Bridging the Gap:
Disciplines, Times, and Spaces in Dialogue

Volume 2

Sessions 3, 7 and 8 from the Conference Broadening Horizons 6 Held at the Freie Universität Berlin, 24–28 June 2019

Edited by
Nathalie Kallas

BROADENING HORIZONS 6

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To Christian W. Hess,
who left unannounced.

Contents

Foreword

These volumes represent the proceedings of the conference Broadening Horizons 6, hosted by the Institute for Ancient Near Eastern Studies and the Institute for Near Eastern Archaeology at the Freie Universität Berlin from 24–28 June 2019. Taking the long-standing partnership of the two institutes and the multidisciplinary tradition of Ancient Studies in Berlin as inspiration, the general theme of 'Bridging the Gap' was chosen to encourage approaches to the study of the Ancient Near East which transcend traditional disciplinary boundaries in bringing a range of evidence and methods into dialogue.

The Berlin conference was fortunate to include over 100 papers presented by participants from over 22 countries and 70 universities. These were divided into eight thematic sessions, each framed by an introductory keynote. Since its first incarnation at the University of Ghent in 2006, Broadening Horizons has developed into a regular venue for young scholars in the field. In many respects, it remains the only conference of its kind, taking both 'ancient' and 'Near East' in the broadest sense possible, from the prehistoric to the Islamic periods. It is a particular point of pride that the conference is not confined by field, but remains open to any philological, archaeological, and methodological approaches to the material. As a conference for and organized by young scholars, it thus provides a uniquely wide snapshot of current work.

Berlin was chosen as a venue for Broadening Horizons 6 by the members of the Organizing Committee of the previous conference that took place in Udine in 2017, and to whom we are grateful. In agreement between the two committees and in the spirit of international cooperation, the organization of the conference in Berlin also included members of the preceding one. We are happy to express our enormous thanks to the institutions and persons without whose support the conference, and these proceedings, would not have been possible. Funding for the conference was provided by the German Research Foundation (DFG), the Office of International affairs of the Freie Universität Berlin, and the Ernst-Reuter Gesellschaft. The university's administration and staff, the Department of History and Cultural Studies, Prof. Dominik Bonatz (Institute for Near Eastern Archaeology), and Prof. Jörg Klinger (Institute for Ancient Near Eastern Studies) all provided generous logistic and administrative support during the organization and the conference itself. Rana Zaher designed our brilliant logo, which contributed greatly both to conference identity and now the cover of these volumes. Members of our Scientific Committee, some of whom joined us during the conference, provided generous advice and encouragement.

The smooth and timely flow of the individual sessions was largely due to the tireless efforts of the numerous student assistants and session chairs. It is only fitting that we mention here explicitly the catering and hosting offered by Cosimo Dalessandro and the Ristorante Galileo, which has long since become an institution of its own within the Freie Universität Berlin, and which kept the breaks of the conference amply supplied with coffee and refreshments. The conference's opening and closing events hosted at the Museum Europäischer Kulturen (MEK) by EßKultur provided the ideal setting for social interaction and exchange.

These volumes were only possible due to the perseverance of the participants who submitted their contributions despite the closure of libraries, difficulties in accessing resources, and the many hardships

the pandemic imposed on our lives in 2020 and 2021. Our thanks are due especially for their heroic efforts in the timely submission of their papers during a most difficult year. We also express our sympathy and understanding to those who decided to withdraw their papers as a result of the imposed limitations. Finally, we are especially grateful to the many referees who graciously agreed to donate their time and efforts to the reviews, even as their crucial contributions remain anonymous.

Costanza Coppini
Georg Cyrus
Hamaseh Golestaneh
Christian W. Hess
Nathalie Kallas
Federico Manuelli
Rocco Palermo

Berlin, 18 July 2021

Introduction

Nathalie Kallas

The second volume of the proceedings of the conference 'Broadening Horizons 6 – Bridging the Gap: Disciplines, Times, and Space in Dialogue' compiles papers presented in three enlightening sessions: Session 3 – Visual and Textual Forms of Communication; Session 7 – The Future of the Past. Archaeologists and Historians in Cultural Heritage Studies; and Session 8 – Produce, Consume, Repeat. History and Archaeology of Ancient Near Eastern Economies. Within this volume, the 20 papers traverse diverse topics spanning multiple periods, from the 5th millennium BCE to the Roman Empire, and encompass a wide array of geographical regions within the Near East.[1]

As Foucault so brilliantly illustrated in his first chapter of the *Archaeology of the Human Science*, any object stripped of its layers of meaning, of its historical context and of our gaze as observers, represents nothing more than itself.[2] Through their diverse contributions to **Session 3** the authors strive to unveil these layers offering readers a glimpse into the concealed life behind textual or visual representations.

Marian Feldman's keynote contribution serves as a foundational exploration of the premises outlined in this session, specifically delving into communication, meaning, and the concept of meaningfulness. She introduces diverse theoretical approaches employed by archaeologists and historians in deciphering messages conveyed through visual and textual forms of communication. Feldman then applies this theoretical discussion to the architectural program of the Third Dynasty of Ur and how it responded to the legacy of the preceding Akkadian rulers, unravelling its implications.

The subsequent contributions within this session embark on an illuminating journey through case studies spanning ancient Iran to Egypt. These studies showcase the many ways in which scholars examine specific aspects of textual and visual communication, seeking to decode the meanings carried within and gain insights into their inherent meaningfulness.

Certain authors have chosen to concentrate their attention on visual representations across various art forms, aiming to uncover the cultural, social, political, or religious narratives embedded within them. Delphine Poinsot investigates the animal iconography found on Sasanian bullae at the site of Qasr-I Abu Nasr, with a specific focus on the depiction of sexual determinant characteristics within the portrayed species. Her research highlights that the male body was frequently chosen for representation due to its ability to encapsulate the most representative elements of the species, irrespective of gender. Furthermore, these depictions offer insights into the observer's experience of nature. Elisa Roßberger contributes insights into the role of mould-pressed clay miniatures portraying chariots and thrones as visual media linked to oath taking. Through a meticulous comparison of evidence from Old Babylonian

1 This volume is dedicated to Christian W. Hess, who assisted with reviewing proofs. Though he is no longer with us, his support and encouragement will always be remembered. The editor extends heartfelt gratitude to Federico Manuelli for his invaluable efforts in reviewing the proofs and for his constructive feedback. These proceedings benefited from the contribution of Rocco Palermo during the initial stages of preparation. This publication was financed in part by the open access fund for monographs and edited volumes of Freie Universität Berlin.

2 Foucault 1970, 27-40.

written records and the visual representations impressed on clay artefacts, she underscores how the latter ensured the future adherence to the conditions and consequences of binding oaths. Margaux Spruyt's comprehensive examination of a hunting scene featuring onagers from the Neo-Assyrian period goes beyond figurative representations. She reveals how every element of the composition, including spaces, frames, voids, and choice of posture, among others, collaborates to convey the intended message more effectively to the viewer.

Three more authors direct their attention to textual sources, surpassing the confines of the inscribed text itself to explore broader contextual dimensions. Marta Pallavidini's paper transcends the apparent meaning of specific texts, unravelling the significance of metaphors in diplomatic discourse. By deciphering Hittite expressions rooted in verbs of motion and those suggesting specific orientations, Pallavidini illuminates how these linguistic nuances were universally understood, establishing them as cross-cultural indicators. In Olivia Ramble's contribution, a multidisciplinary approach draws on insights from anthropologists, historians, and archaeologists across diverse regions. Ramble's exploration shifts away from a macro-scale perspective, intricately examining the cumulative nature of texts at Persepolis. Her analysis focuses on the interplay between the inscriptions themselves, their contextual relationships, and the medium through which they are conveyed, providing a nuanced understanding of their interconnected significance. Federica Pancin's work explores the intersection between religious tradition and textual sources. By scrutinising mentions of sacred trees in the 'geographical lists' of the Graeco-Roman temple tradition, Pancin reveals the materialisation of extensive knowledge encompassing both local and national traditions. She concludes that these references serve as agents in transmitting Egypt's cultural memory, highlighting the profound connection between religious practices and the preservation of heritage within textual sources.

The combination of textual and pictorial elements was frequently employed in the ancient Near East to construct compositions capable of conveying multi-layered messages and facilitating diverse interpretations by the audience. In her examination of the semantics of mathematical diagrams on Old Babylonian clay tablets, Adeline Reynaud explores the pictorial representations and their interaction with the accompanying discursive text. Her findings reveal how the close integration of visual and textual components aimed to minimise ambiguity, ensuring the conveyed messages were as unequivocal as possible. Benedetta Bellucci probes into the text-image relationship on Late Bronze Age ring seals, specifically those featuring composite creatures from Hittite and Syro-Hittite corpora. Her study sheds light on the magical and protective attributes of these creatures, emphasising their embedded meanings. Iria Souto Casto considers the interaction between iconography and text on votive stelae from Ramesside period Egypt. She examines the role of these stelae as a means of private communication between humans and the divine, serving as identity markers and expressions of personal beliefs. Additionally, Souto Casto underscores the distinction between the perspectives of the literate few who could comprehend the texts and those who viewed the stelae without understanding the written content.

The dynamic interplay between medium and visual communication comes to light in three compelling contributions. A collaborative effort by Agnese Vacca, Valentina Tumolo, Georges Mouamar, and Stephen Lumsden scrutinises the Early Bronze Age seal-impressed vessels from the Northern Levant. This joint paper systematically dissects both the characteristics of the ceramics and the iconographic repertoire, aiming to unveil the meaning behind the depictions and discern the vessels' functions. Metoda Peršin, in her contribution, endeavours to unravel the messages conveyed by potmarks incised on vessels from Early Bronze Age contexts along the Lebanese coast. By scrutinising the signs themselves, their placements, and the pairings of signs with vessels, this paper contributes to a deeper understanding of the elaborate system to which this relatively undeciphered medium of communication belonged. Maria Silvana Catania's study explores the private Tombs of the Theban Necropolis. Here, she

meticulously disentangles the complex relationship between text and scenes, rituals and recitations, monumentality, and location. Catania's work reveals how these tombs play a vital role in preserving and transmitting personal, family, and cultural memories, showcasing the profound connection between visual representation and the perpetuation of cultural memory.

As argued by Bernbeck and Pollock, archaeological work is inherently entangled in the 'production of heritage', carrying in the process a myriad of paradoxical cultural, political, social and intellectual 'underpinnings'.[3] The two contributions in **Session 7** offer a direct and indirect exploration of various aspects related to the intricate relationship between archaeology and cultural heritage. These aspects include the underlying processes shaping heritage development, the reflection of political ideology and colonialism in museology, and the ensuing politics of objectification, memory, and memorialization. Both contributions underscore the pivotal role played by sound archaeological research and the formulation of timely research questions.

Lamia Sassine critically deconstructs the labelling of specific materials as Phoenician, both in research and museum contexts. Tracing this classification back to an inherited graeco-roman view of the ancient world. Her case studies shed light on the challenges associated with adhering to a so-called Phoenician identity in research. Sassine advocates for a balanced contextual approach to the study of material culture, proposing that museums hold the key for archaeologists to re-examine artefacts in a more comprehensive light.

Cinzia Pappi presents the integrated approach adopted by her research, the Archaeological Survey of Koisanjaq/Koya Project. Her work exemplifies the significant potential that arises from combining traditional archaeological fieldwork and survey methods with modern radar sensing technology and the inclusion of oral sources. Additionally, she emphasises the crucial role of engaging local stakeholders, academics, and communities in advocating for the development of conscientious measures that ensure proper and sustainable preservation of the cultural landscape. Pappi recognizes that these diverse voices are essential for shaping policies that genuinely reflect the values and needs of the communities involved in the cultural heritage preservation process.

Archaeological material, be it textual sources or material remains, has a great - and mostly unexplored - potential to contribute to our understanding of ancient state economies.[4] Drawing upon a variety of archaeological findings and textual data, thoroughly examined within the broader socio-political contexts, the papers presented in **Session 8** vividly illustrate the diverse economic landscapes of the ancient Near East. The authors direct our attention towards specific facets such as craft production, specialised working groups, shops and markets, and social and trade networks. Through these lenses, the contributions collectively highlight the significance of employing a spectrum of methodologies to shed light on the intricate mechanisms that governed ancient economies.

Eivind Heldass Seland's keynote contribution lays the foundation for the papers in this session. He provides an overview of the historiographical background of studies on ancient economies, contextualised within recent theoretical and methodological advancements. Emphasising the merits of New Institutional Economics, Seland illustrates how it facilitates the examination of trade through the lens of social networks. His case study on Roman trade networks in the east underscores the utility of various network analysis models in making sense of scenarios with limited evidence.

Takehiro Miki's contribution brings attention to an often-overlooked facet in the analysis of craft production, namely skill. Focusing on six ceramic vessels with identical motifs from the Chalcolithic

[3] Bernbeck and Pollock 2007.

[4] Smith 2004.

site of Tall-e Bakun A in Iran, Miki employs a skill score analysis derived from quantified pottery attributes. The results yield compelling observations, providing insights into the vibrant reality of pottery production.

In a meticulous analysis of 60 texts from the Persepolis Fortification Archive of the Achaemenid era, Yazdan Safaee reconstructs our understanding of the role and identity of a specific specialised working group: female weavers. Through a careful examination of etymology, epigraphic details, and textual content, he sheds light on the multifaceted aspects of the female weavers' presence, enriching our knowledge of their significance within the broader socio-economic context of the Achaemenid era.

Redirecting attention to the economic role of shops within an urban setting, Hassan El-Hajj explores two distinct types of shops uncovered in the Roman Colony of Berytus. Through a thorough examination of these establishments, his paper underscores the complex interplay of factors shaping the economic dynamics within the urban environment.

In the final paper in this session, and this volume, Naseem Raad embarks on an exploration of the maritime commercial networks of the Roman port of Berytus. His comprehensive approach in the study of a distinctive type of amphora employed in the wine trade unveils insights into the economic trajectory, growth, and decline of the city within the broader context of socio-political external developments.

In conclusion, the second volume of the conference proceedings weaves a rich tapestry of scholarly inquiries presented across three insightful sessions. The case studies presented in Session 3 delve into the layers of meaning embedded within the material culture of the ancient Near East, unravelling the concealed life behind textual and visual representations. Session 7 navigates the entanglement between archaeology and cultural heritage studies, underscoring the importance of sound research and timely questions, advocating for an integrated contextual approach and highlighting the merits of combining traditional fieldwork with modern technology and community engagement. The diverse perspectives presented in Session 8 offer a multitude of perspectives that vividly illustrate the diverse economic landscapes of the ancient Near East. Collectively, all these papers not only deepen our understanding of the region but also underscore the interdisciplinary nature of archaeological research, enriching our appreciation of the interconnected facets of this fascinating region.

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Session 3 —
Visual and Textual Forms of Communication

Meaning and Meaningfulness in the Visual Arts: The Akkadian Legacy in the Ur III Period

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Abstract

This session rests on the foundational assumption that visual and textual forms convey messages; they are a type of communication and expression. As scholars of the ancient world, one of our responsibilities is to ascertain what these messages were in the past. This introduction to the session examines this assumption and considers the complexity of the endeavor. Beginning with an exploration of the basic concepts that are bound up in the assumption, including communication and meaning, it surveys some of the primary ways in which scholars approach the question, in particular iconographic and semiotic approaches, on the one hand, and phenomenological and materiality-based approaches on the other hand. Arguing for the need to consider both meaning and meaningfulness, the final part examines a case study of the responses by the Ur III period rulers to their Akkadian predecessors and proposes a distinction between the felt and embodied meaningfulness of architecture and the discursive and self-conscious meaning of representational monuments.

Keywords

Iconography, Semiotics, Phenomenology, Materiality, Ziggurat

Introduction

The organizers of the sixth Broadening Horizons conference proposed a session on visual and textual forms of communication in order to 'try to decipher the messages' that visual and textual forms carry. In their explanatory materials for the conference, they note the multiplicity of such messages as well as the diversity of ways in which these messages may be received and interpreted. Serving as introductory remarks for this session, this short contribution considers some of the concepts and assumptions that underpin the session's premise. It begins with a brief overview of the twin notions of communication and meaning, focusing on the aspect of meaningfulness. Four approaches to accessing meaning and meaningfulness, located in two distinct clusters, are then presented: iconography and semiotics, on the one hand, and phenomenology and materiality, on the other. Such a short essay cannot do justice to these topics, but a quick summary presents their theoretical and methodological contours. In the final section, I explore the implications of the theoretical discussion in the case of the Ur III period in southern Mesopotamia at the end of the third millennium BCE. Examining the differing means by which the Ur III rulers engaged with, preserved, curated, or effaced their predecessors of the Akkadian Empire, I propose that meaning and, most critically, meaningfulness operate along a spectrum from consciously aware and discursive forms to more felt and embodied sensory forms. Sensitivity to this full range of meaningfulness, even when its accessibility may elude our grasp, best serves an approach to ancient objects and monuments.

Communication and meaning

Communication can be understood to be the expressing or exchanging of information, ideas, thoughts, or feelings between two or more people. It is, therefore, an inherently social concept, assuming both shared practices and structures between the communicators, as well as the presumption of unknowns: that is, the material that requires communicating. When we consider the act of communicating, we tend to assume that there is meaning that is being communicated. In the process of communicating, meaning is conveyed. At the same time, it is now fully acknowledged that there is a plurality of meanings, which are always fluid and in flux. The organizers note that 'images and text can convey a plethora of messages to express identity, belief, feelings, perceptions, dominance or power.'

Yet, what exactly is meaning? One could say that to articulate a meaning is to explain what something is. But here we run into complications, particularly when we acknowledge the fluid and multiple nature of meanings. I turn to a much different context than the Ancient Near East in my consideration of meaning. The social learning theorist Etienne Wenger in his book, *Communities of Practice*, defines meaning as, 'a way of talking about our (changing) ability – individually and collectively – to experience our life and the world as meaningful.'[1] With Wenger's definition, we shift from a notion of meaning as essentially stable and inherent – in other words, a sense that the meaning exists outside of us and is simply waiting to be accessed by us – to a notion that the viewer's experience generates the meaning.

We can trace this tension between stable, inherent meaning, and fluid, multiple meanings through various disciplinary approaches to Ancient Near Eastern art. We can also see a concurrent shift that Wenger's definition captures: that from meaning (as a bounded, concrete thing) to meaningfulness (as a phenomenological experience). In the following, I will briefly trace some of the fluctuating registers of meaning and meaningfulness by way of the dominant methodological approaches to Ancient Near Eastern art, namely, iconography and semiotics, on the one hand, and materiality and phenomenology, on the other.

Iconography and semiotics

Iconography and semiotics are first and foremost concerned with meaning as it is conveyed through a principal notion of the sign.[2] Formalist, structuralist, post-structuralist, and deconstructivist frameworks undergird these two approaches. Iconography, as pioneered in the early and mid-twentieth century, offers an essentially formalist approach to meaning. While iconography is often contrasted with formalism – the content versus form opposition – the practice of iconography often rests on a formal reading of a work.[3] In this way, iconography associates meaning with specific forms or motifs, each form effectively containing within itself its meaning, even if that meaning must be obtained by the scholar through some kind of verbal text.

Erwin Panofsky's three-step iconographic method, as the main type of iconographic analysis to be practiced in art history, is well known.[4] Forms dominate the first stage of pre-iconographic description, in which a close attention to the motifs of an artwork provide a thick description. In the second step, these motifs are then understood as signs – often referred to as 'symbolic forms' – that encode culturally shared meanings (or what Panofsky termed 'conventional' meaning). To actually get at these meanings, the art historian relies on written texts, often of a literary nature. The quest for meaning in the visual

1 Wenger 2008, 5.
2 Damisch 1975; Hasenmueller 1979; Preziosi 1998, 227-233.
3 See Hatt and Klonk 1988, 96.
4 Panofsky 1939; Panofsky 1955; Holly 1984; Lash 1996.

realm almost always leads to the textual realm in iconographic studies.[5] The third stage of the method – the iconological – is the most ambiguously defined, requiring what Panofsky termed 'synthetic intuition' of the essential tendencies of a specific culture. The final iconological step has proven particularly challenging due to its ambiguous definition, and most studies concentrate primarily on the second, iconographic step – a step that relies heavily on knowledge of literary sources, which are understood to lie behind and motivate the representational rendering.

While iconography locates meaning within the boundaries of a work of art's forms, in effect taking those forms as signs of a larger cultural realm, semiotics destabilizes the relationship between the forms – as signs – and meaning. Drawing upon linguistic and philosophical/metaphysical theorists, most notably Charles Sanders Peirce (1834-1914) and Ferdinand de Saussure (1857-1913), art historical semiotic approaches derive from the perception of art as an ideal sign-maker.[6] Semiotics views culture conceptually as a field replete with signs, each of which refers to something other than itself, and it studies the ongoing processes of sign-use, sign-making, and sign-reading.[7] In semiotics, meaning exists and is generated outside of and in between the 'forms-as-signs,' in contrast to iconography, in which meaning is tethered to the sign-forms.

Early semiotic approaches derived from structuralist theory understood meaning to derive from sets of internal oppositions and differences within a closed system.[8] The structures, whether of language, culture, or symbolic forms, were essentially static and binary in nature. While meaning now existed between sign-forms and was not solely attached to a given sign-form as in iconography, these inter-sign relations were taken as structured binaries, such as male/female, exterior/interior, public/private, etc. To discern meaning, then, required the scholar to first establish the structure of the socio-cultural system in which the sign-forms originated. This idea underlies the contextual approach, in which the 'context' stands for the socio-cultural system.[9] To accurately define the context is to discover the meaning. The problem, of course, is not only where to draw the boundary between the object itself and its context, but whether the context divulges meaning any more readily than the object.[10]

It is this aspect of continual deferment of meaning that motivates post-structuralist and deconstructivist critiques, in particular those advanced by Jacques Derrida, of the static and unchanging nature of structuralist approaches.[11] If meaning might constantly be sought elsewhere, through further context or additional data, then meaning itself should be understood as diachronically always fluid. It is only in the relay between sign-forms that meaning can be glimpsed, sideways so to speak. The dynamic nature of meaning-making through time such that no one meaning could ever be fixed permanently leaves the researcher on very shaky ground, with little specificity to hold onto by way of explicated meaning. It is for this reason that post-structuralist and deconstructivist approaches to Ancient Near Eastern art have found fewer adherents in the field.[12]

The question then is how to apply a concept of meaning that embraces its dispersed, fluid, and slippery nature in an analysis of ancient art works? It is here that the shift to meaningfulness can be productive. To return to Etienne Wenger, 'Meaning: [is] a way of talking about our ... ability ... to experience our

5 Damisch 1975, 30-31.
6 See, e.g., Bal and Bryson 1991; Wolf *et al.* 1992.
7 Bal and Bryson 1991, 174.
8 Bal and Bryson 1991, 177.
9 Hodder 1991.
10 Culler 1988; Bal and Bryson 1991, 177; Bryson 1992; Dilley 1999.
11 Bal and Bryson 1991, 177.
12 But see, e.g., Bahrani 2003.

life and the world as meaningful.'[13] For Wenger, meaning is not a thing to be found, but rather a way of expressing our world as meaningful. This conception verges on the tautological – something is meaningful because it is expressed, and it is expressed because it is meaningful – and yet this tautological aspect is in fact a valid indicator of meaningfulness. We may not be able to pin down a single or even multiple specific meanings; we may never be able to know what something precisely meant to any given individual or at any given time. However, we can get a firmer hold on meaningfulness in varying degrees, and more specifically on what constituted meaningfulness in different past situations. Here we have the crucial distinction between a meaning – something that is other than what it is – and that which is full of meaning, even if that meaning is potentially fluctuating, multiple, or undefinable.

Phenomenology and materiality

With this shift, we can turn to approaches of phenomenology and materiality in order to consider the meaningfulness of affect and experience as fundamental contributors to the processes of human engagement with the material world. As has been noted by several scholars recently, the term 'materiality' has gained widespread credence across the humanistic and social science fields, and has a multitude of conceptual bases folded into it.[14] Within the disciplines of art history and archaeology, materiality can embrace studies that range from the technical analysis of specific materials and processes of making to more theoretically involved conceptualizations of the interrelationship between the material and human worlds. Here, I use the term materiality to signal not just the material properties or techniques of manufacture of the works under study – although the term certainly calls for a close and serious commitment to those – but more significantly to signal the fundamental ways in which physical things act in the world and on human subjects. That is, their agency and affect.

The larger conceptual framework of phenomenology provides an especially productive way by which to assess material affect, while also extending the purview beyond individual things to assemblages and spaces. Phenomenological approaches derive from studies of the first half of the twentieth century by scholars such as Edmund Husserl, Martin Heidegger, and Maurice Merleau-Ponty, who considered the structures of experience and consciousness as the basis for philosophy.[15] In particular, the human body in the world is seen as central. The work of these scholars laid the foundation for recent interest in understanding sensory qualities – seeing, hearing, and touch being the most prominently considered – as well as broader notions of perception, including time, memory, emotions, and the self.[16] Physical things and material surroundings play an important role, as they provide the catalyst for, and the arena within which, human experience takes place.[17] There can be no human experiences without the material world in which we are all enmeshed.

In thinking about the perception of experience in ancient life, we might consider questions of self-awareness and consciousness. A significant strand of materiality studies argues that much of what we experience is felt at a pre-analytic or unconscious level.[18] That is, we might be quite unaware of how our lives are shaped and constrained by the material world around us. Take, for example, furniture. The type of furniture and its arrangement in space shapes human behavior and interactions, often without our awareness that it is doing so. That we sit in chairs facing a speaker, while the speaker stands and lectures to us, structures social dynamics and hierarchies in ways of which we might be only peripherally cognizant.

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13 See footnote 1, above.

14 See, e.g., Pollock 2016, 277.

15 Smith 2018.

16 On sensory studies in the Ancient Near East, see Hawthorn and Rendu Loisel 2019; Neumann and Thomason 2022.

17 See, for example, Malafouris 2013.

18 With respect to architecture, see Pallasmaa 2014; Böhme 2017.

What then happens to meaning in such frameworks? If in iconography and semiotics, meaning is hidden in a linguistic network that requires decoding, in phenomenological and materiality studies, meaning becomes amorphous and submerged. In such a proposal, it may not be possible to identify any specific concrete meaning, but rather one can identify meaningfulness: times, places, things that contribute to, or indeed constitute, meaning for those who experience them. It is important to note that these approaches to the study of meaning need not be exclusive, and that indeed, both concrete meanings – even if temporary – and meaningfulness comprise important areas of study. To pursue one does not negate the significance of pursuing the other. Looking at the rich assemblage of papers gathered for this session, it is clear that there are many different ways of studying the questions of visual communication, messages, and meaning.

Meaning and meaningfulness in late third millennium Mesopotamia

In the final part of this contribution, I would like to follow the two main paths of pursuing meaning and meaningfulness that I have outlined above through a case study from southern Mesopotamia that investigates the ways in which the Ur III Dynasty responded to the legacy of the preceding Akkadian rulers. I contrast architectural spaces – their affective qualities residing in and stemming from a pre-analytical, fully embodied spatial experience – with figurative monuments and their discursive, ideological representativeness. Specifically, I look at the destruction of Akkadian sacred spaces in contrast to the preservation of Akkadian victory monuments.

Toward the end of the third millennium BCE, the Akkadian rulers, including the founder of the dynasty, Sargon, and his grandson, Naram-Sin, created a strikingly new image of kingship from that which had preceded them, emphasizing their role as charismatic leaders whose central achievement was the unification of southern Mesopotamia and territorial expansion beyond.[19] Their accomplishments, however, were relatively short-lived, the kingdom disintegrating around 200 years later. Shortly after the fall of the Akkadian state, a new territorial entity established itself around 2100 BCE, based at the city-state of Ur in the south. The ancient literary text known as the Sumerian King List identifies this as the third such dynasty to be associated with the city of Ur, supplying the modern scholarly designation: Third Dynasty of Ur, or Ur III for short.

Little archaeological material survives from the Akkadian period.[20] The capital of Agade has eluded discovery, and remains from other southern Mesopotamian sites are scarce. The dynasty is best known from a series of monuments excavated at the Elamite city of Susa in southwestern Iran, where they were taken as military booty in the twelfth century BCE, and from royal inscriptions copied by Old Babylonian period scribes at the beginning of the second millennium, several hundred years after the end of the Akkadian kingdom.[21] Both the absence of architectural remains and the preservation of royal monuments can be attributed in the first instance to the Ur III rulers, and it is this discrepancy in the curation of the Akkadian royal legacy that I would like to present as a case study in different approaches to meaning.

In contrast to the meagre remains from the Akkadian period, the rulers of the Ur III dynasty, most notably Ur-Namma and his son and successor Shulgi, have left especially impressive architectural reminders of their time in power, in particular massive ziggurat structures. These monumental stepped platforms, designed to raise a temple skyward, constructed a potent physical legacy for the Ur III rulers that still dominates the landscape today.[22] During the Ur III period, at least four similarly designed

[19] For a comprehensive overview of both the Akkadian and Ur III periods, see Sallaberger and Westenholz 1999.
[20] Nissen 1993, 99; Sallaberger and Westenholz 1999, 19.
[21] For the monuments, see Amiet 1976; Harper *et al.* 1992, 159-182; for the texts, see Gelb and Kienast 1990.
[22] On ziggurats in general, see Edzard 1987; Sauvage 1998; and McMahon 2016.

Figure 1: *View of the Ur III ziggurat at Ur. Photo by Michael Lubinski, 2006; https://commons.wikimedia.org/wiki/File:Ziggarut_of_Ur_-_M.Lubinski.jpg.*

ziggurats were erected at the southern Mesopotamian cities of Ur, Eridu, Uruk, and Nippur. The ziggurat in the precinct of the moon god Nanna at Ur is the best preserved and best known of these (**Figure 1**).

The concept of the ziggurat appears to have been derived from the long sequences of rebuilding required by mudbrick architecture, that eventually elevated the temple itself on a platform well above the surrounding area – although there is debate about whether the ziggurat in its Ur III form represents a natural evolution of the earlier temples or a starkly new formulation.[23] Regardless of which developmental scenario is correct, the archaeological evidence shows that the Ur III ziggurats, while built in exceptionally close proximity to earlier temple structures, did not incorporate the earlier remains into their platforms, but rather constructed the platforms *de novo*, with a huge solid brick core enclosed in a baked brick retaining wall. For example, at Eridu, a sequence of temple structures stretches from the Ubaid period around 5500 BCE up to the end of the Uruk or Jemdat Nasr periods around 3000 BCE. The clear superimposition of successive temples at Eridu charts the gradual elevation of each structure, with what appears to be the encasing of the entirety in a massive platform at the very end of the Uruk or during the Jemdat Nasr periods.[24] The Ur III ziggurat sat just to the northeast of these earlier temples, partially overlapping them at the southern corner of and directly adjacent to the ziggurat itself. However, the Ur III ziggurat platform is built substantially brand new, and there is a significant gap in architectural evidence between the Uruk/Jemdat Nasr building and the new ziggurat.

