LB IIB (Level K-8) and LB IB–IIA (Level K-9) directly into a horizon containing MB III–LB IB (Level K-10, which corresponds to Strata X–IX). Thus, Level K-10 represents the span of time during which one would expect to observe the transition from MB to LB material culture (ca. 16th–15th centuries BCE). However, the bulk of the LB I pottery assemblage derives from intramural

burials, which serve as discrete time capsules in an otherwise uninterrupted cultural continuum at the site. It is not until Level K-9 (ca. 14th century BCE) that a marked shift to LB material culture becomes clear (cf., Toffolo *et al.* 2014).

Not only is the LB IA virtually absent from the record, the transition between LB IA and IB is also unclear. As mentioned above, conventional periodization (based especially on historical correlates) links the beginning of the LB IB with Thutmose III's campaign in the Levant, ca. 1450 BCE. This campaign presumably initiated social and political change in the region, particularly at the site of Megiddo. According to Egyptian accounts, in his 23rd year, Thutmose III marched his army to confront a coalition of Levantine kingdoms, led by the king of Kadesh, who had gathered at Megiddo. An open battle was fought in the plain outside Megiddo, to which the defeated Levantine coalition retreated, resulting in a blockade (not siege) of the city by the Egyptian army, which may have lasted several months until capitulation (cf. Cline 2000: 16–23; Redford 2006: 329–331). Although there is no reason to question the basic events purported by these Egyptian accounts, no unequivocal archaeological evidence to date has provided evidence for warfare, hardship, or cultural change at Megiddo at that time. Although these historical events probably represent what seems to have been an important turning point in the region, politically, the challenge remains controlling for these events, archaeologically, and determining the degree to which this political shift persisted or affected the local societies in the region of the Levant.

To recapitulate, there is no clear LB IA horizon at Megiddo due to the fact that there is no major stratigraphic break during what was an otherwise long, continuous phase spanning the MB III through LB IB. If this situation is true for several other sites in the southern Levant, as it seems to be, then there are two important implications: (1) sub-periodic classifications of material culture remain a major challenge during the transition from MB to LB in the region; and (2) despite Egyptian historical implications of a discontinuous break, the growing archaeological consensus views this transition as long and continuous. These observations highlight the problems and challenges we face when Levantine chronological frameworks rely simultaneously on historical correlations from external regions and local changes in material culture. Unfortunately, the archaeological record does not provide us with what we would hope or predict.

So whence comes our notion of the LB, specifically distinctive LB IA material? In contrast to the example of Megiddo and other sites in the northern extent of the southern Levant, sites to the south provide more evidence of the transition from MB to LB, including the elusive LB IA horizon of material culture.

In summary, with the exception of direct Egyptian influence, as at 'Ajjul, the transition from MB to LB throughout most of the southern Levant was rather long and continuous. Nonetheless, we may draw a few noteworthy distinctions between the two periods, particularly drawing from patterns that coalesce by the LB II. From an historical perspective, the LB witnessed a fundamental shift with intensified Egyptian influence. The purpose here is not to speculate regarding the spatial extent or degree of Egyptian hegemony in the southern Levant during these centuries, which would require considerable treatment of the evidence at hand. It is perhaps more useful to look at Levantine society as a whole, and consider Egyptian (as well as Hittite and Mitanni) political and military activity in the region as only *one of many* factors contributing to the overall structure and modes of connectivity during the latter 2nd millennium BCE.

As an evolution from the extensive networks of connection developed over the preceding centuries, the LB witnessed increasingly long-distance exchange. Here we enter a period branded by Liverani (1987: 66–67) as “great kings” and “small kings”, when the major political superpowers of Egypt, Mitanni, and Hatti, on one hand, coincided with Levantine societies of varying scales (e.g., city-states), on the other.

In part, the systems of commercial exchange during this period appear to be substantially structured by elite socio-political institutions, which were outwardly oriented according to an elite *koiné*, or international style (Caubet 1998; Feldman 2006). Increasingly specialized economies helped facilitate modes of elite consumption and distribution, particularly diplomatic gift-exchange. For decades, scholars have taken note of this conspicuous exchange of elite goods, and remarked on the international nature of the eastern Mediterranean, which became particularly influenced by Aegean and Cypriot material culture.

As interconnected as the region appears to be from the standpoint of long-distance exchange, one must bear in mind the degree to which this is an observation based on *elite* exchange and interconnectivity. While Levantine city-states produced desirable staple commodities for the regional market, the elites became consumers of predominantly imported goods. Thus, the so-called palace economies of these societies were plugged into the larger exchange system and cultural *koiné*, but primarily more as passive consumers than major players. However, the consumption of imported goods may often be overstated. As Bergoffen has demonstrated (this volume), 'Ajjul was an exceptional site in terms of the quantity and type of imported pottery. Yet, if we look at a site like Megiddo, the pattern is considerably different. Although not a coastal site, Megiddo was prominently situated on a major route connecting to Abu Hawam on the nearby coast, by which Mediterranean goods travelled inland. Also considering the relatively large size of Megiddo, including its LB pal-

ace complex, one would expect to find a high proportion of imported goods. However, the assemblage of imported objects during this period are somewhat low. For example, assemblages from LB I Megiddo (predominantly from burials) yield only ca. 5% imported pottery, almost exclusively Cypriot, and this pattern continues into the LB II (Martin, personal communication).

Whereas the elites engaged in writing on an unprecedented scale for the purposes of international diplomacy, the records (e.g., Amarna letters) indicate fragmentation, volatility, and hostility within the Levant itself (e.g., Savage and Falconer 2003: 33). Many scholars have noted that the region appears to have become somewhat balkanized into several modestly sized city-state polities that varied in extent and composition (Savage and Falconer 2003; cf. Bunimovitz 1995; Na'aman 1988), perhaps with a demographic crisis in many regions (Finkelstein 1996: 243–245). Thus, in contrast to the MB, which appeared to be oriented around open intraregional interaction, the LB seems to represent a more closed system of interaction controlled by political elites.

Several aspects of material culture indicate a relative drop in the technological innovation that was so characteristic of the preceding MB. In certain respects, a dichotomy is exhibited in material culture: on one hand, a diminutive proportion of high-quality luxury items and imported ceramics but, on the other hand, a conspicuous drop in monumental architecture (with few exceptions) and decline in local ceramic production. LB pottery demonstrates some elaborately painted ware, as well as local imitation of imported ceramics, suggesting local supplementation and/or emulation of elite consumption, albeit in small quantities. Nonetheless, local production of ceramics may be generally characterized by less plastic clays, a reduction in fast-wheel formation, warping and cracks resulting from poor drying or firing conditions, and a reduced range of typologies (Panitz-Cohen 2014: 550). Although evidence suggests that the fast-wheel went out of use in some areas (e.g., Franken 1992; Glanzman and Fleming 1986), this practice does not appear to be universal (Magrill and Middleton 2001). Over the course of the LB, it also appears that local bronze metallurgy became generally scarce in the southern Levant until its brief revival in the LB III, coinciding with the withdrawal of Egyptian influence in the region (Yahalom-Mack 2009).

Despite no major historical upheavals or breaks in material cultural over the course of the MB to LB, there nonetheless appear to be fundamental changes in the material culture between the two. To what should we owe these shifts? What happened to the grassroots technological innovation so characteristic of the MB? This shift in production probably coincided with socio-political reorganizations in the LB related to boundaries created by the assumed city-states of the period, resulting in balkanization, in turn altering the modes of ceramic

production and creating a more controlled economy. Based on the distribution of elite goods, it is clear that certain systems of exchange persisted, but the interconnections are representative of a closed system. Modes of production probably became increasingly controlled by central institutions favoring intense specialization over general subsistence, to the point of being stretched rather thin.

Although Egyptian hegemony in the southern Levant may not have been as consistent through space and time as a maximalist historical perspective might convey, it nonetheless had a lasting and widespread impact on modes of political economy whereby power dynamics and networks became disrupted (e.g., Bienkowski 1989; Knapp 1989, 1992). In the wake of this disruption, subsequent reconstruction of intraregional connections became more politically dominated and antagonistic, if the Amarna letters are any indication. This overspecialization and balkanization slowed, and in some cases, reversed the trajectories of technological innovation, demographic growth, and overall economy of the southern Levant. Here we witness the early signs of systemic vulnerability which, in my opinion, set the stage for the inevitable disintegration of LB political economy and urbanism over the course of the 12th and 11th centuries BCE, namely the “collapse” of the Bronze Age.

Summary

Perhaps the most important way to characterize the Levant during the 2nd millennium BCE is by degrees of open connectivity – in terms of both socio-geographic continuity and technological innovation. Complex society early in the MB developed out of long-term, widespread exchange networks that facilitated the open innovation of resources, technology, and stylistic concepts. Contrary to longstanding culture-historical notions of diffusion and political hegemony, these features appear as a result of the steady intensification of local and regional exchange networks which, in turn, were reinforced by innovation. In contrast, the transition to the LB demonstrates a steady decline in local material culture. Although connections were definitely maintained throughout the region, as evidenced by the exchange of several types of commodities over great distances, the modes of exchange became more specialized and controlled by a chiefly political economy. Thus, by the end of the Bronze Age, politically contingent and perhaps even antagonistic relationships between city-states in the southern Levant appear to have stifled local technological innovation in favour of elite consumption of international products.

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IV. EGYPTIAN RED SEA TRADE

POWER AND PRESTIGE: EGYPTIAN RED SEA TRADE DURING THE OLD AND MIDDLE KINGDOMS AND ITS PLACE WITHIN THE ROYAL REDISTRIBUTIVE NETWORK

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Archaeological excavations at the harbor sites of Wadi el-Jarf, Ayn Sukhna, and Mersa/Wadi Gawasis have revealed the significance of maritime access to the Red Sea during the Old and Middle Kingdoms. An examination of the physical remains from these sites along with additional epigraphic and art historical data demonstrates that during these two periods of strong centralization, commodities obtained as a result of Red Sea mining and trade expeditions came under the exclusive authority of the king¹. These items functioned as part of an elaborate system of royal gift-giving designed to strengthen both internal and external alliances and to ensure dependence on the central authority. Egyptian objects inspired by and composed of materials derived from the Red Sea appear as far as the royal tombs at Byblos, illustrating the cultural significance of such commodities. During the Old and Middle Kingdoms, the strong connection between Egypt and Byblos provided the Egyptian state with access to materials coming from further inland and aided in the transmission of Egyptian objects and iconography throughout the Levant and Syria.

Introduction

The Red Sea served as an important conduit for trade throughout much of Egyptian history, linking the products of the horn of Africa and southern Arabian Peninsula with Egypt, the Levant, and beyond. Maritime navigation of the Red Sea not only provided the Egyptians with easy access to important mining regions in the upper Sinai, it also allowed for direct contact with the land of Punt located further south.² The region of Punt was a vital commercial zone situated outside of Egypt's military or political control but still within its economic grasp (Creasman 2014: 396). While the precise location of Punt remains undetermined, K. A. Kitchen has proposed that the 'heartland' of Punt consisted of a lozenge shaped

territory defined on the west by the Nile beginning at the Fifth Cataract and running south to Khartoum, on the north by a broad line spanning from the Nile to the Red Sea coast somewhere north of Port Sudan, on the east by the Red Sea coast spanning from north of Port Sudan to at least the Bay of Aqiq, and on the south by a stretch of terrain parallel with the Sudanese Eritrean and Ethiopian borders (Kitchen 2012: 61). The area of Punt held an important ideological significance for the Egyptians due to the cultic nature of its two chief products: *ntyw/nd* and *sntr*, which experts have commonly identified as myrrh and frankincense.³ Other imports from the area included: resins, gums, precious metals, rare woods, animals, and other luxury goods.

The bulk of the evidence for Egyptian maritime usage of the Red Sea during the Old and Middle Kingdoms derives from three archaeological sites: Wadi el-Jarf, Ayn Sukhna, and Mersa/Wadi Gawasis. The material uncovered there, in addition to the epigraphic and art historical data from the period, indicates that these expeditions were under the strict control of the state. The commodities acquired were the direct prerogative of the king and as such they functioned within a redistributive system centered on internal and external royal gift-giving. The royal nature of these exchanges lies in direct opposition to the more entrepreneurial spirit present in some areas of the Near East during this period.⁴ It is the aim of this overview to start a dialogue about how these differing mechanisms for trade worked together to create a cross-cultural network that allowed for the flow of goods and influence throughout Egypt and the Near East during this period and after.

Red Sea Trade during the Old Kingdom (c. 2686–2160 BCE)

There is no clear archaeological evidence for maritime activities on the Red Sea prior to the Old Kingdom (Creasman 2014: 397). However, ebony, obsidian, Red Sea shells, and other commodities found in Egypt during the Naqada period (c. 4000–3000 BCE) attest to the pres-

¹ The research for this paper was conducted in 2016 with the final draft submitted in 2017. For updated bibliography on the sites discussed see: Bard and Fattovich 2018; Taterka 2021; Durand et al. 2022; Manzo 2022; Somaglino and Tallet 2022.

² Scholars have long debated whether the region of Punt was situated in Africa or the southwestern Arabian Peninsula: Bradbury 1996: 37–60; Kitchen 1999: 173–178; Meeks 2003a: 53–80; Meeks 2003b: 54–57; Sayed 2005: 203–237; Balanda 2005/2006: 33–44; Fattovich 2012b: 39–46; Kitchen 2012: 59–63; Creasman 2014: 396.

³ For more on the use of these terms, their translation, and the importance of incense in Egyptian culture/religion see: Serpico 2000: 430–474; Aufrère 2003: 117–151; Baum 2003: 16–36; Wise 2009: 67–80.

⁴ See Gojko Barjamovic in this volume.

ence of a well-developed indirect trade network focused on overland routes (Roy 2011: 244–286; Mark 2013: 30). Despite a dramatic increase in traded goods resulting from the appearance of the sailboat and the spread of Naqada IIc culture throughout Egypt and Nubia during the Predynastic period, it is unlikely the Egyptians were sailing the Red Sea prior to the Early Dynastic period, due to the immense logistical and organizational constraints of such voyages (Mark 2013: 34). The first seafaring expeditions towards Punt were likely integrated with the development of large-scale mining operations during the Early Dynastic period (c. 3000–2686 BCE) (Mark 2013: 34). Evidence for early contacts with Punt consists mainly of small ebony objects dating to the First Dynasty (Creasman 2014: 397). However, the disappearance of the Late A-Group in Nubia adds further support to the theory that the Egyptians had established a sea route during this period (Mark 2013: 35). Previously, A-Group Nubians had served as the middleman between Egypt and lands further to the south, but maritime travel allowed the Egyptians to circumvent the A-Group leading to their gradual weakening and disappearance (Mark 2013: 35).

The earliest archaeological evidence for Red Sea traffic relates to mining operations, confirming the proposed link between these two enterprises. Remains from the sites of Wadi el-Jarf and Ayn Sukhna indicate that the Egyptians used the northern Red Sea to reach important mining regions in the Sinai by boat, cutting down on travel time and increasing the quantities of raw materials returning to Egypt. Wadi el-Jarf is located on the western coast of the Suez Gulf, some 20 km south of the modern town of Zafarana (Tallet 2012, 2013; Tallet and Marouard 2012, 2014). Evidence from the joint University of Paris-Sorbonne and IFAO excavations indicate that the harbor was established during the 4th Dynasty, making it the oldest known harbor site in the world (Tallet 2012: 153). The earliest material dates to the reign of Senfru (ca. 2613–2589 BCE), but the main period of occupation was the reign of his successor, Khufu (ca. 2589–2566 BCE) (Tallet 2012; Tallet and Marouard 2014: 4). While the primary purpose of this installation related to the mining of turquoise and copper in the Sinai, the presence of a substantial corpus of water containers produced locally at the site led Tallet to postulate that the harbor may have also served as a stopover for journeys to Punt during the early Old Kingdom (Tallet 2013: 83).⁵

The facilities at the site are extensive and include some 30 rock-cut galleries organized like those at Ayn Sukhna and Mersa/Wadi Gawasis (Tallet and Marouard 2014: 4). It is important to note that Wadi el-Jarf appears

to be distinctive from the other known Red Sea harbors, as evidence of permanent settlement has survived. In addition to the storage galleries, the site contained an area of camps with several stone installations and a long north-south wall, as well as a second complex with a single stone structure located along the coast (Tallet 2013: 79). In addition, archaeologists uncovered hundreds of fragments of papyri, the oldest ever found in Egypt, that reveal some of the bureaucratic workings of the port. The texts include a personal logbook recording the day-to-day activities of a team of about 20 men led by the inspector Merer (Tallet and Marouard 2014: 8). The occupation of the site was short-lived and it appears to have fallen out of use shortly after the reign of Khufu, when focus may have shifted to Ayn Sukhna, a site located closer to the administrative capital of Memphis (Tallet 2013: 83).

Wadi el-Jarf was closely linked with the coastal site of El-Markha/Tell Ras Budran, located on the opposite side of the Suez Gulf (Tallet 2013: 81). The remains at Tell Ras Budran include a circular limestone fort that marked the landing point for Egyptian expeditions (Mumford 2005: 24–26; Tallet 2013: 81). The fort dates to the late Old Kingdom and is one of three that the excavators have identified at the site, whose dates span from the Early Dynastic period through the Old Kingdom (Mumford 2006: 13). The dominance of locally produced wares from Wadi el-Jarf amongst the ceramics found along the Sinai coast confirms the suggested link between these two sites. The surrounding areas contained turquoise and copper mines, with mining camps located further inland at sites like Wadi Maghara and Kharig (Mumford 2005: 24). The layout of the fort suggests a focus on long-term security and it likely housed a garrison of 25–50 soldiers who would have been charged with thwarting attacks from the local Bedouin (Mumford 2005: 26, 2006: 40–41). G. D. Mumford's work in the area has also revealed that the fort's inhabitants collected an array of local materials, including a variety of Red Sea shells and marine products, for potential export to Egypt or perhaps the Levant (Mumford 2012a: 108, 116). Based on an analysis of the presence and popularity of Red Sea shells, sea urchins, coral, and objects created from those items, Mumford has proposed that during the Old Kingdom the Egyptians worked to collect and transport such commodities back to Egypt and possibly on to the Levant (Mumford 2012a: 117). He has suggested further that while the acquisition of these goods would have been secondary to the mining/trade expeditions, it still represented an important aspect of culture and commerce during the Old Kingdom.

Ayn Sukhna is also located on the western bank of the Suez Gulf and lies 120 km east of modern Cairo. The excavations of the joint University of Paris-Sorbonne and IFAO team have revealed that the area served as a port site from the late 4th Dynasty to the New Kingdom for the primary purpose of crossing over to the southern part of the Sinai Peninsula (El-Raziq *et al.* 2012; Tallet 2012: 148; Tallet 2013: 76). The site was set up in much the same way

⁵ While the earliest textual sources for maritime trade date to the 5th Dynasty, Tallet cites the tomb of Seshat-hotep at Giza, which may depict a Puntite individual (PM III: 149–150; Junker 1934: 172–195). Since this tomb has been dated to the reign of Khufu, it suggests the possibility of expeditions dating to the early 4th Dynasty. However, the presence of an individual from Punt does not necessitate maritime travel.

as the other Red Sea harbors and included a system of galleries, which were used for storage and living quarters. One of the most important areas at Ayn Sukhna contains a series of copper workshops dating to the Middle Kingdom (El-Raziq *et al.* 2012: 7–8). There is also evidence of a settlement near the coastline. Material from the site dating to the Old Kingdom includes an inscription from Gallery G6 recording an expedition under Djedkare-Isesi, the eighth king of the 5th Dynasty; a series of sealings bearing the names of Khafre, Niuserre, Djedkare, and Unas; several Old Kingdom storage jars; an ostrakon and at least five official inscriptions (El-Raziq *et al.* 2012: 6; Tallet 2012: 149). The epigraphic data reveals that expeditions traveling through Ayn Sukhna began in Memphis and sailed to the southern Sinai Peninsula; between expeditions, the Egyptians dismantled their boats in order to store them in site's rock-cut galleries (Tallet 2012; Tallet 2013: 76). There are also significant remains dating to the Middle Kingdom, with the earliest inscriptions dating to Mentuhotep IV (c. 1992–1985 BCE), the last king of the 11th Dynasty (El-Raziq *et al.* 2012: 4).

While very limited, the archaeological remains from the African and Arabian regions of the southern Red Sea suggest that the populations there were interacting as early as the 3rd and 2nd millennia BCE (Fattovich 2012b: 39, 42). Based on an examination of the known sites in the northern Horn of Africa and southwestern Arabia, R. Fattovich has identified two primary phases of interaction; the first, dating from 2500–1500 BCE, is characterized by the diffusion of obsidian from the African coastal regions to the Yemeni Tihamah, and the second, dating from 1500–900/800 BCE, likely focused on the progressive inclusion of the African coastal regions into the commercial expansion of the communities present on the Yemeni coast. He has suggested that Egyptian maritime trade with Punt was likely the main factor that stimulated interactions between these two populations during the second half of the 2nd millennium (Fattovich 2012b: 39, 43).

P. Magee, whose work has focused on the archaeology of prehistoric Arabia, agrees that the evidence dating to the Bronze Age in western Arabia remains unclear (Magee 2014: 126). The data available indicates that agriculture began to develop in the Yemeni Highlands during the late 4th and early 3rd millennium, leading to rapid settlement growth from c. 3000 BCE on; contacts with Africa likely played an important role in the domestication process (Magee 2014: 135). By the late 3rd millennium, subsistence strategies spread to a number of sites spanning from the Saudi Arabian coast down to Sabir on the southern Yemeni coast; the combination of irrigation agriculture and contacts with the African Red Sea coast led to the long-term sustainability of these settlements. The site of Sabir, located near the Gulf of Aden, was particularly significant during the 2nd millennium (Magee 2014: 141–143). Material remains, including Nubian C-Group and Pan Grave ceramics suggest an African orientation

for this Bronze Age coastal culture (Magee 2014: 143). Further, evidence from the Farasan Islands indicates that they too played a role in the maintenance of these contacts (Magee 2014: 143). The discovery of early 2nd millennium levels at the site of Tayma, located in the Hijaz, is also interesting as that site became an important caravan station on the overland network connecting Arabia and the Near East (Magee 2014: 144–150).

The earliest written sources from Egypt relate primarily to contacts with Punt. The first is the Palermo Stone, which records a voyage to Punt during the reign of Sahure (c. 2487–2475 BCE) (Strudwick 2005: 72). The entry reports some 80,000 measures of *ntyw*, 6,000 pieces of electrum, 2,900 pieces of malachite, and 23,020 measures of an unknown unguent. This account appears just below a list of items from the “terraces of turquoise,” likely a term for the Sinai, that included 6,000 pieces of copper.⁶ The Palermo Stone inscription likely relates to a series of reliefs from the causeway of Sahure at Abusir, which depict the return of a fleet of ships loaded with cargo from Punt, including: monkeys, baboons, dogs, incense trees⁷, and Puntite families (El Awady 2009: 155–157, 159, pl. 5). The scenes portray the king, his wife, his mother, and a number of courtiers celebrating the arrival of the expedition and receiving treasures from Punt (El Awady 2009: 169). The associated inscriptions suggest that the imported items functioned as gifts from the king to his mother and possibly to others who were present in the scene. One badly damaged block preserves a group of high-ranking officials giving gold jewelry to members of the expedition crew (El Awady 2009: 184–186, pl. 7). The titles of some of the individuals depicted help to elicit what types of activities took place during such voyages. Two particularly informative titles are ‘overseer of quarry-work’ (*(j)m(j)-r mr*) and ‘overseer of prospectors’ (*(j)m(j)-r smntj*), which confirm that mining activities also occurred (El Awady 2009: 157–185, fig. 81a).

The tomb inscription of Weshptah, the Vizier, Chief Judge, and Chief Architect of Neferirkare (c. 2475–2455 BCE) indicates that the practice of gifting materials from Punt was a common royal practice (Creasman 2014: 397). The text states that, amongst other gifts, the king ordered a special ebony coffin for the deceased (Breasted 1906: 111–113). The majority of the commodities acquired through the Red Sea trade were prestige items; texts related to those expeditions often referred to such goods as *inw*. As early as the First Dynasty, the Egyptians used the rubric *inw* to denote transactions involving the king (Bleiberg 1996: 29). These exchanges were an integral component of the royal redistributive network through which the royal family and other officials received

⁶ In later times the term (*Htjw mfkst*) definitely refers to the Sinai (Strudwick 2005: 79, n.17) and is common in other Old Kingdom inscriptions referencing the area, including those from Ayn Sukhna (Tallet 2012: 107).

⁷ In a short excursus on the subject Awady explains why the trees depicted on the causeway must have been Frankincense trees, not Myrrh (El Awady 2009: 253–257).

various gifts and commodities. Texts from the Old Kingdom indicate that *inw* served as a designation for exchanges between the king and others that could then be redistributed (Bleiberg 1996: 53). During the First Intermediate Period, *inw* collection and redistribution became the prerogative of the nomarchs; however, the term retained its traditional sense soon after kingship became reestablished in the late 11th Dynasty (Bleiberg 1996: 54). Based on his analysis of the term *inw*, E. Bleiberg has determined that such transactions constituted official gifts; such gifts were an important aspect of Egyptian governance from the Archaic period on (Bleiberg 1996: 117). Once the king received *inw*, it was kept separate from revenue received through taxation or by other means; official gifts were distinctive as they represented an expression of social relationships rather than simply an economic value (Bleiberg 1996: 123). This practice served to reinforce or establish alliances, to ensure dependence on the central authority, and as a competitive mechanism for the public display of wealth (Aubert 2013: 95).

Additional written accounts related to Punt come from the tomb inscriptions of Harkuf and Pepynakht, which date to the end of the 6th Dynasty. Harkuf served under Merenre (ca. 2287–2278 BCE) and Pepi II (c. 2278–2184 BCE) had a number of important titles, including ‘expedition leader’⁸ (*jmj-r ʿw*) and ‘overseer of all the foreign lands of the Head of the Upper Egypt’ (*jmj-r ḥꜣswt nb tp šmꜣw*); his tomb is located in Aswan. His inscription indicates that he led four missions into the southern Nubian region of Yam, as well as additional journeys into previously unexplored areas. As a part of these missions, Harkuf is said to have brought *inw* to the king on several occasions. The text of his final journey, which took place under Pepi II, is recorded in the form of a letter from the king to Harkuf. It states that Harkuf traveled down the Nile from Yam, in Upper Nubia, along with the army, in order to acquire a pygmy from Punt for the young Pepi II, a task that had been accomplished previously during the reign of Djedkare-Isesi (c. 2414–2375 BCE). The series of interactions described reveal an active system of exchange and interaction between Egyptian royal officials living along the southern border of Egypt and those individuals living further south (Breasted 1906: 151). It also shows that while maritime routes had been well established by the reign of Pepi II, they were not the only means of accessing Punt.

The tomb of Pepynakht is located in Elephantine and dates to the reign of Pepi II; Pepynakht had a series of important titles that also included ‘expedition leader’ (Strudwick 2005: 333–335). His inscription indicates that he led two military campaigns against regions in Nubia and was then sent on a royal mission to retrieve the body of a fellow expedition leader who had been preparing for

a voyage to Punt. According to the text, Ankhti had been in the land of the Aamu building a boat for his journey when Aamu and ‘Sand-dwellers’ (*hr(y)w-šꜣ*) killed him and the armed division of the expedition accompanying him. While part of the text is missing, in the end, Pepynakht and his men are able to drive away the murderers. Kitchen has suggested that this incident occurred in the Eastern Desert (Kitchen 2004: 25); however, this is at odds with later textual sources, which will be discussed below, that indicate that craftsmen constructed the ships used to travel to Punt in the Nile Valley. Perhaps Pepynakht and his team were merely reassembling their boat on location, at a site like Ayn Sukhna. Finds from that site, including references to the type of boats used for traveling to Punt, support this theory (Tallet 2012: 111).

Near the end of the Old Kingdom, the C-Group emerges in Nubia at a time when Egyptian political dominance was weakening, resulting in the inability of the Egyptians to conduct maritime expeditions via the Red Sea (Mark 2013: 35). During this period, C-Group Nubians once again functioned as the middlemen for Egyptian overland trade ventures, leading to an increase in both wealth and power for the Nubian state. Evidence for maritime trade during the First Intermediate Period remains unclear, and it is possible that without a fully centralized government, the Egyptians lacked the economic and logistical means for such ventures.

Red Sea Trade during the Middle Kingdom (c. 2055–1650 BCE)

Textual sources attest to the return of seafaring almost immediately after the reunification of the country, as early as the reign of the 11th Dynasty pharaoh Mentuhotep III. The inscription of Henu, located in the Wadi Hammamat, preserves an account of a royal mission to Punt dated to Year 8 of Mentuhotep III (Breasted 1906: 208–210; Couyat and Montet 1912: 81–84). This account is the first of a series of inscriptions that paint a very clear picture of the mechanics of such voyages during the Middle Kingdom. First, the king commands Henu to send a ship to Punt in order to acquire fresh myrrh. Henu’s expedition team, which includes an army of 3,000 men and a team of asses laden with sandals, then departs from the city of Coptos in the Nile Valley and travels through the Eastern Desert to the coast; each man is equipped with a leather bottle, a carrying pole, two jars of water, and 20 loaves of bread per day. Along the way, Henu stops to dig a series of at least 15 wells in order to supply water for his expedition members. Upon reaching the Red Sea, Henu and his men reconstruct their ship and, after making a sacrifice that included cattle, bull, and ibexes, they set sail.⁹ The

⁸ This term has a number of interpretations including: overseer of translators (Roy 2011: 250) and overseer of foreigners (Strudwick 2005: 328). For a detailed analysis of the title see: Bell 1976.

⁹ Archaeological remains found near the ceremonial structures located at the harbor of Mersa/Wadi Gawasis suggest that various rituals occurred before and/or after the start of each voyage, a practice that is also well documented at Middle Kingdom mining sites in the Eastern Desert

account concludes with Henu's return to the Nile Valley via the Wadi Hammamat, and his presentation of all of the gifts (*inw*) of the 'God's Land.' This inscription reveals the utilization of a previously unknown route for Red Sea expeditions as texts from the Old Kingdom indicate that troops departed from Memphis (Gasse 2012: 140).

The details of this mission are very similar to those described in a series of 29 additional Middle Kingdom texts found at the site of Mersa/Wadi Gawasis, which will be discussed below, that indicate the establishment of a clear pattern for such missions. These inscriptions reveal the following process: first, craftsman constructed the necessary ships at Coptos, the closest point in the Nile Valley to the Red Sea. Next, the vessels were fully equipped, disassembled, and transported across the Eastern Desert via the Wadi Hammamat and its branches using a team of roughly 3,000 men. After arriving on the Red Sea coast the expedition members reassembled the fleet and departed. Once the team returned, they trekked the goods acquired overland to Coptos. Archaeological evidence from the southern Red Sea coast indicates that these expeditions likely culminated at Trinkitat or Aqiq Bay after bypassing some 60 possible anchorage points for overnight stopovers (Kitchen 2012: 61). Kitchen has calculated that if the ships were traveling at a speed of 50 km per day over the roughly 1,100 km journey, they would have made some 24 stops in route (Kitchen 2012: 61).

During the 12th Dynasty (c. 1985–1773 BCE) the dominant Red Sea port seems to have been that of Saww (Mersa/Wadi Gawasis), which was positioned at the end of the shortest overland route from the Nile Valley to the coast (Bard and Fattovich 2013: 4). The journey to the coast would likely have taken nine to ten days and utilized a system of wadis that were also important to Egyptian mining activities in the Eastern Desert.¹⁰ For the ships, craftsman used cedar imported from Lebanon, establishing an important link between the Red Sea system and the long-distance trade routes connecting Egypt to the Levant and beyond. Once the ships departed towards Punt, the remaining crewmembers likely dispersed (Ward 2013: 29). It is possible that the majority of the unneeded workers went to the mines and quarries in the nearby Wadi Hammamat until the ships returned, while a small garrison stayed behind in the temporary shelters to safeguard the harbor (Bard *et al.* 2013: 542). The site's excavators have suggested that these vessels likely traveled south along the African coast and then returned via the Arabian coast (Bard *et al.* 2013: 533). Unfortunately, the current state of the archaeological record does not allow for a more specific reconstruction of the routes used.

and Sinai (Bard *et al.* 2013: 546). Important deities worshipped at Mersa/Wadi Gawasis included: Min of Coptos, Osiris of the Sea (*Wsjr w3d-wr*), and Horus the Great (*Hr-wr*).

¹⁰ A detailed examination of the possible wadi systems used appears in: Bard *et al.* 2013: 533–556.

Evidence of Red Sea trade becomes particularly prominent during the 12th Dynasty, with confirmed expeditions dating to the reigns of Senwosret I, Amenemhet II, Senwosret III, Amenemhet III, and Amenemhet IV. It is likely that the rise to power of the Kingdom of Kush in southern Nubia interfered with Egypt's overland contacts, increasing the importance of maritime commerce during this period (Bard and Fattovich 2013: 4). A. M. Sayed's discovery of Mersa/Wadi Gawasis in 1976 was a critical turning point in understanding the significance of the Red Sea trade during this period; Sayed spent two seasons at the site (Sayed 1977). In 2001 the University of Naples "l'Orientale" and Boston University began a joint reinvestigation of the area. The earliest remains reveal that the Egyptians first used the harbor in the 3rd millennium, when the area was a brackish lagoon protected from the open sea; however, the primary period of occupation was the Middle Kingdom, particularly the 12th Dynasty (Ward 2013: 27–28; Bard and Fattovich 2013: 5; Fattovich 2012b).

The main areas of occupation included a series of ceremonial structures located near the coast, temporary shelters, rock-cut galleries and man-made caves, camps along the beach, and an industrial area. There is no evidence of permanent structures. A lack of local fresh water and the inability to grow emmer wheat meant that the Egyptians trekked in all the necessary provisions from the Nile Valley, which would have significantly hampered the ability to establish a permanent outpost (Bard and Fattovich 2013: 5; Bard *et al.* 2013: 541). Remains derived from the expeditions include obsidian, ebony, foreign ceramics, and over 40 cargo boxes with labels dating to Year 8 of Amenemhet IV that denote their contents as the "wonders of Punt" (Bard and Fattovich 2013: 6). Broken clay sealings found at the site signify a high degree of administrative control (Bard *et al.* 2013: 545; Fattovich 2012a: 11). The excavators have identified two phases of seal usage, an earlier phase related to the management of expedition supplies and a later phase associated with the control of imported goods. Other administrative evidence includes ostraca and inscribed wooden tags, as well as 50 carefully piled shallow bowls each covered with a linen cloth (Bard *et al.* 2013: 545). Arnold has interpreted similar bowls from Lisht as jar stoppers (Arnold 1988: 110); however, the excavators have proposed that in this case they may have served as ration bowls being stored for a future expedition (Bard *et al.* 2013: 545).