The question arises, therefore, whether the Akkadian rulers in fact devoted resources to building projects in the sacred precincts of these southern cities, and some scholars have considered their

[23] For the development and possible antecedants of the Ur III ziggurats, see Van Ess 2001, 323-326.

[24] Levels VI-XVI predate the Uruk period; levels I-V are remains of platforms belonging to Uruk period temples. Safar *et al.* 1981.

architectural interventions to have been minimal.[25] Nonetheless, circumstantial evidence of various forms – though rarely architectural – does point to both cultic patronage and construction activity. Although only very fragmentary remains of construction from the Early Dynastic or Akkadian period were found on the main mound at Eridu,[26] an extensive Early Dynastic settlement existed on a smaller mound one kilometer north, and it seems likely that some iteration of temple structure existed that would have spanned the periods separating the Ur III from the Uruk period, suggesting that the Ur III ziggurat platform obliterated these intervening structures. Unfortunately, the state of preservation of the tell as a whole, which was extremely denuded through erosion and dust, does not permit any further understanding of the relationship between the Ur III ziggurat and the preceding periods.

Likewise, at Uruk, the Ur III ziggurat represents an entirely new construction that sits directly on the Early Dynastic period terrace, with no evidence of building activity during the period in between.[27] At Ur, also no trace of Akkadian period buildings survives in the precinct of Nanna.[28] Nonetheless, the appearance of the so-called Disk of Enheduanna, found in later levels of the Giparu,[29] as well as the fact of installing an Akkadian royal daughter as high-priestess of the moon god Nanna,[30] suggests that the Akkadian rulers were significant patrons of the temple, and would have been involved in, at the very least, the maintenance, if not the renovation or rebuilding, of the moon god's temple. Several dedicatory items bearing inscriptions of the Akkadian rulers were also recovered from the excavations that attest to their activity in the temple precinct.[31]

At Nippur, however, traces survive that point unequivocally to Akkadian royal construction projects within the Ekur sacred precinct itself (**Figure 2**).[32] Underneath an Ur III period temple to Enlil built on the ground alongside the massive remains of the ziggurat in the Ekur complex, bricks bearing the names of Naram-Sin and Shar-kali-sharri point to the existence of Akkadian period construction in the so-called 'pre-temple strata,' even though it is not possible to know the specific form this construction took (**Figure 3**). Aage Westenholz reconstructed a major rebuilding scheme begun by Naram-Sin and completed by Shar-kali-sharri according to an archive of tablets and other inscribed objects found in the fill of Ur-Namma's later platform.[33] These 'Akkadian' texts – so-designated because of their use of the Akkadian language, the characteristic Akkadian ductus of their writing, and dating according to the Akkadian and not local Nippur calendar – appear to be the records of a single massive enterprise to rebuild and furnish the Ekur. Westenholz concludes that 'Even though a good many details in these texts are quite obscure, they make it abundantly clear that this rebuilding was of grandiose proportions.'[34]

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25 Van Ess 2001, 325.

26 Safar *et al*. 1981, 46, 64.

27 Van Ess 2001, 13, 24, 28, 323. The foundation of the Eanna ziggurat was approximately 0.8 m high and was set into a pit dug into the 'Archaisch I' level (Van Ess 2001, 28).

28 Woolley 1939, 5.

29 University Museum, Philadelphia, object no. U.6612; Gadd and Legrain 1928, 5: no. 23; Woolley 1955, 49, pl. 41.

30 In addition to the disk, Enheduanna's presence at Ur is attested in two cylinder seals found at the site, one inscribed for an official named Adda (U.9178; Gadd and Legrain 1928, 72: supplement no. 272; Woolley 1955, 49; Woolley 1934, 358, pl. 212, no. 307), and the other whose name does not survive (U.8988; Gadd and Legrain 1928, 71: supplement no. 271; Woolley 1955, 49; Woolley 1934, 358, pl. 212, no. 308), as well as the sealing of her scribe (U. 11684; Woolley 1955, 49; Woolley 1934, 358, pl. 212, no. 309).

31 These include a green quartz mace-head with an inscription that may be attributed to Sargon (U.221; Gadd and Legrain 1928, 3: no. 6), a calcite mace head inscribed for Rimush (U.206; Gadd and Legrain 1928, 4: no. 10), several vase fragments with inscriptions of Rimush, including one (U. 231) said to be booty of Elam dedicated to Sin (U.251+253, U.231, U.7807, U.6333; Gadd and Legrain 1928, 3-4: nos. 8-10, 5: no. 22); and a granite bowl inscribed for Naram-Sin and then rededicated by a daughter of Shulgi (U.6355; Gadd and Legrain 1928, 5-6: no. 24). See, in general, Woolley 1955, 49-51.

32 There also appears to have been Akkadian building activity in the nearby Inanna temple, although the evidence is not secure (see Zettler 1992, 38).

33 Westenholz 1987, 21-58.

34 Westenholz 1987, 24.

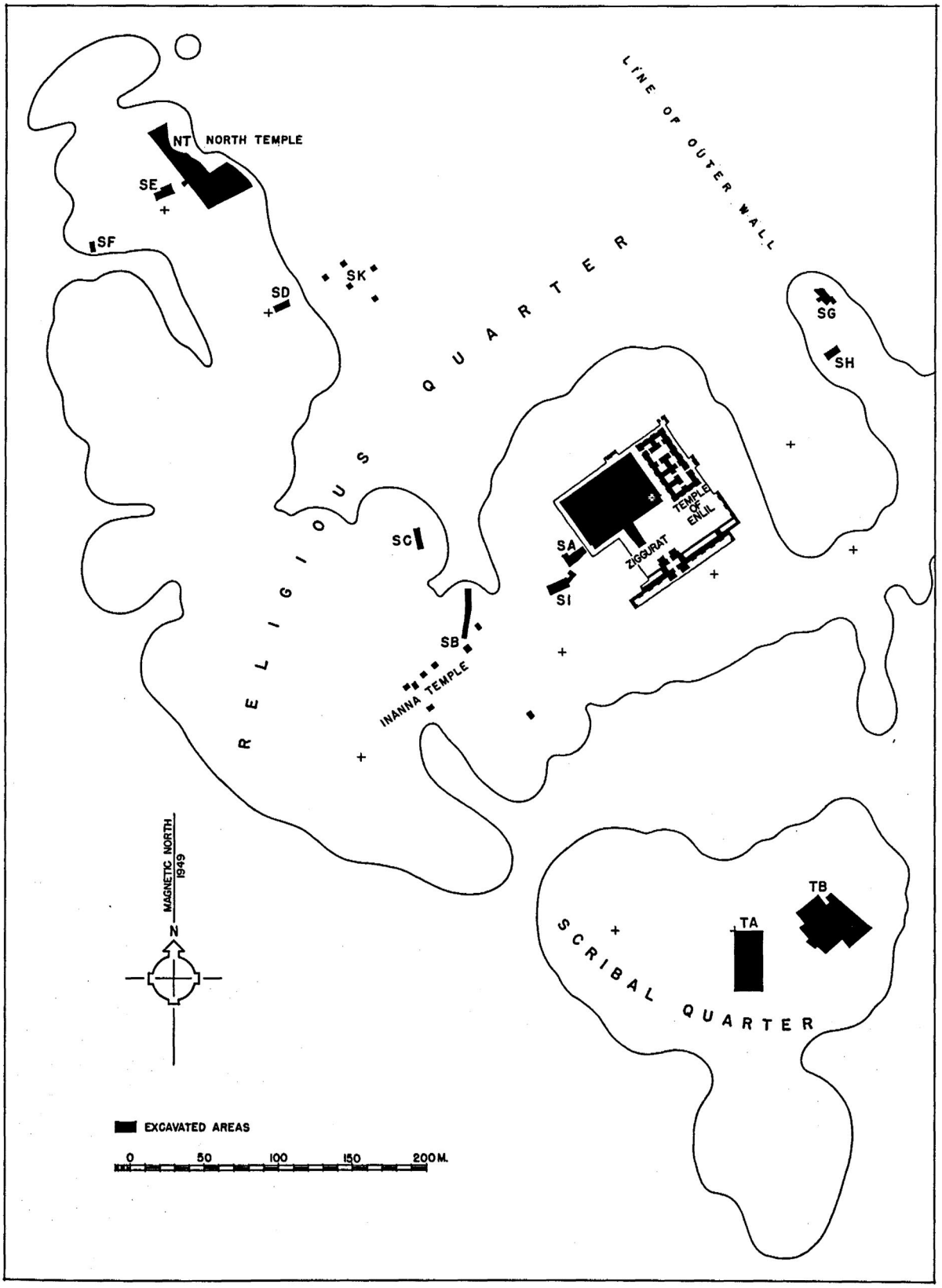

Figure 2: *Plan of eastern Nippur. McCown et al. pl. 5. Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.*

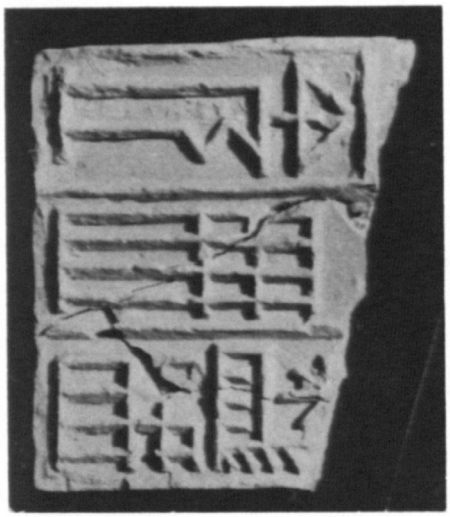

Figure 3: *Fragment of Shar-kali-sharri brick stamp from Nippur. McCown et al. pl. 31:1. Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.*

Two pairs of large, heavy door sockets with matching inscriptions from the reign of Shar-kali-sharri appear to have marked two gateways leading into the main courtyard of Ekur where the main temple structure would have stood.[35] Based on references to large amounts of gold, silver, and copper, and to large scale sculptural decorations in the form of mythical creatures, Westenholz reconstructs the Akkadian period Ekur, imagining that 'Ekur must really have been a dazzling sight, gleaming with gold and copper and filled with works of art in the best Akkadian tradition.'[36]

It is here at Nippur, also, that we can see in greater detail the construction strategy of the Ur III kings and how it destroyed the architectural achievements of those who preceded them. The excavators of the Oriental Institute expedition in the 1940s and 50s, Donald McCown and Richard Haines, describe the Ur III construction process of the Enlil Temple as follows: first, a base or footing was laid in deep trenches below the existing (that is, Ur III period) ground level; then a substructure was built on top of this footing.[37] This substructure was filled to the top and then a second substructure built on top of it, and its rooms and surrounding area were likewise filled in. It was only after these three steps that the visible walls of the temple were built on top of the upper substructure. The inscribed Akkadian period bricks formed fragments of pavement preserved in between the walls that created the footing of the Ur III foundation.[38] These pavement fragments belong to a series of four floors assigned by the excavators to the Enlil Temple Level VI (pre-temple strata) and can be seen best in room 17 of the plan (**Figure 4**).

In order to create such a complex foundation, the Ur III builders had to excavate down to a significant depth, destroying what they dug through. Since the Early Dynastic material is also largely missing at these sites, it is possible that there was no Akkadian period building, and that the Ur III rulers were only digging through Early Dynastic period constructions. However, the circumstantial evidence from Ur and the direct evidence from Nippur suggest there were Akkadian period buildings, or at the very least, Akkadian renovations and embellishments. The textual evidence studied by Westenholz would seem to

35 Westenholz 1987, 23, nos. 42A&B and 43A&B.
36 Westenholz 1987, 25.
37 Now the Institute for the Study of Ancient Cultures of the University of Chicago. McCown *et al.* 1967, 5.
38 McCown *et al.* 1967, 3-4.

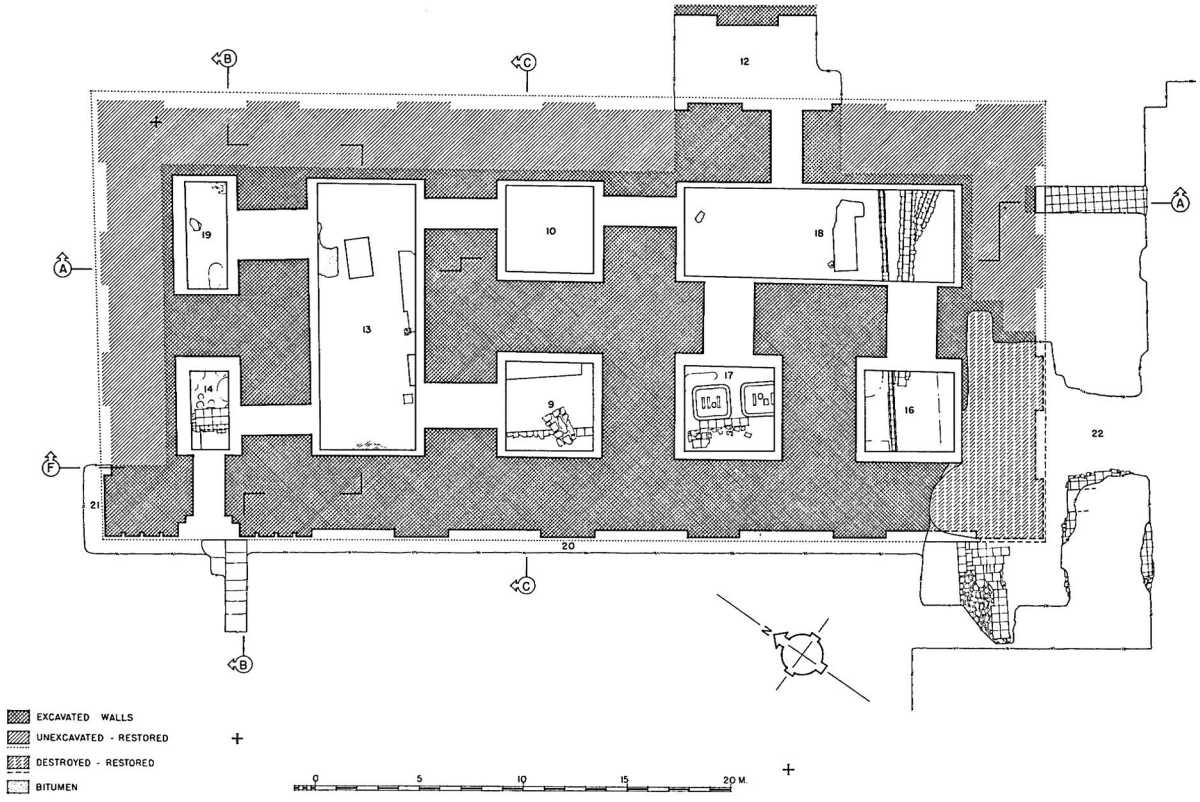

Figure 4: *Plan of Enlil Temple level VI, Nippur. McCown et al. pl. 15. Courtesy of the Institute for the Study of Ancient Cultures of the University of Chicago.*

indicate that the building activity at Nippur was extensive. Thus, we can assume that at least at Nippur, most likely Ur, and possibly elsewhere, the Akkadian kings left behind a sacred landscape marked by their construction activities that was subsequently destroyed by the building activities of the Ur III rulers.

While there appears to have been a dismantling of Akkadian monumental sacred space through the construction of Ur III ziggurats, in contrast, inscribed representational remains of the Akkadian dynasty in visual form not only lingered, they appear to have been actively curated and cultivated. For example, the victory stele of Naram-Sin probably stood in the courtyard of the Ebabar temple complex at Sippar until the twelfth century BCE when it was taken as war booty by the Elamite ruler Shutruk-Nahhunte (**Figure 5**).[39] The stele is exemplary today for its clearly articulated depiction of conquest in a distinctive artistic style.[40] Many other, less well-preserved Akkadian period royal monuments appear to have remained accessible in temple courtyards well into the second millennium, as is evident in the twelfth-century inscriptions of Shutruk-Nahhunte added to several of them found at Susa.[41] As a group,

[39] For the most recent assessment of the monument, with full bibliography, see Eppihimer 2019, 36-89.

[40] Eppihimer (2019, 39) cautions against the over privileging of Naram-Sin's stele at the expense of other Akkadian monuments.

[41] In these, he claims to have taken monuments from Agade, Sippar, and Eshnunna, including Naram-Sin's stele. See Amiet 1976, nos. 11 (Eshnunna), 13 (Agade), and 27 (the 'Victory Stele of Naram-Sin'; Sippar).

Figure 5: *Victory stele of Naram-Sin, Susa. Limestone; Height: 200 cm. Musée du Louvre Sb 4. By Rama, CC BY-SA 3.0 fr,* https://commons.wikimedia.org/w/index.php?curid=2966753.

these monuments present the newly emerging and carefully conceptualized rhetorical representation of Akkadian kingship.

Additionally, Old Babylonian period copies of inscriptions taken from Akkadian sculpture still standing in various temple courtyards attest not only to their longevity in these locations even beyond the Ur III period, but also to their continued relevance to the scholarly practices of the early second millennium.[42] Again, Nippur stands out for its wealth of evidence in this respect, with at least seven tablets that assemble inscriptions from monuments dedicated by the Akkadian kings Sargon, Rimush, Manishtushu, and Naram-Sin that had been erected in the courtyard of the Ekur, and which still stood there at the time the copies were made in the early second millennium.[43] That these monuments appear to have been displayed in the courtyards and used for scribal training, as opposed to installed in the ritual spaces of the temple, further suggests the element of curation – that is storage, preservation, and display – rather than ongoing active participation in cultic activities.[44] Given that these courtyards, such as the one in the Ekur at Nippur, were entirely new constructions during the Ur III period, we must assume that when the older temple structures were destroyed, these monuments were carefully removed and kept safe until they could be reinstalled in the new structure, perhaps in a different architectural context than their original site of installation.

There were, therefore, two very different reactions by the Ur III rulers to the Akkadian legacy. On the one hand, sacred spaces, which from a phenomenological and materiality-based perspective would have generated felt meaningfulness – the meaningfulness of being an embodied entity moving through the space of the temple precinct and its furnishings – were destroyed and entirely remade through the monumental construction of the Ur III ziggurats. On the other hand, royal victory monuments, which from an iconographic and semiotic perspective encode specific narratives of conquest and superiority – that is, a clearly articulated meaning of royal prerogative and territoriality – were preserved, curated, and re-erected by these very Ur III rulers. As embodied experience, spatial meaningfulness has profound potential to bind together collectivities on a visceral level. It is especially powerful due to its unacknowledged, non- or pre-discursive aspect, and therefore potentially more dangerous and harder to counteract than more explicitly articulated representations. In contrast, because of their discursive and self-aware nature, monuments such as the stele of Naram-Sin both demanded and received intellectual engagement, lending themselves to active curation in order to control their contexts of display and encounter.

Conclusion

The literary composition known as The Curse of Agade recounts the disgrace of Naram-Sin that leads to the collapse of the Akkadian Empire. What is Naram-Sin's transgression that angers the gods so much? He is accused of destroying the Ekur in Nippur, going against Enlil's pronouncements 'like a robber plundering the city.'[45] The composition was known during the Ur III period, if not created during this time, and it points to a number of noteworthy aspects relevant to this essay. First, the supposed destruction of the Ekur by Naram-Sin, when paired with the archaeological evidence for his reconstruction activities in the sanctuary, suggests in fact the exact opposite, namely that the Akkadian rulers most likely made large-scale interventions in the Ekur. However, its emphasis on the negative consequences resulting from the unsanctioned destruction/reconstruction of Enlil's temple, signals the post-Akkadian unease with the sacred architectural landscape wrought by the Akkadian rulers and

[42] Buccellati 1993.

[43] Gelb and Kienast 1990, 129-292.

[44] Although these two uses of monuments may not have been mutually exclusive, as Evans (2012, 76-110) has demonstrated for Early Dynastic votives statues, many of which were set up in courtyards and entrances instead of in cult cellas.

[45] Cooper 1983, 55.

permits an understanding of the motivations underlying its obliteration by the Ur III rulers. Above all, The Curse of Agade reveals an awareness of the power embodied by architectural structures and their spatial experience. Nonetheless, the very fact of composing such a text and its ongoing presence in the Mesopotamian literary canon can be positioned alongside the preservation and curation of Akkadian period monuments such as Naram-Sin's victory stele. In both instances – legendary narrative and preserved victory monuments – complete erasure of memory was not the goal. The goal was instead a more powerful reframing and manipulation of that memory.

In conclusion, meaning and meaningfulness can be conveyed through multiple means, with varying degrees of conscious and unconscious articulation. Both meaning and meaningfulness can be experienced on the 'felt' level, or can be analytically conceived for discursive consumption. In our attempts to recover meaning in the past, we must stay attuned to both the diversity of communication media and the range among the forms of meaning, bringing an array of theoretical and methodological approaches to our analyses, from iconography and semiotics to materiality and phenomenology.

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Sexuation of Animals' Bodies in the Bullae from Qasr-I Abu Nasr

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Abstract

This study of the sealings from the site of Qasr-I Abu Nars (Fārs, Iran) focuses on the body's sexuation in the animals' figurations. It questions, trough this biologic and iconographic element, the principles of images' formation in Late Antique Iran (Sasanian dynasty, 224-651 CE). Each identified species from the corpus of Qasr-I Abu Nasr is compared to the biological data indicating the presence or absence of sexual dimorphism for the organic referent. This provides an iconographic typology of the body's sexuation: male, female, non-materialized body's sexuation, and non-materializable sexuation. This paper shows that the male body is chosen because it is the one bearing the most representative elements of it species. In the cases where the sexual dimorphism is less evident but could be figurated through the representation of the genital organs, that figuration is not systematically made. It indicates that, in terms of semantic for the animals' figuration, the important element is the species, and not the male body. Finally, the sexuation of bodies shows that in Late Antique Iran, the animal image is built on the observation of nature, not as an exact minutes, but as an experience of viewing.

Keywords

Animal Studies, Late Antiquity, Iranian Art, Body Sexuation, Zoo-iconography

Introduction

From the site of Qasr-I Abu Nasr (a Sasanian fortress, 6 km from present-day Shiraz, in Fārs), 505 bullae dated to the end of the Sasanian period (5th-7th centuries CE)[1] have been found. Bullae are clay balls on which were affixed one or more seals, and which were attached to a document or a good, as a way of authentication or protection. Traces of the seals' impression on the clay bullae are called sealings. From the sealings imprinted on the Qasr-I Abu Nasr bullae, 465 different seals have been identified. From these 465 seals, this study focused only on those with an animal representation. These are in fact the main iconographic group of the corpus: from the identified seals from Qasr-I Abu Nasr bullae, 249 seals (i.e., 53% of the corpus) present an animal image in the form of a whole animal, parts, composite or hybrid animal, and the majority bears a single animal iconography. This iconographic theme is, along with busts and offices' seals, one of the main component of Sasanian glyptic.

The corpus of bullae from Qasr-I Abu Nasr is amongst the largest from the Sasanian period, and it is entirely published,[2] giving us access to a complete corpus with an archaeological known provenance. The reason this study focuses on Qasr-I Abu Nasr bullae is that it allows the reflection to be built on a whole contextualized corpus. Of course, for the Sasanian period, other important bullae corpuses

[1] Dating suggested in Frye 1973, 48, based on the Middle Persian scripture from the sealings that present a late cursive form.

[2] Frye 1973.

excavated on the Iranian plateau are known and currently under study: bullae from Takht-I Suleyman, Seyfabad and Tappe Bardnakoon.[3]

The site of Qasr-I Abu Nasr was excavated during three seasons from 1923 to 1935 by a team from the Metropolitan Museum of Art led by Jospeh M. Upton, Charles K. Wilkinson and Walter Hauser.[4] The finds from the site were divided between the host country and the institution conducting the excavations. Concerning the bullae, half of them are now kept in the Metropolitan Museum of Art in New York, and half in the National Museum of Iran in Tehran. There are not much publications about the excavation at the site, just some preliminary reports and an important overview of the MET's material by D. Whitecomb.[5] The Sasanian bullae, seals and coins were published by R.N. Frye and P.O. Harper.[6]

The site of Qasr-I Abu Nasr is a settlement with a fortress and a lower town located at a major crossroads between the North-East road toward Istkhar and the West road to Bišāpūr.[7] Due to its position, it is more a focal point for the settlements in the valley, and less a center for provincial administration as was Shiraz located just few kilometers away.[8] The study of the coins excavated at the site helped establish its occupation sequence. During the late Parthian period, the fortress was erected, and the lower town expanded around it. There was then an important expansion period of the fortress at the end of the Sasanian period, and it was continually occupied until the beginning of the Islamic period. During the Abbasid period, the fortress was abandoned, and a small settlement developed west from the site. This settlement is the only inhabited part of the site at the end of the 14th century CE.[9] The fortress at Qasr-I Abu Nasr is combined with a platform whose function is a little mysterious. This platform has parallels with the ones excavated at Kish by P.R.S. Moorey,[10] who, based on comparisons with Choche and Ctesiphon, has suggested that they are part of an admirative complex. That suggestion is followed by D. Whitcomb for the function of the platform at Qasr-I Abu Nasr, dismissing the idea of a religious function, in which case the platform would have served as a stand for a fire altar.[11] Qasr-I Abu Nasr was according to this interpretation a small administrative center, with an important military dimension, in relation both with the development of settlements in the valley and the more important center near Shiraz.

The bullae were found in two of the fortress's rooms, these were destroyed by fire, as attested by the layer of ashes on the ground. In one of the rooms, the bullae were piled up, suggesting that they were kept aside, once being detached from a document or a good. In the other room, the bullae were scattered on the ground, so the fire should have burnt the documents or goods on which they were still attached.[12] Unfortunately, the publication of the bullae does not indicate which bullae came from which room.

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3 Takht-I Suleyman: Göbl 1976; Moradi and Hintze 2020; Moradi and Hintze 2022; Moradi and Hintze 2023. Seyfabad: Ghasemi *et al* 2017. Tappe Bardnakoon: Khosrowzadeh *et al.* 2020.

4 Yates 2018.

5 The preliminary reports: Hauser 1933; Winlock *et al.* 1934; Wilkinson 1965. The overview of the MET's material: Whitcomb 1985.

6 Frye 1973. This publication was completed by P. Gignoux's work on the Middle Persian inscriptions, see Gignoux 1974 and Gignoux 1985.

7 Frye 1973, 9.

8 Whitcomb 1985, 15.

9 Whitcomb 1985, 21-22.

10 Moorey 1978.

11 Whitecomb 1985, 107.

12 Frye 1973, 15-17.

This study focuses on a specific iconographic group, namely *whole animals*, and on a specific feature, which is the sexuation of the body. The term 'sexuation' reflects the 'binary description of the bodies sexuation'.[13] It usually appears along with the term 'gender' which is used for what regards 'the socio-cultural construction of this description',[14] understood here as an historical category.[15] The socio-cultural construction of this description will not be examined here, being part of a larger study on the animals' figurations at Qasr-I Abu Nasr.[16] What we present here is the formal analysis of the binary description of the body's sexuation for the Late Antique Iranian bestiary, its main iconographic features and the reflections it generates in term of apprehending the production of images in Late Antique Iran.

For the Late Antique Iranian studies, the question of genders has mostly been raised within the context of the Zoroastrian studies and the role that each gender, although studies were mostly centered on women, played in the Zoroastrian vision of the world.[17] Sex and gender were rarely discussed, as a subject *per se*, within the visual culture of Late Antique Iran, but important overviews of the imagery of women were published for the glyptic and the silverware corpuses.[18] In recent years, more gender studies-oriented works have been done, questioning the role of gender in the Sasanian society.[19]

The sexuation of the animals' bodies as represented in the Late Antique Iranian repertoire was not much questioned. Animals' imagery has been studied in the framework of Zoroastrian studies, and looked at as representations of celestial elements, concepts or doctrines from the Zoroastrian Church, as known to us from the textual sources.[20]

Willing to go beyond that Zoroastrian approach, my work on animals' iconography aims at practicing zoo-iconography. This method of animal image's analysis is built on a formal zoo-technical analysis taking into account the morphological, anatomical and behavioral aspects specific to each animal species, and which integrates these elements in the traditional iconographic analysis.[21] Within the practice of zoo-iconography, this study focuses on a precise anatomical point, the sexuation of the bodies. Actually, this work deals with what of, and how, the binary description of the bodies' sexuation was rendered in the animals' figurations. These questions lead to two further questions. First, is there an impact of bodies' sexuation on the image's semantic within sealing's practices in the context of authentication, protection or validation? Second, how can the bodies' sexuation of animals enlighten more largely the principles of images' formation in Late Antique Iran? This paper will focus on the second question, the elements for the first question being published in a larger study on animals' imagery from Qasr-I Abu Nasr bullae.[22]

13 Löwy and Rouch 2003, 7.

14 Löwy and Rouch 2003, 7.

15 Following Löwy and Rouch (2003, 14) on the French meanings of 'genre', which, in their analysis, can be either a 'catégorie classificatoire atemporelle' when gender precedes sex; or a 'catégorie historique' when sex precedes gender.

16 Poinsot forthcoming a.

17 Chosky 1988; 2002; Jong 1995.

18 Glyptic: Malekān and Mohammadifar 2013. Silverware: Olson 2009; Rouhani 2018.

19 Dezamkhooy 2012; Emrani 2009.

20 On the Zoroastrian iconology of animals' imagery, see Jakubiak 2011; Grenet 2013; Compareti 2009. This is a relevant approach, given the importance of the Zoroastrian Church in the state and society of Sasanian Iran.

21 Poinsot forthcoming b.

22 Poinsot forthcoming a.

Iconographic categories according to the sexuation of bodies

Representation of sexual dimorphism

The formal analysis of the animal iconographies in the corpus was carried out according to these questions: for the species identified, is the sexuation of bodies visible in nature, and if so, is it materialized in the image? We therefore begin by presenting the species identified.[23] We then look at whether these species display visible body sexuation, known as sexual dimorphism. In the case of sexual dimorphism, the anatomical and morphological features that distinguish males from females are recorded. Finally, we asked whether or not these elements can be materialized in an image, and if so, which elements of sexual dimorphism can be distinguished in the animal iconographies of Qasr-i Abu Nasr. The answers to these questions are given in the following summary table (Table 1).