A total of 29 stelae from a series of ceremonial structures located near the harbor attest to the activities at the site and preserve the names of Senwosret II, Senwosret III, and Amenemhet III (Fattovich 2012a: 7–11). The totality of the epigraphic evidence denotes a minimum of 12–15 journeys headed to Punt and Bia-Punt (Bard *et al.* 2013: 537). The earliest inscriptions date to Year 22 of Senwosret I and include a stela fragment, a text from the Sanctuary of Ankhu, and the stela of Antefoker-Ameny (Mahfouz 2011: 52–56, 2012: 117–118). These texts reveal that the mechanics of Red Sea maritime trade had not

changed since the 11th Dynasty; first the king commanded the construction of a fleet at Coptos; then some 3,756 participants including 3,200 soldiers, 500 sailors, 50 ‘followers of the king,’ five scribes, and one overseer transported the ships, under the command of the army, from Coptos to the Red Sea coast; finally, the fleet departed from Mersa/Wadi Gawasis and traveled to Punt.

The stela of Khentykhetyur (Stela Durham 1934) records a Year 28 expedition of Amenemhet II (Mahfouz 2011: 57–58; Mahfouz 2012: 119) anchored at Saww on its return voyage from Punt; it preserves the only known attestation of the ancient name of an Egyptian maritime port (Mahfouz 2011: 58). Stela Durham 1935 indicates that an expedition also occurred in Year 1 of Senwosret II, and although it does not relate any of the details of the mission, it indicates that the official Khnumhotep oversaw the erection of a monument related to the voyage on location in Punt (Mahfouz 2011: 58–59, 2012: 119–120). A Year 5 mission of Senwosret III is referenced on a series of Hieratic ostraca (23 sherds and 15 marked jars) and stela WG 14 (Mahfouz 2011: 60–61, 2012: 120–121). The hieratic inscriptions reveal that the administrative center of Lahun funded the venture, and they also provide information on the officials involved, the necessary supplies, and several place names (Mahfouz 2008). Four additional stelae, WG 16, 23, 05, and 06, likely reflect a single mission during the reign of Amenemhet III (Mahfouz 2011: 61–64, 2012: 121–122). The final confirmed expedition occurred in Year 8 of Amenemhet IV and is attested on boxes WG 02 and 21 and ostrakon WG 0111 (Mahfouz 2011: 64–65, 2012: 122–123).

Maritime trade likely continued through the 13th Dynasty.¹¹ However, contacts seem to fade along with the centralized control of the government. After the Middle Kingdom, there are no known records of trade prior to that of Hatshepsut, although that does not mean Theban kings did not travel to the region (Creasman 2014: 398). D. O’Connor has suggested that the restoration of contacts with the Levant played a central role in the desire for reunification after the Second Intermediate Period (O’Connor 1997: 62), leading Creasman to propose that the blockage of trade with the Levant, the origin of most of the wood used for these expeditions, may have resulted in the cessation of interactions. After an apparent hiatus of roughly two centuries Hatshepsut was the first to reopen the route to Punt, and the record of her expedition, preserved on the walls of her mortuary temple at Deir el-Bahari, remains the most detailed depiction and description of the land of Punt, its products, and its people (Creasman 2014: 395). The reliefs from Hatshepsut’s mortuary temple at Deir el-Bahari indicate that Egypt’s main exports included bread, beer, wine, meat, and flour, and images of the chief of Punt suggest that

they also exported personal ornaments and weapons (Bard *et al.* 2013: 534).

While it lies beyond the scope of this workshop, it is important to note here that the dynamics of trade with Punt seem to shift somewhat after the Middle Kingdom. Creasman has suggested that the central motivation for Hatshepsut’s journey was to secure the cooperation of influential entities within Egyptian society, including the priesthood of the all-important temple of Amun at Karnak, and to demonstrate her administrative and personal success in organizing and implementing such a venture (Creasman 2014: 402). The distinctive element of her journey is her dedication of the resulting gifts to the god himself, his cult, and his personnel (Creasman 2014: 401). This difference is apparent visually when comparing her reliefs to those from the Sahure causeway. The Old Kingdom scenes depict Sahure tending to incense trees transplanted into his own royal garden, while Hatshepsut planted her trees around her temple as an offering to Amun (El Awady 2009: 257). After the reign of Hatshepsut, sporadic voyages continued through the 20th Dynasty with known expeditions dating to the reigns of Amenhotep III and Ramses III (Creasman 2014: 399).

The Egyptian Red Sea Trade in Context

While much of the analysis related to the material from Mersa/Wadi Gawasis has focused on the mechanics of seafaring expeditions to Punt and Bia-Punt and the locations of those areas, scholars such as A. Manzo have delved deeper, shedding light on the relationship between the Red Sea trade and the more well documented networks of exchange connecting Egypt with Levant (Manzo 2011). Manzo has examined several of the products and raw materials associated with the Red Sea in order to assess their impact on the Middle Kingdom cultural landscape. His work has revealed a complex network of royal exchange that is central to understanding how Egyptian Red Sea trade functioned within the broader sphere of interregional exchange throughout the Levant and the Near East during this period.

Jewelry, stone vessels, and even royal statuary dating to the Middle Kingdom reveal a keen interest in exotic materials and semi-precious stones that is reflective of the policy and broad trading relationships that distinguish the period (Wildung 1984: 89; Hardwick 2012: 14). Middle Kingdom jewelry displays the widest range and quality of materials, incorporating: amethyst, carnelian, feldspar, lapis, turquoise, obsidian, and other semi-precious stones and metals, demonstrating significant resources dedicated to mining and to the distribution of raw materials (Bourriau 1988: 127). Further, both the design inspiration and the raw materials needed to produce many of these pieces related directly to Egyptian maritime activities. Important commodities from the

¹¹ An inscription dating to Neferhotep I records a ritual that was “greatly flooded with the scent of Punt” during which the king presented “myrrh, wine, and divine products” to the god Osiris (Simpson 2003: 342).

Red Sea regions included the shells, electrum, and pure gold used for many of the items discussed below. An examination of the composition, style, and distribution of some of these Middle Kingdom luxury goods serves to illustrate how the Egyptian royal redistributive network connected with the dominant commercial centers of the period to create a broad system of linkages spanning from Punt to the Near East.

The use of shells or imitation shells for personal adornment began sporadically during the Early Dynastic Period and Old Kingdom and dramatically increased during the Middle Kingdom (Manzo 2011: 71). One important example of this type of embellishment is a series of rounded mother of pearl pendants exclusive to the Middle Kingdom (Manzo 2011: 71). These pendants, first studied by H. Winlock (1932), consist of Red Sea shells that have been ground down to their mother-of-pearl interiors and trimmed into a circular shape. The pendants measure roughly 10–11 cm in diameter and are drilled near the top with two holes for suspension. The center of each shell contains a royal cartouche. There are roughly 50 known examples of such pendants, the majority of which name kings of the 12th Dynasty.¹² The condition of the pendants indicates that they were worn during the owner's life (Winlock 1932: 389).

Initially scholars suggested that the pendants had served as some type of military decoration or distinction; however, in most cases the evidence for their provenance is unclear (Winlock 1932: 388, 390; Arkell 1944: 74; Bourriau 1988: 153–154). C. Aldred and J. Bourriau have proposed that the royal names may have served a protective function (Aldred 1952: 131; Bourriau 1988: 153–154). In light of the finds from Mersa/Wadi Gawasis, Manzo has related the pendants to the Red Sea expeditions (Manzo 2011: 72); this would not rule out a military connection, as the epigraphic evidence clearly indicates that the majority of the men who participated in these missions were soldiers. Aldred has linked the increased popularity of shell in general during this period to contacts with Nubia, leading Manzo to theorize that Nubian crewmembers may have introduced the style (Aldred 1952: 132; Manzo 2011: 72). It is also possible that the protective nature of the pendants themselves appealed to the expedition members.

Shell-shaped jewelry created using precious metals and sometimes inscribed with the king's name also became popular, especially with the royal courts of Senwosret III and Amenemhet III. The preserved examples of this type, which utilized various techniques including granulation, filigree, cloisonné, and casting, illustrate the highly elite nature of many of these objects (Aldred 1952: 131–132; Engelbach 1915: 12, pl. I, 4; Petrie 1914: 27, pl. XIV, 112 c; Bourriau 1988: Cat. 158; Wilkinson 1971:

60–61, fig. 38, pl. I.B, XIV). This material suggests that during the Middle Kingdom, particularly the second half, Red Sea shell inspired jewelry had become part of the standard repertoire of objects created for the royal court (Manzo 2011: 73). A series of important jewelry caches from the tombs of several 12th Dynasty royal women at Lahun and Dahshur¹³ support this theory, and additional examples attest the popularity of these styles through the early New Kingdom.¹⁴ Manzo has highlighted a distinctive series of pendants from the tomb of the princess Khnmet at Dahshur, that may depict starfish, which he believes could represent the first use of granulation in Egypt – a technique with origins in the Near East (Verrier 1925: CCG 52865, 52975–52979; Lilyquist 1993: 36–37; Manzo 2011: 74).¹⁵ However, C. Lilyquist has stated that the star pendants, along with much of the other “unusual” jewelry from the tomb, originated in Crete and/or Anatolia – not in Egypt (Lilyquist 1993: 37).

Manzo has theorized that since the mother-of-pearl pendants served as an insignia or decoration for members of Red Sea expeditions, the same may have been true for their precious metal counterparts (Manzo 2011: 74). However, unlike the mother-of-pearl examples, these versions seem to have been associated exclusively with women, a fact which Manzo seems to ignore (Bourriau 1988: 148). It is important to understand the royal nature of these objects, whose production and distribution would have been dictated by the king. These items functioned as royal gifts in both internal and external redistribution networks; therefore, they likely served multiple functions. Evidence for the distribution of precious metal shell jewelry outside of Egypt includes an inlaid gold shell pendant with a cloisonné inscription bearing the name of Yapi-Shemu-Abi, a ruler of Byblos contemporary with Amenemhet IV, from one of the Biblite royal tombs (Manzo 2011: 75; Montet 1928: 165–66, pl. XCVII, n. 618; Wilkinson 1971: 61).

In many of the 12th Dynasty Egyptian royal tombs, Red Sea inspired jewelry was found in association with furniture and objects made of materials imported via the Red Sea (Manzo 2011: 76–77). Examples include: the ebony and ivory boxes used to contain the jewelry, oil jars, cosmetics, and wigs of Sithathoryunet from Lahun (Brunton 1920: 25, 37–41, pl. XII; Winlock 1934: 12–23, pl. I); three oil jars and a khol pot all made of obsidian also from the tomb of Sithathoryunet (Winlock 1934: 19, 67–68, pl. XVIa; Brunton 1920: 26, 37–38 pl. XI; Mace 1921: 4–6); stone vessels from the tomb of Meret at Dah-

¹² 12th Dynasty examples name: Senwosret I, Amenemhet II, and Senwosret III; Petrie 1914: 27, pl. XLIV, 112 a–a5; Winlock 1932: 380; Arkell 1944; Aldred 1952; Bourriau 1988: 153–154.

¹³ These objects are particularly significant as they were worn during the lifetime of the tomb owners, not simply produced for a funerary context (Manzo 2011: 73). The jewelry comes mainly from the tombs of Sithathoryunet, Sithathor, and Meret, whose lives spanned the reigns of Senwosret II through Amenemhet III. (De Morgan 1895: 59–75; Brunton 1920; Winlock 1920; Winlock 1934; Aldred 1952: 131).

¹⁴ Later examples include: Garstang 1901: 4, 26, 29, pl. I; Bourriau 1988: 148, n. 158; Andrews 1990: 180, figs 157, 166; Arnold 1995: 36, n. 41.

¹⁵ For more on the use of granulation in Egypt and its development see: Aldred 1971: 33, 120–121; Lilyquist 1993: 290–291, 36–37.

shur (De Morgan 1895: 71, pls XXV); and the toilet set of Sithathoryunet which utilized electrum and obsidian (Brunton 1920: 36, pl. XI; Winlock 1934: 60–62, 67–68). While obsidian was used in small quantities during the Old Kingdom,¹⁶ larger and more complex objects begin to appear during the 12th Dynasty (Hardwick 2012: 11; Wainwright 1927). Throughout this period, obsidian usage was likely restricted to items of particular importance or luxury. Further, the increased presence of obsidian coincides with a renewed interest in semi-precious stones such as turquoise and amethyst (Hardwick 2012: 14). Analysis indicates that the variety of obsidian used during this period derived from the African and Arabian coasts of the southern Red Sea (Manzo 2011: 76; Aston *et al.* 2000: 46–47). An obsidian head from a statue depicting Senwosret III¹⁷ represents the high point of obsidian usage during the Middle Kingdom.

Obsidian objects made in Egypt traveled at least as far as Byblos, indicating that these items were also a part of the royal redistributive network (Montet 1928: 155–157, pls LXXXVIII, LXXXIX; Stevenson Smith 1969: 279–281; Lilyquist 1993: 42–43; Brunton 1936: 217). One especially telling find is a small obsidian box from Tomb II in the royal necropolis at Byblos that bears the name of Amenemhet IV (Montet 1928: 157–159, pl. LXXXVIII, XC, figs 68, 69; Lilyquist 1993: 42–43). Montet has suggested that the Egyptians used boxes of that style for aromatics, as contemporary examples exist that preserve the label *pr ʿnty*, “house of incense.” It is likely that objects like these, which were made of and contained Red Sea materials, derived from royal workshops and were distributed through the same channels as the maritime themed jewelry (Manzo 2011: 77). Maintaining a healthy relationship with the rulers of Byblos was critical for the Egyptian state. Byblos provided the cedar used to build the Red Sea ships and may have even supplied sailors and other expert crewmembers (Manzo 2011: 78). During the Old and Middle Kingdoms, Byblos was a key trade partner and an important link between Egypt and areas further north and east.

Byblos was located along the Lebanese coast in an area with hinterland access, rich agricultural potential, and close proximity to the transverse overland routes leading to Syria and the Middle Euphrates (Aubet 2013: 202). Commodities exported to Egypt included: cedar and pine wood, resins, and oils, as well as copper and silver. The earliest contacts between Egypt and Byblos occurred between 3800–3200 BCE, during Egypt’s Predynastic Period; it is most likely that at this early stage, interaction occurred overland, via Palestine, as the evidence for

sea traffic is limited (Aubet 2013: 208–213). Egyptian relations with Byblos strengthened during the First Dynasty as a result of the establishment of maritime routes (Aubet 2013: 218–219).¹⁸ The appearance of large numbers of imports in the royal tombs at Abydos and Saqqara suggests that at that time, trade operated through royal missions only. Further evidence for the royal nature of this trade includes a stone vessel with an inscription preserving the name of Khasekhemwy, the last king of the 2nd Dynasty (c. 2890–2686 BCE), found in Byblos (Montet 1928: 84).¹⁹

During the Old Kingdom, Byblos expanded into a dominant regional center with very close ties to Egypt. The presence of offerings from nearly every pharaoh of the Old Kingdom at the temple of Baalat Gebal in Byblos attests to the intimate nature of contacts (Aubet 2013: 230–231). The Palermo Stone preserves the first explicit reference to sailing to Byblos in an entry dated to Snefru; it states that the king brought forty ships from Byblos loaded with cedar/pine wood (Ward 1963: 22; Aubet 2013: 232; Strudwick 2005: 67). The reigns of Pepi I and II, at the end of the 6th Dynasty, represent the height of Old Kingdom interaction with Byblos. During this period, offerings also appear from private Egyptians, including scribes, expedition leaders, and merchants. This evidence, coupled with the local celebration of Egyptian religious festivals, led Aubet to propose the existence of an Egyptian colony at the site (Aubet 2013: 230–235). The EBA ends at Byblos with a series of fires and destruction, similar to other centers in the area; this period also coincides with the end of the Old Kingdom in Egypt, and voyages to Byblos cease from c. 2150–1970 BCE. Numerous 12th Dynasty finds at the site attest to the prompt renewal of contacts. The presence of a number of Egyptian objects in the royal tombs at Byblos illustrates a new Egyptian strategy towards the area, with the chief recipient of offerings being the royal family, not the gods (Aubet 2013: 242).²⁰ In addition, during the 13th Dynasty local rulers in Byblos begin to refer to themselves using the Egyptian term for mayor (*ḥꜣty-ꜥ*) and to write their names in a localized form of Egyptian hieroglyphs. How-

¹⁶ Old Kingdom Egyptians used obsidian primarily for eye inlays in coffins, masks, and statuary (Hardwick 2012: 11).

¹⁷ Lisbon, Museu Gulbenkian 138; Hardwick 2012: 7–52. There are also three other obsidian sculptures dating to the Middle Kingdom: Cambridge, Fitzwilliam E.63.1926, which likely dates to the 13th Dynasty; London, British Museum EA 65506, which likely dates to Amenemhet III; and New York, Metropolitan Museum of Art 10.130.2596, which dates to the 12th Dynasty or later.

¹⁸ By the mid First Dynasty in Egypt Near Eastern and Lebanese pottery appears in tombs at Abydos (Allen 2003: 251). Additional support includes the Lebanese cedars and other products present in the 1st Dynasty royal tombs at Abydos, the best example of which is the tomb of Djer which contained some 7,000 copper objects, 75 copper ingots, turquoise bracelets (Sinai), and numerous ceramic containers for the transport of wine and oil from the region of Byblos (Allen 2003: 251; Aubet 2013: 219).

¹⁹ While it is possible that the vessel arrived at a later date, a seal impression also dated to the reign of Khasekhemwy found in Egypt that preserves the first known occurrence of the title *jmj-r ḥꜣst*, ‘overseer of foreign land(s)’, strongly suggests Egyptian involvement in foreign territories (Wilkinson 1999: 92).

²⁰ The tomb of Abishemu (Tomb I) contained a gold and obsidian cylinder jar with the cartouche of Amenemhet III, an amethyst necklace, a gold mounted scarab ring, a gold pectoral depicting Hathor, and various alabaster vessels. The tomb of Yapi-Shemu-Abi (Tomb II) contained a casket of obsidian and gold, stone vessels naming Amenemhet IV, an amethyst necklace, a papyrus handled mirror, and locally made gold jewelry in the Egyptian style.

ever, as is seen with the Red Sea trade, after the breakdown of the Middle Kingdom, contacts fade.

During the 2nd millennium Byblos served as a critical commercial center at the heart of a vast interregional trade network with additional hubs in the Egyptian Delta, Ugarit, and many intermediary points along the Mediterranean coast. The topography of the coast offered a series of natural shelters and the nearby mountains provided the raw materials needed for shipbuilding, while inland routes provided access to the hinterland (Sader 2015: 117). A northern land route led from Byblos to the Orontes Valley and a central route linked the site to cities such as Qatna and Aleppo and then led further on to the Euphrates. In addition, a southern route centered on the port of Sidon and connected to the Biqa' valley and Damascus. The Lebanese Biqa' also had a branch that linked Egypt to Syria via Palestine (Sader 2015: 117–118). The Mari archives attest to the connection between Byblos and central Syria, as it is the only Lebanese city trading with central Syria mentioned in the texts. During this period all maritime trade seems to have passed through Byblos, while overland trade was directed through Hazor into Palestine (Sader 2015: 118). Ugaritic mythology frequently mentions Byblos as an intermediary in maritime voyages between Ugarit and the Nile Delta, and underwater finds dating to the MBIIA indicate an increase in sea traffic all along the Levantine coast with significant concentrations of finds near Ashkelon and south of Mount Carmel (Aubert 2013: 252). This material suggests that ships returning from Byblos to Egypt would have stopped in Acre or Ashkelon before heading on to the Delta.

At the start of the 2nd millennium international contacts became more generalized, leading to a boost in sea traffic in the eastern Mediterranean and the Aegean. This resulted in a shift in the center of commercial activities in Mesopotamia from the east/Iran/the Persian Gulf to the northwestern periphery, shortening the route through Mari and the distance between the Euphrates and the Mediterranean (Aubert 2013: 255–256). Cuneiform documents dating to the 2nd millennium refer to Egyptian objects as 'gublayu' or 'Byblite', indicating that Byblos was likely the key intermediary for the dispersion of Egyptian/Egyptianizing objects into inner Syria (Ahrens 2010: 23). F. Van Koppen has linked this back to the Mari archive and the exchanges between Zimri-Lim and the king of Hazor, Ibni-Adad (Van Koppen 2003: 371). Hazor was located on a northbound trade route for goods traveling from the Arabian Peninsula and Egypt. The texts state that the annual gift from Ibni-Adad to the king of Mari consisted of linen textiles "from Byblos (gublayu)" – indicating that the items actually originated in Egypt (Van Koppen 2003: 372). Van Koppen has proposed that Hazor may have served as a trade emporium between the southern Levant and Syria, which attracted the attention of Mari and Babylon.

Archaeological evidence from the site of Ebla offers further insight into Egypt's down-the-line connections. In 1977, excavators discovered several fragments from alabaster and diorite vessels in the Administrative District associated with Ebla's Palace G, which they have dated to the EBIVA (c. 2400–2300 BCE) (Scandone Matthiae 1995: 234). The two most important pieces are a diorite lamp with the royal titles of Khafre (c. 2558–2532 BCE) and a circular alabaster lid with the badly damaged cartouche of Pepi I (c. 2321–2287 BCE). G. Scandone Matthiae has proposed that these objects most likely derived from contacts with Byblos; however, she has also suggested that it is possible Egyptian envoys went further north accessing other port cities like Ugarit, which would have been easier for Eblaite merchants to reach (Scandone Matthiae 1995: 235). Indirect contact is also attested during the MBII, which roughly equates with the late Middle Kingdom to New Kingdom in Egypt (Matthiae 1984: 19, 20). Between 1978–1982 excavators uncovered a royal necropolis containing three important tombs dating to the MBII whose remains included several Egyptianizing objects (Matthiae 1984).²¹ This group, found in association with material from across the Near East and Levant, betrays a complex network of direct and indirect contact that must be explored further in order to truly understand the dynamics of trade and cross-cultural connection during this vibrant period. Additional evidence for the diffusion of Egyptian influence includes several Old Syrian Period furniture inlays from Ebla's Northern Palace (Matthiae 2008: 35)²² and Egyptian inspired motifs present in many Old Syrian period cylinder seals (Scandone Matthiae 1995: 239; Teissier 1995: 11). B. Teissier attributes the impact of Egyptian iconography to the presence of a wealth of Egyptian imagery throughout Syria-Palestine, often second hand. It should be noted here that Egyptian imagery was not emulated in Syria; instead, it was integrated into local traditions.

Egyptian objects have also been found in the royal tombs at Qatna, where a single tomb contained a corpus of 52 stone vessels that included Egyptian imports, Egyptianizing imitations, and local variants, whose dates span the entire 2nd millennium (Ahrens 2015: 281–295). A. Ahrens has proposed that these foreign imports and exotica held an important social significance tied to the construction and maintenance of royal power in Levantine cities (Ahrens 2015: 289). Local rulers exploited Egyptian objects and iconography as emblems of power

²¹ The objects in question include: a small green faience vessel, a beaded necklace with a lapis lazuli scaraboid, part of a gold beaded necklace, five alabaster vessels, one breccia vessel, a gold cloisonné ring, a gold necklace with a papyrus umbel terminal, and a mace inscribed with the name of Hotepibre. The excavators have stated that these objects represent direct contacts with Egypt's 13th Dynasty (Scandone Matthiae 1995: 237; Matthiae 2008: 35). However, Egyptologists have concluded the objects most likely came from neighboring areas such as Ajlul or Byblos, where Egyptian motifs were popular and where more direct contacts are attested (Lilyquist 1993: 47, 1996: 134, 136; Ryholt 1998).

²² This group is very similar to the corpus of Egyptianizing ivories known from sites in Palestine and coastal Syria also dating to the MBII (Liebowitz 1977).

that they could use to distinguish themselves from their contemporaries. As the demand for such objects increased, local court workshops began to produce their own variants. The site of Qatna was located in the middle of the Syrian plain in a key area related to both North-South and East-West trade routes concerning the trade of cedar, metals, lapis lazuli, and other commodities (Klengel 2015: 65). Archaeological evidence from Qatna and other sites indicates that early interregional contacts ended at the close of the 3rd millennium with an interruption in urban development and a renewed expansion began from the 18th century BCE onward, when Egyptian objects appear at Byblos, Ugarit, Ebla, and Qatna (Klengel 2015: 65). Middle Kingdom objects found in Beirut suggest that that city may also have played a role in MBA connections (Sader 2015: 123).

Additional evidence for contacts between Byblos and sites further inland comes from Alalakh seal impression 194, whose hieroglyphic inscription was most recently studied by S.J. Wimmer (Wimmer 2005: 127). The Alalakh seal appears on a LBA marriage contract that was impressed with a MBII seal that does not appear to have any relevance to the document itself. Wimmer has proposed that the seal reads: *h3tj-ḥ Kpn(j) Nhsj-ḥn[h m3ḥ hrw] [mrj] sth nb Rb[n]w[n]* – “Mayor of Byblos Nehesi-ankh, justified, beloved of Seth, Lord of Lebanon.” Previously this spelling of Lebanon was only known from the 18th and 19th Dynasties, however, this archaic form predates that of the New Kingdom (Wimmer 2005: 130).²³ In addition, the god Seth was popular at Byblos and in Lebanon as he was associated with the god Baal (Wimmer 2005: 131).

Egypt also maintained strong connections with the Levant during this period. The site of Tell el-Dab’a, a harbor area in the eastern Delta, preserves evidence of an intensive trade network connecting the Nile to the Levant beginning in the Late Middle Kingdom (Forstner-Müller and Kopetzky 2009: 143). The remains at the site also reveal an influx of ethnic Asiatic individuals, likely from the Lebanese coast during that same period. It is most likely that traders from the Levant settled in the northeastern Nile Delta at the end of the 12th Dynasty, under the auspices of the royal administration (Forstner-Müller and Kopetzky 2009: 147). From the late 12th Dynasty through the end of the New Kingdom, the harbor at Tell el-Dab’a was an important center for trade and served as a key reloading zone for imports headed to the capital for redistribution. The climax of importation occurred during the 13th Dynasty, after which time trading blockages with the southern half of the country likely hampered demand (Forstner-Müller and Kopetzky 2009: 154).

²³ Wimmer cites another possible early form spelled *Rmn-n*, which comes from the pyramid complex of Senwosret I at Lisht; Senwosret III also mentions Lenbanon (Remnn) in the context of a conflict between Byblos and Ullaza. In the above case the scribe has used a phonetic rendering – *R-b-nw-n*.

The most significant Egyptian documentation of Near Eastern contacts during the Middle Kingdom is the Mit Rahina inscription of Amenemhet II. The text comes from a series of inscribed blocks from the temple of Ptah at Memphis, and its content likely derives from the king’s annals. The inscription records the endowment projects, building program, and foreign contacts dating to Senwosret I Year 45/Amenemhet II Year 3 and Amenemhet II Year 4, the first year of that king’s sole reign. It includes accounts of military and commercial expeditions to the Levant both by land and by sea, possibly making it the earliest cargo manifest known in the ancient Mediterranean (Marcus 2007: 137). The account records as few as two or as many as six maritime voyages going to and from the Lebanese Coast (*Hnty-š*)²⁴, with ships, likely sailing in flotillas or convoys (Marcus 2007: 145). Cargo from the areas of *I3sii* and *Twii* included: hafted copper and bronze weapons; copper; copper and silver jewelry; amethyst; malachite and other semi-precious stones; ivory furniture elements; Asiatic household goods; lead; and Asiatic prisoners. (Marcus 2007: 150). Marcus has suggested that while the metals could have come from Cyprus, the other items suggest a mainland origin.

The inscription also records two ships carrying cargo from the *Hnty-š*/Lebanese Coast that included: silver, gold, copper, white lead; 16 bronze, gold, and silver daggers; 21 bronze and ivory daggers; various stones, seals, ivory, gold, and silver as well as aromatics, oils, cedar resin, pine resin, olive oil, terebinth resin, fig trees, sycamore trees, 231 trunks of cedar, and 65 men and women (significant portions of the cargo are lost in the inscription). These goods reveal an origin in the northern Levant, likely Lebanon or Syria (Marcus 2007: 151). Problems with the philological identification of some of the stone products listed have prevented the definition of a more specific interaction zone. Unfortunately, there are no depictions of Middle Kingdom seagoing vessels or foreigners arriving by boat to Egypt, and most textual references do not relate to the Mediterranean. Other evidence includes stone anchors both on land in Egypt and Byblos and underwater examples found along the Carmel Coast and the coast of the Sharon Plain (Marcus 2007: 155).

The Tod Treasure also attests to broad interregional contacts during the Middle Kingdom. The treasure dates to the reign of Amenemhet II and comes from the temple of Montu at Tod; the materials found within as well as the stratigraphic position of the chests, indicate that it was contemporary with the Mit Rahina inscription (Marcus 2007: 158). The treasure includes: four copper

²⁴ In his assessment of the geography of Lebanon and Syria described in the tale of *Sinuhe*, Green has defined the *Hntyw-š* as the “timbered region” north of Geshur and the area around Mount Hermon. Other interpretations offered by Green include: the *mkj* as the southern Biqa’; the *mnws* as the region of the Amanus mountains; *kšw* and *mkj* as the *t3 fihw* or ‘land of the woodcutters’; the *rtmw hry* is the area above the Litani, including the plain of Homs and its vicinity and *kdm* is the area east of the Lebanon Mountain range. All are areas with important resources to the Middle Kingdom Egyptians (Green 1983).

chests and nails, two shafts of copper; ten ingots, a cup, and two fleurettes of gold; numerous rings, bracelets, a mirror, zoomorphic figures, pendants, one stamp seal, an electrum-fastened holster, and over 150 shallow bowls or cups all of silver; cylinder and stamp seals, a scarab, pendants, figurines, plaques, beads, chunks, and part of a bowl of lapis lazuli; carnelian beads, and fragments of quartz, amethyst, and obsidian. Marcus has suggested that the treasure may have made use of some of the raw materials and other items referred to in the Mit Rahina inscription. The locations reflected in the treasure's contents are varied and include regions in the eastern Mediterranean and the Near East. Marcus has linked the silver bowls with the Aegean and Anatolia, and the silver ingot and weights reflect the Syro-Mesopotamian system; the silver objects also seem to align with large quantities of silver found at both Ebla and Mari during this period (Marcus 2007: 159). The lapis indicates down the line contacts with Afghanistan.

In addition, the Middle Kingdom levels at Ezbet Rushdi in the eastern Delta reveal that the site served as the "interface between Egypt and the eastern Mediterranean world" (Marcus 2007: 160). Amenemhet I founded the original settlement, whose Egyptian name means the "Door (or Mouth) of the two ways," (*Rꜥ-wꜣty*), and the earliest evidence for the presence of MBA and Minoan cultures in Egypt comes from that area (Marcus 2007: 160; Bietak 1991: 28). Based on an analysis of Levantine Painted Ware vessels and fragments, the closest parallels to Ezbet Rushdi come from northern sites, and a detailed petrographic analysis has revealed 11 groups ranging from the area around Ugarit in the north to Tell el-Ajjul in the south (Bagh 1998: 47; Cohen-Weinberger and Goren 2004: 71).²⁵ Marcus has proposed that Mediterranean Sea trade during the Middle Kingdom made use of a series of ports-of-call along the Levantine coast which acted as way stations in route to key hubs such as Byblos and Ugarit (Marcus 2007: 164). Using the results of this petrographic analysis and the sequence of Levantine Painted Wares at Ezbet Rushdi as a guide, Marcus has attempted to identify key points along this route. Possible regions include the northern Levant ranging from the port of Akko to the Akkar plain, the Amuq region, the Syrian coast, and the southern Levant. According to Marcus, the evidence discussed above indicates that during the reign of Amenemhet II, the Egyptians restored contacts with the Levant for the first time since the First Intermediate Period (Marcus 2007: 170). In addition, the earliest Middle Kingdom mention of Byblos comes from the Execra-

tion Texts found at Mirgissa, which date to Amenemhet II and Senwosret II (Marcus 2007: 173). However, the resurgence of expeditions to Punt during the 11th Dynasty suggests that the Egyptians had reestablished trade with Byblos much earlier as the ability to launch such voyages appears to have been linked with the acquisition of cedar.

12th Dynasty maritime partners were not limited to Egypt's northern neighbors, as the evidence from Mersa/Wadi Gawasis also indicates the involvement of Nubians. The closest parallels for the mother of pearl pendants discussed above are with the Kerma culture, which appeared in Nubia prior to the 12th Dynasty (Manzo 2011: 78–80; Dunham 1982: 88–89, 138, 143, pls XVIIIa, XXXIII, XLic; Reisner 1923: 318). W. Stevenson Smith has suggested that the presence of Egyptian and Egyptianizing objects in both Kerma and Byblos may stem from their roles as the endpoints of a large trade network (Stevenson Smith 1969: 281). It is possible that the Kerma Nubians originally acted as the facilitators of Egyptian trade further south, and once they emerged as a real competitor, the Egyptians attempted to bypass them. This is the same scenario that likely led to development of maritime trade during the Old Kingdom and the disappearance of the A-Group in Nubia. Manzo's work demonstrates that the materials imported via the Red Sea and objects inspired by that environment played a central role in the Egyptian royal redistributive network, especially during the 12th Dynasty. In addition, these objects served as important markers of rank and insignia that held meaning within Egypt, Byblos, and Kerma.

Conclusions

The preserved inscriptional and archaeological data indicates that, while currently unattested, maritime navigation of the Red Sea likely began during the Early Dynastic period in conjunction with large-scale mining operations that first occurred at that time. The remains at Wadi el-Jarf and Ayn Sukhna further cement the link between the activities along Egypt's Red Sea coast and important mining regions in the southern Sinai. Egyptian mining expeditions were conducted under the direct authority of the royal court, and the products derived therein were the prerogative of the king alone. At least as early as the 5th Dynasty, it appears that the Red Sea was also used to conduct expeditions to Punt. While these missions were still royally sanctioned, their chief aim was the acquisition of prestige goods, which the king himself used as a means of acknowledging/rewarding members of his own family and Egyptian officials, and to nurture important diplomatic and economic relationships abroad.