Animals	• **Sexuation of body**[24]	**Representation of body's sexuation**
Anas platyrhynchos[25] – mallard (D.22, D.47, D.71, D.73, D.327, D.336, D.378)[26]	• Iris color • Beak Color • Feathers' colors • Genital organs (visible only by internal examination of the cloaca)[27] • Curved feathers down the back for male[28]	• Curved feathers down the back • None of the other elements can be represented on a glyptic image
Anatidae – duck (D.43, D.49, D.364, D.366)	• Iris color • Beak color • Feathers' colors • Genital organs (visible only by internal examination of the cloaca)[29]	
Bos taurus indicus – zebu (D.29, D.215, D.222, D.252 to D.255, D.257)	• Prominent fat bump[30] • Large horns[31] • Visible testicles and sheath for male • Visible udders for female	• Prominent fat bump • Large horns • Visible sheath on some representations (D.29, D.252, D.255)

Table 1: *Species from the bullae of Qasr-I Abu Nasr, the elements for body's sexuation and their representation.*

[23] According to the criteria and process developed in Poinsot 2018, 137-182.
[24] As known by anatomy (genital organs), morphology (sexual dimorphism) and mating behavior.
[25] Species' name attributed to the iconography, according to the process of identification as developed in Poinsot 2018, 137-182, and following the species' name given here.
[26] Seals from Qars-i Abu Nasr having this particular species, numbers attributed in Frye 1973.
[27] Mouronval 2016.
[28] Firouz 2005, 125.
[29] Mouronval 2016.
[30] Sokouri *et al.* 2007, 38.
[31] McDade 2003, 12.

Animals	• **Sexuation of body**[24]	**Representation of body's sexuation**
Camelus dromadarius – arabian camel (D.118, D.155, D221, D.286, D.354, D.356)	• Male larger[32] • Visible testicles and sheath for male • Visible udders for female	• Mostly represented as a single subject, without any feasible comparison and without scale, it is of course not possible to materialize a larger animal • No visible genital organs on representations
Canis – canid (D.67, D. 390 (?), D. 448 (?), D.308, D.314)	• Male larger[33] • Visible testicles and sheath for male • Visible udders for female	• Mostly represented as a single subject, without any feasible comparison and without scale, it is of course not possible to materialize a larger animal • Visible udders on some representations (D.308, D.314) • Testicles and sheath not represented
Cervus – Stag (D.11, D.187, D.214, D.217, D.263, D.293, D.294, D.418)	• Male larger[34] • Visible testicles and sheath for male • Visible udders for female • Antler for male	• Antler
Equus caballus – Horse (D. 150, D. 158, D. 225, D. 227, D.228, D. 229, D. 231, D. 238, D. 239 to D. 243, D. 300)	• Well-developed canines on the jaws for male[35] • Visible testicles and sheath for male[36] • Visible udders for female	• Some representations with a visible sheath (D.150, D.228, D.238)
Falconiforme – Raptor (D.41, D.56, D.58, D.60)	• Monomorphic species[37]	
Felidae – Felid (D. 223, D. 311, D. 312, D. 315)	• Male larger[38] • Visible testicles and sheath for male • Visible udders for female	• Mostly represented as a single subject, without any feasible comparison and without scale, it is of course not possible to materialize a larger animal • Testicles and sheath, or udders, not represented

Table 1 cont.: *Species from the bullae of Qasr-I Abu Nasr, the elements for body's sexuation and their representation.*

[32] Myers *et al.* 2023.
[33] Myers *et al.* 2023.
[34] Myers *et al.* 2023.
[35] Eisenmann 2023.
[36] Myers *et al.* 2023.
[37] Centena-Cuadros *et al.* 2017, 153.
[38] Myers *et al.* 2023.

Animals	• Sexuation of body[24]	Representation of body's sexuation
Gallus gallus domesticus – Rooster (D.57)	• Crinkled crest • Barb • Tail with panache feathers • Spur on the tarsometatarsus[39]	• Crinkled crest • Barb • Tail with panache feathers • Spur on the tarsometatarsus
Grus – Crane (D.36, D.40, D.360, D.382, D.383, D.433, D.434)	• Monomorphic species[40] • Genital organs nonvisible	
Lepus – Hare (D.23, D.192 (?), D.237)	• Monomorphic species[41] • Genital organs nonvisible	
Ovis orientalis – Bighorn sheep (D.34, D.62 to D.66, D.205, D.220, D.224, D.246 to D.248, D.250, D.251, D.343, D.389)	• Male larger[42] • Visible testicles and sheath for male • Visible udders for female • Horns forming a complete revolution appear only in mature males[43]	• Horns forming a complete revolution • Visible sheath on some representation (D.62 to D.65, D.250, D.251)
Panthera leo – Lion (D.10, D.27, D.32, D.37, D.50, D.54, D.69, D.121, D.154, D.156, D.157, D.159 to D.176, D.181 to D.183, D.245, D.249, D.320, D.355, D.416, D.430, D.442)	• Mane[44] • Visible testicles and sheath for male • Visible udders for female	• Mane
Pavo cristatus – Indian peafowl (D.72, D.133 (?), D.359 (?), D.365 (?), D.372, D.381)	• Feathers' colors: blue and green for male, brown, gray and white for female • Matting behavior: only male display their train as visual signal directed to the female[45] • Train of feathers for male	• Displaying of the train
Phasianidae, patridge type (D.285)	• Feathers' colors differ in males and females	
Phasianus cholcicus – Pheasant (D.39, D.45, D.46, D.363, D.392, D.432)	• Naked red crop and a fleshy and flexible caruncle, which dangles beside the beak for male[46]	• Representation of the crop and the caruncle
Rodentia – Rodent (D.264, D.435)	• Testicles or udders discernible by close observation	• No representation of testicles or udders

Table 1 cont.: *Species from the bullae of Qasr-I Abu Nasr, the elements for body's sexuation and their representation.*

[39] Clavel *et al.* 1996, 4.
[40] Species with no phenotypic differentiation between males and females (Centena-Cuadros *et al.* 2017, 153). For crane: Mudrik *et al.* 2013, 1254.
[41] Peroux 2003, 1.
[42] Myers *et al.* 2023.
[43] Bon *et ali* 1991, 70.
[44] Aragon 2023.
[45] Harikrishnan *et al.* 2010, 13.
[46] Olendorf 2003, 433-434.

Iconographic categories

The following table is a synthesis of body's sexuation according to the species, as it appears on the seals from the Qasr-I Abu Nasr bullae (Table 2).

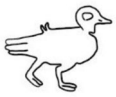
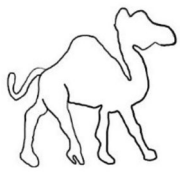
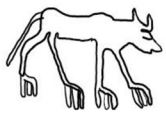
	Visible body's sexuation		**Non visible body's sexuation**	
Species	Male	Female	Monomorphic species – or non-materializable elements	Non-materialized body's sexuation
Anas platyrynchos – mallard	 **D.71**			
Anatidae – duck			 **D.49**	
Bos taurus indicus – zebu	 **D.29**			
Camelus dromadarius – arabian camel				 **D.221**
Canis – canid		 **D.308**	 **D.67**	
Cervus – stag	 **D.11**			

Table 2: *Iconographic categories. All drawings in this table are by the author, based on individual seals, with numbers indicated beneath each drawing as published in Frye (number attributed in Frye 1973).*

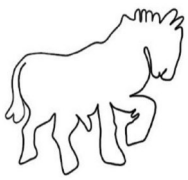
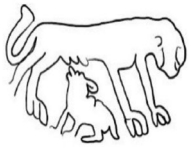
	Visible body's sexuation		Non visible body's sexuation	
Equus caballus – horse	 **D.150**			 **D.158**
Falconiforme – raptor			 **D.41**	
Felidae – felid		 **D.314**	 **D.228**	
Gallus gallus domesticus – rooster	 **D.57**			
Grus – crane			 **D.40**	
Lepus – hare			 **D.23**	

Table 2 cont.: *Iconographic categories. All drawings in this table are by the author, based on individual seals, with numbers indicated beneath each drawing as published in Frye (number attributed in Frye 1973).*

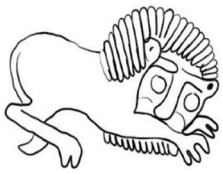
	Visible body's sexuation		Non visible body's sexuation	
Ovis orientalis – bighorn sheep	 **D.62**			
Panthera leo – lion	 **D.37**			
Pavo cristatus – Indian peafowl	 **D.72**			
Phasinidae – *patridge type*			 **D.385**	
Phasianus cholcicus – pheasant	 **D.363**			
Rodentia – rodent			 **D.435**	

Table 2 cont.: *Iconographic categories. All drawings in this table are by the author, based on individual seals, with numbers indicated beneath each drawing as published in Frye (number attributed in Frye 1973).*

Commentary on the iconographic categories

The male as an iconographic tool to identify the species

On the 17 species from the seals used on the Qasr-I Abu Nasr bullae, 14 have an easily discernible sexual dimorphism,[47] and only three species are monomorphic species.[48] There is also the specific case of the *rodentia,* whose genital organs can be seen by close observation, and for which it is hard to say whether the lapicides were able or not to make/record that observation. That feature is just in coherence with what can be observable in the wild, were most of the species have a sexual dimorphism, although for certain species it is very hard to record by the naked eye.

Among the Qasr-I Abu Nasr species with a sexual dimorphism, most of them have anatomical elements that can be transmitted into a formal figuration: the male *anas platyrynchos* and its curved feathers down the back; the male *Bos taurus indicus* and its prominent fat bump, large horns and visible testicles and sheath; the male *Camelus dromadarius* and its very visible testicles; the male *Cervus* and its antler; the male *Equus caballus* and its visible testicles and sheath; the male *Gallus gallus domesticus* and its crest, barb, tail and spur; the male *Ovis orientalis* and its horns; the male *Panthera leo* and its mane; the male *Pavo cristatus* and its train of feathers; the male *Phasianus cholcicus* and its caruncle. In the corpus studied, all of these species are represented as male, with those very same elements represented on the iconographies, with the exception for the *Camelius dromadarius*, which case will be discussed below. We will also discuss the specific case of the *Equus caballus,* whose body's sexuation in the Qasr-I Abu Nasr corpus is not systematic, or even rare, with most of the iconographies belonging to the non-materialized body's sexuation category. To our knowledge,[49] in the corpus of the seals and sealings from the Sasanian period, the species cited at the beginning of this paragraph are represented the same way as in the Qasr-I Abu Nasr corpus: meaning as male, and with the very same morphological elements of sexual dimorphism materialized in the iconographies.

Some of the Qasr-I Abu Nasr species have elements of sexual dimorphism that cannot be transmitted into a formal figuration: the *Anatidae* and the *Phasianidae*, whose feather color changes cannot be rendered on a seal; the *Canis* and the *Felidae* that have a larger size of the male which cannot be visible when it is a single subject. For these last two species moreover, the sexual organs (testicles or udders) are also not really visible on the animal. These species are represented, in the bullae from Qasr-I Abu Nasr, with no visible body's sexuation, as is also the case, to our knowledge, within the seals and sealings corpus from the Sasanian period. As for the rest of the identified species, the *Falconiforme,* the *Grus*, the *Lepus* and the *Rodentia*, the non-visible body's sexuation is in coherence with what can be observed in the wild.

When it comes to building the bestiary's images, we can draw two conclusions from the Qasr-I Abu Nasr corpus and the study of the sexual dimorphism. The first is that the sexual organs are not used as a way of distinguishing between male and female, all the more in species with very subtle sexual dimorphism, as it is the case for the *Camelus dromadarius,* the *Canis* and the *Felidae*. So it appears that choosing between the male and the female is not what matters the most when it comes to the representation of a species, but for certain particular cases that we are discussing in the second part. What matters the most in the species' representation, and that is our second conclusion, is the ability of identifying the species. The sexual dimorphism is taken into account in that specific context. When it exists and it can be

[47] *Anas platyrynchos; Anatidae; Bos taurus indicus; Camelus Dromadarius; Canis; Cervus; Equus Caballus; Felidae; Gallus gallus domesticus; Ovis orientalis; Panthera leo; Pavo cristatus; Phasianidae; Phasianus cholcicus*.

[48] *Falconiforme; Grus; Lepu*s.

[49] Based on a review of publications of seals and sealings from the Sasanian period, gathered in a relational database developed for the PhD work of the author,, comprising over 3000 records of seals and sealings showing the iconography of a single subject animal (Poinsot 2018).

transmitted into a formal figuration, it is used as a way of clarifying the animal's identification. In animal species, it is generally the males who have the most developed and visible physical characteristics, due to intrasexual selection (favoring the strongest males and therefore leading to the development of important offensive or defensive elements), and intersexual selection (selection pressure exerted by females).[50] What matters is not as much representing a male, but a specific species: what is represented is an *anas platyrynchos,* and not another species of *anas*; what is represented is a *Bos taurus indicus* that cannot be confounded with a *Bos taurus* also attested during the Sasanian period,[51] etc.

About some cases

Figuration of females

The corpus of seals from the Qasr-I Abu Nasr shows that female animals are represented in a particular iconographic context, which is a suckling scene (D.304; D.307;[52] D.308; D.313; D.314). And to our knowledge, in the corpus of seals and sealings of the Sasanian period, there is no other case where a female animal is clearly figurated.

It is worth mentioning here the case of the seal D.32, depicting a lion, identifiable thanks to its mane, with a cub sitting at its feet and seemingly suckling. That is a surprising iconography that have led to assert that 'the artist has been extraordinarily naive in his representation of the cub, which sits in a most unnatural pose, and in the error of giving a lioness a mane, thereby making the female indistinguishable from the male.'[53] The unnatural pose of the cub could be explained if one does not regard this scene as a suckling one, but as playing one. Play is particularly important in a cub's learning process (for hunting, mating, social relations...), and while it is more the lioness's domain, the male lion can also play.[54] On the other hand, the 'error of giving a lioness a mane' could also be explained following what has been demonstrated on the importance of clarifying the species. Once engraved onto a seal, it can be difficult to differentiate a lioness from another type of *Felidae,* and using a male and its very recognizable mane can be a way of depicting more clearly the species.[55]

The Camelus dromadarius

On all the seals from the Qasr-I Abu Nasr corpus, the *Camelus dromadarius* is represented walking at an amble,[56] which is actually its gait,[57] unlike many quadrupeds that walk in diagonal biped. In all the seals also, the foreground hind leg is moving forward, with the formal consequence that the formal testicles cannot be visible. The aim was certainly not to hide the testicles, but neither was it to show something that is clearly visible on the animal. The dromedary is an animal with little sexual dimorphism, but it is also a highly recognizable species, so you don't have to go through the male to identify it as such. In this iconography, the important thing is to recognize a dromedary; the fact that it is male is of little importance.

50 Hancok 2012.

51 Mashkour *et al.* 2017.

52 On this seal, a she-wolf is represented suckling two little humans, in a form and style that makes this scene clearly related to the imperial roman motif found on coins and gems of the she-wolf suckling Romulus and Remus (Frye 1973, 75).

53 Frye 1973, 76.

54 Morin-Garaud 2001, 113-116.

55 Other occurrences of the suckling lion have been published in Gyselen 1993, 33.5-8, pl. XXXIII, so it may not be a 'naïve artist' but a playing scene used in seals and sealings from the Sasanian period.

56 D.118, D.155, D.221, D.286, D.354, D.356.

57 Balsan 1968, 48.

The horse

Within the seals of Qasr-I Abu Nasr, very few horses are represented with visible sexual organs (three occurrences on 13), as it is more largely the case in the seals and sealings from the Sasanian period. The non visible sexual organ is not related, as it is the case for the *Camelus dromadarius*, to a way of representing the horse walking. The representation of the horse ambling, the foreground leg hiding the sex, is much less systematic than for the camel. Some seals of Qasr-I Abu Nasr show horses represented as diagonal bipeds (D.158), or the hind leg represented as in the amble, but the foreground leg backwards, which in this case would make the sex of the male visible (D.228; D.231; D.239; D.240). This last posture is also known from Sasanian art. Horses are depicted in this posture in a number of rock-reliefs.[58] For example, the rock-relief of Ardāšīr I (224-241 CE) at Naqsh-e Rustam represents an investiture scene. The king on horseback faces the god Ahura-Mazda, also on horseback. The latter gives the king a ribboned ring in a gesture of designation of legitimate authority. The horses are in a posture that is also very often found on Sasanian seals. Three limbs are placed on the ground, with one front limb raised at right angle. The two hind legs are plumb diagonally, with the foreleg in the back, making the testicles visible. In the rock-reliefs, this particular representation is linked to the context of royal iconography, in which it is appropriate to show the king's horsemanship and his ability to dominate his mount, which, uncastrated, is of a fiercer temperament.[59] Interestingly enough, the one horse with a very visible penis in the Qasr-I Abu Nasr seals is the only one represented as a mount (D.150). It is possible that the figuration of a stallion, the sexuation of the body in this image, is linked to the function of the animal as a mount, related to what we find also in the Sasanian rock-reliefs: as a way to depict a seasoned and talented horseman. In the Qasr-I Abu Nasr corpus, this same posture is found on nine of the 16 seals depicting a horse.[60] As in all equine representations of Qasr-I Abu Nasr, the sexual organ of the horse is never visible and this is a characteristic that seems to be common to the figurations of the horse in the Sasanian seals.[61] Thus, the seals of the late Sasanian period attested at Qasr-I Abu Nasr repeat, or continue, an equine iconography developed from the beginning of the period, at least in rock reliefs. However, this equine iconography seems to have a slightly different scope in the corpus of seals. Indeed, the absence of a sexual organ, although it is clearly visible on the rock reliefs, shows that it is probably not a question of depicting a spirited mount in the corpus of seals.

Accentuating the body's sexuation

One final case deserves our attention: species represented by what is clearly identifiable as males, sometimes—but not always—depicted with visible sexual organs. That is the case with the *Bos taurus indicus,* the *Equus caballus* and the *Ovis orientalis.* Of all the species in the corpus represented by a male, these are also the ones whose sexual organs are the most visible on the animal. In the case of deer and lion, it is much more difficult to distinguish them on the moving animal. This element of variation, which is not necessary to identify the species, may also be a question of 'style', the testimony of a personal way of representing the animal, this 'personal' may cover a particular lapicide, a workshop, a school, etc.

As for the question of whether the accentuation of the sexuation of bodies has a significant impact on sealing practices, i.e. if there is a choice on the part of the person commissioning the seal, or is it

[58] The posture described below is found on at least five rock-reliefs from the Sassanian period: the rock-reliefs of Šāpūr I (224-242 CE) at Naqsh-e Radjab, Naqsh-e Rustam and Bišāpūr, and the rock-relief of Bahrām I (273-276 CE) at Bišāpūr.

[59] For more details, see Poinsot 2022.

[60] Those nine seals are: D.158; D.225; D.228; D.229; D.238; D.240; D.242; D.243; D.338. Other seals with a horse: D.149; D.150; D.227; D.231; D.239; D.241; D.300.

[61] See Gyselen 1993, A.14-36, pl. XXXVII.

significant for the user or the recipient, this will be published in a more comprehensive forthcoming study.[62]

Conclusion

In the Qasr-I Abu Nasr corpus, the body's sexuation of the represented animals can be divided in four categories: male, female, non-materializable and non-materialized. The species from the Qasr-I Abu Nasr corpus belong mainly to the first and the third category, in coherence with the readiness of making the species identifiable, along with the difficulties of rendering the richness of colors and subtle changes visible in nature. The existence of the fourth category, although it concerns only a small number of species, is a clue that the body's sexuation does not aim to describe a gender but to indicate a specific species.

In the Sasanian bestiary, the binary description of body sexuation takes place above all in a context of species identification. The socio-cultural construction of gender may have only a relatively minor impact on the understanding of the bestiary' images. In order to truly understand its semantic impact on the images a broader study on animals' gender in Iranian late Antiquity should be first developed. Nevertheless, from the point of view of the semantics of animal iconography during this period, it is first and foremost the animal that is significant, and it is therefore the anthropo-zoological link that must first be explored.

In terms of the creation of images in Late Antique Iran, this study confirms one important aspect of the creative process, namely the observation of nature. Indeed, the animals on the seals from Qasr-I Abu Nasr record very precise elements regarding the morphology and anatomy of the species. However, what is rendered of this observation of nature is not so much a precise account but an experience of observing that nature. Thus, the precise account of the observation of nature would be to draw the lion's testicles, because we know they exist. The account of the experience of observing nature is not to show these testicles, because you do not see them, or very rarely, when you look at a lion.

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[62] Poinsot forthcoming a.

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Generations of Writing: The Secondary Inscriptions of Darius' *Tacara* at Persepolis

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Abstract

Engraved on the ruins of the *tacara* (palace) of the Achaemenid king Darius (r. 522-482 BCE) at Persepolis are hundreds of inscriptions, in different languages and scripts, added over the course of 2500 years. These range from the monumental trilingual cuneiform inscriptions commissioned by the Achaemenid king when the structure was built, to the most cursive of graffiti in Persian, English and Arabic – a few lines of poetry or even just a name – left there by travellers. The visitors have often come from far afield to admire the sumptuous ruins of a long-vanished era, situated in the collective imaginary somewhere between history and myth. If most of these inscriptions have been studied individually, a comprehensive analysis of the *tacara*'s writings remains to be attempted. This paper proposes to approach the *tacara*'s corpus of epigraphic texts as a whole, by reflecting on the way in which the inscriptions articulate with one another both spatially and linguistically. Drawing on works by anthropologists of writing as well as historians and archaeologists outside of Iranian studies who have tackled similar phenomena, I hope to investigate a possible methodology for studying such a case of long-term accumulation of writings in a single place and retrace the creation of this apparently disparate set of texts.

Keywords

Persepolis, Epigraphy, Graffiti, Sasanian, Performativity

The graffiti of Persepolis: the case of Darius' *tacara*

Engraved, scratched, pecked and painted onto the polished stones of Darius' *tacara* (palace) at Persepolis are hundreds of inscriptions and drawings, added to the monument over 2500 years.[1] On a single doorway or window frame we find, juxtaposed to one another: the trilingual cuneiform inscriptions of the site's founder, the Achaemenid king Darius (r. 522-482 BCE); Middle Persian inscriptions commissioned by a Sasanian prince, 700 years later; the Arabic Kufic inscriptions of Buyid emirs (945-1055 CE); bilingual Persian and Arabic inscriptions by Injuid rulers (1325-1353 CE); a saying attributed to Ali ibn Abi Talib, followed by a few Persian verses by Sa'di that are repeated some decades later by another visitor, in explicit reference to his predecessor; Hebrew graffiti with a star of David; the dated signatures in Roman capital letters of British, French, Dutch and other travellers from the 17th to the early 20th centuries, many of whom had themselves visited Persepolis to take mouldings of (or hack out)[2] the Achaemenid inscriptions; petroglyphs representing livestock and even board games – a Nine men's Morris and a game of noughts and crosses. The Persian and Arabic inscriptions seem to outdo each other in beauty,

[1] Both the exact meaning of the Old Persian term *tacara* and the function of the building it designates remain difficult to determine. For a recent exhaustive study of the literature dedicated to the *tacara*, see Filippone 2019.

[2] Cornelis de Bruijn carved out part of the Old Persian inscriptions that adorned the king's robes on the southern doorway leading to the *tacara*'s portico (Schmidt 1953, 223-224).

offering a magnificent display of different calligraphic styles – Kufic, Naskh, Thuluth, Nastaʿliq and their many variants.[3]

The mud brick walls that filled the gaps between the stone doorways and window frames disappeared long ago, burnt in the destruction of the Terrace by Alexander in 330 BCE or eroded away.[4] With only the buildings' stone skeletons still standing it is sometimes difficult to determine where one structure stops and another begins, even for someone who has studied the plan of the Terrace before doing their fieldwork.[5] Yet, the many writings of the *tacara* scrupulously respect the space delineated by the building's southern portico, with graffiti carved on the internal and external surfaces of its architectural elements but never venturing onto those of adjacent monuments – none, for instance, is carved in the main hall. In fact, at Persepolis, graffiti are to be found in only three very precise locations, without spilling over. After the *tacara*, the second big cluster of writings is located at the Terrace's main entrance, on the Gate of all Nations. Several travellers' names are repeated in both those places, as if their authors had been careful to sign wherever they were allowed – or wherever they felt they ought to. We meet some of these same visitors in other archaeological sites of ancient Iran: the names of all the members of Colonel William Fenwick Williams' delegation, carved together at the *tacara* occur again, dated to the same year 1850 at Taq-e Bostan; that of William Kennett Loftus (1820-1858 CE) reappears at Susa.[6] Finally, a third, much smaller, cluster of Hebrew graffiti was recently brought to light, scratched on the glossy black stones of the so-called 'Harem of Xerxes'; these would date back to the Sasanian period.[7] As in the case of the *tacara*, the signatures of Hebrew travellers appear alongside a dozen Sasanian graffiti representing princes of this dynasty clad in patterned trousers and tunics, some mounted on richly harnessed horses, and a roaring lion—elements of iconography that might evoke a royal hunting party. A chessboard, probably much later in date, and a swastika make up the rest of this building's graffiti.

Although such *anepigraphic* graffiti frequently occur elsewhere at Persepolis, not even the smallest inscription can be found on the more impressive and ornate buildings of the Terrace such as the Apadana or the broken columns of the Hundred Columned Hall. In this respect, the many writings of Persepolis obey the first rule of graffiti: they are not scattered at random throughout the site but collect in specific places – visitors write where others did. In fact, tourists now need a special permit to enter the *tacara*, for whenever the monument is open to visitors, they apparently feel the irresistible urge to add their name to it, each time damaging and disfiguring the structure's ancient stones a little more. How can we explain this need to carve one's name next to that of others, to add one's mark to this 'monument of signatures'?[8] How may we approach such a disparate corpus of miscellaneous texts, in different languages and from different historical periods, left by kings and private visitors alike?

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[3] For work on Islamic epigraphy, Islamic scripts as well as the use of inscriptions in Islamic art in architecture, see for instance Blair 1998; Gharipour and Cemil Schick (eds) 2013.

[4] For an exhaustive study of the history of the archaeology of the Persepolis Terrace, see Mousavi 2012.

[5] I would like to thank the Institut français de Recherche en Iran (IFRI) for awarding me a three-month travel grant (2018), with which I was able to go to Iran for my fieldwork. I also warmly thank the Institute for Humanities and Cultural Studies (IHCS) and in particular Prof. Dr. Cyrus Nasrollāhzādeh who applied for a research visa on my behalf, allowing me to visit the archaeological sites of Fars. I am very grateful to Dr. Owlad Hoseyn, vice-president of Persepolis, for giving me permission to visit the *tacara* and to study its inscriptions. Finally, I wish to thank my colleague M. Abedi, who travelled to Persepolis in December 2019 and took additional pictures of the *tacara*'s graffiti to complement my own, and for his help with reading the Persian and Arabic graffiti.

[6] Simpson 2005, 39-40, 65-66.

[7] Razmjou 2005, 325-326.

[8] This is how C. Guichard describes the marble mantelpiece in Heliodore's chamber at the Vatican, covered in artists' signatures, see Guichard 2014, 69.

Approaching the *tacara*'s epigraphic corpus as a whole

The *tacara*'s inscriptions have been variously studied for their linguistic and historic value, and mainly separately, by scholars of each language and historical period. The inscriptions of Darius (r. 522-486 BCE) and Xerxes (r. 486-465 BCE) joined the corpora of Achaemenid epigraphic texts such as that put together by R. Schmitt, while the two Middle Persian inscriptions (respectively 311 and 327 CE) were first published by R. Frye in a dedicated article.[9] More recently, scholars have based themselves on these two inscriptions to illustrate the obvious symbolic importance that the Achaemenid ruins (330-550 BCE) retained in the Sasanian period (224-651 CE), and the Middle Persian pair joined the wider debate about whether the new Iranian dynasty had kept a historical memory of their predecessors or not.[10] Most of the *tacara*'s Arabic and Persian inscriptions were inventoried by S.M. Mostafavi in his monumental *Land of Pars*, and A.S. Melikian-Chirvani brought to light the allusions to Solomonic prophecy and other core themes of Sufi mysticism in a number of inscriptions from the Islamic period engraved at Pasargadae and Persepolis.[11] As for the graffiti of European travellers, they have been the subject of several articles by S.J. Simpson, who put forward a prosopographical study of several important visitors of the Persepolitan ruins.[12] In his thorough history of the archaeology of Persepolis, A. Mousavi does address a wider selection of inscriptions, but mainly chronologically, and concentrating on the writings of kings, emirs, and sultans.[13] As this brief survey shows, a more comprehensive study of the *tacara*'s writings remains to be attempted.

I would like to suggest that the *tacara*'s writings are carefully integrated with one another and should be considered as forming a whole. They are organised around one another on the rock surface in a deliberately manner: an author's decision to engrave their inscription next to another, older one, or to use the same calligraphic style as an admired predecessor creates a link, a dialogue between two or more texts. Their intricate relationship also presents a linguistic aspect: the inscriptions often explicitly point to one another using deictic pronouns, prepositions, and adverbs of place. Sometimes the reference is more implicit, and an author will incorporate the verses of an older inscription into his composition or develop the same theme by citing a different poem. In this way, the *tacara*'s writings warrant a more encompassing approach, which brings into consideration the inscriptions' materiality and aesthetic qualities, their spatial and textual relationships, without imposing a hierarchy between the works of kings and of private visitors.

An exhaustive analysis of all the *tacara*'s royal and private inscriptions falls far beyond the scope of this essay. Nevertheless, with the help of works by anthropologists of writing such as B. Fraenkel, as well as by historians and archaeologists outside Iranian studies who have tackled similar phenomena, I hope to investigate a possible methodology for approaching such a case of long-term accumulation of writings in a given place and retrace the creation of this apparently disparate corpus of texts. My own research interest is in the inscriptions of ancient Iran: the Old Persian and Middle Persian texts. Yet, to limit myself to these two older strata in this context would be to ignore the intricate relationship between the older inscriptions and those from the later Islamic period. One of the notions I would like to explore and better define with this preliminary study is the performative quality of the inscriptions from my research corpus as being themselves generators of writing and their role as catalysts for the transformation of the *tacara* into a site of memory.

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[9] Schmitt 2009; Frye 1966.

[10] For an overview of the discussion concerning the memory of the Sasanians for their Achaemenid predecessors, see Canepa 2010, 563-564.