Generally speaking, the Egyptian economy during the Old and Middle Kingdoms was state-run, with little evidence surviving related to the private sector. However, the right of the pharaoh to tax his subjects does suggest

²⁵ The groups pertinent to this discussion are Groups A–D (Cohen-Weinberger and Goren 2004: 71). Group A comes from the furthest north and encompasses the area around Ugarit, similar fabrics also come from Syria, Turkey, Cilicia, Cyprus, and the Amuq Valley. Group B contains a significant number of examples and covers the Levantine Coast from around Tell Araq to just south of Tyre. Group C is rare and relates specifically to the area of Byblos, however there is little petrographic data on that area. Group D is well represented and indicates connections further inland, but still in the vicinity of Byblos. The authors have linked the clays with the Lebanon Mountains and the Transjordan.

the existence of private property (Warburton 1997: 60). While the precise origins of the Egyptian state and its economy remain obscure, by the end of the Old Kingdom, a system had developed that recognized several categories of participation, including: the king, the royal court, local leaders and officials, the general populace, and the gods, their temples, and the temple staff; the rights/powers of each of these groups was dependent on its relationship with the others (Warburton 1997: 69).²⁶ The role of the Egyptian state was to increase demand through the collection of revenues/taxes that it then used for investment projects such as temple, tomb, and palace construction, leading to an artificial increase in demand, removing workers from the agricultural sector, and increasing overall employment. This system functioned because the Egyptian economy was essentially closed; however, the income acquired did permit the stimulation of imports and generated considerable economic wealth throughout the region, without hindering local development (Warburton 1997: 128–130).

D. A. Warburton has classified Egypt as an Ideological State, i.e. one based on the concept of divine rule (Warburton 2007: 81). Within the Ideological State, commodities such as gold, lapis, turquoise, etc., take on a heightened significance as they are able to tie into all three key economic value systems: religion, politics, and markets. During the Old and Middle Kingdoms, the ancient Egyptians acquired these commodities, along with many other prestige items, through royally sanctioned trade and mining operations centered on the Red Sea and elsewhere. The values of the Ideological/Egyptian economic system lie in opposition to those of commercial centers like Ugarit and Byblos, where development was contingent upon trade and competition (Warburton 2007: 81). Commercial States served as hubs linking peripheral zones with the main centers of wealth and power to create a broad system of exchange reflecting two parallel sets of values – those of the Ideological State (i.e. power/prestige) and those of the Commercial State (i.e. wealth) (Warburton 2007: 81). Well-maintained contacts with commercial centers like Punt and Byblos provided Egypt with access to commodities from further abroad and allowed for the spread of Egyptianizing objects and iconography throughout the Levant and Syria.

While the information presented above represents only a fraction of the data available, it is intended to illustrate the complex nature of interregional exchange during this period. Throughout the Old and Middle Kingdoms, the Egyptian state used the acquisition and distribution of luxury goods and materials to tap into this broad system of cross-cultural linkages. Though private trade of some kind must have existed in Egypt, a lack of direct evidence makes it difficult to assess anything outside of the royal sphere. As the archaeological

exploration of Red Sea coastal regions expands scholars must continue to reevaluate previously held beliefs about trade and contact during the 2nd millennium BCE and to assess new methods for evaluating the means of exchange during this vibrant period.

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²⁶ Warburton 1997: 59–130 offers an in-depth overview of the various theories related to the early political and economic development of the Egyptian state.

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V. MIDDLE GROUNDS, CONTACT AREAS AND SOCIAL IDENTITY IN THE IRON AGE

MIDDLE GROUNDS, CONTACT AREAS, AND THE ASSYRIAN EMPIRE: THE CASE OF THE SYRIAN LOWER EUPHRATES VALLEY, IRON II PERIOD

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Paris

After the first discoveries of the splendor of the Assyrian civilization, highlighted since the mid-19th century by the excavations of A. H. Layard, P. E. Botta, V. Place and W. Andrae in the capitals along the Tigris (Larsen 1996), another aspect of the Empire was only later revealed by the archaeological explorations in the Northern Syria Euphrates Valley. Since the 1930s, the excavations by F. Thureau-Dangin and M. Dunand at the Syrian sites of Tell Ahmar and Arslan Tash (1928–1931), offered enough evidence to build up a way to visualize the power and the presence of the Assyrian empire in all the Near Eastern regions in the 1st millennium BCE (Thureau-Dangin *et al.* 1931; Thureau-Dangin and Dunand 1936). The narration of the construction of the empire, as it was presented in the inscriptions of the Assyrian kings, and illustrated in the reliefs shown in western museums, eventually matched the marks left by the Assyrians in the Syro-Mesopotamian landscapes (Liverani 1979; Postgate 1992; Matthiae 1996; Fales 2001; Bagg 2011).

The model of an ever-extending empire with its provinces covering the totality of the lands and populations through their administrative structures, imposed itself as definitively true, and as a privileged object of research (Holloway 2004; Frahm 2006; Parker 2014; Masetti-Rouault 2013a, 2018). A deepened knowledge of the organization of the Assyrian empire, through the analysis of the State Archives texts found in the capitals, helped to give a reality, and a chronology, to its system. Its image was strengthened as a precursor of any other imperial program, from Persia to Rome (Bedford 2009; Liverani 2011; Radner 2014).

In the late seventies, a wave of archaeological projects in Northern Syria, and later also in Southern Turkey, detected new sites marked by Assyrian culture – some of them preserving administrative archives, such as in Tell Sheikh Hamed/Dur-katlimmu (Akkermans and Schwartz 2003: 346–386; Masetti-Rouault 1998; Kühne 1995, 2000, 2013a; Fügert *et al.* 2014). The new evidence was easily integrated into this model: it was clear, from the first results, that they belonged to this same political structure. Their history offered a meaningful example of the way in which a collection of conquered territories, later provinces, was built around the “national” core of the country, the Land of Assur itself. It became then possible to follow the changes in the imperial geography, separat-

ing the first experiences of the Middle Assyrian period from the strategy of the Neo-Assyrian kings. Babylon, however, represented altogether another political and military front and problem for the Assyrians (Machinist 1984/85). The dynamics of its integration into the empire, in some way, could not be compared with the northern or western ones. At the beginning of the Iron Age II, after a long period of crisis, continuous military campaigns were organized targeting the newly organized societies neighboring Assyria, often marked as “Aramaeans” countries – the program itself spelled, in the royal inscriptions, as a “Reconquista” (Masetti-Rouault 2001, 2009; Kühne 2009, 2013b). In the modern historical treatment of the evolution of the Assyrian Empire, the creation of its final administrative organization has been traditionally attributed to king Tiglath-Pileser III, in the second half of the 8th century BCE.

The northern and western expansion of the Assyrian empire, archaeologically visible especially – though maybe only? – in the Syrian Jazireh and in some parts of the Levant (Morandi Bonacossi 1996; MacGinnis *et al.* 2016), seemed not to require a political justification, from an historical point of view. This policy has been explained by historians and archaeologists, as the natural thrust of an entire society looking for land and space – not a political choice, but a survival reaction against the hard environmental and climatic conditions of the Assyrian homeland, which determined the limits of its development. At the same time, its undeniable success corresponded to an objective military and strategic superiority when confronted with other armies.

Assyrian royal ideology attested in the royal inscriptions and communicated by rites and ceremonies, constantly represented this drive for conquest and border expansion as the enactment of a formal order of the city god, Ashur, to enlarge the Land, transmitted to the king by the specialists of sacred matters (Holloway 2002; Pongratz-Leisten 2013). This divine command was not to be discussed, but intensively carried out by the king, the palace élite and the army, who found in such a function the very reason of their existence and privilege. Notwithstanding the critical analysis undergone by the activities of the royal chancelleries, it seems to me that this ancient interpretation of the imperial system is still powerful today. It continues to be exploited to explain

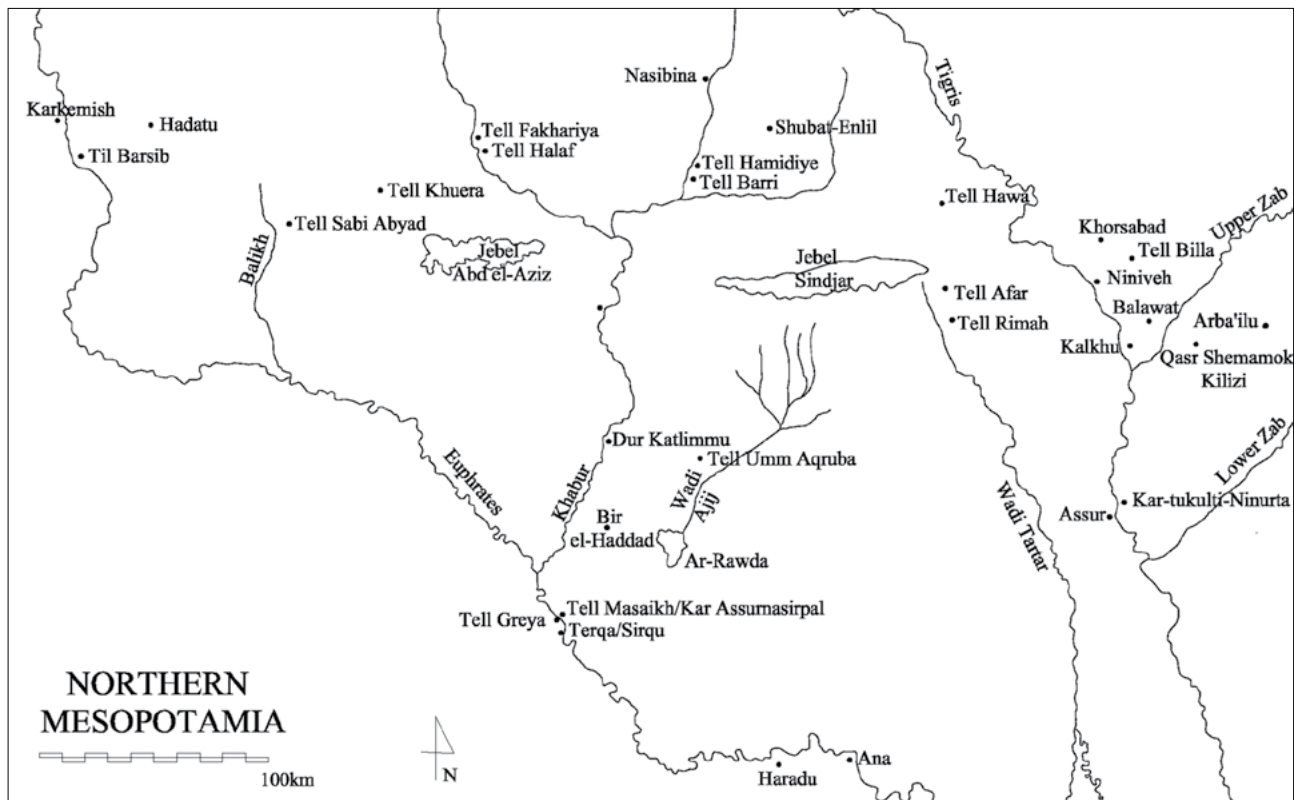


Figure 1: Map of Northern Mesopotamia (Mission archéologique française à Tell Masaikh, Syrie)

the formation of the Assyrian empire. Even if different models or metaphors have been proposed to represent its expansion and administration (Liverani 1988), the debate rarely touches the core of the problem. While imperialistic ideology and programs are easy to acknowledge for the origins of Assyrian expansion, which then fueled its further development, it is harder to accept the recourse to ideology alone, with its unique, almost magical power, as determining the real course of historical events, both in the context of Assyrian society itself, and in the evolution of the societies and cultures integrated into their system.

When excavating and studying the sites of Ashara/Terqa and of Tell Masaikh, the Neo-Assyrian Kar-Assurnasirpal, in the Syrian Lower Euphrates valley (Rouault 2013; Masetti-Rouault 2013b) (**Fig. 1**), I had a perception of the weakness of this simple “imperialistic” model, and of its limits for the understanding of Assyrian colonization and provincial management. Other models were needed, considering the fact that this region has no special or appealing natural resources for the Assyrian State and its economy. Situated in a deep and narrow part of the valley, well under the isohyet bar of 200 mm of rain per year, its agricultural production depends on irrigation. This segment of the Euphrates banks, where Mari and Terqa were founded in the Early Bronze age, and also comprising a part of the Lower Khabur Valley, was called the “Land of Khana” since the Middle Bronze II period (Rouault 1992, 2004; Masetti-Rouault 2007a, 2022). The continuity of

the cultural and political identity of this region, strongly marked by Amorite traditions, was broken during Late Bronze Age, after the collapse of the Khana state, and of its capital, Terqa. At that time, the relations and control Khana used to have over the semi-nomadic populations of the Syrian steppes were also cut. As their agreement and logistic support had assured the regular progression of trade and market exchanges between Northern Mesopotamia, Assyria and Babylon, with the Levant and the Mediterranean coast, this crisis jeopardized not only the local, but also the international economic balance (Masetti-Rouault 2007b; Masetti-Rouault and Rouault 2016).

Assyrians occupied the Lower Khabur and Balikh valleys in this critical context (Kühne 1995, 2000; Luciani 1999–2001). Possibly far more so than the search for a Wild West that provided new agrarian lands, this economic situation was also one of the major reasons why the Assyrians settled there, in order to replace the Khani-galbat/Mitanni government (Schwartz 2014, Yoffee 2014) in order to assure the management of an area crossed by international trade. A Babylonian colonial movement almost simultaneously took hold of the Lower Middle Euphrates Valley, to balance the forces present there. We have highlighted a large settlement system marked by Late Kassite Ceramics in the Terqa region. It occupied both well-known ancient sites, such as Anat, Mari and Terqa, and other areas never studied before, such as Tell Marwaniye, Tell Jurdi Sharqi, and Jebel Mashtale,

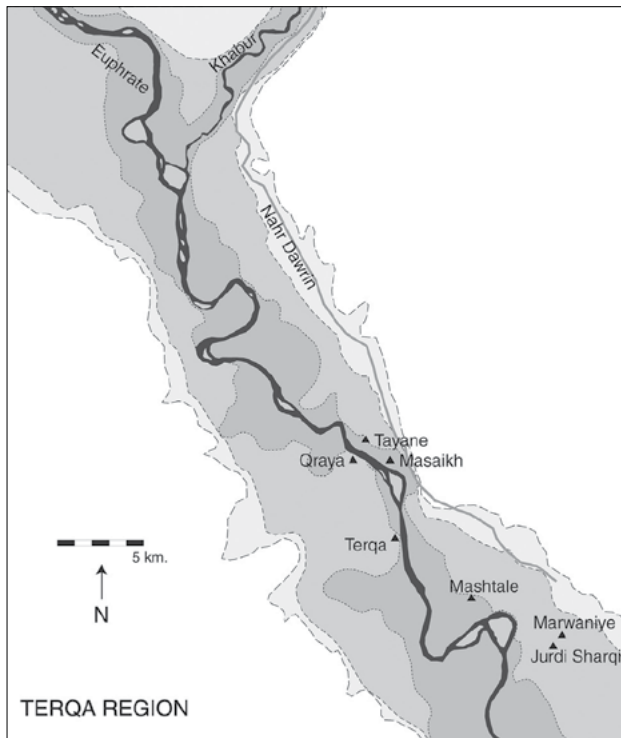


Figure 2: Map of the Terqa region. (O. Rouault, Mission archéologique française à Tell Masaikh, Syrie)

on the eastern bank, where a new agricultural exploitation of the region was then developed (Fig. 2) (Pons and Gasche 1996; Rouault 1998, 2009; Masetti-Rouault 2013b; Masetti-Rouault and Rouault 2015). The positive effects of this parallel policy are attested by the quality and nature of the material found in the so-called Middle-Assyrian necropolis excavated by A. Parrot at Tell Hariri (Masetti-Rouault 2007b). It shows the presence of a new, hybridized local culture, open to different influences, from Assyria, Babylonia, and the Levant as well. The provenance of the objects found in the tombs is evidence of renewed long distance trade circulating again through the Euphrates Valley, connecting Luristan and Elam with the Mediterranean coast.

I would like to propose that, instead of considering this (parallel) colonization movement only as the result of military occupations of the Lower Khabur and Euphrates valley, decided by the two States, Assyria and Babylon, it could be useful to read it also as a more complex and “private” – as opposed to “public”, i.e. state driven – phenomenon, and as an answer to economic and social needs in the respective metropolises (Masetti-Rouault 2016 ; Masetti-Rouault and Rouault 2016). This colonial strategy would have been supported only some time later, at least in the case of Assyria, by direct military and administrative intervention of the state. It is easier to imagine this situation if you look at it from the Euphrates point of view: “Late Kassite” settlements there do not show any military or fortified aspects, nor are they recorded in official texts.

From the theoretical perspective of a *Middle Ground* context created in the area during this period (White 1991; Malkin 2004; Malkin *et al.* 2007 ; see also Parker 2006), it is possible to understand better the evolution of the Lower Khabur societies – for example, the relations established by the Assyrian colonies with the Tabete dynasty (Masetti-Rouault 1998; Kühne 2009, 2013a; Shibata 2010, 2011, 2012). If I use the idea and the model of a Middle Ground situation along the axis constituted by the Lower Khabur and the Lower Middle Euphrates Valleys, which would allow cultural and economic encounters and joint projects among different identities, it is to suggest that other agencies, interests and logics were then playing beyond Assyrian State politics. It is no question to minimize the impact the colonies had on the evolution of local societies. In the Lower Middle Euphrates, Late Kassite ceramic culture apparently replaced every other kind of local production. In the Khabur Valley, the Assyrian State decided quite early on to strengthen its direct control over the region, possibly over its colonies too. A “provincial” administration was then established in Dur-katlimmu, its archives showing a strong interest of the state in the exploitation of the land, beyond war organization (Cancik-Kirschbaum 1996; Röllig 2008). The conquest of Babylon by Tukulti-Ninurta I seemed to grant Assyria domination over the Middle Euphrates axis – “from Carchemish to Rapiqu” – but instead resulted in blocking and ruining the political balance colonization had already built. This change in the system put a quick end to the Assyrian administration of the region, and possibly it generated also a new anti-Assyrian reaction among the local, now mixed, “Aramaean” societies (Masetti-Rouault 2009).

At this point we are entering the dark corners of the chronology and of textual and archaeological evidence found in the region. But when we get out of it, since the beginning of the Iron II and the 9th century BCE, thanks to the narration of the Assyrian royal inscriptions of this period of Adad-nirari II, Tukulti-Ninurta II, and Ashurnasirpal II, the same local societies appear to have reorganized themselves. They created a new federal system, the “Land of Laqê”, “High and Low”, uniting, as before, the settlements on the banks of the Lower Khabur and the Euphrates, some of which by this point had palaces and local lords. They are often described as Aramaeans (Lipiński 2000: 77–108), but the only text dating to this period found in the region, from Ashara/Sirqu, is in fact a cuneiform inscription written in provincial, but standard Babylonian language and style (Masetti-Rouault 2001). Assyrian texts show the kings of the first half of the 9th century, Adad-nirari II and Tukulti-Ninurta II, coming back to this region, in order to visit the main cities, trying to strike deals with the sheikhs. Pretending to establish again Assyrian power, they were in fact striving to participate, as before, in the trade system. But now, it is not anymore the traditional business network the Assyrians were interested in. In the inscriptions, the lists of the products and goods extracted by the kings from



Figure 3: Tell Masaikh. Aerial view of the Palace area.
(O. Rouault, Mission archéologique française à Tell Masaikh, Syrie)

the local palaces – as booty, tributes or taxes – show, for the first time, that Aramaean élites had a special source of income, through long distance trade coming from, and going to, Arabia (Grayson 1991: 174–177, l. 64b–115a; Liverani 2003; see also Beaujard 2012: 272–283). To the presence in local markets of precious Southern Arabian products and exports, such as myrrh, must be added the value of other staples and artefacts, such as iron and tin, purple wool, or ivory, coming from and traveling in opposite directions, not only north-south, but also west-east. Products from Southern Arabia were collected by Assyrian kings only at Sirqu, Khindanu and Anat – but dromedaries only at Khindanu, where the caravans stopped. Gold, silver, ivory, tin, bronze and iron, precious woods and textiles, are attested among the properties of the other urban centers, evidence of the strong development of international business in the regional economy.

As if there weren't any more places and opportunities to integrate into this system, Assyrian kings, from the beginning of the 9th century BCE, had to check the situation in the region, and to divert a part of these staples, as well as profits, to Assyria, through agreements struck with Aramaean élites. They offered in exchange their protection and armed forces against incumbent social conflicts, which could menace the trade itself. But this political solution appeared soon not to be satisfactory. Assyrians soon realized that Laqê élites, aware of their autonomy and role in international trade, were unreliable partners in business, often “revolting”, that is refusing to share profits. Royal inscriptions make clear that their attitude required punitive military interventions, carried out by Ashurnasirpal II, and their progressive replacement by a new aristocracy, coming from the metropolis (Grayson 1991: 198–200, l. 1.75–97a).

While his policy, marked by destructions, pillages, and élite deportations, was possibly not a real success if the aim was to participate in international trade, Ashur-



Figure 4: Tell Masaikh, Plan of the Palace area (2009).
(O. Rouault, Mission archéologique française à Tell Masaikh, Syrie)

nasirpal's inscriptions quote an alternative method tried at this point to re-enter the system. During one of his punitive expeditions in the Lower Laqê region, a “colony”, named Kar-Ashurnasirpal, “The Harbor of Ashurnasirpal”, was founded “by the king” on the eastern bank of the Euphrates, over an ancient tell, called today Tell Masaikh (Grayson 1991: 215–216, III, l. 48b–50a; cf. Masetti-Rouault 2010, 2013b, 2016). Not acknowledged as a crown property or a royal town, the settlement and its twin counterpart Nebarti-Assur, on the opposite bank, were installed there to replace the functions of Sirqu/Terqa, only three kilometers downstream, of control of the river crossing and boat circulation. It is difficult to define the status of these new foundations in an Aramaean land. This first Kar-Ashurnasirpal was possibly only an experiment, later abandoned, and certainly erased by the construction of a new Assyrian town at the very beginning of the 8th century, which gave the site the form still defining it today (Fig. 3). A rectangular Lower Town was added to the Citadel, where a palace was then built (Masetti-Rouault 2013c) (Fig. 4). I have already suggested that this second foundation should be connected with a new program of organization for the region, carried out under the responsibility of the governor of the Rasappa province, Nergal-eresh (803–775 BCE),



Figure 5: Satellite view, Tell Masaikh, Tell Graya and the Nahr Dawrin.
(Source of satellite image: SPOT / CNES; Plan: O. Rouault, Mission archéologique française à Tell Masaikh, Syrie)

during Adad-nirari III's reign (Masetti-Rouault 2016; Masetti-Rouault and Rouault 2016; cf. Blocher 2001; Zaia 2018; Siddall 2013; Parpola 2017). The chronology of the Iron II Assyrian occupation of Dur-katlimmu, on the eastern bank of the Khabur, allows one to consider the two centers as largely contemporary (Fügert *et al.* 2014). They were integrated into the same plan – a colonization program.

Explicitly attributed to his king's will, this project is recorded and described in Nergal-eresh's stela inscriptions, namely the Saba' stele, as well as the Tell Rimah stele (Grayson 1993: 27–28; Grayson 1996: 208–209, cf. l. 23–25 [Saba'a Stela]; Grayson 1996: 210–212, l. 13–15). The project was aimed at the rate of settlement growth and urbanization of the western part of the Rasappa province, through the foundation of a three-tiered system of villages depending on towns. Its realization has been recognized in surveys carried out in the Lower Khabur valley (Morandi Bonacossi 1996, 2000). Interpreted as an effort to exploit the land better, this project has been associated with the installation of long irrigation canals, parallel to the river, managed by the Assyrian State administration (Kühne 2012). However, the construction of a palace in the Citadel of Kar-Assurnasirpal, built as a reduced version of the Calah royal residence, in a location where no Assyrian king ever set his foot again, could cast a shadow on the idea that the governor Nergal-eresh had his own power and mandate. This suspicion is somewhat confirmed by the fact that the section of the Rimah stela, describing Nergal-eresh's project, was later cut and chiseled away – a clear *damnatio memoriae* act.

The sincerity of the governor's commitment in his relations with the Court and the king in the homeland should not be seriously doubted, at least at the beginning of his rule. In fact, he received a written approval and agreement from Adad-nirari III, who confirmed officially and explicitly the governor's authority and right to get local taxation in the region just south of the Laqê coun-

try, at Khindanu, against any possible contestation and objection arising in the court (Grayson 1996: 214–216). The insisted upon integration of this area into Nergal-eresh's domain should be understood in the context of his main project. Specifically, the need for the annexation of Khindanu to the governor's province can be explained by the geographical limits of a very long canal he was planning to build on the eastern bank of the Euphrates, reaching down to this city and market, which was a station post in the trade itineraries, even if, admittedly, no written record has been found mentioning it.

Following the same master plan he carried out in the Khabur Valley, Nergal-eresh would have launched the construction of a 120 km long canal, parallel to the Euphrates, but close to the ridge of the Eastern Pleistocene terrace, along the same layout (Fig. 5) exploited later by the early Islamic period Nahr Dawrin canal (Berthier 2001; Geyer and Monchambert 2003: 199–217). Taking its waters from the Khabur, in a location not far from its confluence with the Euphrates, this canal would have joined the Euphrates downstream, close to Khindanu, not far from the ruins of ancient Mari.

Although the exploitation of the canal for irrigation seems obvious, considering the climate and environment of the region, the investments necessary to support the huge hydraulic project construction would have been major, quite unbalanced for this narrow part of the valley where the exploitable agricultural land is limited. Moreover, new research analyzing texts from the Middle Assyrian archives of Dur-Katlimmu, confirms the fact that the introduction of (intensively) irrigated agriculture in the region did not produce large surpluses worth the while of the economic and political efforts – in fact, quite the contrary (Reculeau 2007). However, if we consider that the canal could also have been a route for communication and transport, exploited to bring staples upstream in a much safer way than through

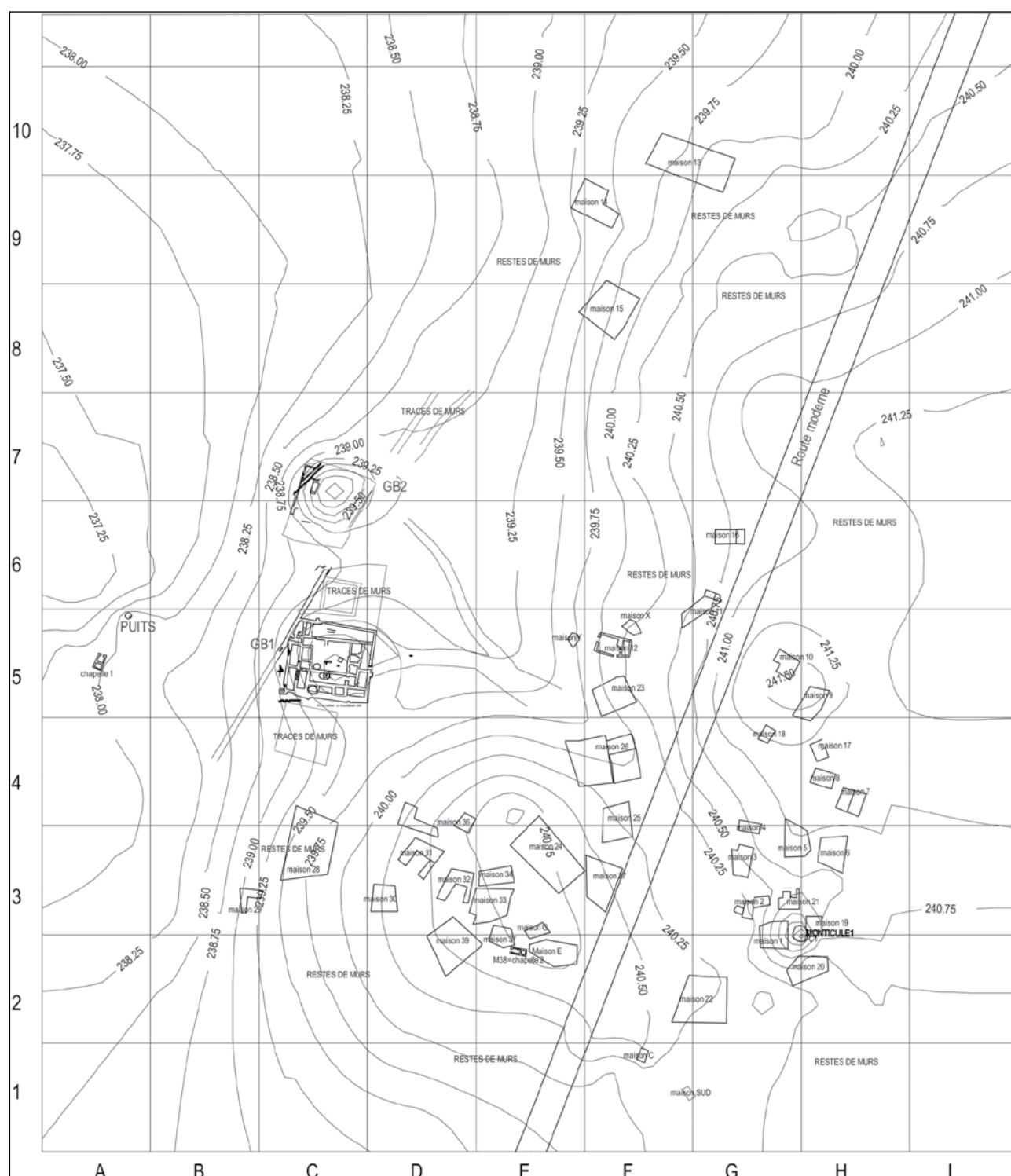


Figure 6: The site of Bir-el Haddad (Syrian Jezireh). (O. Rouault, Mission archéologique française à Tell Masaikh, Syrie)

the risky navigation of the Euphrates, the investments appear as rational and clever. The choice of its limits, at Khindanu, where caravans stopped, and close to the Khabur/Euphrates confluence area, passing near Kar-Assurnasirpal, are understandable in order to secure and enhance the same trade traffic which had made the Laqê country rich less than a century before. A little later, this kind of trade would be the object of the interest of the lords of downstream Suhu and Mari, still proclaiming their

Babylonian and Kassite origin (Frame 1995: 278–331; cf. 292–293, l. 19b–50).

To understand better Nergal-eresh's management of his province, another element could be taken into consideration: identified by surveys in the 1990s, the presence of a road system which crossed the Jazireh, connecting Dur-katlimmu to Assur, following the Wadi Ajij, can be associated with the canal system.

Used since the Middle Assyrian period, this track was renewed during the Iron Age II, possibly as a part of the same plan (Bernbeck 1993). In 2010, we identified another, more recent branch of this road network, between Tell Masaikh and the Khabur valley, which crossed the eastern steppe, passing through the oasis of Bir el-Haddad, where we have excavated a possible station, a *mar-ditu* post (Fig. 6) (Masetti-Rouault and Rouault 2014). This communication system belonged clearly to the same general management plan as the canals, even if it is not recorded in any royal inscription or archive document produced by Nergal-eresh's, or even by any Assyrian king's, chancellery.

Nergal-eresh's colonization plan, articulated by the construction of a communication and exchange network of roads and canals, and supported by a complex settlement system, does not look anymore only as the manifestation or the materialization of the crown and state ideology, or as regular provincial administration. It seems to correspond also, and more plausibly, to a deliberate and specific economic project, to master the circulation of staples, profits and capital among the major western markets and production areas, from Southern Anatolia to Southern Arabia, and the African coast, and from the Zagros Mountains to the Levant, and the Mediterranean Sea. It did last for a while, even if, as the Tell Masaikh excavations have shown, the Kar-Ashurnasirpal colony lost its "all Assyrian" identity quite quickly, opening itself to contacts and influences with the local, possibly more Babylonian oriented, culture.

Even if I am tempted to do it, we have not enough elements to describe the corresponding archaeological level in Kar-Ashurnasirpal as another "Middle Ground", where the relations and the exchanges between the local Aramaean population, Assyrian colonists, administrators, merchants, workers, and travelers from other parts of the Mesopotamian world created new cultural forms. However, its autonomous and independent attitude determined (again) an attack of the imperial forces who destroyed the palace, cut the surface of the province, and installed a new administration, possibly during Tiglath-pileser III's reign (744–727 BCE). As usual, this did not work out: we know that Aramaean clans, coming from the South, menaced the weak, isolated Assyrian settlement (Frame 1995: 292, l. 24b–28), while the international trade routes were soon abandoned, to follow other itineraries, at least until the foundation of Dura Europos. But this is another story.

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TELL JEMMEH: SOCIAL IDENTITY AT A CULTURAL CROSSROADS

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Abstract

Interregional interaction and cultural transmission are foundational for anthropological and archaeological investigation of complex societies, colonialism, and technological change. World Systems Theory (Wallerstein 1974, 1980, 1989) has shaped our understanding of these complex social processes to such an extent that it is difficult to conceive of an imperial or colonial system without, consciously or unconsciously, relying on a variant of the core-periphery dichotomy, which is monolithic and homogenizing in nature (Thomas 1994). One of the most problematic extensions of interregional interaction models based on World Systems Theory is the equation of colonial or imperial material culture with colonial/imperial identity. This conflation of geographic political boundaries, materiality and identity exaggerated the prominence of the 'core' in terms of territory and influence, while at the same time inflating the importance of 'peripheral' groups. A rather striking example of this is Palace Ware, a 8th–7th century BCE ceramic drab ware, that has been used as evidence of Neo-Assyrian imperial occupation and administration of cities and territories despite the absence of corroborating evidence (e.g. Van Beek 1973). In this paper, we will explore how material culture is used to negotiate, establish and maintain social identity within the complex of intercultural and interregional relationships of the Late Iron Age Levant.

Introduction

I approach material culture studies from two different and complementary disciplines: anthropological archaeology and materials science. Together, these two perspectives inform my understanding of identity, materiality, and material culture. Over the last ten years there has been increasing movement away from global interpretive models and toward context driven narratives that focus on “the recursive relationship between social structure and the strategic actions of individuals or small groups” within a particular imperial or colonial system (Stein 2005: 7). An extension of this movement is an increased awareness and interest in the complex and evolving social and symbolic value and meaning of material culture, which invites archaeologists to look beyond

the functionality or utility of an object and understand artefacts “not merely as products, but also [as] instruments used by actors in [a] social system” (Beaudry *et al.* 1991: 174) and even as actors themselves. The intersection of anthropological archaeology and material science enables us to understand material culture as the dynamic medium through which relationships and identities are negotiated, established, and maintained by going deeper than form and function and focusing on the human behaviors behind the materials: the behaviors that shape the production, consumption and discard of objects. In this paper, I present the synthesis of several years of detailed scientific analysis; comprehensive reporting of the data and their interpretation is published in Hunt (2015).