[11] Mostafavi 1978; Melikian-Chirvani 1971.

[12] Simpson 2005.

[13] Mousavi 2012.

Exploring the performative aspects of ancient Iranian inscriptions

Within the field of ancient Iranian studies, works that have addressed the performative qualities of monumental rock inscriptions are recent, and limited in number. C. Nimchuk dedicated an article to Darius' foundation charts.[14] These gold and silver plaques were found buried in the foundation of the Apadana's corners and are all engraved with an identical trilingual text in which the king defines the extent of his empire, according to an ancient Mesopotamian tradition. Now, the empire is described from North-East to South-West and South-East to North-West according to four liminal provinces that mark the border between empire and non-empire,[15] a plan that corresponds exactly to the orientation of the Apadana itself, laid out in an X-formation according to those very cardinal directions: the building acts as a microcosm of the Empire. This is also suggested in its iconographic program, which represents long processions of the kingdom's peoples who have come to offer their gifts to the king. The Persepolis Terrace itself is oriented according to the axes of the winter and summer solstices, imparting a cosmic dimension to Darius' reign.

Drawing on this study, M. Cool Root has highlighted the performative role of the monumental Achaemenid gateways, which bear pairs of trilingual cuneiform inscriptions carved opposite one another on the inner facades of the high doorjambs.[16] These texts, most of which are engraved four meters above ground, as on the Gate of all Nations, mark *thresholds* – the symbolic transition between the inside and outside of the royal spaces.

The case of the foundation charts, which were interred at the time of the building's construction and therefore remained invisible to the world from the moment the site was inaugurated, as well as the example of the architectural inscriptions, which were placed too high above ground to be read, raise the question of the readability and visibility of such 'displayed writings' ('*écritures exposées*') – a notion first formally discussed by B. Fraenkel.[17] In the first instance, the buried plaques of gold and silver are granted a certain efficacy by the words of the Achaemenid king with which they are engraved. As to the inscriptions of the gateways, they mark by their very presence the symbolic liminal passageways of the site.

At the *tacara*, a pair of inscriptions on the entrance doorway name the building as the *tacara* and identify Darius as its founder. Inscriptions also label the figures that decorate this doorway: on the folds of their garment, we read 'Darius the great king', and on the opposite jamb, 'Xerxes the son of Darius the king, an Achaemenid'. The ornamental quality of these label-inscriptions, finely engraved like lacework on the royal dress, is striking. It is also through them that otherwise identical figures become different people.[18] In terms of studying the relationship between the *tacara*'s older and later inscriptions, it is remarkable that among the Hebrew graffiti and star of David, scratched many centuries later on the West gateway, several are carefully incised on the folds of the drapery worn by the figures of this passageway:[19] the graffiti consciously and explicitly imitate the Achaemenid practice of incising sculpted

[14] Nimchuk 2010.

[15] [DPh]; Schmitt 2000, 63-64.

[16] Cool Root 2015.

[17] Béatrice Fraenkel, anthropologist of writing (EHESS, Paris), shows that the so-called 'symbolic' function of 'displayed writings' (*écritures exposées*) – these are not destined to be read and therefore do not have a primarily informative function – pertains to the 'illocutory force of writing' and has to be considered in the context of displaying 'practices' (Fraenkel 1994, 110). We could add in light of the Achaemenid foundation charts that symbolic writings can also be the object of 'burying' practices.

[18] [DPa]; [DPb]; and [XPk]; see Schmitt 2000, 53, 98. We could add in line with Cool Root that by 'naming' their foundations with labels carved directly onto the architectural structures, the kings effectively 'create', in an Austinian sense, specialised spaces and monuments (on the notion of performative utterances and 'speech acts', see Austin 1962).

[19] I thank Milad Abedi for this observation.

drapery with writing; they 'quote' the cuneiform label-inscriptions visually,[20] and establish a link with older epigraphic texts that were long since unreadable.

Finally, M. Canepa has interpreted the Sasanian practice of engraving inscriptions on Achaemenid monuments as a 'technology of memory' used by the emerging dynasty to harness the aura and authority of the sumptuous ruins.[21] At the site of Naqsh-e Rostam for instance, the second Sasanian king Shapur I (r. 240-270 CE) had a trilingual inscription engraved on the much older monumental Achaemenid tower, the 'Ka'ba of Zoroaster'; in this rock-cut text, the king details his military victories on the Romans and establishes a foundation for the souls of his ancestors and family. Canepa observes that the different Sasanian rock reliefs at this site are carved directly underneath the Achaemenid tombs and are perfectly aligned with these, so as to continue the vertical arm of their cruciform shape. He proposes to view Shapur I's inscription similarly, as a political device allowing the nascent dynasty to anchor itself in the continuity of a long-vanished Persian empire and to legitimate its claim to power.[22] Canepa's attention to the special role played by the inscriptions' performative power in the Sasanian political re-appropriation of the Achaemenid ruins allows him to move on constructively from the otherwise binary question of whether the Achaemenids were or were not the 'ancestors' referred to in Shapur I's inscription.

Now, Canepa understands the two Middle Persian inscriptions of the *tacara* in a similar perspective: 'microcosmically paralleling' Shapur I's monumental soul foundation at Naqsh-e Rostam, the two Sasanian inscriptions belong to a set of 'memory practices' inherited from the founders of the dynasty, and enable the authors to connect to a glorious Persian past made tangible through its ruins.[23] We may consider, however, that the Middle Persian pair were not engraved by a reigning king of kings, nor are they destined for an audience of subjects: like the majority of the later inscriptions of the *tacara*, they are private mementos carved by travellers passing through Persepolis, in this case a Sasanian prince and an official (a *dādwar*, 'judge') on their way to and from court from their distant provinces.

In this study, I would like to move away from the macro-scale perspective which the notion of a dynastic re-appropriation of the past implies.[24] It is a rich, panoptic approach that helps us to trace the formation of an imperial 'topography of memory', but also tends to overlook the localised, site-specific dynamics at play, denying the individual inscriptions and their medium – the ruins of the *tacara* – a certain agency.[25] I would like to focus instead on the relationship of the inscriptions with their context (natural

[20] I borrow the idea of 'visual quotations' from J. Lerner 2017, who used this wonderful image to describe the revival of Persepolitan imagery in Qajar art.

[21] Canepa 2010; 2015; 2018, 251-270.

[22] Canepa 2010, 580-582, 586-587. For a study of the role of rock inscriptions in the expression of kingship in Persia from the Achaemenid through to the Sasanian period as well as in Islamic period, see Canepa 2015: inscriptions were visual actors of a 'distributed royal self' and their 'tangible presence extended the power and presence of the royal patron beyond the palace and into the landscape' (Canepa 2015, 13).

[23] Canepa 2010, 589-590; 2018, 269-270.

[24] 'Macro-perspectives and network-based models move us away from thinking about monuments as places of site-specific practices', Harmanşah 2017, 62.

[25] The very notion of a 'ruin', and the ways in which ruins affect the visitor, are a core aspect of studying a monument's secondary inscriptions. Far from being passive objects to which people apply meaning, ruins accumulate a history, real or imagined – a biography. In a recent work, it has been pointed out that the fundamental questions raised by the concept of ruins in other disciplines such as history, literature or philosophy have hardly ever been broached in archaeology (Marsh and Jones 2014, 177). Ruins carry an intrinsic sentimental value, perhaps because of their incomplete reality, which fuels the visitor's imaginary and allows for popular interpretations (from Khaqani or Hafez to Joachim du Bellay, numerous collections of poems testify to the extraordinary 'literary' productive capacity of ruins). Vestiges of the past are also instrumentalised by political authorities: in an inscription at the *tacara,* the Qajar king Naser al-Din Shah (1848-1896 CE) declares that he has picked up the fallen ruins and wiped the earth from them (see Mostafavi 1978, 228-229). This dynasty widely incorporated the iconography of Persepolitan 'ruins' in monuments and silverware, effecting a direct link with Persia's Achaemenid past (Lerner 2017). Ruins

and built), with their medium, and above all with each other. Far from enforcing a three-fold approach, I hope to show that these three levels of analysis are suggested by the inscriptions themselves. With precise linguistic tools and formulas that mobilise both spheres of oral and written performativity, they systematically refer to the landmarks around them, to the ruins, and to one another.

The notions of primary and secondary epigraphy: the tacara*'s generations of writing*

Several recent studies have worked towards 'rehabilitating' graffiti as a constituent part of a site, monument or artwork, and have been particularly helpful in approaching the *tacara*'s corpus of inscriptions. S. Dord-Crouslé, who tackles the 'graffitomania' of 19th century travellers in Egypt, interprets the act of adding one's name to an ancient monument as a quasi-ritual performance in which visitors feel they must engage. Like an epitaph, graffiti function as a commemorative monument in transmitting the memory of the visitor's otherwise anonymous existence to posterity.[26] In turn, through its graffiti, a monument acquires a 'historical layering' (*un feuilleté historique*) that endows it with a living memory. Similarly, C. Guichard's study of the graffiti on the Renaissance frescos in Rome calls for a reintegration of these writings, often ignored by art historians, into the work of art.[27] They are the tangible traces of the 'social life' of the work, they trace the evolution of its interpretation and give it a heightened material and symbolic value. Finally, the recent collective work *Scribbling Through History* explores the role of graffiti in 'place-making', with several case studies tracing the long-term accumulation of such writings in certain significant sites.[28] The authors define the act of carving a graffito as an 'event', insofar as it alters a place and can even be at the root of its significance. They also explore the so-called 'and-me phenomenon', or 'injunction of writing', the apparently universal reality according to which we tend to write where others have written (or drawn), where writing invites more writing.

Above all, this work offers a valuable methodology with which to *untangle* the writings of the *tacara* from one another. I have until now used the terms 'inscription' and 'graffito' almost interchangeably, spontaneously preferring 'inscription' for the older or more ornate writings and referring to the little anonymous ones as 'graffiti'. With this terminology, I fall into a crude typology of the *tacara*'s writings which does not account for the inscriptions' relationship.[29] The authors of *Scribbling through History* offer a precious alternative, by putting forward the productive notions of primary and secondary epigraphy. The first is an inscription that belongs to its context in its original state, while the second is a later addition that was not 'planned' for the medium and therefore modifies it.[30] Typically, Darius' trilingual cuneiform inscriptions are primary inscriptions while the two Sasanian inscriptions are a case of secondary inscriptions. Of course, matters are quickly complicated: what should we call Xerxes' inscriptions that continue his father's architectural programme? Above all, do the two Middle Persian inscriptions have quite the same status?

These are the first secondary inscriptions of the *tacara* and they are engraved on the right doorjamb of the portico's entrance (**Figure 1**). They are written in inscriptional monumental Middle Persian script, with detached letters, yet these are far from being the large, deeply engraved and stylised characters spaced

are also surrounded by an ominous, magical aura and at the *tacara* numerous graffiti take the form of *ex voto*s, giving thanks or asking for help.

[26] Dord-Crouslé 2011.

[27] Guichard 2014, 22.

[28] Ragazzoli *et al.* (eds) 2017.

[29] This joins similar discussions concerning the definitional issues and interpretative paradigms applied to the study of epigraphic vestiges developed by scholars working on ancient graffiti (Mairs 2010; Baird and Taylor 2016). Mairs 2010 in particular points out the blurred boundary between inscription and graffito and highlights the 'dialogue' between different graffiti in any given site.

[30] Ragazzoli, Harmanşah and Salvador 2017, 10.

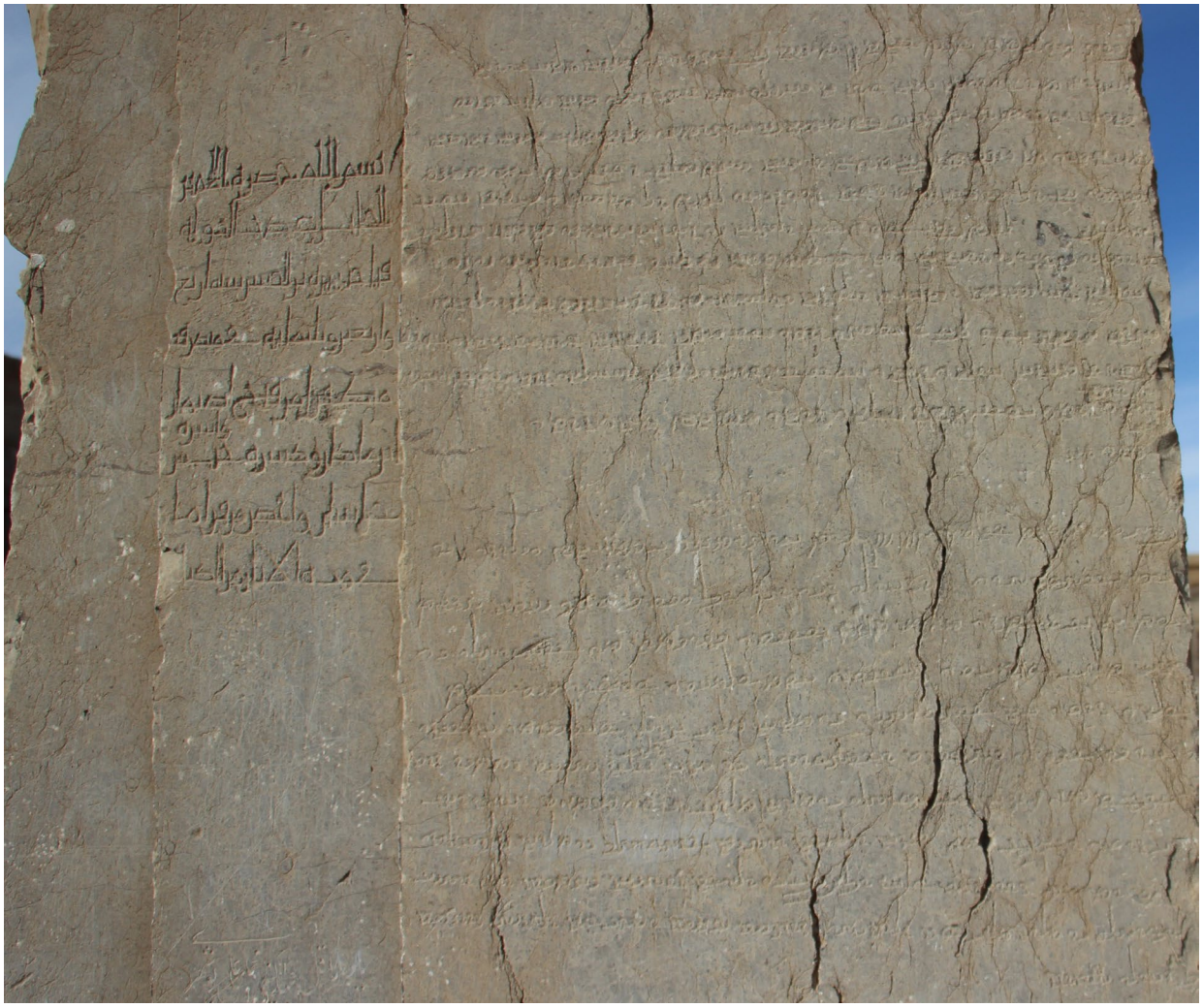

Figure 1: *Middle Persian Sasanian inscriptions (3rd century CE) and Adud al-Dawla' Arabic Kufic inscription (10th century CE); tacara's southern portico, Persepolis. Photo M. Abedi.*

out as on a grid of Shapur I's monumental inscription at the nearby site of Naqsh-e Rostam. Also, they are not trilingual (or bilingual), an important feature of royal edicts in the early Sasanian period. These visual elements immediately indicate that this is a more private enterprise. Their eccentric placement, on a doorjamb of the building's entrance, also deserves special mention. Ragazzoli, Harmanşah and Salvador note that secondary inscriptions, because they are additions, entertain a close, 'existential' relationship with margins.[31] Following Dord-Crouslé, we should also note that the entrance is the place that all visitors must pass, and therefore see. In that respect, secondary inscriptions are addressed to fellow travellers,[32] and indeed, the other important cluster of graffiti at Persepolis is the main entrance to the Terrace. With the first Middle Persian inscription of the *tacara* a change of gravity takes place:[33] travellers' writings collect at the entrance gate, then move onto the neighbouring windows, gradually 'colonising' the *tacara*, whereas the Achaemenid epigraphic programme had carefully and evenly distributed the cuneiform inscriptions on the building's architectural elements.

31 And marginality, see Ragazzoli, Harmanşah and Salvador 2017, 10.
32 Dord-Crouslé 2011, 329.
33 Graffiti 'alter the balance and centres of gravity of the original', Ragazzoli, Harmanşah and Salvador 2017, 10.

The first Middle Persian inscription, the upper one in the pair, was commissioned by Shapur king of the Sakas, son of the king of kings Hormizd, and is dated to the second year of Shapur II's reign (r. 309-379 CE).[34] The author is a Sasanian prince and he has travelled 1200 km from his province to the capital, Staxr, to pay homage to the newly crowned king. On the way back he stopped at 'A Hundred Columns' (*sadstūn),* for piety/the accomplishment of pious actions (*pad kirbag*īh); he ate and drank with his companions, whose names are all recorded – not least that of the scribe, Narseh – and he had rites performed for his soul, for that of his father and ancestors *and* for those (anonymous) individuals who built the structure: the *tacara.* With demonstrative pronouns, adverbs of place, place names and visual triggers, the inscription positions itself, temporally, geographically and spatially. In other words, the content of the inscription situates the physical text according to its material context. E. Chmielewska, a linguist who has studied the relationship between displayed writings and their environment, would say that the inscription is establishing its 'deictic field of reference', giving material form to the 'here-now-I' of the text.[35] The prince passed on *this* road (ēn *rāh*), between the capital and his province – a reference to the royal road that cut across the Marvdasht plain, skirting the Persepolis Terrace. His inscription's location is thus first defined according to two main imperial points of reference. The text then becomes more precise, pointing to the ruins on which it is engraved: the prince stopped 'here' (ēd*ar*), at 'A Hundred Columns', in 'this building' (*im xānag*), gradually narrowing down the field of reference. The name 'A Hundred Columns' is a metonym: the many stone columns still standing were a striking feature of the Achaemenid ruins. The structure, perhaps in a wider sense, is referred to again at the end: rites (āfrīn) were also made in honour of those 'who built this structure' (*kē* ēn *mān kard*). The exact meaning of the ending formula (*yazd yād*) is difficult to determine; it is enough to say that it encapsulates the inscription's primary commemorative function by invoking the gods to remember.

The second inscription is signed by the judge Seleukos, who travels to the Sasanian court 16 years later, all the way from Kabul. On his way he stops at 'A Hundred Columns' and sees the inscription that the Sasanian prince had ordered engraved.[36] He has the first inscription read (out loud?, *pahipurs*-), has rites performed for the king of kings, for the Sasanian prince and for his own soul. He records his own visit to the site with a new inscription, placed right beneath the first, describing this as a 'pious action' (*kirbag*). The second inscription is also dated, but the reign is not recorded – probably because this information is already contained in the first text. Thus, from the very first lines, the second inscription works with the first one, located just above it. The judge also refers to his text's location, again calling the Terrace 'A Hundred Columns'. This time however, the rites performed are not to honour those who built the structure, but for the author of the first text, the king of the Sakas.[37] Above all, the second inscription does not 'geolocate' itself in terms of the royal road and the Achaemenid ruins as the first one had done. Rather, it locates itself spatially with respect to the first text, by pointing to it directly: 'this inscription (*ēd nāmag*, lit. 'document') which is written above (*abar*)'.[38]

The first text is a secondary inscription in the sense that it does not belong to its medium, the ruins of the *tacara*, in its original state. As in the case of most secondary epigraphy, it functions as a material trace of a traveller's evanescent presence in a place of significance, capturing his response to it; the final formula suggests a reflection on the passing of time and the fleetingness of memory. Most importantly however, the two Sasanian inscriptions *together* effect the transformation of a secondary inscription *into*

[34] I base my transcription of the first inscription on its recent edition in Sasanika, T. Daryaee (ed); for a recent translation of this text see also Canepa 2018, 269. For the second Middle Persian inscription at the *tacara*, I base myself on Frye's transliteration (Frye 1966).

[35] Chmielewska 2007, 152-153.

[36] In his edition of both inscriptions, Frye assumed that Seleukos had been ordered by the Sasanian king to go to Persepolis 'in order' to visit the inscription he had left there several years earlier, but this is not at all explicit from the second text.

[37] [ŠPs-II, 6].

[38] [ŠPs-II, 3].

a primary monument. The first text prompts the engraving of the judge Seleukos' own inscription: it has *become the monument that was visited,* and rites are performed for its author in the same way that the first text had recorded rites performed for the builders of the *tacara*, the texts' medium and the original point of reference. The first inscription has become a primary monument by the performative action of the second inscription, placed just beneath, in line both with chronology and hierarchy.[39] If the first inscription has no meaning outside its material and geographical context, the second inscription has no *raison d'être* without the first. The first inscription directly produces the second one: in this respect we can speak quite literally of 'generations of writing'. Now, this 'genealogy of writing' is only just beginning.

Tracing the genealogical map of the *tacara*'s secondary inscriptions

In 955, the Buyid emir of Fars Adud al-Dawla (936-983 CE) visits the Persepolis ruins and has an Arabic Kufic inscription engraved in the narrow space between the two Sasanian inscriptions and the inner edge of the doorway, effecting a deliberate link with the older writings (**Figure 1**). In his memento, the emir celebrates a recent victory and, most remarkably, declares that he has summoned a specialist to decipher the ancient inscriptions carved onto the ruins:[40] although they could not be read, or rather, precisely because they were illegible to the Buyid visitor, the Middle Persian inscriptions thus produce a new inscription – and even two. Adud al-Dawla has a second memento engraved, dated to the same year and placed on the window frame directly to the right of the doorway. Spatially the two Buyid inscriptions frame the Middle Persian pair. This second text is the sequel to the first: the emir has called upon a *mowbed* and the ancient inscriptions were read before him. As Mousavi notes, Adud al-Dawla's interest for the Persepolis ruins are part of this ruler's desire more generally to link himself to Iran's past.[41] Now, several years later, the son of the emir, Abu Nasr (971-1012 CE), passing through Persepolis while on an onager hunt, has his own inscription engraved in Arabic, also in Kufic, on the left doorjamb of the same doorway, opposite to that of his father's. By the inscription's placement, the type of calligraphy he chose and the name of his father in his title, he directly associates his inscription with that of Adud al-Dawla. His own memorial is later vandalised by a certain J.M. Mehrab, who carved his signature in big Roman capital letters upon Abu Nasr's Kufic ones, apparently in strong disapproval of him.[42]

The Middle Persian pair, along with the two inscriptions by Adud al-Dawla which frame them, makes up the core epigraphic group of the *tacara*'s secondary inscriptions. Like Abu Nasr's memento and J.M. Mehrab's signature, inscriptions by later shaykhs, sultans and kings as well as private visitors, gradually clustered around this nucleus, carefully articulating with one another. Some engraved two or more inscriptions, typically placing one right next to the corpus' first centre of gravity, and then venturing further into the portico for their other 'satellite' inscriptions. These in turn provided new anchors for the formation of other clusters, eventually taking over all of the portico's architectural elements. Several centuries after Adud al-Dawla's visit to Persepolis for instance, the last of the Injuids, shaykh

[39] This joins Ragazzoli's observation concerning the graffiti in the Scribes' Cave at Deir el-Bahari that signatures are in a 'relative position' to one another so that in a 'sequence of epigraphic events [...] the focal point is very likely to be the centre of the panel, the first graffito that was written;' the central panel is turned into a monument 'to be seen' by the transformative power of the secondary inscriptions, Ragazzoli 2017, 31.

[40] For a full translation of the *tacara*'s Buyid inscriptions, see Mostafavi 1978, 218; see also Blair 1992, 32-35 for a full translation and commentary of Adud al-Dowla's two inscriptions at the *tacara* as well as other monumental inscriptions from the early Islamic period engraved at Sasanian and Achaemenid sites.

[41] The emir claimed to be a direct descendant of the Sasanians, Mousavi 2012, 86-87.

[42] It is worth noting that while Abu Nasr is evidently emulated by his father's inscription, the relationship of contiguity between Abu Nasr's own memorial and J.M. Mehrab's is one of direct confrontation: still, we may consider that since the production of the latter's signature is prompted by the presence of the older epigraphic text, they present a strong genealogical relationship.

Abu Ishaq (1335-1357 CE), has a short inscription engraved right next to the Buyid emir's first text on the right doorjamb of the entrance, with his name and the date of his visit (1337). On the same occasion he commissions the famous calligrapher Yahya ibn Nasr al-Jamali al-Sufi, to compose a second, much longer text, carved in beautiful Thuluth lettering and placed in the stone niche on the west side of the portico. It is a poem in both Arabic and Persian, a contemplation on the evanescence of power and riches, and elegantly rendered by Sharp as follows: 'Where are the first great monarchs called Khosrow?/ Their stores of treasure gone – and themselves also/ To the Throne of Solomon, on him be peace!/ No night or morning brought a sad decrease/ But see how finally it did decay [...]'.[43] The text has been painstakingly reconstructed by Mostafavi, for it was later deliberately hammered out line by line in a clear act of *damnatio memoriae* – in itself a testimony to the symbolic commemorative power of these secondary inscriptions.

Melikian-Chirvani notes that the first couplet is taken from a poem by the 'Abbasid poet al-Mutanabbi. Now, these very lines are quoted again at the *tacara,* by the Timurid sultan Ibrahim (r. 1415-1435 CE) in an inscription engraved to the East of the entrance: the sultan read the secondary inscriptions of the *tacara* and makes a direct reference to the Injuid ruler's memento, carved at the other end of the building.[44] The sultan left several inscriptions at the *tacara* – one of which is, as expected, engraved at the entrance, next to the primary epigraphic cluster – and al-Mutanabbi's poem is one of numerous instances of deliberate literary citations between the *tacara*'s secondary inscriptions. In an exquisite inscription, almost sculpted in low relief in ornate Naskh lettering and placed on the *tacara*'s West antae, directly beneath Xerxes' trilingual cuneiform inscriptions (**Figure 2**), Ibrahim Sultan had the following verses engraved: 'Whom knowest thou of the rulers of 'Ajam (Persia)/ Of Farīdūn of Zahhāk and of Jam/ Who did not lose his throne and rule at last/ Deposed and overthrown by fate's strong blast [...]'.[45] These verses are taken from the first chapter of Sa'di's *Bustan*. The next lines however replicate the shaykh Abu Ishaq's poem: 'To Throne of Solomon, on him be peace! [...]'. The Timurid sultan has ingeniously reworked Sa'di's poem to include the verses composed by the Injuid ruler.[46] His inscription is also the first to venture so far into the *tacara* and to establish a conscious relationship with the Achaemenid cuneiform inscriptions, creating new links between the different writings of this extraordinary corpus. With his poem, the anonymous builders of 'A Hundred Columns' to which the Sasanian inscriptions pay homage have become the mythical kings of the *Shahnameh*.

For Melikian-Chirvani, the frequent reference to the 'Kingdom [*molk*] of Solomon' in the inscriptions from the Injuid period onwards has a double meaning. The expression is used in a geographical sense to refer to the province of Shiraz and its Achaemenid ruins, the building of which was attributed by popular belief to King Solomon (as well as to Jam). It could also bear a more spiritual allusion: Solomon, believed to be gifted with esoteric knowledge, is a figure of Sufi mysticism, and Achaemenid sites were linked to Solomonic themes in Sufi esoteric discourse. In one of his inscriptions at the *tacara* Abu Ishaq in fact signs as 'the least of the dervishes'.[47] The phenomenon of intertextuality between the Injuid, Muzaffarid and Timurid inscriptions of the *tacara* would suggest that the rulers of Fars from these periods visited the ruins in a deliberate act of mystic pilgrimage.[48]

More generally, the theme of the transience of human life, often cast in dramatic contrast with the permanence of ruins, is the subject of over a third of the *tacara*'s secondary inscriptions, including the

[43] Sharp in Mostafavi 1978, 225-226.
[44] Melikian-Chirvani 1971, 24.
[45] Sharp in Mostafavi 1978, 227.
[46] Melikian-Chirvani 1971, 25.
[47] Mostafavi 1978, 223; a humble signature discussed by Melikian-Chirvani 1971, 20-21.
[48] With similar examples at Pasargadae, Melikian-Chirvani 1971, 21. We could even talk of 'intratextuality' within the corpus of the *tacara*'s secondary inscriptions.