Background

Most models of imperial and colonial interactions are constructed or derived from Wallerstein's World Systems Theory, which is a model of economic interactions and relationships (1974, 1980, 1989). World Systems Theory describes three groups of players in economic systems: the core, periphery and semi-periphery. The core is composed of rich, technologically developed and economically independent countries or groups, while the periphery is composed of poor, economically dependent groups. The semi-periphery is composed of semi-developed, semi-economically independent countries and groups. Although the model was developed to explain industrial economics, it is often modified for pre-industrial settings where the core is composed of groups with international economies and political identities, the periphery is composed of groups with local economies and politics, while groups in the semi-periphery have national, but not quite international, economies and political identities.

In terms of material culture, according to World Systems Theory, high prestige goods and material culture are produced and consumed in the core; although they may be traded with or emulated by the periphery and semi-periphery. This leads to one of the most problematic extensions of World Systems Theory, the equation of core material culture with core identity or, for our study, imperial material culture, in the form of Palace

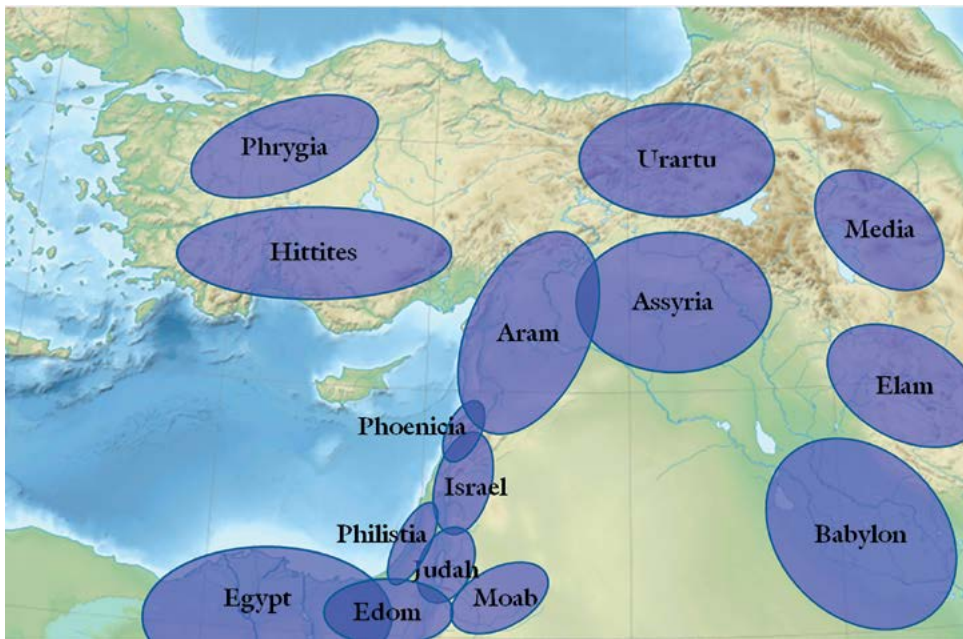


Figure 1: Political and economic players during the Late Assyrian period during which the Neo-Assyrian Empire flourished.
(A. M. W. Hunt;
Map: © Sémhur / Wikimedia Commons / CC-BY-SA-4.0)

Ware, with Neo-Assyrian imperial identity. By conflating geographic political boundaries, materiality and identity, World Systems Theory exaggerates the prominence of the core, in terms of territory and influence, and inflates the importance of peripheral territories.

There is another difficulty in using a model based on World Systems Theory to understand the Neo-Assyrian imperial system and Late Iron Age Levant. World Systems Theory implies both the dependence of the core on an underdeveloped periphery and the dependence of the periphery on the core for economic stability (see Dependence Theory, Singer 1949 and Prebisch 1949). Although borders shifted and changed, during the height of the Neo-Assyrian Empire (911–612 BCE) each and every group/region highlighted in **Figure 1** had an independent national and/or international economy and political identity. While these groups were interdependent and engaged in complex interregional relationships, none of them were solely dependent upon another for either raw materials or economic security.

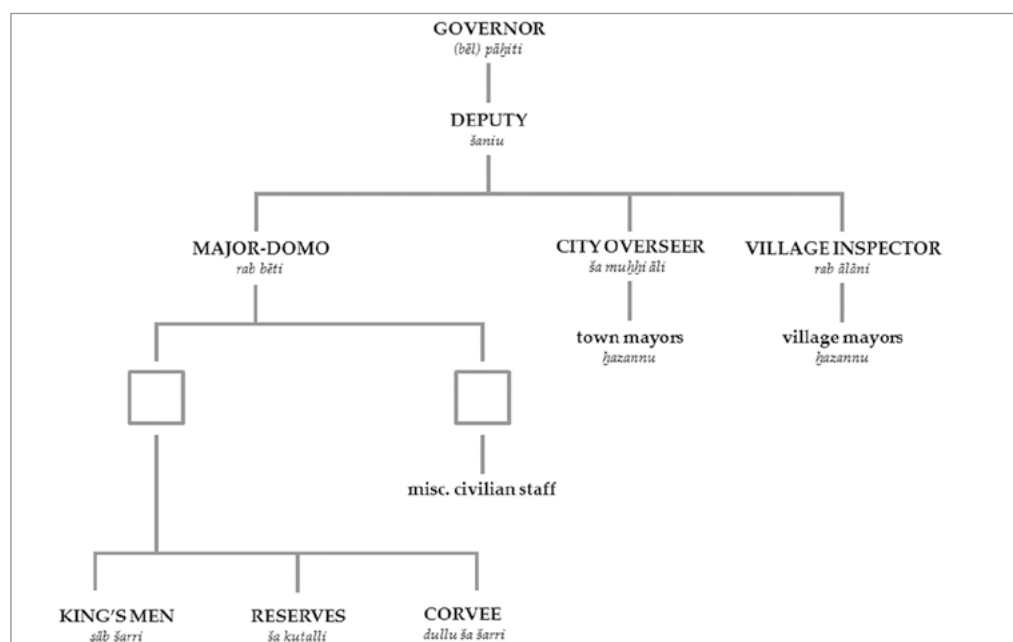
Criticisms of World Systems Theory have been elegantly and extensively published elsewhere Stein (2002) for example, and include its monolithic and homogenizing nature (Thomas 1994), overemphasis on the importance of the core in interregional interaction (Dietler 1998), top-down view of cultural interaction (Schreiber 2005), simplification and gloss of the unique cultural contributions of the periphery (Stein 1998), and reduction of the complex of human behavior into dualist or binary interaction (Meskell 1998; van Dommelen 1998). Despite almost two decades of challenge and critique, World Systems Theory survives, in various permutations and derivations, as the predominant interpretive model for complex interactions in imperial and colonial contexts.

The theoretical flaws in World Systems Theory combined with the incongruity between the economic groups it describes and those at play during the Late Assyrian Period/Iron Age preclude it as a model for understanding the diffusion of material culture across the Neo-Assyrian imperial landscape. How then are we to understand and reconstruct the complex and dynamic interregional relationships and social, economic and political identities at play?

If material culture is the medium through which social and political identities and relationships are negotiated, established and maintained, then it must be located within the particular narrative of its political, cultural and economic geography and/or population of consumers, producers and cultural audience. In our study of Palace Ware, this means we need a model that is flexible enough to detect nuances of meaning and value in different parts of the Neo-Assyrian imperial landscape. It also means we need a new nomenclature for the socio-political players during the Late Assyrian Period.

Assyria was composed of semi-autonomous political economic units or provinces. In our discussion we will refer to this area as the home provinces. As Assyria expanded, it incorporated cultural/political regions into its imperial geography. Regardless of whether these regions were annexed into the empire through treaty or conquest, they were organized into provinces, and will, therefore, be referred to as the annexed provinces. However, regions not annexed or officially incorporated into the official administrative structure of the Neo-Assyrian Empire also had economic and social relationships with Assyria. These groups will be referred to as the unincorporated territories and include vassal states, buffer zones, and other independent entities.

Figure 2: Organizational structure of the Assyrian Provincial Administration. (A. M. W. Hunt after Postgate 1992)



Social Function & Semiotic Meaning of Palace Ware

At the height of its power, the Neo-Assyrian provincial system extended across most of the Near and Middle East. Although there is much we do not know about how these provinces functioned, we do know that they were administrated by a Governor, appointed by the Assyrian king and selected for loyalty. Under the Governor were a Deputy and three high officials: the Major-Domo; the City Overseer; and the Village Inspector (Fig. 2). In annexed provinces, the Deputy was someone from the local community, often the ruler of the city state before its annexation into the imperial administration. If the annexation of the province was peaceable, the town and village mayors and, possibly, even the Village Inspector and City Overseer were also local. In provinces where annexation was not peaceable and/or the local population was hostile to imperial administration, all of these officials would be held by Assyrian appointees from the home provinces.

The top tier of provincial officials (Governor, Deputy, Major-Domo, City Overseer and Village Inspector) was obligated to travel, at least once a year, to the Assyrian imperial capital for an audience with the king. During this audience, officials paid their tribute and renewed their loyalty oath to the god Aššur, the King, and the land (Assyria). Vassal rulers, local governors and kings in unincorporated territories would also have been obligated to travel to the Assyrian imperial capital to present their tribute and renew their fealty to Assyria and its king.

The renewal of loyalty oaths was probably part of the *adê* ritual, an aspect of which was the conspicuous consumption of a beverage from a bowl designated for this particular purpose. In the highly stratified world of the Assyrian court, the material of the bowl reflected the

status of the drinker or official. *Adê* drinking bowls have been recovered archaeologically manufactured from precious metals, copper alloys and ceramic; a few have even had the name and/or rank of the drinker engraved on their rim (Radner 1999–2001).

The ceramic version of the *adê* bowl was manufactured from a unique fabric, called Palace Ware: an extremely fine-grained, high fired class of vessels with eggshell thin walls. Although Palace Ware occurs in several vessel forms, this paper will focus on the *adê* bowl form, referred to here after as type A.

The spread of Palace Ware, in general, follows the growth of the Assyrian empire in the 8th and 7th centuries, as provinces were annexed and Assyrian influence and protection diffused into the southern Levant (Fig. 3). Movement of Assyrians from the imperial home provinces to annexed provinces as administrators and advisors may account for the transmission of material culture and social practice, and is certainly consistent with the social value and semiotic meaning of Palace Ware. However, it does not satisfactorily explain the proliferation of these vessels, particularly the *adê* bowls in unincorporated territories, such as Tell Jemmeh.

Tell Jemmeh: Social Identity at a Cultural Crossroads

On a provincial map of Assyria, Tell Jemmeh is located in an unincorporated region of the Negev along the Gaza-Petra trade route, approximately 10 kilometers southeast of Gaza. Throughout its history, Tell Jemmeh sat at a cultural crossroads between Egypt and Assyria, Arabia and the Mediterranean. It is not surprising

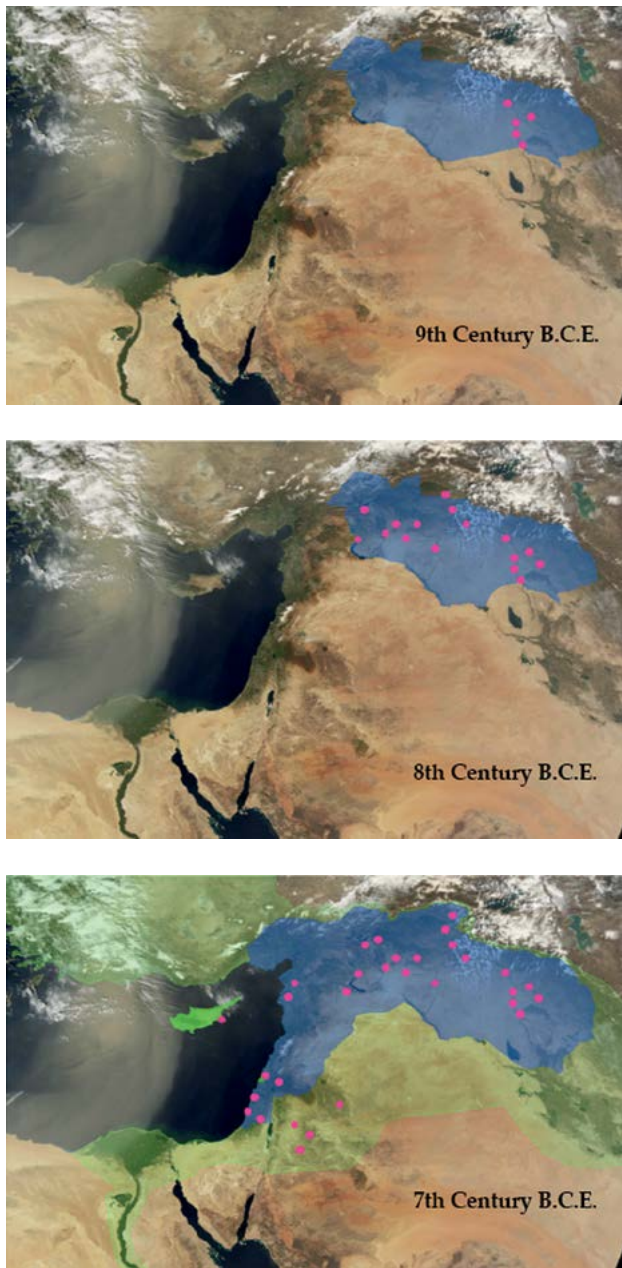


Figure 3: Annexation of territory and growth of Neo-Assyrian influence with reported Palace Ware finds during the 9th, 8th and 7th centuries BCE. (A. M. W. Hunt; Map: Google Earth)

that the 5 hectare site yielded Egyptian, Aegean, Cypriot and Philistine artefacts in the same strata. Nor, perhaps, is it surprising that these same strata contained pottery that reminded Sir W. M. F. Petrie of metal Assyrian vessels he had seen in the British Museum (Palace Ware).

The presence of these Assyrian-style vessels led Petrie to conclude that Tell Jemmeh was occupied by the Assyrians, during the Neo-Assyrian periods, possibly as a staging area for Egyptian military campaigns. When excavation of the site began again 50 years later, under the direction of G. van Beek, it was with the understanding that Tell Jemmeh had been an Assyrian province or

administrative center. This conclusion was reinforced when van Beek uncovered monumental architecture he dated to the Neo-Assyrian period (8th–7th centuries). Van Beek reconstructed the monumental building to be a two story structure supported by arches, containing a cache of Assyrian style vessels and Palace Ware, and associated with a series of residences he dated to the same period (van Beek 1973).

The architecture of both the monumental building and the residences is inconsistent with local architecture in the Negev dated to the Neo-Assyrian period. However, neither is it consistent with Assyrian architecture. Even in annexed provinces, Neo-Assyrian buildings were organized and orientated very specifically, and the floor plans didn't vary. In addition, there is no textual record of Tell Jemmeh in the Assyrian annals or administrative documents: unheard of for an annexed province during the Neo-Assyrian period. If Tell Jemmeh was not an Assyrian province or occupied by the Assyrian, how do we explain the presence of Palace Ware? What was the social function of these vessels, particularly since the majority of forms resemble the *adê* bowls associated semiotically with Assyrian fealty in other parts of the imperial landscape?

Palace Ware consumption at Tell Jemmeh follows a different pattern than is found in either the Assyrian home or annexed provinces (Fig. 4). Typically, cups and jars are prevalent and the bowl forms represent a fraction of the Palace Ware consumption at a given site. The exception is funerary contexts where there is a significant increase in the frequency of *adê* bowl forms. At Tell Jemmeh, approximately 80% of the assemblage consists of form A bowls: the social value and symbolic meaning of which is one of Assyrian loyalty and political affiliation, as well as the attendant prestige and power of participating in the *adê* ritual with the king.

One possible explanation for this consumption pattern is that different rulers from Jemmeh travelled to Assyria each year, thereby increasing the number of bowls transported from Assyria to Tell Jemmeh. Another explanation is that the population of Jemmeh wanted to demonstrate to Assyria that they were loyal. Parsing the presence of these bowls at Jemmeh and their social value and semiotic meaning for their consumers, requires a more in-depth analysis of their form and fabric.

Geochemical and mineralogical analysis of the form A bowls from Tell Jemmeh, conducted by instrumental neutron activation analysis and petrographic microscopy, demonstrates that these vessels are not only distinct from those found in either the home or annexed provinces, but these vessels were manufactured locally at Jemmeh (Fig. 5). The discrete bulk chemical and mineralogical suite of the form A bowls at Jemmeh indicates that the presence of these vessels was not the result of transport or trade.