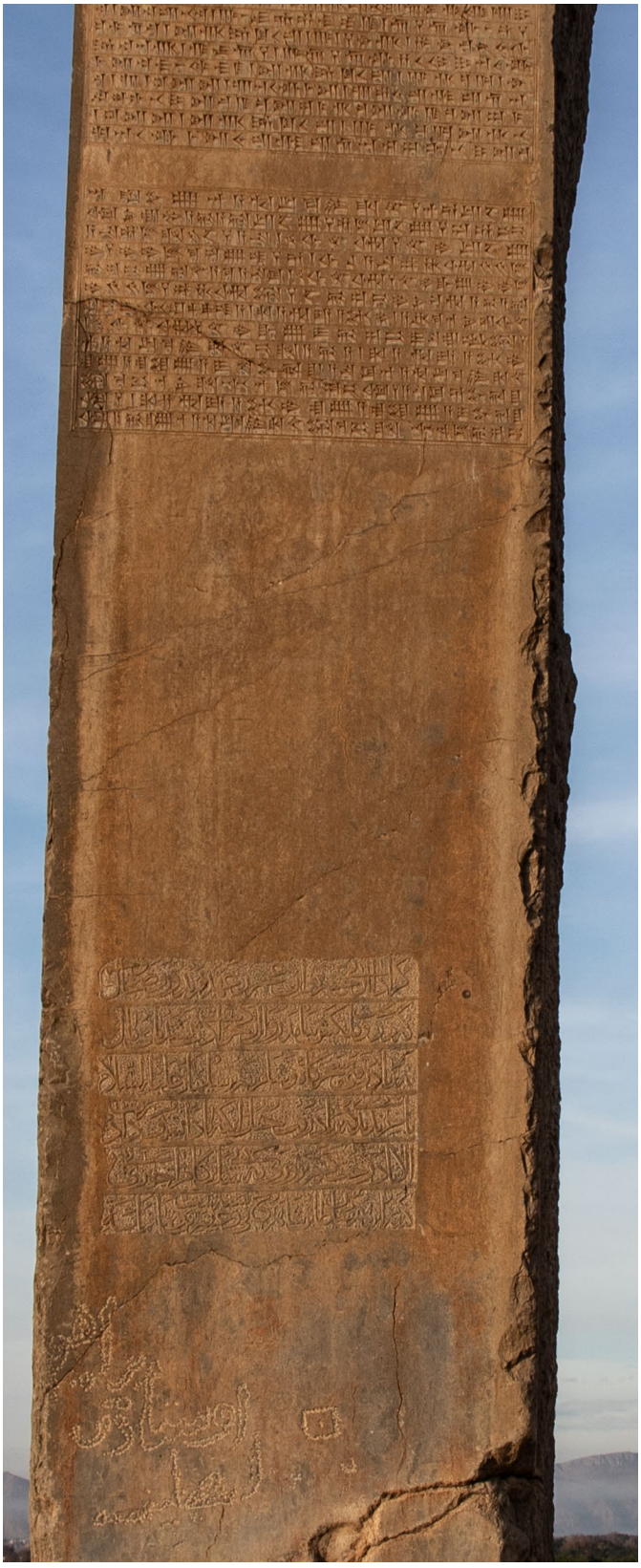

Figure 2: *Sultan Ibrahim ibn Shahrukh's monumental inscription placed in the continuity of the Xerxes' Achaemenid cuneiform inscriptions, tacara, Persepolis. Photo by the author.*

Figure 3: *Cluster of secondary inscriptions,* tacara*, Persepolis. Photo by the author.*

most modest ones. One of the first mementos to continue the *tacara*'s primary epigraphic cluster, placed right beneath Adud al-Dawla's second inscription, is an anonymous citation in neat Naskh characters of sermon 133 of the Nahj al-Balagha attributed to Ali ibn Ali Talib: 'The world is a place of transit, not a place for staying' (**Figure 3**). Directly underneath it, another private visitor takes up the same theme, but this time citing a few verses from Sa'di's *Bustan*: 'The world, O young man, is not an eternal kingdom [*molk*], Do not expect loyalty from it [...]'.[49] Dancing between the Buyid inscription, Ali's sermon and Sa'di's verses, taking up half of the window frame's wall and boldly cutting into shaykh Abu Ishaq's signature, are the flowing, ribbon-like Nastaʿliq characters of an inscription by the renowned calligrapher Bakhsh

[49] Free translation of the following verse: جهان ای پسر ملک جاوید نیست ز دنیا وفاداری امید نیست .

Ali, celebrating the eternity of God. This is one of four inscriptions in Naskh, Thuluth, and Nastaʿliq left by him at the *tacara*, in an obvious playful display of his draughtsmanship. A common variation on the theme of the vanity of human existence is the author's explicit reference to his act of writing as an attempt to outdo the passing of time and give his ephemeral existence a certain eternity through his words cut into the ruins. This sentiment is perhaps best expressed in a small anonymous inscription scratched on the opposite wall of the same window frame: 'Upon this ancient stone smooth-faced and cool/ New letters have been carved with sharpened tool/ That this inscription might remain secure/ In memory of me and long endure'.[50]

Conclusion

This paper has sought to show that in examining an apparently disparate corpus of miscellaneous inscriptions accumulated over many centuries in a specific place and engraved in different languages, scripts and in highly varying degrees of refinement, studying the texts separately according to their date, language or to an arbitrary typology (graffito, royal inscription, signature, petroglyph etc.) does not account for the many and complex ways in which the inscriptions are articulated and integrated with one another. Focusing on the interrelation of the inscriptions on a micro-scale allows us to investigate a possible methodology to approach such a corpus and to highlight the different nature of the many relationships of the *tacara*'s secondary inscriptions. Documenting the ways in which inscriptions respond to older epigraphic texts helps us trace their genealogical map, as they progress further and further into the ruins, drawing concentric circles stemming from a core-inscription or core-epigraphic group, like ripples radiating from a stone thrown into a lake. These concentric circles then meet and overlap, creating new links and internal references.[51] The relationship between the inscriptions is often explicit, with the juxtaposition of engravings separated by many years and even centuries that refer to each other directly with precise linguistic tools. The references can also be more implicit, with the recurrence of a theme, of an author, or again a calligraphic style. The kings, sultans and emirs of Iran came to a 'Hundred Columns' as if on pilgrimage, literally to write themselves into their country's history. In so doing, they acted in the political perspective of a re-appropriation of the past. But we must use the notion of an imperial re-appropriation of the ruins with caution. *In situ*, the detailed study of the many-level relationships between the secondary inscriptions of the *tacara* shows that these writings also – perhaps mainly – are a response to an internal dynamic with its own centre of gravity, which determines the choice of their placement, their script and even their content; a dynamic in which writing generates writing, little by little crystallising collective memory around the ruins.

Abbreviations of Achaemenid royal inscriptions

DPa = Trilingual cuneiform inscription on doorposts of the inner room of the palace, above figures of Darius and his attendants

DPb = Trilingual cuneiform inscription on the garment of Darius

DPh = Trilingual cuneiform inscription on gold and silver tablets from the Apadana

ŠPs-II = The second of the two Middle Persian inscriptions from the time of Shapur II, signed by the judge Seleukos

[50] Sharp in Mostafavi 1978, 223.

[51] This image joins Dord-Crouslé's observation concerning the 'centrifugal movement' that graffiti initiate, a dynamic which she opposes to the 'centripetal movement' of souvenirs—defined as objects taken from a place to function as memory triggers, Dord-Crouslé 2011, 321-322.

XPk = Inscription on King Xerxes I garment, middle door of the *tacara*

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A Few Insights into the Variety of Interactions Between Texts and Diagrams in Old Babylonian Mathematics[1]

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Abstract

Nearly sixty mathematical clay tablets produced in Babylonia during the Old Babylonian period can be distinguished from the other documents of their respective corpora on the basis of the fact that they do not only use discursive text to convey meanings but also diagrams, that is to say, graphical representations of mathematical objects often carrying short inscriptions. In this paper, I present these technical drawings of a specific kind and give an overview of the diversity of ways in which they are involved in mathematical procedures, showing that they fulfill different types of functions and make use of different types of devices in order to express mathematical content. I address in particular the questions of the articulation of the mathematical diagrams with the attached discursive texts, of the distribution of pieces of information between these two means of communication, of the characteristics of the drawings with regard to the objects they aim to represent, and of the properties of the inscriptions inserted into the geometrical sketches. I furthermore try to illustrate how such inquiries can be carried out through a combination of mathematical, textual and material analyses of the concerned clay tablets.

Keywords

Old Babylonian Mathematics, Mathematical Diagrams, Drawings on Clay, Mathematical Procedures, Interactions between Visual and Textual Forms of Communication

Introduction

One of the fields of cuneiform written production in which visual and textual forms of communication are often combined to express meaning is mathematics. Indeed, when we look at the mathematical documentation from the Ancient Near East as a whole, we are struck by the fact that many tablets do not only contain discursive text to present mathematical reasoning, but also include diverse visual devices such as tables, specific layouts, and, occasionally, drawings (**Figure 1**). These drawings, which turn out to be graphical depictions of geometrical objects often bearing diverse kinds of inscriptions, and which I call *(mathematical) diagrams* in accordance with the more general terminology used in history and philosophy of mathematics, are the focus of the present paper.[2] After providing a brief general description of the corpus of Old Babylonian mathematical diagrams, I examine the roles played by these visual means of communication of a specific kind and highlight some of the devices by means of which they contribute to express mathematical reasoning in articulation with discursive texts.

[1] I would like to thank the organizers of Broadening Horizons 6, who gave us a fantastic opportunity to share our research with young colleagues working on a wide variety of topics. I also express my gratitude towards the laboratory SPHÈRE, that provided financial support for my participation in the conference.

[2] The research presented in this paper is part of my PhD project on Old Babylonian mathematical diagrams. All the issues and theses that are only alluded to in this introductory presentation will be discussed more extensively and more precisely in my final PhD dissertation. On the other visual devices used in cuneiform mathematics, which are not included in my own project, see for instance Proust 2007; 2012.

Figure 1: *Visual devices used in cuneiform mathematics: a table on tablet Ist Ni 2208 (Proust 2007, courtesy Archaeological Musuems of Istanbul); a specific layout on tablet Ist Ni 18 (same source); and a drawing on tablet VAT 6598 (detail of a photograph by O.M. Teßmer, © Staatliche Museen zu Berlin – Vorderasiatisches Museum).*

The diagrams, visual means of communication used in Old Babylonian mathematics

Mathematical diagrams within Old Babylonian mathematical documentation

Mathematical diagrams, that is to say, graphical representations of mathematical objects produced for mathematical purposes, are attested on cuneiform clay tablets from the Sargonic period (*c.* 2330-2150 BCE) to the Hellenistic period (*c.* 330-140 BCE).[3] However, the temporal distribution of the known instances is very irregular, and the great majority date back to the Old Babylonian period (*c.* 2000-1600 BCE), for which cuneiform mathematics is presently best documented. In view of this situation, and since the characteristics of the drawings and their relationship to texts evolved over time and require adequate analyses for each period, I restrict myself in the present article to the description of the most abundant Old Babylonian diagrams, whose number within the published mathematical documentation amounts to somewhat more than 160 (partly) preserved specimens appearing on approximately 60 different tablets.[4]

Interestingly, these tablets come from different geographical areas of the Ancient Near East. Indeed, although many of them were found during illegal excavations and have so far not been attributed with certainty to any precise archaeological site, we do know that Old Babylonian mathematical diagrams were produced at least in Northern Babylonia (Kiš, Sippar), in Southern Babylonia (Nippur, probably Uruk, perhaps Larsa), in the Diyala region (Šaduppûm, Mê-Turran) and in the Elamite city of Susa (**Figure 2**). This distribution shows that, in the Old Babylonian period, using drawings in relation to mathematical activities was not an isolated local peculiarity, but a more widespread practice shared – though sometimes with substantial variations from one place to another – by several centers of

[3] It has to be mentioned that tablet Ist Š 77, which shows four tangent circles inscribed in a square and was dated by its editor as archaic (Jestin 1937, 5), is actually Old Babylonian (Krebernik 2006, 14) and thus not the oldest known Near Eastern document containing a mathematical diagram.

[4] The complete catalogue of these tablets is too long to be included in the present article. However, interested readers can find several examples by leafing through the main volumes of editions of mathematical cuneiform texts, and in particular Neugebauer 1935-1937; Neugebauer and Sachs 1945; Friberg 2007a.

Figure 2: *Map of the Ancient Near East showing the areas where Old Babylonian tablets containing mathematical diagrams have been found (background map by M. Sauvage, published in Charpin and Ziegler 2003, 28).*

scribal production. For reasons similar to those evoked above, this paper only focuses on mathematical diagrams from Babylonia, leaving aside half a dozen tablets from the Diyala region and Susa that present interesting but quite divergent features and would thus require a specific inquiry.

Furthermore, mathematical diagrams appear on various types of mathematical documents. We certainly do not find them on numerical and metrological lists or tables, which consist of structured enumerations of numbers or measurement values, but they do occur in all other main genres of mathematical production, including lenticular tablets bearing elementary or more sophisticated exercises, tablets containing the statements and solution procedures of one or more problems, tablets displaying serialized collections of drawings, and tablets consisting of catalogues of statements of problems without their resolution. This means in particular that diagrams can appear on tablets either alone, that is to say without any discursive text accompanying them on the same material object, or on the contrary in clear material relation to such a discursive text. Moreover, though the statuses of the different documents mentioned above are not always easy to grasp and may have pertained to intellectual contexts that are presently not sufficiently well understood, this small enumeration reveals that mathematical diagrams were not an exclusive feature of one of these contexts but were on the contrary produced and used both in mathematical documents involved in scribal education and in more scholarly mathematical documents.

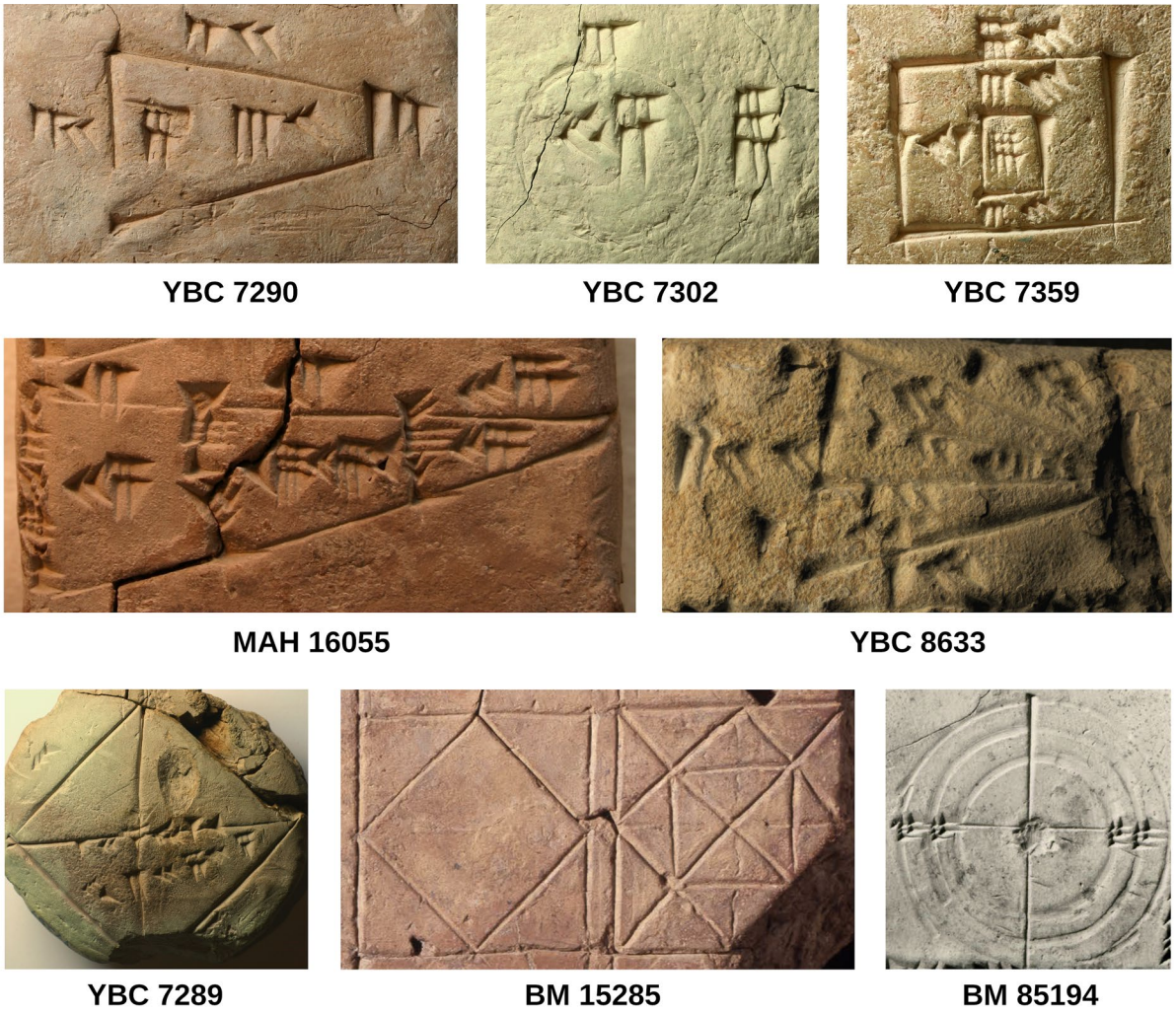

Figure 3: *Some examples of mathematical diagrams appearing on Old Babylonian tablets from Babylonia: details from YBC 7290, YBC 7302, YBC 7359 and YBC 7289 (photographs by C. Proust, courtesy Yale Babylonian Collection); MAH 16055 (photograph by C. Proust, courtesy Musées d'Art et d'Histoire de Genève); YBC 8633 (photograph by K. Wagensonner, courtesy Yale Babylonian Collection); BM 15285 and BM 85194 (https://research.britishmuseum.org, © Trustees of the British Museum).*

Main features of Old Babylonian mathematical diagrams

If we now concentrate our attention on the diagrams themselves, it appears that all of them primarily consist of drawings that show geometric shapes instantiating either the corresponding plane geometric figures or, in some rare cases, parts of three-dimensional geometric objects. As far as Old Babylonian tablets from Babylonia are concerned, these shapes belong in the overwhelming majority to a limited repertoire of elementary figures comprising triangles, trapezia, rectangles, squares, circles, and arcs of circles.[5] They are often supplemented by specific inner lines such as diagonals, transversals, diameters, or chords, and are sometimes combined with each other in order to produce more elaborate configurations (**Figure 3**).

[5] The only significant exception is the famous tablet BM 15285 (Robson 1999, 208-217), on which we find more complex figures such as concave squares and even shapes for which we nowadays no longer have specific designations. Other figures can also be observed on Old Babylonian tablets from outside Babylonia, for instance a few regular polygons on tablets from Susa (Bruins and Rutten 1961, 22-24).

Careful observation of the material features of the drawings reveals that the strokes constituting them were marked out on the tablets in two main ways: either by impressing into the clay surface a stylus identical or similar to the one used for writing cuneiform, or by incising the clay surface by means of this same stylus or a sharper tool. Moreover, at least one or two auxiliary instruments seem to have been occasionally combined with these drawing techniques, namely a kind of compass of unknown nature to delineate some circles – as is evidenced by the presence of specific residual traces on the corresponding diagrams – and perhaps a kind of ruler or linear guiding tool to produce some perfectly straight incised lines.[6]

However, the drawings themselves appear to make up only one facet of the mathematical diagrams from the Old Babylonian corpus, and in the great majority of cases the geometrical sketches they display are complemented by several short inscriptions in cuneiform script positioned at specific places on the depicted figures (**Figure 4**). These inscriptions consist of numbers written in sexagesimal place value notation or, more rarely, of nominal groups containing a sexagesimal number followed by a substantive, and they convey different types of indications that turn out to constitute an essential part of the information delivered by the diagrams. It is worth underlining in this respect that the diagrams, which can be primarily considered as visual means of communication mainly conveying messages through drawings and spatial dispositions, are in fact rather multimodal tools of expression incorporating, alongside visual arrangements, some basic resources from the textual communication.

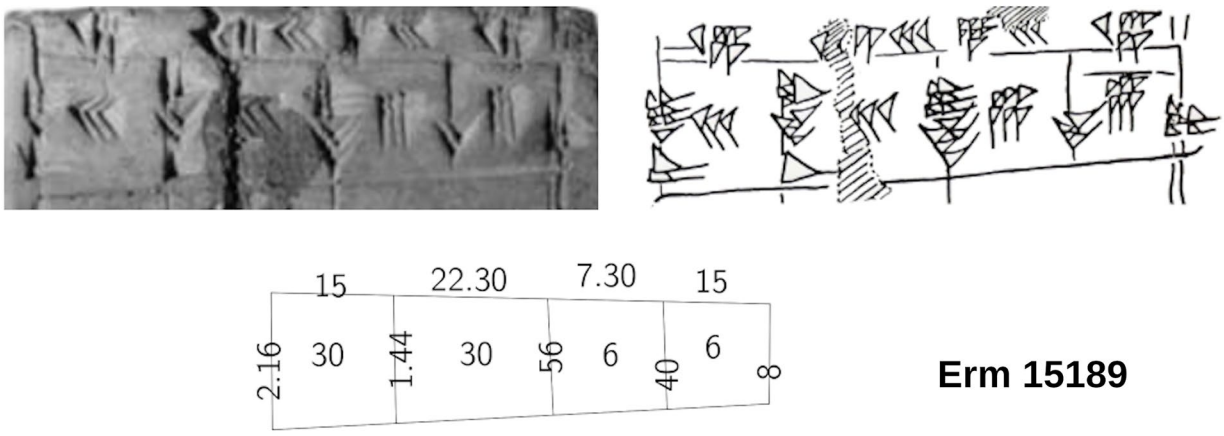

Figure 4: *A diagram from tablet Erm 15189 and its inscriptions (photograph: Friberg 2007b, 288; hand-copy: Vaiman 1955, 74).*

Furthermore, a systematic survey of the corpus reveals that those diagrams that appear in relation to a discursive text are always located at the beginning of the corresponding section, that is to say at its top, in its top left corner or to its left.[7] This does not necessarily imply that the diagrams were drawn on the tablets before the texts were inscribed, but it nevertheless means that their integration into the documents that contain them had been anticipated from the very beginning of the production of these documents rather than decided spontaneously during their writing, a point that should be kept in mind for the discussions that follow.

[6] The use of a compass has already been mentioned in the literature, for example in Robson 1999, 189; Friberg 2007a, 207. To my present knowledge, however, no commentator has looked more generally into the drawing techniques of the diagrams so far. My PhD dissertation will include a comprehensive study on this topic.

[7] This is by contrast not systematically the case outside Babylonia. The diagram of the famous tablet IM 67118 (Baqir 1962) from the Diyala region, for example, appears at the very end of the text.

Roles played by Old Babylonian mathematical diagrams in interaction with discursive texts

Investigating the semantics of the diagrams: problems and possible methods

With these first general elements of description in the background, we can now turn to the investigation of the functions that were fulfilled by the mathematical diagrams produced in Babylonia during the Old Babylonian period, and in particular – at least for those that are accompanied by a written procedure, which is the case for somewhat more than 20 tablets out of the roughly 55 in the corpus – of the ways in which they interacted with discursive texts in the elaboration and the formulation of mathematical reasoning.[8]

As we try to undertake such an investigation, however, some important methodological questions immediately arise, and notably the question of the types of clues on which we can base our analysis. Quite obviously, there is no straightforward method to perform this kind of study, and in most cases the direct evidence upon which we can rely to reconstruct the roles played by Old Babylonian diagrams is very scarce. As a matter of fact, we find absolutely no meta-discourse about them in the sources, and in particular no expressions like 'as can be seen in the drawing' or 'deducing from the drawing', that would unequivocally entrench these visual means of communication in the reasoning. Moreover, the inscriptions appearing on them are far from being explicit about the ways in which they were used, and – contrary to what we observe in some ancient mathematical documents from other geographical areas – contain for example neither whole sentences enabling us to situate them within the procedures nor letters or symbols providing us with clear links between them and precise passages of the procedures.[9] As a consequence, we have to turn to more indirect approaches to inquire into the functions endorsed by the diagrams and their relations to texts.

Of course, a first indirect way of getting a sense of the possible uses of mathematical diagrams is to draw on mathematical examinations of the documents in which they appear. Indeed, understanding the statements and the solution procedures of the problems to which the diagrams are linked, as well as appreciating the prior knowledge on which these problems rely, the peculiarities they incorporate, and the technical or conceptual difficulties they raise, can often provide us with useful hints to begin the investigation of the roles played by these visual devices. But due to the situation described above, such mathematical analyses alone are doomed to remain partly speculative, and it is thus my conviction that it is extremely important, in order to go further than this first approach, to combine and compare the mathematical evidence with other types of indirect evidence.

To begin with, in the few cases for which archaeological information is available to us, taking into consideration the context in which the tablets seem to have been used in antiquity, as well as the other documents to which they were linked, obviously provides us with precious elements against which we can assess the conceptions derived from their mathematical reading to avoid gross misinterpretations. Another complementary approach that can be employed to refine the mathematical understanding is the textual approach, and far more clues than we would usually expect can be collected through a close analysis of the organization, the phraseology and the vocabulary of the sources. In particular, spotting small variations regarding the expressions used to designate mathematical objects or operations to

[8] Similar inquiries have been carried out in the last two decades on other ancient mathematical corpora. Among the many studies published on this topic, which have proved very fruitful and have provided me with a solid basis on which to develop my own approach, one may for example have a look at the following ones – the list being of course extremely incomplete: De Young 2009 (Egyptian documentation); Netz 1999 (Greek documentation); Saito and Sidoli 2012 (Greek documentation); Keller 2005 (Sanskrit documentation); Chemla 2010 (Chinese documentation); Crozet 1999 (Arabic documentation).

[9] See, for instance, Chemla 2018 for examples of diagrams displaying whole sentences in Chinese mathematical texts, and Netz 1999 for examples of diagrams displaying labels in Greek mathematical texts.

be performed, between texts that are accompanied by diagrams and texts that are not, can prove very fruitful to identify what the presence of visual auxiliaries implies. Finally, a third useful complementary approach is the material examination, that consists in observing, for instance, the ways in which the diagrams were laid out on the tablets, the different drawing techniques that were used to produce them on different occasions, the sequences in which the strokes constituting them were marked out, or the places where some of their elements were erased. As nitpicking as it may look, focusing on such crucial details often provides us with valuable clues complementing both the mathematical and the philological analyses, and thus enables us to point out features that we would not have noticed otherwise.

Some examples of roles played by Old Babylonian mathematical diagrams

By combining all these different points of view, inspired both by methods used in history and philosophy of science and methods used in Assyriology, we can detect that many different roles, and often even several interrelated roles at the same time, could have been attributed to the mathematical diagrams appearing on cuneiform clay tablets in relation to a solved problem. Characterizing the exact functions of these visual means of communication in mathematical reasoning and their multifaceted interactions with discursive procedures, as well as unfolding the precise arguments that enable us to appreciate these elements, would imply elaborations and in-depth case studies that are far beyond the scope of the present article.[10] However, some general trends will be highlighted and provide an initial glimpse into this complex topic.

The main task that has been attributed by commentators to Old Babylonian mathematical diagrams consists in illustrating the statements of problems.[11] Indeed, all the diagrams drawn in relation to so-called 'procedure-texts' turn out, at least to a certain extent, to represent the geometrical configuration and to display the numerical data that are introduced in the statement of the problem written beneath them. However, this first role is far from being the only one fulfilled by the diagrams, and seems to be almost always combined with other, more subtle ones.

If we look, to begin, at the way in which the diagrams render the statements of the associated problems, then we notice two interesting features that show that their function is not merely illustrative. First, in all the cases where the object dealt with in the problem is introduced in the statement as a concrete object without explicit geometrical modelling (for instance a door, a wall or a ramp), it turns out that the diagram does not depict this concrete object as such but directly shows it as the abstract geometric figure which will be considered during the resolution. Second, when magnitudes are given in the statements as measurement values (that is to say, as numbers followed by measurement units, for example ⅓ *kuš*), we almost systematically observe that these data are not indicated on the diagrams as such, but rather in the form of the associated floating sexagesimal place value numbers (for instance 1.40 in the example introduced above), which is precisely the numerical form on which operations are carried out in the procedures even though no explicit conversions are provided by the texts. These two facts thus show us that the diagrams, even when we restrict ourselves in a first stage to the elements linked to the description of problems, stand somewhat closer to the resolution than the discursive statements do, and leave by the way traces of steps of the reasoning that ought to be performed to deal with the problems but remain totally invisible in the discursive accounts of the procedures.

[10] An example of a detailed case study of an Old Babylonian mathematical procedure accompanied by a diagram will be published in Reynaud forthcoming.

[11] This view is most explicitly expressed by J. Høyrup, who states: 'All that occurs are diagrams that illustrate the statements of problems. With one atypical and partial exception (...), the texts never contain drawings that illustrate what goes on in the procedure. The rare drawings we find only serve to elucidate the meaning of the statement (...)' (Høyrup 2002, 103).

Beyond this observation, we further note that the diagrams are not at all restricted to elements contained in the statements of the problems to which they are associated, but often also include items exclusively linked to the solution procedures.[12] More precisely, we regularly find on them lines rendering geometric constructions elaborated during the resolution, as well as numerical values determined in the course of the calculations. In several cases, we even notice that the inscriptions appearing on a drawing do not include all the numerical data mentioned in the discursive procedure but have been selected so as to bear exactly on that information that is intended to be (re)used later in the argumentation. This confers to the diagrams in question the role of essential working tools supporting the reasoning, to which the writer, the copyist and/or the readers could refer whenever they needed to overcome the progressive temporality of the discourse and obtain all the useful data at a single glance.

What is more, there are several cases in which the diagrams display pieces of information that are necessary to understand or ground the procedure performed to solve a problem, but that are not directly present in the discursive text. In such cases, it is always difficult to determine to what extent it is appropriate to speak of an explicitation or a supplementation of the text, since elements that seem to be lacking for modern readers could have been understood by the actors in ways that we are no longer able to perceive – for example through the use of technical terms that conveyed more meaning than we have recovered so far, or through the assumption of implicit properties that were imputed to geometric figures and that we no longer attach to them. However, it seems that this interpretation can be relevant in at least some cases. We for instance encounter diagrams showing through their shape arrangements of figures or lines that are not specified in the text, diagrams indicating visually through the positioning of their inscriptions to what magnitude of the configuration a numerical value introduced in the text by means of an ambiguous denomination pertains, diagrams clarifying that a computation made only once in the text should be understood as applying to several places of a symmetrical configuration, and even diagrams providing through an ad hoc visual adaptation of the numerical data pieces of information that are totally overlooked in the text. Such situations reveal that the presence of one or more diagrams in a mathematical document could have had an influence on the formulation of the associated procedures, namely by enabling both the author or compiler of the text to omit written descriptions of elements whose precise discursive characterization would have been challenging or fastidious and the reader to understand these same elements in spite of their absence in the discourse.

In addition to those just mentioned, several more contextual tasks seem to have been occasionally fulfilled by mathematical diagrams produced in Babylonia during the Old Babylonian period, for instance describing a configuration as completely as possible by including elements with no direct link to the text, contributing to some aspects of the explanation or justification of a procedure, or serving as an auxiliary tool for the elaboration of problems.[13] Though without having gone into all the details, we thus see that these visual means of communication, far from being mere illustrations of statements of problems, played a wide range of roles and extensively participated to the expression of mathematical reasoning in close articulation with the discursive texts they accompanied.

Some reflections on the devices enabling mathematical diagrams to play their roles

Characteristics of the drawings with regard to the objects they aim to represent

This preliminary description of diverse functions that may have been attributed to the mathematical diagrams from the Old Babylonian corpus raises the question of the devices that were shaped in order

[12] This fact has already been judiciously pointed out in Friberg 2007a, 259.

[13] Of course, further – and quite different – roles could be identified by extending the study to diagrams appearing without a discursive text (for example constituting a model for a geometric exercise that students had to copy), or to diagrams from outside Babylonia (for example depicting a complex geometric figure as exactly as possible).

to enable them to convey, as clearly as possible, the messages they were intended to carry. In this last section, I give some initial thoughts concerning two important aspects of this topic, namely the ways in which the geometrical features of the depicted figures were represented in relation with the tasks performed by the diagrams and the ways in which the inscriptions were displayed on them with regard to the information they had to deliver.

A first thing that strikes a modern observer concerning the way in which the diagrams depict geometric figures is that the overwhelming majority are crudely inaccurate: the ratios between the lengths of the different sides and inner lines as recoverable from the inscriptions or the accompanying texts are not respected in the drawings, and consequently the shapes appear as distorted.[14] The only geometric features whose graphical transposition is generally faithful are the relative positioning of the diverse elements, the comparative directions of parallel lines, and the aperture of right angles whose rightness is used at some point of the associated procedure – most of the time to compute an area. This situation, which should in all likelihood not be ascribed to a hypothetical inability of those who drew the diagrams to trace precise figures, reveals that these visual means of expression were not intended to render graphically all the properties of the depicted configurations, but only to show those relevant for the reasoning. They provide the reader with a sketch giving a general idea of the geometrical situation under scrutiny, they bring out the few geometric elements that are useful for solving the problem, and they offer a spatial framework on which to display textual data, but one should not expect their visual significance to extend further than that. In particular, the relation between the shapes they exhibit and the written data they display is a suggestive rather than an effective one, and the drawings could for instance not be used to check, through concrete measurement, the numerical results computed in the procedures: the diagrams were intended to provide a visual support for the geometric and/or computational reasoning, and efficiently fulfilled this task through a deliberate practice of overlooking superfluous geometric features, but this way of conveying the information prevented them from performing other functions such as offering a material alternative to the procedural reasoning.

A second point that deserves our attention concerning the way in which the diagrams represent geometric figures is the fact that, beyond their regularly cited peculiarity of an apparent 90° rotation with regard to the text, they display elementary shapes with an almost invariable orientation.[15] Indeed, except in rare cases where we can identify a specific reason for not doing so, triangles, trapezia and rectangles are drawn 'lying' with respect to the script (and thus probably seen as 'standing' by the actors), with the bases of triangles and the longer bases of trapezia placed on the left-hand side of the tablets and – where applicable – the right angles of trapezia placed to the top. In addition to providing us with precious evidence to discuss the Old Babylonian conception of geometric figures and the spatial or technical character of the terminology linked to them, this specificity reveals a great consistency, or even a kind of codification, for the representation of figures by mathematical diagrams. This has several consequences on their capability to convey messages, and in particular introduces, between analogous situations, strong visual resemblances that make it easier for observers to relate individual statements to familiar groups of similar problems.

[14] This manifest characteristic has already been described several times, for instance in Neugebauer 1934, 176; Høyrup 2002, 103-105. It is, by the way, worth mentioning that this situation is not specific to the cuneiform corpus, and a similar discussion concerning Greek diagrams is offered by Saito and Sidoli 2012, 143-148.

[15] As almost all commentators have noted, if the horizontal orientation of the cuneiform script that is usually assumed for the Old Babylonian period is correct, then it seems that mathematical diagrams should be turned 90° clockwise with regard to the text in order to be seen as they were considered by the actors. This situation is described, inter alia, in Neugebauer 1934, 34; Friberg 2007a, 189.

Properties of the inscriptions with regard to the information they aim to convey

Besides these characteristics of the drawings, which can be considered as a first set of devices enabling the diagrams to convey mathematical information, we observe interesting regularities regarding the way in which their inscriptions are attached to elements of the figures. A systematic survey of the corpus indeed reveals that inscriptions indicating surfaces are generally placed horizontally inside the corresponding parts of the figures, whereas inscriptions concerning lengths are rather placed alongside the corresponding lines, often written vertically or obliquely so as to better follow the inclination of the strokes, and outside the figures when this is possible (**Figure 4**).[16] This striking homogeneity points towards the observance of a regular pattern for displaying textual data on the drawings, that probably enabled readers accustomed to the mathematical corpus to understand the embedded meaning of inscriptions at first sight and thus increases the potential of the diagrams to express mathematical content.

What is more, we notice that the rare inscriptions consisting of a number followed by a substantive rather than a number alone, which I have mentioned earlier, occur essentially in two precise cases, namely in situations where several inscriptions with different meanings are stacked along one and the same side of a figure, and in situations where the indicated value concerns a magnitude that is not directly visible on the drawing (for instance the volume of a three-dimensional object or the length of a line perpendicular to its represented section). These inscriptions thus seem to have been expanded precisely to overcome the difficulty of making their signification clear by means of the usual devices based on the sole position of the numbers. Hence, we see that, in the absence of purely utilitarian lines or marks – that is to say, of elements without geometrical meaning that would help to attach the different pieces of information to precise elements in the drawings –, the transmission of numerical data is achieved through an intricate combination of their positioning and their formulation. This bears further witness to the close articulation of visual and textual apparatuses involved in the expression of mathematical content through diagrams.

Conclusion

In this article, conceived as an introductory description of the known Old Babylonian mathematical diagrams from Babylonia and their most significant properties, I have tried to show that these specific elements of mathematical cuneiform production were flexible and effective means of expression, that significantly combined visual resources (namely the drawings of which they primarily consist and the spatial dispositions offered by these drawings to display information) with resources from the textual communication (namely the inscriptions inserted into the drawings), and that further resorted to diverse implicit or even unconscious devices in order to make their messages as unambiguous as possible for readers familiar with Old Babylonian mathematical documentation. I have also argued that these artefacts, whose semantics can be best analyzed through a combination of mathematical, textual and material approaches, far from being confined to mere illustrations of mathematical situations, performed a great variety of functions – many of them entwined with those fulfilled by the accompanying discursive text whenever there is one – and played an important part both in the elaboration and in the formulation of mathematical reasoning.

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[16] Once again, this property has already been judiciously alluded to in Friberg 2007a, 189.

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Chariots and Thrones.
Visual/Material Bonds in Old Babylonian Legal Practice

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Abstract

The proliferation of figurative terracotta artefacts in early 2nd millennium BCE Babylonia is well-known, but the meaning and function of these objects remain difficult to explain. This paper considers the iconography of mould-pressed clay miniatures of chariots and thrones from southern Iraqi sites and relates them to a specific semantic field and social practice: oath taking and legal decision making more generally. Oaths played a key role in the Old Babylonian juridical system and are well documented in contemporary texts. The written record attests to the great importance of divine emblems in non-anthropomorphic form and of certain paraphernalia (nets, traps) in these contexts. The designs on terracotta chariots and thrones regularly depict these motifs in various combinations; I argue that they served to represent the visual/material bonds inherent in the promises and obligations required by an oath and the divine punishment inflicted in the event of its breakage.

Keywords

Terracotta Chariots, Terracotta Thrones, Old Babylonian Period, Oath Taking, Divine Emblems

Introduction: Material dimensions of oath taking past and present

Swearing an oath is not something to be undertaken lightly – not today and even less so in early 2nd millennium BCE Babylonia.[1] An oath can be defined as a 'formal assertion of truth or declaration of intent which cannot be breached without incurring severe consequences'.[2] It becomes effective through performative action by the oath taker and derives its power from an appeal to agents considered sacred and significant within his or her cultural sphere. Even today, institutions and ceremonies in largely secular societies require oaths as statements of truth and loyalty: A judge requests a witness to testify 'under oath'; ministers, soldiers and civil servants are 'sworn into office'.

These procedures typically involve oral, physical and material components: Besides declaring out loud a prescribed phrase such as 'I swear' and/or 'so help me god', oath taking requires the performance of certain postures and gestures such as standing up and lifting the right hand with two or three outstretched fingers. Additionally, the material presence and, often, the touching of symbolically charged objects,

[1] This paper presents preliminary insights into a larger chapter from my publication project 'Visual Forms in Cultural Practice. Semiotic Landscapes of Early Babylonian Imagery in Clay (2100-1700 BCE)'. I have profited greatly from discussing Old Babylonian legal symbolism and oath taking practices with Z. Földi (LMU Munich) and F. Nebiolo (Collège de France). F. Nebiolo generously provided me with a chapter of her unpublished PhD thesis. S. Richardson published an important paper on Old Babylonian divine emblems after the manuscript of this paper was finished (2021); some of his observations are now cited in this paper but could be discussed in detail. Furthermore, I would like to thank the organizers for a wonderful and stimulating conference in Berlin and various conference participants and colleagues for discussions and corrections that helped to improve this paper. Sincere thanks go to an anonymous reviewer for important remarks that helped strengthen my argument. Helena Young (Julius-Maximilians-University Würzburg) was kind enough to thoroughly correct my English.

[2] Ziegler 2008, 3.

e.g., a holy book like the Bible or the Quran, or a national symbol like a flag, are crucial for the efficacy of an oath. To be effective, these objects need to represent a powerful supernatural agency or a system of legitimacy/truth in the eyes of the person taking the oath and to the people who are considering its binding value. It is surprising to see the extent to which these concepts, which remain valid even today, were equally valued in ancient Western Asian past and during the Old Babylonian period (*c.* 2000-1600 BCE) in particular.

The entities who served as guarantors to an oath in early 2nd millennium BCE Babylonia would have been one or more deities and, occasionally, the king. Their presence during the ceremony was mediated through emblematic objects in the form of divine standards and weapons.[3] The presence of human witnesses at the oath taking procedure was equally important and carefully noted in the written records. These records were sealed by the witnesses and stored for the future, usually by the person or institution which benefited from the agreement, or by both parties.

Philologists who study ancient Babylonia and the period under discussion profit greatly from the written testimony of this practice. However, I will argue that not only textual but also material/visual remains survive. More specifically, I aim to establish a connection between two specific groups of terracotta artefacts (chariots and thrones) and the semantics and pragmatics of oath taking and legal decision making more generally. I will base my argument on the mould-impressed iconographic program employed on chariot front shields and throne backrests, which sets them apart from other contemporary mould-pressed terracotta plaques. The motifs depicted on chariots and thrones match the objects involved in legal decision making according to the written evidence to a remarkable degree. The reason why their crucial role has been overlooked so far or was previously interpreted differently may lie in the fact that the spectrum of possible divine authorities related to oath taking was larger and more diverse than it is in today's monotheistic cultures. This diversity resulted in certain regional, even local, particularities and thus in a more varied visual spectrum of reference for the same social practice.

This paper starts out with a summary of the written evidence relevant to my argument with a focus on the basic concepts of oath taking, its spatial setting, the divine agents involved, and the material symbols in form of emblems present during these performative actions. The paper then tackles the visual record: First, the terracotta chariots with their mould-impressed designs and second, the thrones. The representation of 'nets' and 'traps' on both kinds of terracotta objects will be connected to the idea of (divine) 'capture' and punishment threatening a person in the event of transgression of a legally valid agreement.

The gate, the net, and divine emblems: Written evidence on oath taking practices during the Old Babylonian period

Thanks to an abundance of court records and contracts, we know a lot about Ur III and Old Babylonian legal practices.[4] An oath (Sumerian (nam) erím or sag-ba, Akkadian *māmītum*) is commonly defined as either an assertion concerning the past or a promise for the future, leading to the fundamental differentiation between assertory and promissory oaths – a differentiation which is already attested

[3] On the fundamental function of standards and weapons of gods 'as secondary agents of the divinity in judicial context', see Pongratz-Leisten 2011, 106 and 109, as well as the literature cited below. See now Richardson 2021 for a full discussion of divine emblems in the Old Babylonian period with further references.

[4] A substantial corpus of literature exists on this topic, I will summarize here only the points most relevant for my later argument. See the seminal works of Harris 1975; Dombradi 1996; Lafont 1997; van der Toorn 1985 (45-55 on oaths) and Charpin (e.g., 1982, 2010) among others, and for a concise summary Stol 2004 (654-663) or Westbrook 2003. On legal symbolism in ancient Mesopotamia in general, see Malul 1988, and on divine symbols used in (Old Babylonian) oath taking more specifically Harris 1965; Pongratz-Leisten 2011 (2011, 109); Stol 2012 and Charpin 2019. See Sallaberger 2008 for references to Ur III practices and Edzard's 1975 study '*Zum sumerischen Eid*'.

in early Babylonia.[5] While the first kind of oath declares the present state of affairs or past actions, the second one is a promise to adhere to a certain behaviour (e.g., loyalty) or to a mutual agreement (e.g., a sale of property), including renouncing future claims on property (German: *Verzichtsklausel*). The essence of the oath thus lies in its potential consequences: In the event of violation/disloyalty, a curse (= the same words as for 'oath': nam) erím / *māmītum*) 'catches up with' (*kašādum*), 'seizes' (*ṣabatum*), or 'binds' (*kasûm*) the oath-breaker.[6] Like *kasûm* 'to bind', the Sumerian expressions nam-erím tar and nam-erím-ku$_5$ for 'to swear, confirm by oath, to curse', the verbs' tar and ku$_5$ with their literal meaning being 'to cut (off)', might point to a thread/string/net concept that lies behind an oath and its delimitating nature towards a person's future behaviour (see the discussion of the net metaphor in oath contexts below).[7]

Promissory oaths were typically sworn to a combination of two or three gods. Additionally, the king and occasionally the city or the city elders were invoked in order to serve as agents of jurisdiction in the event of a breach of contract.[8] Thereby, the king often remained unspecified, i.e., he was only referred to by his title (lugal/*šarrum* 'king') and not by his actual (personal) name.[9] Thus, it was his role as king and not as an individual person, that was significant in the ritual. In a contract from Sippar for example, the buyer and the seller swear on the 'lives' (zi/*nīšum*) of Šamaš, Marduk, and the king that neither party will ever sue the other for a certain field.[10] In another case, the oath is taken on the life of the god Šamaš, the life of the king, and 'the life of the city of Sippar'.[11]

Assertory oaths, on the other hand, resulted from court rulings and were intended to determine the state of affairs in case of dispute. The person sentenced to swear an oath was led to a place of oath taking (*ana nīš ilim*, literally 'to the life of the god', or: *ana šurinnim nadānum* 'to the place where the divine emblem is given'),[12] which was either a temple gate (*bāb* DN 'the gate of god XY', or even: *bāb nīš ilim* 'the

[5] See Edzard 1975 and Sallaberger 2008, 1-4 with reference to earlier literature and Sumerian terminologies. For a quick survey of Old Babylonian legal practice including oath taking, see e.g., Westbrook 2003, 374-375 (oath); further literature will be cited below. To cite van der Toorn (1985, 45): '...the oath functioned as a means to secure the reliability of the human world.' And further: 'The human world, sealed by an oath, could consist in an assertion concerning the past as well as a promise for the future.' (van der Toorn 1985, 47).

[6] Van der Toorn 1985, 50.

[7] See Edzard 1975, 68-77 for a detailed etymological discussion of nam-tar and nam-ku$_5$ in Sumerian oath formulae. Edzard (1975, 72, 75) speculates about the cutting of a textile or strip of a garment in search of an explanation for these expressions but does not draw the connection to the net mentioned in oath-related inscriptions like that of the Stele of Vultures (see discussion below). Sallaberger (2008, 1) translates nam-erím ku$_5$ 'to cut the evil (for oneself in case of perjury)'.

[8] San Nicolò 1938, 306. Divine witnesses were also needed 'to ensure the just storage of the harvest yield, and to bring about the settlement of disputes, collection of taxes and tithes, the fair distribution. All this was accomplished by statements made in the presence of the symbol' (Harris 1975, 204; cf. Harris 1965, 224b). See also Stol 2012, 563-565 for occasions in which divine symbols (emblems and weapons) were used. Cf. Sandowicz 2011, for (mostly Neo-Babylonian) references and literature on the consequences of perjury and stepping back from an oath.

[9] The conventional Sumerian expression during the Ur III period for the royal oath ('*Königseid*') was mu lugal-bi pa$_3$ 'to invoke/appeal to the name of the king'/ 'by the name of the king' without specification of the ruler's name (Sallaberger 2008; Edzard 1975, 86-88; cf. San Nicolò 1938, 306). During the early Old Babylonian period, a god together with the (unspecified) king was typically invoked; occasionally, more than one king was cited, but only very rarely did the king act as sole oath guarantor (e.g., Harris 1975, 3-4 with references; Nebiolo 2018). From the reign of Hammurapi onwards, the king's name was increasingly specified (San Nicolò 1938, 306-307).

[10] Harris 1975, 217.

[11] Harris 1975, 4.

[12] San Nicolò 1938, 307.

gate of the life of the god'),[13] or, the entrance to the temple cella.[14] There, the oath taker had to assert the truthfulness of a claim or statement in front of one or more human and divine judges and witnesses.[15]

Concerning gesture, texts refer to a 'touching of the throat' on these occasions – quite appropriately, since the word 'throat' (*napištum*) also means 'life', i.e., the life of the oath taker.[16]

Clear preferences existed regarding the gods chosen for legal supervision of oath taking and legal decision making more generally; a certain hierarchy of popularity among them can be deduced from their place of mention in first, second, or third position of the oath formula.[17] Most frequently invoked was the sun god Utu/Šamaš, the god of justice, often referred to as the 'judge of the country' or the 'judge of heaven and earth'.[18] He occupied a predominant position as judicial agent *par excellence*, and was also feared for his sanctions. In second place in terms of frequency of being invoked was another astral deity, the moon god Nanna/Sin. In addition, local tutelary or dynastic deities such as Tišpak in Ešnunna, Itur-Mer in Mari, or Ninmarki of Gu'abba in Lagaš, Larsa and Ašdubba, and special oath deities such as the goddess Išhara occurred often, as did divine couples such as Šamaš and Aya, Sin and Išhara, Ninmarki and Lagamal, or Bau and Zababa.[19]

The deity/deities to whom an oath was sworn were regarded as materialising in the form of non-anthropomorphic divine standards or as weapons planted in the ground.[20] These portable items (often two or more) included the 'emblems' (ŠU.NIR/šurīn*num* in the form of sun-disc and moon-cresent) of Šamaš and Sin, and the 'weapons, maces' (^{giš}TUKUL/*kakkum*) that could be associated with various (belligerent) gods like Ninurta, Nergal, Adad, Zababa, or Ištar.[21] More specific weaponry were the 'saw' (*šaššarrum*) of Šamaš and the 'axe' (*pāštum*), besides the 'spade' (*marrum*) of Marduk, the 'lance' (*imittum*) of Ištar; furthermore, animals like the 'bird' (MUŠEN/*iṣṣūrum*) of Ninmarki, the 'snake' (*bašmum*) or the 'scorpion' (GÍR.TAB/*zuqiqīpum*) of Išhara, the dog (*kalbum*) of Gula, and the 'calf' (AMAR/*būrum*) of Adad or Sin were mentioned. Weapons, often two or three, were typically 'erected' (*zaqāpum*) or 'installed' (*šakānum*) in the place where the assertion of truth was to be made.[22] The verb most frequently used in this functional context of divine emblems was *bârum*: 'to establish the true legal situation'.[23] The places where this happened was often the (temple) gate,[24] the courtyard or inside of the temples, but could also lie outside the cities in local fields, orchards and other rural places where the authority of valid judgements was needed, especially in regard to correct measurement of land property and

[13] Veenhof 2003, 323-324. On the gate as place of judgement see the large number of attestations in CAD B 17, 19-20, 22, as well as in Dombradi 1996, 321-325.

[14] Veenhof 2003, 323.

[15] On the 'judges of a specific temple', the 'judges at the gate of the temple' and the 'judges of the king', who became increasingly important during the Old Babylonian period, see e.g., Harris 1961, 119. Consequently, social groups who typically served as witnesses, for instance at the gate of the 'cloister' (*gagûm*) at Sippar, were 'priests' (sa$_2$ga), 'stewards of the *nadītum*-priestesses' (ugula lukur ^{d}Utu) and 'doorkeepers' (i$_3$-du$_8$, *bābim gagîm*) (Harris 1961, 118).

[16] For the expressions 'to touch the throat' (*napištam lapātum*) and 'touching of the throat' (*lipit napištim*) see the attestations in CAD L, 84-85 and 201; also, Charpin 1982.

[17] For statistics of these mentions, see Nebiolo 2018.

[18] Krebernik 2007, 354-355; 2011; Kurmangaliev 2011.

[19] For Šamaš and Aya, see Harris 1975, 150 with fn. 62.

[20] The information in this paragraph is gathered from the evidence collected by Dombradi 1996, 84-86, 91-92; as well as Pongratz-Leisten 2011, 106.

[21] Charpin (2019) makes the important point that *šurinnum*-emblems were connected to specific gods (the emblem of Šamaš was the 'sun disc' (*šamšum*), the emblem of Sin was the 'moon crescent' (*uskarum*)), but that weapons were not exclusively associated with a specific deity. In addition, Šamaš and Sin could also possess one or several weapons.

[22] See now Richardson 2021, tables 2.2 and 2.3, for a list of emblem types and related verbs (table 2.5).

[23] CAD B, 126-127 s.v. *bârum* A 2. 'to become established, proven (in legal context)' and 3. *burru* 'to establish the true legal situation (ownership, amounts, liability, etc.) by a legal procedure involving an oath'; cf. Richardson 2021, 38 with table 2.5.

[24] Stol 2012, 562, 565-566; Pongratz–Leisten 2011, 110.

crops.[25] Richardson makes the important point that the wide-spread use of emblems to validate legal proceedings is restricted to the Old Babylonian period from 1880 onwards (no attestation after 1620 BCE),[26] as is their remarkable active role/agency. The latter is attested through the verbs most used in regard to emblems: they (the emblems) 'went' (*alākum*), 'went out' (*waṣûm*), 'came down' (*arādum*), 'circumambulated' (*sahārum*), and 'established a true legal situation' (*bârum*), which enabled humans to decide, measure, and find truth in a rightful and authoritative manner.[27]

Reflecting the ranking in popularity of the above deities, the gates of the temples of Utu/Šamaš and Nanna/Sin were the most popular locations for oath taking all over Babylonia, with local differences depending on the local panthea. In the city of Ur, the city of the moon god Nanna, the most important location for legal decision making during the Ur III and Old Babylonian periods was the Dublamah, the ceremonial gateway building which connected the sanctuary of Nanna with that of his spouse Ningal.[28] There, pivot stones dating to the reigns of Amar-Sin (2046-2038 BCE, all dates according to the Middle Chronology) and Šu-ilišu (1984-1975 BCE) respectively, identify the building as 'the place of his [Nanna's] judgement' (ki di-kud-da-ni).[29] Furthermore, Amar-Sin's inscription employs a metaphor which will become important for my later argument: It describes the gate as 'his [Nanna's] *net* (sa-bar), which the enemy of Amar-Sin cannot escape'.[30] Piotr Steinkeller has gathered further attestations for sa-bar/sa-par$_4$/*saparum* 'casting net' in Ur III and Old Babylonian literary and historical texts which similarly connect the capture of enemies by gods and kings with the capture and imprisonment of evil-doers and criminals. In the Code of Hammurabi, the king refers to himself as the 'king of justice' and as the 'net that captures all enemies' (ii 68).

Similar to the Dublalmah at Ur, the Ekur at Nippur is compared to a 'net' in its function as a place of judgement and punishment.[31] Furthermore, texts on oath taking procedures refer to 'nets' and 'bird-traps' (*huhārum*) as (ritual) equipment in which oath takers would be 'entrapped' in the event of oath breaking.[32] Since both words are used in more ordinary contexts for catching fish and birds, we should expect the same kind of visual rendering to be used to represent divine or royal ensnarement of enemies and oath breakers as well as for fishing/hunting (see below).[33]

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[25] Richardson 2021, 33, 41.

[26] Richardson 2021, 35-37, cf. table 2.2.

[27] Richardson 2021, 38.

[28] See Steinkeller 1985, 39 with fn. 1 for the Dublalmah's function as a 'courthouse' and further references to texts which specifically identify the Dublalmah 'as a location of legal proceedings and oath taking'. See also RIME 3/2, E3/2.1.3.9 for Amar-Suena's and RIME 4, E4.1.2 for Šu-ilišu's pivot stone inscription. Cf. Veenhof 2003, 324.

[29] Steinkeller 1985, 39 (UET 1 71, l. 21). The king, who was frequently referred to in the oath formulas, may have been substituted by an image (a statue or stele) if not present in person. The Dublalmah at Ur, for instance, housed fragments of the stela of Urnamma (Zettler and Hafford 2016, 373) and its placement may have established royal besides divine presence there.

[30] Steinkeller 1985, 39 (l. 22-25).

[31] The hymn Nungal in Ekur describes the Ekur as 'house, it surveys heaven and earth, a net spread out, the criminal cannot escape its arm, it drags around the enemy' (lines 38-39), and as 'her (i.e., of Nungal) net (i.e., Ekur) is (made of) fine meshes, she has spread it over the land, the wicked man cannot grasp her foot, he cannot escape her arm' (lines 38-39) (Steinkeller 1985, 40).

[32] See also Veenhof 2003, 324-326, for a discussion of various nets in oath taking contexts. He concludes that '[t]he presence of the net [*saparum*] as an instrument of divine punishment at the very place where the oath is sworn creates an almost physical awareness of the danger of perjury' (Veenhof 2003, 235). Cf. CAD S s.v. *saparru* A, 161-162 including: 'I properly arranged a net (SA.PAR$_4$) to serve as dwelling place for the divine judges.' (BBR No. 97 r.2; CAD S, 162 A c) and Steinkeller 1985, 41–42 for the use in ordinary fishing. For *huhāru* 'trap' see CAD H, 224-225.

[33] To my knowledge, no depictions of hunting or fishing survive from the Ur III or Old Babylonian periods. However, Neo-Assyrian reliefs from Assurbanipal's North Palace at Niniveh (*c.* 645-635 BCE) depict various hunting scenes with nets, e.g., attendants with nets, stakes and string for traps on their way to the hunt (BM no. 124898; see https://www.britishmuseum.org/collection/object/W_1856-0909-21_1, last accessed 17 February 2022) or the hunting of deer with netting (BM 124871,c; see https://www.britishmuseum.org/collection/object/W_1856-0909-46-B, last accessed 17 February 2022). As is to be expected, the mesh is rendered as diagonally crossed lines.

The gate, the net, and divine emblems: Visual evidence for oath taking on stone artefacts

The best evidence for the concept, that those who break their oaths will be 'caught' in a divine net, with both, textual *and* visual components combined in one single monument, is also the earliest evidence for oath taking which survives from ancient Babylonia: The Stele of Vultures (*c.* 2470 BCE).[34] This famous stone monument lists fields which were disputed between the neighbouring city-states of Umma and Lagaš and which were – according to the inscription – finally granted by the god Ningirsu to Eannatum, the ruler of Lagaš. The largest portion of the inscription describes the oaths taken by the 'man of Umma', i.e., the defeated king of that city: Eannatum makes him touch the 'great casting-net' (Sumerian: sa-šuš-gal, also translated as 'battle-net', German: '*Fangnetz*')[35] of the god Enlil and has him swear an oath on it that he will never trespass the 'borders of Ningirsu' and the related irrigations channels again. The oath ends with the curse: 'Whenever I transgress [this border/this oath], may the great battle net of Enlil, king of heaven and earth, by which I have sworn, collapse/descend upon Ĝiša (Umma)!'[36] The man of Umma then goes on to swear oaths on the 'nets' of the deities Ninhursag, Enki, Sin and Utu.[37] In the case of the goddess Ninki, the last oath deity invoked in the inscription, the curse does not call for the descending net, but for 'snakes from the ground that may bite the feet of Ĝiša [=Umma]' (rev. v, 6-11, 23-41). Corresponding to, and directly reflecting the great prominence of oaths, curses and casting-nets in the inscription, the obverse of the stele depicts a huge person, most likely the god Ningirsu, holding a giant net filled with naked men – obviously, oath breakers who dared to transgress the border lines dictated by the oath.[38] The scene is accompanied by a standard with a bird mounted on top of the pole. Tellingly, one man who sticks his head out from the net is clubbed by the god with a mace as additional punishment for a further transgression. The same textual-visual concepts, i.e., an oath not to transgress boundaries associated with a net and mace, survive in the form of clay mace-heads commissioned by Eannatum's son Enmetena of Lagaš and from rivalling Umma; two of them have a net modelled and/or painted on their tops (**Figure 1**).[39] Depictions of giant maces planted like standards in the ground are known from Early Dynastic, Ur III and Old Babylonian imagery.[40] Even though these artefacts predate the terracotta plaque evidence under discussion in this article by several centuries, it seems reasonable to suggest that casting-net, poisonous animals (e.g., snakes and scorpions), and mace persisted as visual indices for the punishment awaiting oath breakers into Old Babylonian ritual practice, metaphoric usage, and iconography.

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[34] See Winter 1985 with references to earlier literature; for a translation and detailed discussion of the Stele of Vulture's oath section, see Edzard 1975, 64.

[35] Cf. Edzard 1975, 65.

[36] RIME 1, E1.9.5.1, xvi 34-40 and xvii 6-20.

[37] RIME 1, E1.9.5.1, xvii 21-rev. iii 1.

[38] See for instance Winter 1985, figs. 1, 3, 4; cf. Veenhof 2003, 324. In her detailed study of the textual and visual contents of the stele, Winter does not connect the depiction on the stele's obverse with oath related paragraphs in the inscription. She states: 'By contrast, those portions given the longest description in the text – the delineation of all of the restored fields and the oaths sworn by Umma – are entirely omitted from the visual narrative.' (Winter 1985, 22).

[39] For a good picture of the net on the exemplar today housed at the Yale Babylonian Collection (NBC 2501) see: https://cdli.mpiwg-berlin.mpg.de/artifacts/222533. For the British Museum exemplar from Umma see: https://www.britishmuseum.org/collection/object/W_1989-0516-1. Despite I. Finkel's recent announcement that these objects functioned as mace heads not vessels (Kenney 2019), they were and continue to be described as 'vase' or 'cylinder' on the respective websites and in publications (RIME 1, E1.9.5.1; cf.; see also the recent publication of another Enmetena exemplar in mace-shape without net by Khwshnaw and Zolyomi 2020 and the museum websites cited above). The end of the Enmetena inscription (RIME 1, E1.9.5.1, vi 9-16, 19-25) reads: 'If the leader of Ĝiša (Umma) crosses over the boundary dike of the god Ningirsu and the boundary dike of the goddess Nanše, to take away fields by force, [...] may the god Enlil destroy him! May the god Ningirsu, after casting his great battle-net upon him, bring down upon him his giant hands and feet.'

[40] Seidl 2011, 113, with references. An important Early Dynastic parallel in support of the argument presented in this paper is the 'figure aux plumes' stone relief from Tello (Louvre AO 221), which documents a transfer of fields to Ningirsu and depicts a person who touches a standing giant mace.

Figure 1: *Inscribed clay mace-head commissioned by Enmetena of Lagaš (c. 2400 BCE) with a net pattern modelled on top (Yale Babylonian Collection NBC 2501; Cuneiform Digital Library Initiative (CDLI). June 14, 2023. https://cdli.ucla.edu/P222533, last accessed 28 April 2024).*

Many of the divine emblems mentioned in the Old Babylonian textual record relating to legal decision making and oath taking (see above, e.g., disc and crescent, saw and mace, bird, scorpion, and snake) can be readily identified in the contemporary visual record. This record consists mostly of cylinder seals and their impressions on clay as well as of mould-made terracotta plaques.