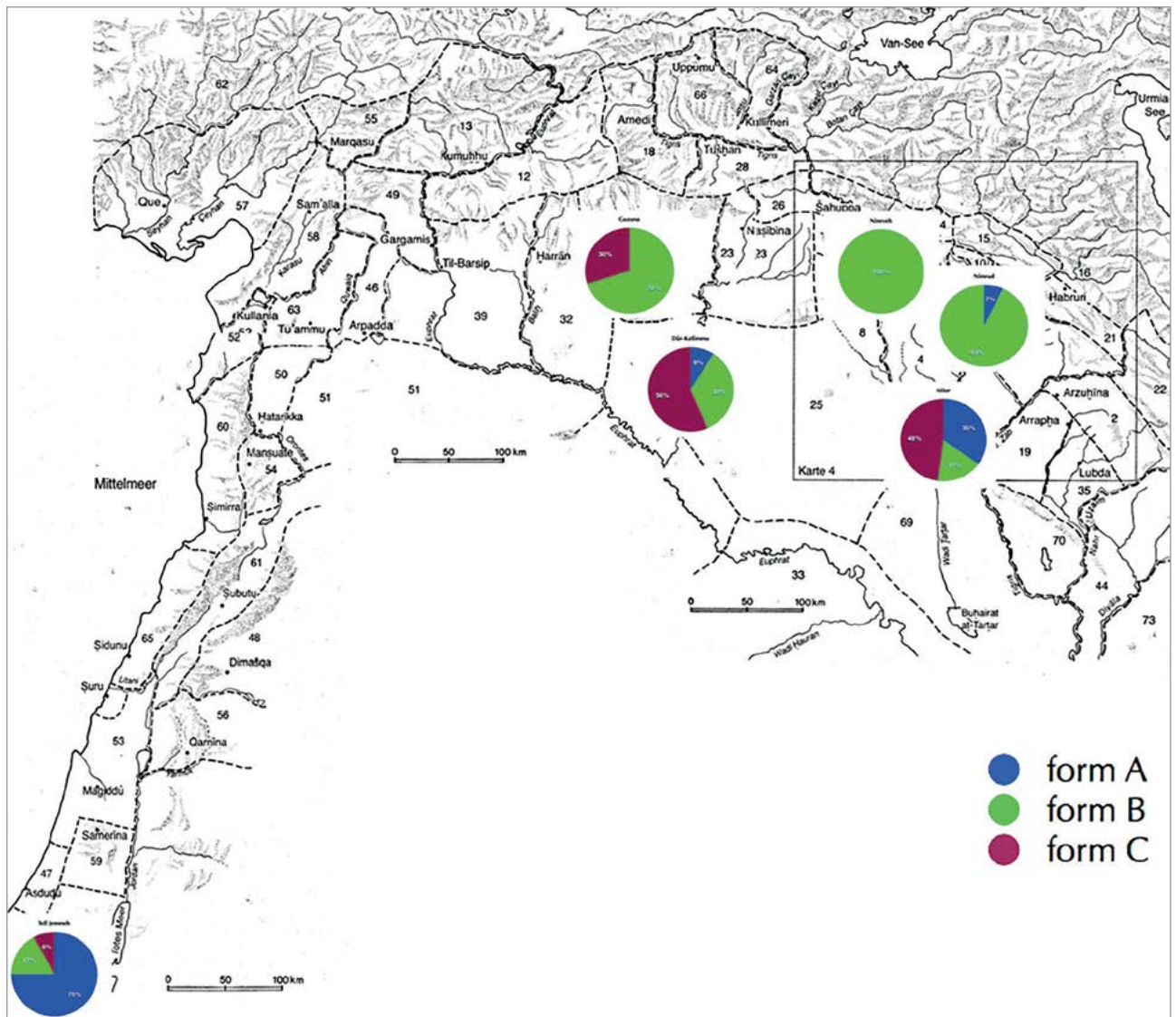


Figure 4: Palace Ware consumption patterns in the home provinces, annexed provinces and at Tell Jemmeh.
(A. M. W. Hunt; Map: after Radner 2006, maps 2–4)

Another indication that the producers and consumers of these vessels at Tell Jemmeh were local and not Assyrian or affiliated with Assyria, related to the formal and fabric characteristics of the bowls. Palace Ware vessels had a specialized social function, particularly the form A or *adê* bowls. This social function necessitated the consumption of a specific, culturally determined quantity of beer or wine. As a result, Palace Ware vessels were manufactured to hold particular volumes, identified as four discrete capacity clusters in **Figure 6**.

Two significant features of these clusters: first, they correspond well with Assyrian volume measurements described in the Nimrud Wine Lists, among others; second, the cups and jars have approximately 1:2 or 1:3 relationships to each other indicating intentionality in the capacities of these forms. Form A bowls are among the smallest vessels, holding approximately half a liter or 6 *kāsu* in the home and annexed provinces.

At Tell Jemmeh, not only is Palace Ware capacity continuous, form A bowls are three to four times larger than their Assyrian counterparts: capacities ranging from ~8 *kāsu* (624 milliliters) to ~4 *qû* (3.43 liters). This suggests that these vessels had a different social function at Tell Jemmeh, one perhaps not dependent upon capacity or in which capacity was not necessarily an important social/semiotic attribute for their consumers.

Palace Ware, by definition, is extremely fine-grained and thin walled. The micrographs in **Figure 7** compare Palace Ware form A fabrics from Nimrud and Tell Jemmeh. For those of you not used to reading petrographic micrographs, there are no significant mineral inclusions in the fabric from Nimrud. The fabric from Jemmeh is not nearly as fine-grained, but it is still a finer fabric than most Iron Age pottery from the Negev. Histograms of grain size for these two fabrics suggest that the difference in grain-size and abundance results from

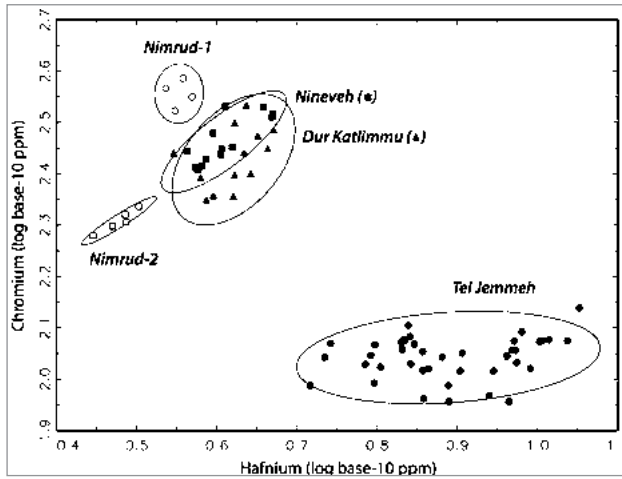


Figure 5: Principal components analysis plot of instrumental neutron activation analytical data (INAA) of Palace Ware chemistry in the home provinces, annexed provinces and at Tell Jemmeh. (Courtesy J. Speakman)

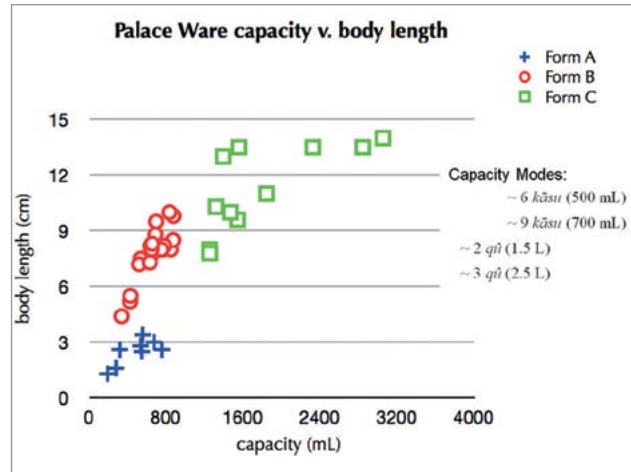
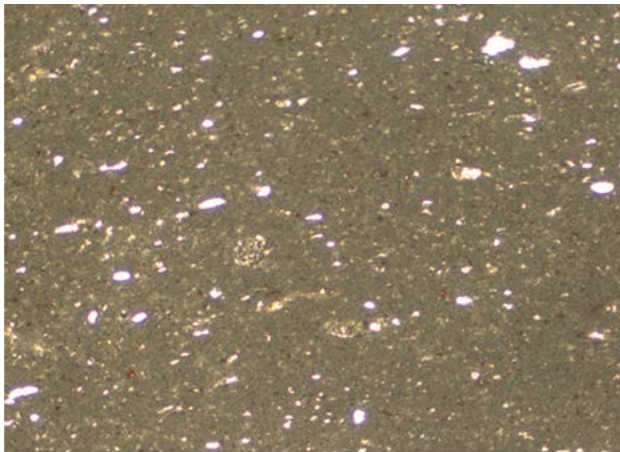
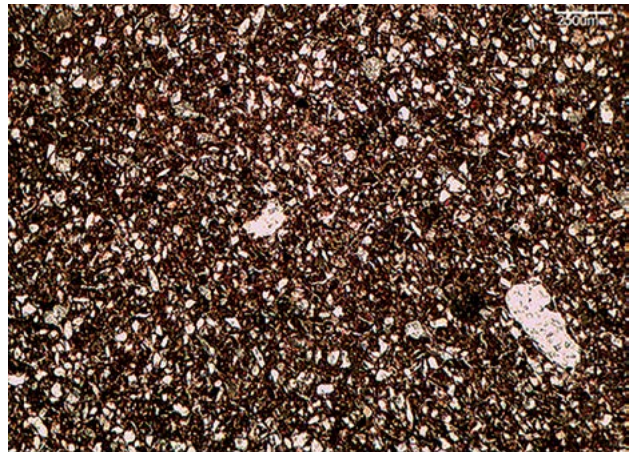


Figure 6: Biplot of Palace Ware capacity against body length. Note the discrete capacity clusters for each form. (A. M. W. Hunt)



Nimrud sample N1-2

field of view = 1.7 mm



Jemmeh sample JS2-11

field of view = 2.5 mm

Figure 7: Micrographs in plane polarized light (PPL) of Palace Ware fabrics from Nimrud (a) and Tell Jemmeh (b). Note that the two micrographs are at different scales in order to show the voids and inclusions in the finer fabric from Nimrud. (A. M. W. Hunt)

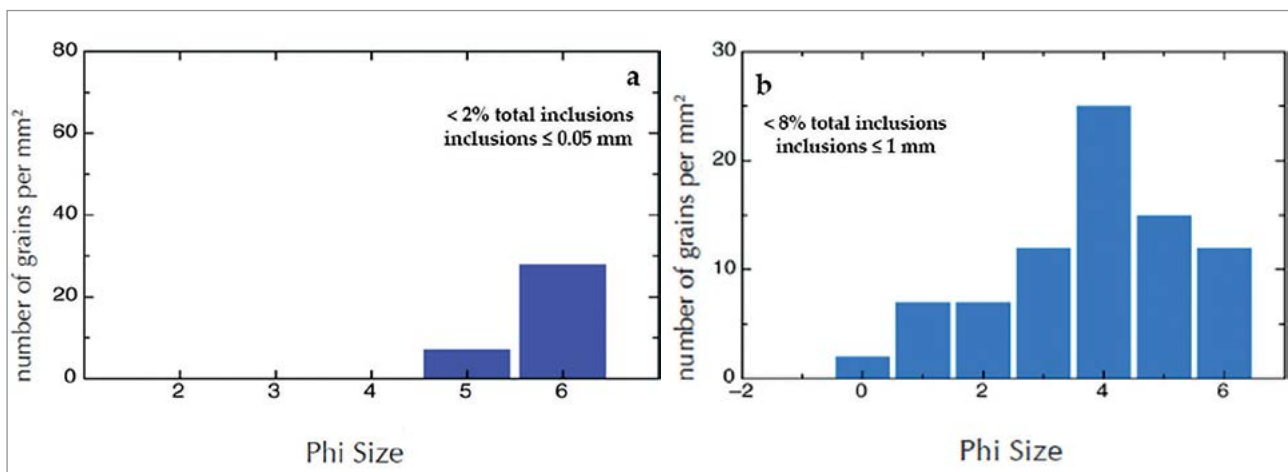


Figure 8: Grain size analysis histograms of Palace Ware fabrics from the home provinces (a) and Tell Jemmeh (b). The sharp truncation in grain size in histogram a is indicative of an artificial process or human behavior, such as intentional sedimentation of raw materials. (A. M. W. Hunt)



Figure 9: Typical Iron Age pottery from the Negev has a green/buff rind as a result of iron volatilization during firing. (A. M. W. Hunt)

intentional processing rather than an inherent difference in the raw material sources (Fig. 8). The sharp truncation in the fabric from Nimrud indicates that this fabric was refined, probably by sedimentation, while the continuous profile in the Jemmeh fabric suggests either no processing or a less exact practice, such as sieving.

In the home and annexed provinces, Palace Ware is fired at high temperatures for soak times sufficient to produce a green/buff color. This color is associated with the verification of calcareous ceramics and the extent of verification in Palace Ware would render these vessels impermeable, a performance characteristic related to their function as drinking vessels. Palace Ware vessels at Tell Jemmeh were not fired at temperatures high enough for the fabrics to vitrify. In fact, most of the form A bowls from Jemmeh are reddish in color, suggesting a moderate to low temperature firing. Perhaps, the difference in firing temperature between Assyrian Palace Ware and the Palace Ware at Tell Jemmeh indicates less experienced local pyrotechnicians. Perhaps the social function of these vessels did not require impermeability. Or, perhaps, the social value and meaning of these vessels was not related to color or was related to a redder color.

What is interesting is that most local pottery in the Negev has a green/buff rind on the surface (Fig. 9). This rind is produced by a chemical reaction in which iron is leached from the ceramic fabric and volatilized. Palace Ware at Jemmeh, was fired at a higher temperature, sufficient to prevent and/or remove evidence of this rind, when allowing it to form, would have resulted in more authentic or Assyrian looking vessels.

The social and semiotic meaning of form A bowls at Tell Jemmeh appears to be predicated on different characteristics than those valued in the home and annexed provinces, even when adherence to Assyrian norms required less work.

If the motivation for consumption of these bowls was to impress the Assyrians with the loyalty of the local population at Jemmeh, then it would make sense that the



Figure 10: Palace Ware from Tell Jemmeh is often red slipped and burnished in the style of southern Levantine Samaria Ware. (A. M. W. Hunt)

vessels consumed locally would replicate those from the home provinces as closely as possible. However, as we have seen, they do not.

Textual evidence describes an uneasy relationship among Judah, the Negev and Assyria. Territories and city-states in the southern Levant continually played Assyria and Egypt, the two superpowers of the day, against each other. Surely, a population at a cultural crossroads, one who benefitted from trade with both Assyria and Egypt, was politically savvy enough to maintain a complex network of political relationships. It is therefore unlikely that the function of Palace Ware at Tell Jemmeh was meant to symbolize fealty or loyalty to Assyria.

What then, if anything, do these bowls tell us about Tell Jemmeh and its relationship to or with Assyria? What was their social function and semiotic meaning?

I don't know. I do know that it was not the same as the social function and semiotic meaning of Palace Ware in the home or annexed provinces. Closer examination of the unique features of these bowls at Jemmeh, may get us closer to an answer.

Many of the form A bowls at Tell Jemmeh were red-slipped and burnished (Fig. 10). This is *not* a typical finishing technique or decorative style for Neo-Assyrian

pottery in general and is NEVER seen on Palace Ware in the home or annexed provinces. Red-slipping and burnishing *are*, however, very common finishing techniques and decorative elements in the southern Levant. The combination of red-slip, burnish and thin walls during the late Iron Age is indicative of a particular Levantine ceramic ware called Samaria Ware.

Samaria Ware was a prestige good: easily identifiable and recognizable by its unique characteristic shiny, thin red walls. The combination of these finishing techniques on Assyrian style bowls suggests that, whatever the social value and function of these vessels was at Tell Jemmeh, it was probably related to status.

Unlike Palace Ware cups and jars, form A bowls are a uniquely Neo-Assyrian form, which does not appear in Middle Assyrian or Babylonian assemblages. I posit that the predominance of form A bowls at Tell Jemmeh is related to this uniqueness. This was something new, and as such, was valued independent, and in spite of its social meaning in provincial Assyria. This is also, perhaps why form A bowls are bigger and more elaborately decorated at Tell Jemmeh.

Despite not being officially annexed into the Neo-Assyrian empire, the population residing at Tell Jemmeh were not backwater farmers or herders. They were merchants and innkeepers along an international, inter-regional trade route, familiar with and accustomed to exotic goods and luxuries. They were also politically savvy enough to play Assyria and Egypt off each other, thus ensuring the safety and continued economic advantage of their location at a cultural crossroads.

I think what we are seeing at Tell Jemmeh, is a community who values the social identity of being considered cosmopolitan, by both themselves and other cultural audiences. Bowl forms are the most conspicuous and unique in the Palace Ware assemblage. Modifying Palace Ware bowls through the application of red-slip and burnish, facilitated the identification of these vessels and their consumers as status symbols to a broader cultural audience. It is possible, even probably, that status was the only social value and semiotic meaning of Palace Ware for its consumers at Tell Jemmeh.

Concluding Remarks

This paper is based on a larger study published by Brill in 2015, *Palace Ware Across the Neo-Assyrian Imperial Landscape*. Detailed discussion of the social practices, value and semiotic meaning of Palace Ware and how it functioned within the Neo-Assyrian political structure can be found there. As with any archaeological study, our understanding is limited by what is available to us in the archaeological record. Someday, I hope more evidence will be uncovered

facilitating a better picture of the relationship between the Negev and Assyria. Until then, I am indebted to the following institutions for allowing me access to their resources, be they texts, artifacts or personnel: The British Institute for the Study of Iraq; The British Museum; École biblique et archéologique française de Jérusalem; Freie Universität Berlin; The Israel Museum, Jerusalem; McDonald Institute for Archaeological Research; Musée du Louvre; Petrie Museum of Egyptian Archaeology; Smithsonian Institution National Museum of Natural History; Technische Universität Wien; UCL Institute of Archaeology; Vorderasiatisches Museum Staatliche Museen zu Berlin; W.F. Albright Institute of Archaeological Research.

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