For cylinder seals, the main visual theme during the Ur III and Old Babylonian periods are so-called 'presentation' and 'audience scenes'. These consist of an encounter between a human person and a (seated) deity or king; almost invariably, a disc-within-a-crescent or, more rarely, a sole disc or a sole crescent, is situated between the protagonists.[41] Maces occur frequently in the (smiting) hands of gods, heroes and/or kings, not only in the period under discussion but already during the preceding Akkadian and Early Dynastic periods. Equally, birds and scorpions occurred occasionally in earlier seals. However, the frequency of these motifs increased subsequently, i.e., on seals of Old Babylonian style. At the same time, special weapons like the double-lion-headed mace and the lion-headed scimitar started to take on a 'life of their own', an independent status outside the belligerent hands of anthropomorphic actors through an oversized appearance and through depiction in an isolated, vertically erected position, planted into the ground like a standard or sometimes supported by a pair of bull-men or six-curled heroes.[42] Similarly, discs-within-crescents or more rarely sole discs and sole crescents or birds started to appear regularly as standards, i.e., mounted on poles.[43]

The increasing frequency and independent positioning of divine emblems in early 2nd millennium BCE imagery reflect the increasing agency of such non-anthropomorphic objects in oath taking and legal decision making more generally, and matches the contemporary written record discussed above.

Early 2nd millennium BCE terracotta plaques

While hand-modelled terracotta figurines have a long tradition and wide-ranging distribution in the ancient Middle East and are known from Early Dynastic and Akkadian period Babylonia, mould-pressed terracotta plaques with figurative designs of gods, goddesses, men, women, and animals are a characteristic form of late 3rd and early 2nd millennium BCE visual culture.[44] They survive in the thousands, but we lack well-stratified archaeological contexts for most of them. Such contexts would help to establish a more precise chronological scheme for the iconographic and stylistic development and the context-related social functions of such plaques. What remains certain is their origin in the Ur III period and their enormous popularity during the Old Babylonian period across all social strata and in all kinds of urban contexts. The overall thematic focus of terracotta figurines and plaques is living beings, i.e., anthropomorphic and hybrid figures ('*Mischwesen*') or animals.

Two types stand out from the typical flat and rectangular or tongue-shaped form of terracotta plaques: these are miniature chariots with mould-pressed front shields and miniature thrones with mould-pressed and/or incised backrests. Both have three-dimensional components manually added to their flat, plaque-like image fields creating the characteristic features of a drawn cart (platform, axle) and of a piece of seating furniture (seat, legs) respectively. However, they are not only notable for their form but also for their iconography, which – unlike ordinary plaques – frequently depicts non-anthropomorphic items, especially divine emblems and standards. We will first turn to the chariots for a closer inspection of their designs and possible oath taking connections, and then move on to the thrones.

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41 For a concise overview on the types and iconographic occurrence of divine symbols, see Seidl 1971.

42 Seidl 2011, 113. Giant maces are already attested earlier, see fn. 33.

43 As mentioned above, bird, lion and hybrid animal standards are occasionally attested earlier (Late Uruk to Ur III periods), see Seidl 2011, 112, 114. The frequency of bird standards increases in early 2nd millennium BCE seals and terracottas (see below).

44 See Roßberger 2017; 2018a; 2018b; and forthcoming.

Terracotta chariot front shields

About eighty chariot models with mould-pressed front shields survive from southern Iraqi sites of the late 3rd and early 2nd millennium BCE.[45] They have been described typologically as 'two-wheeled platform cars' and differentiated from their mid-3rd millennium, mostly Syrian, predecessors since they have no side screens and were never provided with anthropomorphic figurines of charioteers or draught animals.[46] The characteristic front shields with moulded designs on their backs, i.e., towards the chariot's interior, are not encountered outside of Iraq, and not earlier or later than the period under discussion. E. Stone summarized the evidence in her study 'Chariots of the Gods'. In this work, previous evidence is enriched with data collected by Stone during a survey at the site of Maškan-šapir, where many chariot models were discovered.[47] Stone's analysis of the distributional pattern of finds suggests that most chariot models were concentrated in the areas, in which temples and administrative buildings must have been located (not yet been substantiated by archaeological excavation).[48] However, Stone also discusses distribution at other sites, highlighting a mostly domestic incidence for such items, although – as mentioned above – the archaeological context often remains unclear. This makes it difficult to establish a clear picture for the distributional pattern of chariots or to derive a functional attribution for these artefacts from it. Nonetheless, if such chariot models did indeed serve as visual emblems of oath taking, they could have either been left behind close to the place where the oath was taken or brought home into the house of the oath taker; so both, an archaeological association with temple (gate) buildings or with domestic space, would make sense.

Stone argued that the designs found on the chariot models 'reflected the personality of the particular local deity'. In the case of Maškan-šapir, this was Nergal, who – as argued by Stone and others – was symbolized by the lion-scimitar.[49] Her answer to the question 'What then was the function of these objects?' remains rather vague; she suggests that they had a 'role in rituals associated with the city as a whole, perhaps even with the ruler of the city'.

In more concrete terms, N. Postgate suggested in a discussion section following Stone's article that the chariot models should be viewed as 'substitute offerings' for large-scale votive objects dedicated to temples.[50] Similarly, P.R.S. Moorey called them 'imitations of state chariots in which deity statues were transported on festive occasions', 'model votives', or 'educational toys' used at home.[51] E. Klengel-Brandt reached similar conclusions for chariot models from Assur considering them representations of vehicles of transportation for divine statues during festival processions.[52] She assumed that the clay models reproduced originals made of precious metals (gold) and known from texts as dedicatory gifts to temples. In her study on ancient Near Eastern chariot model in general, J. Bollweg concluded that not all models may have had cultic functions since several of them depicted 'profane' motifs (e.g., archers).[53] She interprets these as toys used at home or as personal gifts in wish for good luck when hunting – a suggestion I consider highly unlikely.

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45 For a full catalogue and discussion see my forthcoming book referred to in fn. 1. Cf. J. Bollweg 1999 for catalogue and references on ancient Near Eastern model chariots.

46 Moorey 2005, 97-98; cf. Bollweg 1999, Abb. 7, 35, 38.

47 Stone 1993; Stone and Zimansky 2004, 92-97.

48 Stone and Zimansky 2004, 97.

49 Stone 1993, 87. The identification of the lion-scimitar with the god Ninurta is ascertained only for late Kassite *kudurru* reliefs (Seidl 2011, 113; 1971, 448). It remains unclear for the Old Babylonian period when also associated with a goddess.

50 Postgate 1993, 101.

51 Moorey 1993, 105.

52 Klengel-Brandt 1970, 36.

53 Bollweg 1999, 48-49.

None of the authors cited takes the difference in motif choice, that makes chariots (and thrones) stand out from other mould-made terracotta artefacts (plaques), into account for their functional interpretations. The following motifs occur:[54]

- One to three discs and/or crescents, mostly mounted on poles as standards (**Figure 2-3; Figure 4: 1, 3; Figure 5: 1, 3; Figure 6: 2**). If other motifs are included, disc and/or crescent standards are positioned in the upper part of the front shield.
- Groups of dots or circles, sometimes counting seven (**Figure 6: 2**) and often arranged as rosettes with seven surrounding elements (**Figure 3: 2-3; Figure 6: 2; Figure 7: 2-3**).
- A male god holding a disc emblem, a saw and/or a ring-and-rod and stepping with one leg upon a platform (= 'ascending'; **Figure 4: 3; Figure 5**); sometimes he is faced by a royal worshipper (**Figure 5: 3**). This is the standard anthropomorphic form of the sun-god Utu/Šamaš, which is extremely frequent on contemporary cylinder seals.[55] On these, the god usually holds his saw, occasionally the ring-and-rod (cf. The stele with the Code of Hammurabi), but almost never the disc-emblem.
- The bull-man, a hybrid figure with the upper body of a man, and the rampant lower body of a bull, holding the pole of a standard which is sometimes topped by a disc (**Figure 4: 1**). This motif occurs not only on chariots and thrones but also on terracotta plaques.
- Divine or royal figures holding the so-called double-lion-headed mace ('lion-mace'; **Figure 4: 2-3; Figure 6: 1; Figure 7: 2-3**). This was an extraordinary weapon consisting of a mace with a curled handle; the 'curls' end in the outward turned heads of lions, or rather lion griffins, upon the blade of a scimitar. The lion-mace appears not only in the hand of anthropomorphic figures, but also as an independent object placed in the centre of the chariot front shield and flanked by poles which are topped by triangles, i.e., 'spades' or 'lances' (**Figure 6: 1**).
- Another animal-headed weapon typically found on chariots (but not on other terracotta plaques) is the lion-headed scimitar ('lion-scimitar') with its outward-turned blade below the animal's head (**Figure 6: 1-3**). Pairs of scimitars often flank other divine symbols such as the disc-within-a-crescent emblem mounted as a standard.
- The so-called 'warring Ištar' motif depicting the goddess Ištar (Annunitum) with a bow in one hand and a scimitar or a double lion-headed mace in the other (**Figure 7: 1-3**; see discussion above). She is sometimes faced by a king lifting one hand in front of his face (similar to **Figure 5: 3**).
- The 'victorious king', also called 'figure with a mace' and one of the most popular cylinder seal motifs in early 2nd millennium BCE Babylonia (**Figure 7: 4**). Sometimes, a man with a bow, whose identity remains uncertain occurs.
- Rectangular areas above and below the main image fields filled by cross-hatchings (**Figure 5: 1, 3**) and concentric patterns (**Figure 3: 3; Figure 5: 2; Figure 6: 2-3**). These motifs never occur on other kinds of terracotta plaques or on cylinder seals.

The motif repertoire shows a clear preference for the emblems of the sun god Utu/Šamaš and the moon god Nanna/Sin. A decisive hint that it is their function as oath taking devices to which the imagery on the terracotta chariots alludes, is given by the fact that discs and/or crescents are depicted as standards (i.e., mounted on top of a pole) and not as free-floating astral symbols as is customary in presentation/audience scenes on contemporary seals. In contrast to their frequency on terracotta chariots (and thrones, see below), discs-within-a-crescent (as standards or otherwise) almost never occur on 'regular' terracotta plaques. Sometimes, the standard is supported by a 'bull-man', the *kursarikkum* and divine

[54] Detailed references and statistics will be published in my forthcoming monograph on Old Babylonian terracotta plaques.

[55] Kurmangaliev 2011, 618.

Figure 2: *Terracotta chariot front shields from Isin depicting disc-standards and a crescent above a table (1: IB 1919; 2: IB 1885; water-colour drawings by C. Wolff, © LMU Isin Archiv).*

Figure 3: *Chariot front shields from Larsa (1), Tello (2) and Maškan-Šapir (3) depicting disc- and crescent-standards as well as circles and a concentric 'trap'-pattern (1: after Barrelet 1968, pl. LII.551; 2: after Barrelet 1968, pl. XI.117; 3: after Stone 1993, fig. 6c).*

Figure 4: *1. Chariot from Ur depicting bull-man holding pole beneath crescent- and disc-standard (Penn 31-43-356, © Ur Online Project). 2. Chariot from Bismaya depicting man with brimmed cap (king) holding double lion-headed mace (Wilson 2012, pl. 96e; OIM Chicago, photo: wikicommons). 3. Unprovenanced terracotta chariot depicting ascending god (Šamaš) with double lion-headed mace beneath disc-within- a-crescent emblems and crescent standard (Barrelet 1968, pl. LXXI.741; Louvre AO 6687, photo: Z. Földi, reworked by E. Roßberger).*

servant of Šamaš whose place is the temple gate.[56] When Utu/Šamaš appears in anthropomorphic form on the chariot plaques, he is sometimes carrying the disc-standard (**Figure 4: 3; Figure 5: 3**). This is very unusual for his iconography on seals.

It seems likely that groups of dots, often arranged as rosettes with seven surrounding elements, should be identified with another astral entity: the star constellation of the Pleiades, called the 'Seven' (*sebettum*/^{d}imin) and first attested in texts during the Ur III period.[57] Other than on chariot shields, iconographic representations of these stars are rare before the mid-2nd and 1st millennia BCE, which makes their presence on the chariots even more notable.[58] Written evidence for the important role of the *sebettu* in oath/curse contexts starts with a Kassite *kudurru* inscription and increases significantly during the Neo-Assyrian period,[59] when they typically stand at the end of a row of divine figures, who are invoked to render justice against the one who breaks the oath; often immediately after the goddess Ištar.[60] The appearance of such groups of dots on terracotta chariot shields next to disc- and crescent-standards (**Figures 3: 1-3**) or Ištar (**Figure 7: 2-3**) suggests that this conceptual connection was already in place during the early 2nd millennium BCE.

[56] Wiggermann 1994, 242. Characteristic is the profile view of his body in alignment with the threshold and the head turned outward towards the viewer, i.e., the person approaching the entrance.

[57] Wiggermann 2010, 459.

[58] Wiggermann 2010, 465; Seidl 1971, 485.

[59] Konstantopoulos 2015, 138-139, 182.

[60] Konstantopoulos 2015, 139, 182, 190. In accordance with their growing importance in texts, *sebettu* occur regularly alongside discs, crescents and stars on Neo-Assyrian seals and stelae (Wiggermann 2010).

Figure 5: *1-2. Chariot front shields from Maškan-Šapir depicting Šamaš with a saw, disc emblem above, and a hatched 'net' pattern (1) or concentric 'trap' pattern (2) below (after Stone 1993, fig. 3b-c). 3. Unprovenanced chariot mould depicting king facing ascending god with disc emblem; discs, crescent-standard and hatched 'net' pattern above; pattern below (Yale Babylonian Collection; after Barrelet 1968, text fig. 16).*

Figure 6: *Chariot front shields from Nippur (1) and Maškan-Šapir (2-3) depicting: (1) double lion-headed mace flanked by door pole with spade-shaped heads (Legrain 1930, no. 243); (2) lion-scimitars flanking disc symbol, disc-within-a-crescent standard and groups of seven dots with concentric 'trap'-pattern below (AbD 90-580, after Stone and Zimansky 2004, fig. 55); (3) bald man between lion scimitars above 'trap' pattern (after Stone 1993, fig. 7a).*

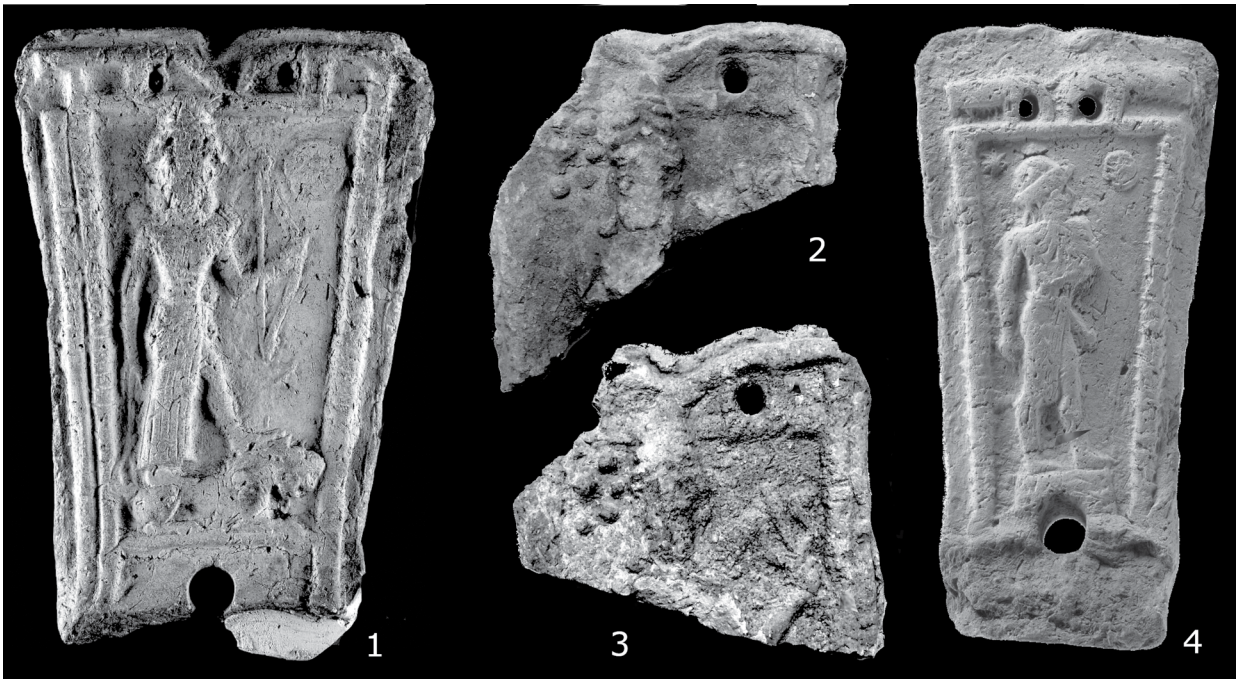

Figure 7: *Chariot front shields from Kiš (Uhaimir) depicting: (1) Ištar on lion with bow and scimitar, sun-disc above (Louvre AO 10479); (2 and 3) Ištar with double lion-headed mace and seven circle rosette (Louvre AO 10480 and 10477); (4) victorious king ('figure with mace'; Louvre 10479). All original photographs © 2008 Musée du Louvre /Antiquités Orientales, adjusted by author.*

As mentioned above, the lion-scimitar and lion-mace appear frequently as independent and vertically placed artefacts in Old Babylonian seal iconography. In addition, both weapons can be held by ascending male gods (probably Šamaš, cf. **Figure 4: 3**), the goddess Ištar (cf. **Figure 7: 2-3**),[61] the king (cf. **Figure 4: 2**), and even bull-men – not only on terracotta chariot shields but also on ordinary terracotta plaques and on seals.[62] It seems unlikely therefore that these weapons should be interpreted as personalized attributes of a specific deity, at least not during the Old Babylonian period.[63] We should rather consider them indicators of a certain role which could be performed by divine and royal agents. This is not the place to discuss these issues further,[64] but given the important role of the king and of Ištar (Annunitum) in the rendering of justice and more specifically the infliction of punishment in the event of oath breaking, their presence on chariot front shields is hardly surprising.

While only the symbol(s) and supernatural figure(s) responsible for the enforcement of an oath were usually chosen as motifs, there is one piece from Maškan-šapir which depicts a bald and shaven man standing in between two upright lion-scimitars. He lifts his right hand to his chin, and it seems reasonable to interpret this as the 'touching of the throat' gesture typically performed during oath taking according to the textual evidence (see above).

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[61] Another fragment of a chariot front shield from Kish pressed from the same mould allows for a better identification of the depicted figure as Ištar, ascending with an open skirt (Barrelet 1968, cat. 625bis). Another exemplar of a chariot shield with this motif is today housed at the Ashmolean Museum Oxford (AN1927.3286).

[62] Examples include terracotta plaques probably from Ešnunna (not excavated but purchased, Louvre AO 12456, lion-mace held by goddess), Nippur (Opificius, cat. 335, lion-mace held by king), Isin (IB 1929, lion-mace held by bull-eared god), and Ur (British Museum BM 127436).

[63] Cf. fn. 44 with references.

[64] See Roßberger forthcoming.

Finally, there are two similar motifs common on chariot shields (and thrones) that are never attested on contemporary terracotta plaques or cylinder seals: These are rectangles filled with cross-hatchings (**Figures 5: 1, 3**) and concentric patterns (**Figure 3: 3; Figure 5: 2; Figure 6: 2-3**). It has been assumed that these indicate woven components of chariots and thrones,[65] which of course makes sense for the seat but not necessarily for the front shield and backrest when surrounded by other motifs. Considering the textual evidence presented above, I suggest interpreting them as icons for 'nets' and 'traps' and thus as characteristic elements of oath taking.

Terracotta throne backrests

In her 1992 monograph, N. Cholidis compiled 69 terracotta throne models, mostly from southern Babylonian sites like Ur-Diqdiqqeh, Uruk, Nippur and Tello. In most cases, only the high backs of the chairs were preserved.[66] Although only a small number were retrieved from functionally defined architectural units, there are examples from private houses (Nippur), temples (Assur, Uruk), and palaces (Uruk). Stone observed that some sites have larger frequencies of chariots (Kiš, Maškan-šapir), and others of thrones (Ur, Nippur, Tello).[67] Even though the lower part with the legs is mostly broken off, throne backrests can be differentiated from other terracotta plaques by their smaller dimensions and shallower impressions.

Following a detailed description of the artefacts, Cholidis reasoned that they represent miniature versions of the thrones on which deities were seated inside the temples; brought into private houses, they would have invited specific deities 'to take a seat'.[68] She added that some sort of apotropaic and (female) fertility-related power may have been imbued with the model chairs given the (presumably fertility-related) presence of birds and scorpions.[69]

As on the chariot front shields, standards with crescents and (more rarely) discs are among the most common motifs pressed into the backrests (**Figure 8: 1-4; Figure 9; Figure 11-12**). Sometimes a bull man and a lion demon (**Figure 9: 1**), or a pair of (divine) female servants are added to support or flank standards (**Figure 9: 2-3**). In one instance, the standard appears placed upon the head of a quadruped animal on which a goddess holding a staff with a bird mounted on top is seated, faced by a bull-man (**Figure 9: 4**). Again, groups of circles and dots occur (**Figures 8: 1-2**), as well as hatched and concentric patterns set into rectangular panels (**Figures 8: 5**). As suggested for the chariots, these may denote 'nets' and 'traps'.

Despite these overlaps, the imagery on chariots and thrones is not identical. The frequent occurrence of animals (birds, scorpions, dogs) and twigs is not paralleled on the chariots (**Figures 8: 3-6**). We may follow the conventional interpretation that connects (water-)birds with the goddess Nanše and her daughter Ninmarki, the scorpion with Išhara, and the dog with Ninisina or Gula.[70] However, the reason for their depiction on the thrones was probably not a vague association with 'fertility' but with the well-attested role of these goddesses as guarantors of oaths – especially for Ninmarki and Išhara; the latter's role in this context continued into the Middle and Neo-Babylonian periods.[71] As in the case of the last oath/curse on the Stele of Vultures (cited above), it must have been the poisonous nature

[65] Sometimes, chariot front shields are filled or painted with these patterns without figurative designs (Bollweg 1999, Abb. 29 and 45).

[66] For a full catalogue, statistics and discussion of these objects, see my forthcoming book referred to in fn. 1

[67] Stone and Zimansky 2004, 93-94.

[68] Cholidis 1992, 119-120.

[69] Cholidis 1992, 122.

[70] Seidl 1971.

[71] Less so for Ninisina/Gula than for Nanše/Ninmarki and Išhara.

Figure 8: *Terracotta throne models depicting crescent standards, dots, birds, scorpions, and dogs: (1) From Tell ed-Der (D 101754; after Gasche and Pons 2014, pl. 70.285); (2) from Ur (Diqdiqqah; BM 116855 © Ur Online Project); (3) from Uruk (Wrede 2003, no. 1268); (4) from Ur (Diqdiqqah; BM 116854 © Ur Online Project); (5) from Tello (after Barrelet 1968, pl. XI.116); (6) from Ur (Diqdiqqah; BM 1927.0527.242 © Ur Online Project).*

of the snake (and similarly that of the scorpion and the rabid dog) which punishes the oath breaker that caused their visual presence on oath-related objects.[72] In support of this argument, we can refer to characteristic groupings of the respective animals, weapons and astral symbols on Old Babylonian cylinder seals (**Figure 10**).

While the weapons, emblems and gods (including the 'warring Ishtar') on chariot shields belong to the male sphere of supernatural agency, the animals on the thrones' backrests are linked to female deities. There are not only empty terracotta thrones, but also a specific group of semi-three-dimensional plaques which depict a seated deity/goddess surrounded by bird-, crescent- and disc-standards (**Figure 11: 1-3; cf. Figure 12: 2**). Notably, the backrests of these figurative versions resemble the empty thrones in their decoration (**Figures 11: 1-2**); sometimes, the enthroned goddess holds 'lances' in her hands (**Figure 11: 1**; cf. the 'spade'/'lance' standard on chariot shield **Figure 6: 1**).[73]

Lastly, thrones are the only kind of terracotta objects, and of contemporary visual culture more generally, that depict the niched gates of temples or entrances to temple *cellae* in some detail. These can take the form of closed doors flanked by standard-holding naked heroes and with birds, recumbent calves, fish,

[72] Roßberger forthcoming.

[73] For the 'lance' (*imittum*) of Ištar and *šukurrum*, see Richardson 2021, tab. 2.2 with references; for the 'lance' (*sappum*) of Ištar (of Tuba) mentioned in texts from Mari, see references in Pongratz-Leisten 2011, 106, 108.

Figure 9: *Throne backrests from Ur (Diqdiqqah) depicting: (1) crescent standard held by a bull man and a lion griffin (BM 127433); (2) crescent standard and bird standards held by women (BM 1924.0920.101); (3) crescent-disc-standard flanked by goddesses (Penn B17212); (4) goddess with bird mounted on a staff and seated upon an animal with crescent-standard on top of his head, bull-man approaching (Penn B15702). All photos © Ur Online Project.*

discs and crescents above the door lintel (**Figure 12: 1**); or, they can represent a stepped niche with the divine image placed upon a pedestal and flanked by standards (**Figure 12: 2**). As typical locations for oath taking and legal decision making, depictions of temple gates decorated with suitable emblems make ideal indices for these procedures on terracotta thrones.

Conclusions: Clay residues of juridical practice

This paper has argued that the characteristic motif choice for mould-pressed clay miniatures of chariots and thrones is best explained through a conceptual relationship with oath taking and legal decision making more generally. Although we are unable to reconstruct the handling of such artefacts during and/or after these acts, their iconography stands out as distinct from the repertoire of other terracotta plaques. A certain overlap with cylinder seal iconography is hardly surprising given the testimonial function of the latter on legal documents such as contracts and court records. Chariot and throne terracottas as well as the divine emblems on contemporary cylinder seals played an active role in the creation of divinely sanctioned permanence of human action through visual-material bonds. The same principle can be observed in the case of the earlier Stele of Vultures and in the later *kudurru*s with numerous divine emblems visually strengthening the real property-related contracts and curses formulated in the inscriptions.

Figure 10: *Cylinder seal dating to the Ur III or early Old Babylonian period (Collon 1982, cat. 249, BM 129467 © The Trustees of the British Museum).*

Figure 11: *Throne models with seated goddesses from Ur (Diqdiqqah): (1) holding spade or lance-like standards (BM 119160); (2) flanked by disc standards above birds and crescent above horned crown (BM 119162); (3) flanked by men holding crescent standards (BM 1931.1010.394). All photos © Ur Online Project.*

Figure 12: *Throne backrests depicting temple facades: (1) from Nippur with naked heroes holding door poles, recumbent calves, birds and crescents with stars above door lintel (Oriental Institute Museum of the University of Chicago A 29427, 3 N 216; photo: E. Roßberger); (2) unprovenanced with kilted heroes holding disc standards, flanking enthroned divine image placed upon pedestal in stepped cult niche (YPM BC 038109, YBC 10035, photo by Yale Babylonian Collection Staff, 2019, viewed 10 July 2020, <https://collections.peabody.yale.edu/search/Record/YPM-BC-038109>).*

The most prominent divine figures in judicial contexts and particularly oath taking were Utu/Šamaš and Nanna/Sin; their sun-disc and crescent-emblems are present on most chariots and thrones. It seems likely that the frequently depicted weapons lion-scimitar and lion-mace referred to divinely sanctioned punishment which could be inflicted by a variety of gods as well as by the king.

The differentiation between chariots and thrones relates to the gender of their supernatural referents: Chariots for (male) gods, the warring Ištar and the (god-like role of the) king; thrones for goddesses such as Ninmarki, Išhara, or Gula; disc- and crescent-standards on thrones most likely referred to Aya and Ningal, the spouses of Šamaš and Sin, in their equally important role in legal decision making. It seems reasonable to suggest that site-specific preferences for certain designs and artefact types (chariots or thrones) reflect local preferences for specific temple gates such as the Dublalmah at Ur connecting Ningal's and Nanna's sacred precincts.[74] These preferences were never exclusive, resulting in varying combinations of deities/divine symbols employed at each site — both, textually and visually.

The stationary character of the thrones versus the mobility of the chariots may equally have played a role when ritual practices were translated into visual-material form. While the throne as place of judgement is hardly surprising, an explanation for the chariot-shape is more difficult to find. The attachment of the standards of Nergal and Adad to chariots used in military campaigns is visually

[74] Without arriving at the conclusions offered here, Stone (1993, 98) observed that local preferences regarding design choice on terracotta chariots existed. She assumed these would reflect the 'symbolism of the titular deity or deities of each particular city' and would have served as an expression of the 'personality of the particular local deity'.

and textually well attested for the Neo-Assyrian period but not earlier;[75] it does not concern us here. I suggest that the active agency and mobility so characteristic of divine emblems during the Old Babylonian period is the cause of their representation on wheeled clay vehicles. Following Richardson and others,[76] the movement of divine emblems created venues for jurisdiction (and oath taking) even outside temple premises and the city. Divinely sanctioned decision-making and rightful measurement was needed especially in regard to real property (fields, land, houses) and crops (barley, taxes). Mobile divine emblems served as 'truth-finders' in these contexts, bringing authority and law to the people in various places.[77] Although no textual attestation survives 'how exactly' emblems moved, their visual rendering on clay vehicles without drivers must have suited the conception of the independent agency of these objects in the minds of the Babylonian people well. The frequency and over-all conformity of rendering for these objects suggests a broad acceptance of these concepts and their firm establishment in everyday life.

An important indicator that chariots and thrones were visual media related to oath taking is the presence of net and trap patterns – motifs never encountered elsewhere on terracotta plaques or cylinder seals. The conceptual connection of nets (and traps) with oath taking, both visually and textually, reaches back to the Early Dynastic period and persisted into the Old Babylonian period.

The exact times or contexts in which the terracotta artefacts were used and later destroyed eludes us; archaeological context remains too weak in the case of most of the surviving objects for us to draw conclusions from distributional patterns. They could have been either left behind at the place of performance (e.g., at the temple gate) or taken home by the oath taker or by the party who benefitted from the oath and who would also store the relevant written document.[78] The belief in the continuing efficacy of certain images that would bind a person to a legal agreement or promise in the future was so strong during the Old Babylonian period that it even persisted in miniature versions made of clay. Just like the much older Stele of Vultures, these artefacts would not only function as witnesses to past events but as active agents in ensuring and enforcing the truth and binding conditions established by an oath taken in the presence of divine and royal witnesses, and enforcing punishment inflicted by curse in the event of transgression.

Abbreviations

CAD = The Assyrian Dictionary of the Oriental Institute of the University of Chicago.

RIME 1 = Frayne 2008.

RIME 3/2 = Frayne 1997.

RIME 4 = Frayne 1990.

[75] Seidl 2011, 114-115. Standards carried into battle are visually and textually attested for the Early Dynastic and Sargonic periods (Richardson 2021, 30 with references).

[76] Richardson 2021, 37-38, 45-47. Cf. the well-documented practice of renting out divine weapons for 'journeys' around fields when property rights needed to be determined with the help of divine judgement (Harris 1965; Stol 2012).

[77] Richardson 2021, 49-50.

[78] Similarly, the Stele of Vultures, whose reason for existence was to visually and textually bind the defeated king to the legal terms recorded on the stele and confirmed by several oaths, was stored in the temple of Eannatum's patron deity at Tello. For a similar reasoning, see Winter 1985, 25.

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When Horses and Onagers Collide: The Use of Constraining Force in the Neo-Assyrian Reliefs

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Abstract

It is through the figuration of anecdotal images that Assyrians developed a particular visual process. Enhancing the narrative features of the unmovable rock reliefs, the Neo-Assyrian hunting scenes from the reign of Ashurbanipal strongly emphasize the confrontation between horses and wild animals. Focusing on the visual staging of the hunt, the precise and systematic analysis of anecdotal events – such as the onager eaten alive by the empire's dogs – and on the use of framework, this article tries to understand the utilization of the constraining force depicted in a predetermined space. Whether there are limits within the sculpted space of the hunt, embodied by nets or lines of armed men with their dogs, or whether, on the contrary, the hunting space appears to be devoid of any obstacles, this article focuses on the mechanisms of constraint set up in these hunting scenes.

Keywords

Horses, Onagers, Ashurbanipal, Hunting Scene, Constraint

Introduction

If Neo-Assyrian textual sources present a long list of hunted animal species, iconographic representations only show a few, among which large mammals such as lions, bulls, onagers, cervids and dogs are the most common.[1] During Ashurbanipal's reign, the North Palace of Nineveh originally held in Hall S a large scene depicting several hunts.[2] The king is shown multiple times taking part in three different hunts, all of them are led on horseback. The first, on the left of the composition is a deer hunt.[3] The second, located in the two upper registers, is a lion hunt.[4] The third, an onager hunt, begins in the lower register below the second and extends to the right to the end of the scene. These hunts seem to have in common the nature of the space in which they take place: enclosed and delimited. Only the onager hunt seems to break this rule, however, the frame and the structure of the pictorial space seems to enclose the scene. Here, animals are mostly directed to the right hand side and are hunted both by men on horseback, led by the monarch himself, and by men on foot with their massive hounds. Looking carefully at the scene, we can notice there are few horses, only four, but the onagers are figured in a large number, that we can imagine was even larger as some of the reliefs are nowadays fragmented. The multiplicity of these figures raises a few questions among which the necessity of this multiplication itself.

In Neo-Assyrian reliefs, the hunting action takes on an undeniable violent character, not only in the figurative gesture itself but also in the way the protagonists appear: thrown at full gallop, the horses chase

[1] See Lion and Michel 2006; Cool Root 2002 for the list of hunted species; Albenda 1972; 1974; 2002 and 2017 for the iconography of the lion and Albenda 2008 for cervids; finally see Reade 2018b, 52-53, fig. 57 for onagers and Reade 2018a, 31, fig. 25 for dogs.

[2] The reliefs are held in the British Museum (inv.: BM 124874 to BM 124882).

[3] Reade 2018b, 72, fig. 79.

[4] Reade 2018b, 70-71, fig. 77.

panic-stricken onagers, as illustrated by their wide-open mouths, their erect tails and their protruding eyes. Imposing hounds are also unleashed in pursuit, revealing large fangs. Here, it is an image marked by violence, underlined by the use of a constraining force, which is staged. Indeed, the monarch, out of reach on his horse or chariot, forces the hunters and horses around him to follow, or even to go ahead of him, in an action in which each one shows their strength. That can enable the hunted animals to save themselves from the hunters or, on the contrary, to be subdued. Here, the composition of the sculpted surfaces seems to act as a frame, the shape of which varies according to the animal being hunted, from which no individual, neither the hunters nor the hunted, can escape. The force of the action acts as a constraint that can only be brought to an end by the outcome of the hunt.

The hunt thus acts not only as a place of expression of the violence, but also as the place where order is restored.[5] The hunting action seems to intervene not only as an event participating in the definition of the monarch's power, but, through its visual translation, as perennial inscription of his authority.[6] Always victorious, the hunting action appears to be like a school of bravery where the king shows his worth and his force. Assyrian images follow a lot of constructional and structural rules, the position of each character, the king, his horses, his enemies – animals or humans – can be specified through each reign.[7] Ashurnasirpal's small scenes, for instance, show approximatively the same composition: the king is on his chariot, a number of two enemies (or two groups of enemies) are disposed on each side of the chariot as his horses jump above one that's already wounded or dead.[8] But, in Ashurbanipal's time, the scenes get bigger and wider, the number of figures gets higher.[9] The onagers hunt is a unique case in Assyrian palace iconography, widely developed on the slabs of the North Palace. However, if all the images belonging to the Assyrian iconographic program have, among other things, the objective of showing a certain image of the monarchy, which aspects are duly presented in this particular scene? How do these differ, both in terms of composition and discourse, from the other hunt reliefs in the North Palace? What does the multiplicity of animals depicted bring to the scene itself?

An enclosed space as hunting theatre

The spaces in which the hunts take place appear to be restricted by several elements, such as nets, cages or armed men.[10] The representation of the hunting environment, which can sometimes be qualified of arena, seems to have been marked in the Assyrian period by a desire for precision.[11] From the spectators to the details of the frame, no element is missing from the figuration. However, the location in which the action takes place varies from one image to another and from one hunted species to another.

The deer hunt is located to the left of the large relief originally exhibited in Hall S of the North Palace and is organised in a separate area.[12] It takes place on two slabs fragments in the upper left-hand corner of the large composition. Two male cervids, identifiable as such by their antlers, are in the middle of a

5 On the subject of violence, see Bachelot 2008, 114; Girard 2016, 13; see also Watanabe, 1998, 83 for order restoration allowed by the scapegoat subterfuge.

6 Bachelot 1991, 109; see also Nadali 2019, 52.

7 Albenda 1998, 9; see also Breniquet 2008, 237.

8 The position where the king takes part in the action but leads his men is identified by Butterlin as 'heroïc', kings appear here as 'predators', symbol that is even more striking in hunting scenes: see Butterlin 2005, 67. On the image structure and the position of each character, see Albenda 1972; Reade 2018b, 58, fig. 63; Spruyt 2019a, 17.

9 For instance, the relief depicting the battle of Til-Tuba (Watanabe 2018, 214-215, fig. 233) contains over 170 humans and 22 equids. See Watanabe 2018, 217; see also Spruyt 2019b, 307.

10 Nets are notably used for the deer hunt, see Reade 2018b, 72, fig. 79. Multiple representations of cages can be observed in lions hunting scenes. See Reade 2018a, 53, fig. 57, 60-61, fig. 65, 68, fig. 73. For armed men, see Reade 2018b, 65, fig. 69.

11 Notably for lion hunts, the hunting space has been qualified as arena, see Reade 2018b, 64.

12 The Hall S is located in the western part of the palace. This hall is open to exterior courtyards on two sides (west and north-west), which allows a clear light directly on the reliefs. See Heinrich 1984, 178, fig. 111.

lush landscape. They are accompanied by a female and a calf. All of them run at full speed to the right as suggested by the elongated rear posture they adopt.[13] However, their course is slowed down by a wide net that two bearded men erect in front of them. A fifth deer can be seen under the net, to the right of the stage, as one of the two men is about to take its life.

The lion hunt is a theme that was first taken up by Ashurnasirpal II in his palace of Kalhu and later further developed by Ashurbanipal in Nineveh.[14] Among the numerous lion-hunting scenes in the North Palace of Nineveh, one, originally exhibited in Room C, occupies the entire height of the reliefs and are developed on 21 slabs.[15] This scene starts on the right side of the composition and is read from right to left, following the direction in which the horses and lions are depicted. The composition opens with the depiction of a large number of foot soldiers wearing helmets, spears and shields. They are positioned along a vertical line that breaks up the horizontal composition. Their presence forms a barricade and thus encircles the hunting action and forces the lions into a specific location, towards the king on its chariot. A lion is released from a cage in front of them in the lower sub-register and rushes towards the monarch. In the upper sub-register, two horsemen, one armed with a whip and the other with a bow and arrow, are launched at the same time as the lion. All of them move towards the hunting ground where several wounded or dead lions and lionesses can already be seen, as well as the royal chariot. This one is pulled by a horse, jumping over the lifeless body of a lioness.[16] A total of 31 lions and lionesses are depicted in this scene.[17] Most of them have already fallen in front of the king, located to the left of the composition. The scene ends with a row of soldiers accompanied by large hounds. Behind them are two more rows of soldiers, the first consisting of lancers armed with shields, the second of archers. Therefore, the entire hunt is completely enclosed in a supervised area where the lions cannot escape their fate, from their cages to the arrows and spears of the king.

The slab's frame as an enclosure?

While in the palace of Nineveh the sculpted representations of the hunts seem to bear evidence of a frame or enclosed space delimiting the place of pursuit, the onagers hunt does not seem to follow this rule as it appears to show no spatial delimitation within the image itself. Both the hunting horses, led by the monarch Ashurbanipal, and the hunted onagers stand out against an empty background, with no ornament whatsoever and no signs of any barriers neither nets, nor armed men. Here the void left between each and every character seems to take an active role in the compositional choices, emptiness allowing the development of a specific discourse that is yet to unveil.[18] In the same way, while the edges of the register structure the external space, there are no sub-register and no ground lines to organise

[13] Reinach 1925, 6.

[14] Among the representations of lion hunting scenes, we can add the painting of Til-Barsip, surely dating from Asharhaddon's reign. See Lion and Michel 2006, 220; see also Winter 1983, 18.

[15] The absence of registers, in the larger part of the relief, allows the characters to be depicted on a much higher size than the onagers which are enclosed in a smaller register. The lion hunt relief is located in Room C, in the centre of the palace and according to the map of this part of the palace (see Matthiae 1998, 133) there is an entrance from Courtyard J on the south-west side, hence exterior light can directly illuminate the right hand side of the relief, see Reade 2018a, 22, fig. 15. To observe the organization of the reliefs in Room C, see Matthiae 1998, 174-175. The reliefs are held in the British Museum (1856,0909.16), see Collins 2008, 119-129 for details.

[16] If lionesses are depicted in these reliefs, they all appear already wounded or dead. Only lions are shown jumping at the king's chariot or horses. Can this choice of showing female lions only in a weak posture – which is opposite to their biological and behavioural reality – be understood as a way to strengthen the king's virility? One can indeed assume that, knowing that the lion hunt is associated in textual sources (Charpin 2016, 272) with military successes, it is indeed a prerogative of masculinity.

[17] They were probably even represented in a larger number as the reliefs are nowadays fragmented.

[18] This use of 'active void' is not specific to Assyria, but is part of an Akkadian iconographic tradition. See Nadali and Verderame 2008, 309.

the internal parts of the scene.[19] In the relief, the four horses, on the left hand side, move to the right in the same galloping movement as they are all depicted in the same elongated rear posture. In front of them, to the right of the composition, a multitude of onagers flee (**Figure 1**). All of them direct their course to the right, as they are followed both by the king's horses and his hounds. A few men on foot are represented in the opposite direction. Not only do they try to whip the onagers towards the king, but they also capture some of the wild asses as shown by the representation of the onager held by ropes around its neck in the last slab on the right hand side. The space in which the action unfolds, this last relief is framed by a wide, unadorned band which, on the one hand, marks the registers of the main relief and, on the other, closes the space engraved on the right.

The space of the last engraved slab (**Figure 1: 6; Figure 2**) appears as the place of the last refuge for the cornered onagers and thus acts as a delimitation to the hunting area. Therefore, the very framework of the composition acts here as the setting for the action taking place there. No net, no rows of armed men to gather the onagers, but a pictorial space that is ever more enclosing, forcing the equids to turn around where, as shown by the onagers held by ropes, they will be captured by human hand or deadly wounded either by arrows or by the hounds' fangs. In the last corner of the relief, on the right hand side, the juxtaposition of the two still free onagers galloping to the right depicted on the bottom of the image and the captured one lead to the left, allows the observer to understand the frame of the relief as an image of the enclosed space of the area. Hence, the situation of the captured onager seems to be a prefiguration of the fate reserved for the others. Here, the composition is inscribed in a circle showing both the action and its result, understood as a 'synoptic concentration'.[20] In one image, the observer can understand the onagers urgency to flee and their ultimate fate. In conclusion, the frame is used both to structure the pictorial space and to present a border for the action represented here and as an image of the enclosure.

The scattered onagers

Anecdotal images are understood as images whose absence within a large composition does not affect the general understanding of the action.[21] Their presence, on the other hand, adds narrative moments to the scene where the latent drama is sometimes unravelled. These images, which can appear drowned in narrative chaos, make it possible to singularise the figurative individuals and thus create several units which, whilst remaining independent, contribute to the construction of the scene in its entirety.[22] The many equine figures scatter, within this complex scene, over the entire engraved space. Yet, if they all are part of the same action, contributing to the scene's narrative, far from creating a whole that would occupy the surface, they seem to be dissociated from one another, as if they were isolated from a group that has lost its coherence and become non-existent. The background is left free of any ornaments or landscape elements. Thus, the individuals, perfectly outlined, are distributed over the surface of the relief and seem to float on it.[23] Left to their fate, the onagers, like the lions, are marked by the isolation which is accentuated by the composition and the absence of intermediate registers. Through this pictorial and narrative process, the figurative individuals are brought to the foreground and the surface of the relief. The observer's gaze is necessarily directed towards individuals detaching

[19] These sub-register can however be found in the lion hunting scene under the bodies of certain lions or under the representation of the hounds and their guards. These lines bring structure to the image and help inscribe the characters in the spatial dimension. See Reade 2018b, 64, fig. 68, 67, fig. 70-71.

[20] Breniquet 2008, 237.

[21] Albenda uses the word 'anecdotal' to name some of the king's actions in lion hunting scenes. However, here, the word is chosen to qualify the intrinsic character of the image and not the action it represents. Albenda 2017, 198; see also Spruyt 2019b, 135 and 277.

[22] Wölfflin 2016, 43.

[23] Wölfflin 2016, 41.

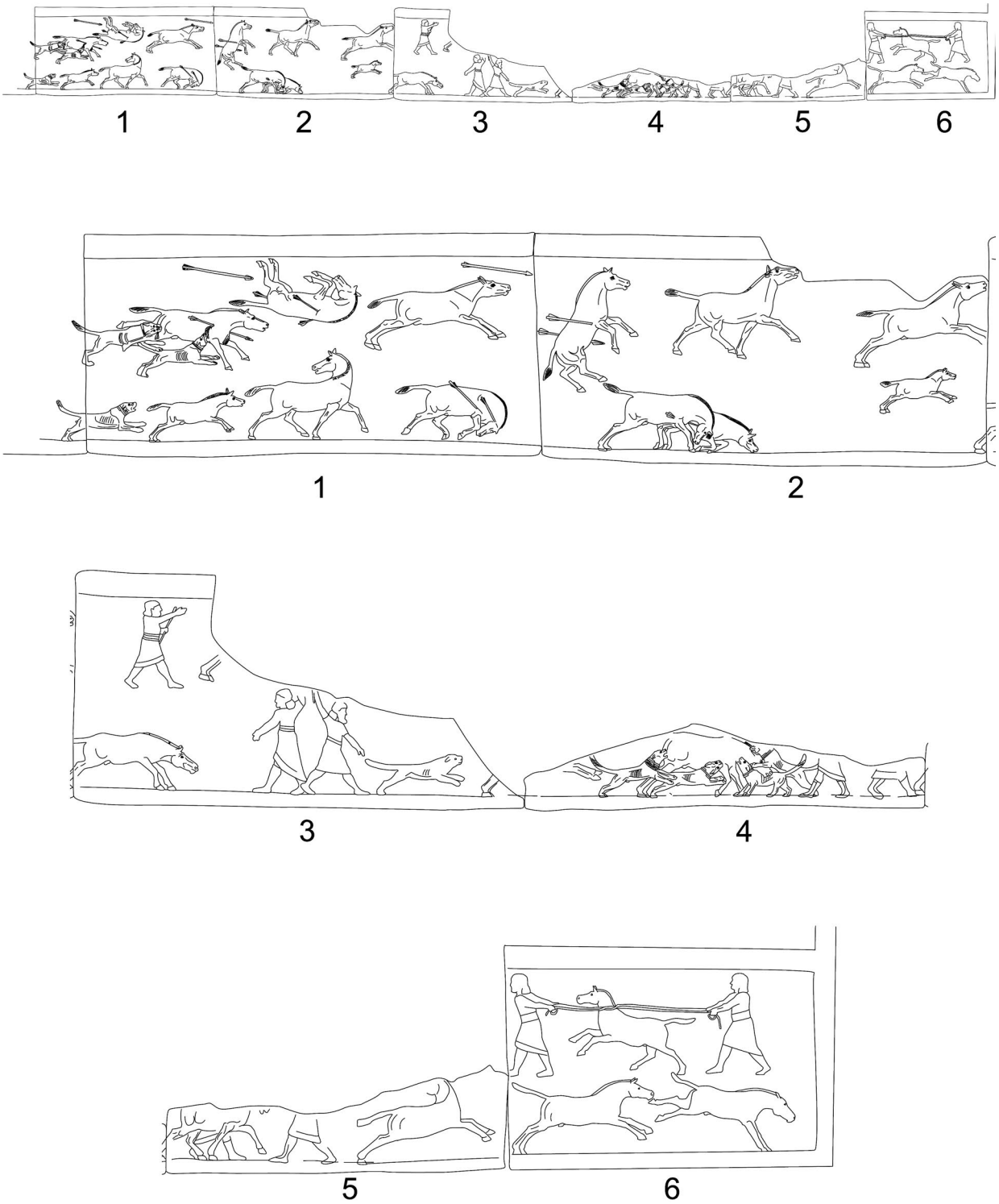

Figure 1: *The complete onagers hunt scene. Drawing after the reliefs BM 124875 to BM 124882 photographed by the author.*

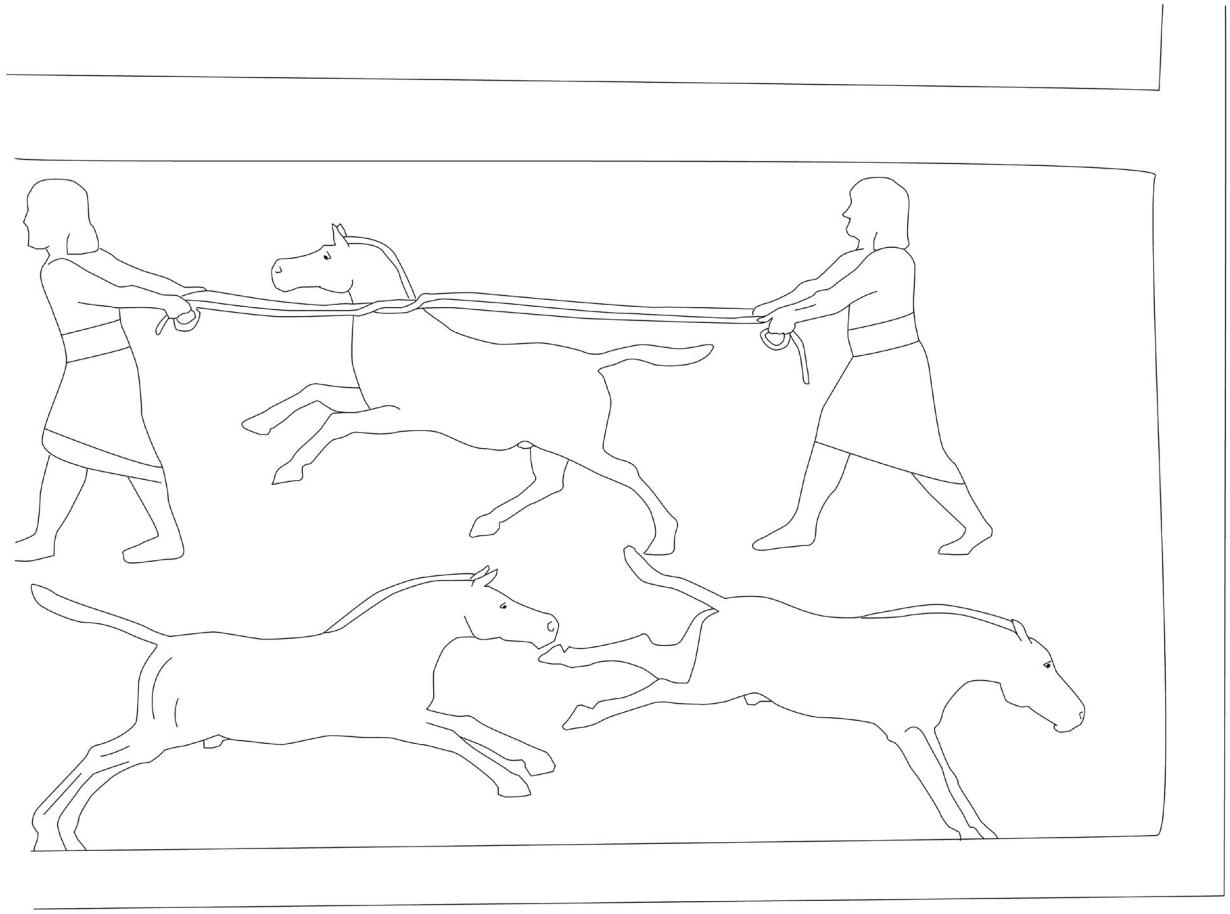

Figure 2: *The capture of the onager in the last engraved slab. Drawing after the relief BM 124882 photographed by the author.*

themselves from the empty space. No tree, no ornamental form allows the observer to separate himself from the representation of these wounded bodies. Inserting anecdotal images into large compositions therefore allows the viewer to have intermediate breaks in his observation process during which he can stop for a smaller action. This process makes it possible to convey a message all the more powerful as the observer may feel a particular attachment for the individuals involved in these anecdotal images.[24] The action they present concerns only a limited number of individuals, ranging from one to three. Whether hunters or hunted, equids are often involved in actions of this kind. This is why we will proceed with an analysis of several cases in order to observe the reasons that led the Assyrians to choose to specifically include these animals.

The Assyrian image, structured here by absence and emptiness is both terrible by what it shows, but also, and probably more so, by what it does not show. Thus, the group of three individuals on the left of the scene composed of a female onager, a foal and a massive hound, is represented suspended in a fleeting instant – the precise moment when the female turns with empathy towards the small one – before the latter is devoured by the furious dog (**Figure 1: 1**).[25] The image here takes on its full meaning in what it does not show, but merely suggests to the observer: the inevitable death of the foal under the

[24] Lazaris 2012, 5. The viewer's attachment to anecdotal images is notably due to the expressiveness and the striking nature of the images.

[25] Reade 2018b, 72-73, fig. 78.

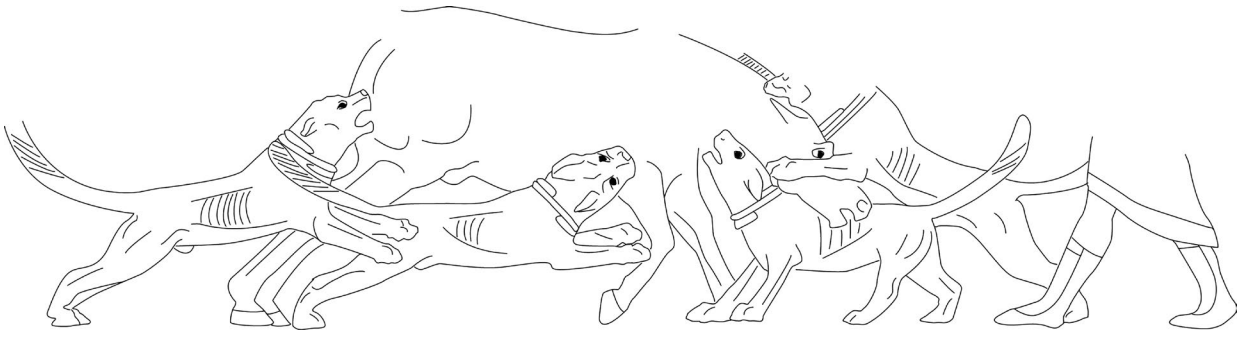

Figure 3: *Onager captured by hounds. Drawing after the relief BM 124880 photographed by the author.*

hound's fangs. This process, linked to the suggestion by absence and emptiness, is presented by Sartre as a '*néant d'être*', the image is by what it does not show, and exists more by what it suggests.[26] It is above all in his imagination, nourished by the image itself that the observer takes the measure of the narrative offered to him. This narrative process reinforces the inevitability of the consequences of the action shown. This phenomenon can still be accentuated nowadays by the breaks in the reliefs.

The fate of another onager (**Figure1: 4; Figure 3**) is all the more terrible because today we have only a partial vision of the action. If the animal is grappling with four hounds trying to make it fall, the outcome of the action is slightly delayed and is probably in the human gestures which is still incomplete and consist in a narrative detail bringing closure to the unravelling action.[27] Indeed, located to the right of the composition, the man who is nowadays only perceived through his steps is heading towards the cornered animal (**Figure1: 4**). Having knowledge of the raised arms of the several men depicted in the relief, but also of the sticks or whips they carry, the observer can quickly draw a parallel between the gestures of these different individuals. Therefore, although fragmentary, the action of the man heading towards the falling onager is known to us by analogy and it is easy to perceive and imagine it. Emptiness or absence, whether intended or due to the fragmentation of the reliefs, crystallises the image in what it shows, hides and suggests to us. The observer is then confronted with a large amount of action taking place without having, at first sight, a precise knowledge of their outcome. This, going beyond the frame of the object image alone, enters the mind and imagination of the observer where it unfolds into a mental image that he creates in front of him. In addition to the void structuring the composition and anchoring individuals in a tenacious distance, there is a multiplicity of attitudes in which they appear and which reinforces the heterogeneity of the whole.

Far from creating bonds, the distance that separates the animals, keeps them even more isolated. The group, scattered on the surface of the relief, does not exist anymore. This dispersion of individuals is all the more striking and easy to perceive when all seem, as is the case for onager hunting, to be moving in the same direction.

However, the precise observation of the onagers shows that these animals are not represented in perfectly similar positions. And if several of them (for instance, **Figure 4; Figure 5; Figure 1: 1-2**) gallop and are consequently represented in the posture of the elongated rear, the lengthening of their movement differs from one individual to another. Thus, the high position of the wild ass' head (**Figure 5**) places it in a more upright position, while the animal (**Figure 4**) seems to throw itself forward with more urgency.

[26] See Sartre 1976, 33; quoted by Bachelot, 2008, 13.

[27] Arasse 1996, 9-11.

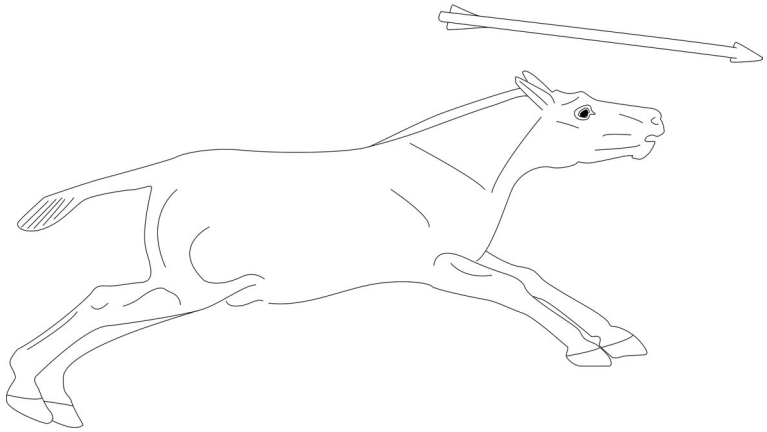

Figure 4: *Fleeing onager below an arrow. Drawing after the relief BM 124877 photographed by the author.*

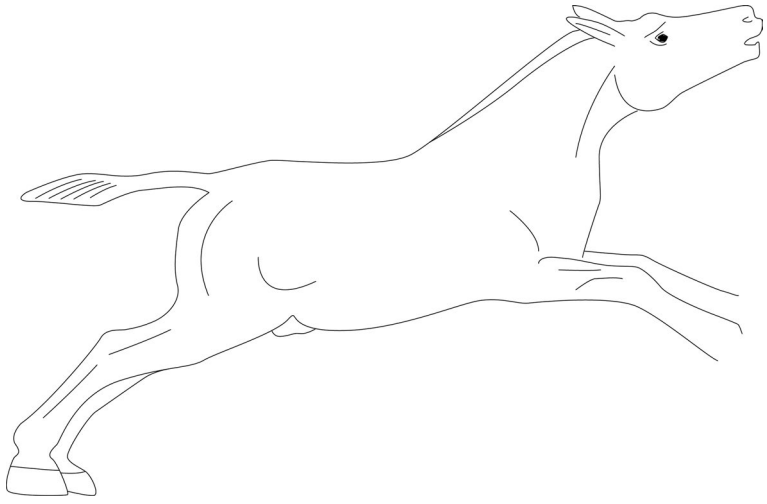

Figure 5: *Fleeing onager. Drawing after the relief BM 124878 photographed by the author.*

This slight difference can be explained by their position within the relief and their proximity to the men and the arrows surrounding them. Indeed, one of the onagers (**Figure 4**) seems to lower his head to avoid a falling arrow above him, while the second (**Figure 5**) seems to make a retreat movement, probably due to the presence of the armed eunuch just in front of him. Thus, although represented in a similar posture, these two equids remain locked in a personal and individual story, linked in particular to the closest context in which they are inscribed.

Finally, two other onagers are depicted in a posture related to a kick. However, there is once again a difference between the two animals, which lies in the course of their movement itself. Indeed, the first one (**Figure1: 1; Figure 6**), struggling with hounds, seems to be represented in a movement that still

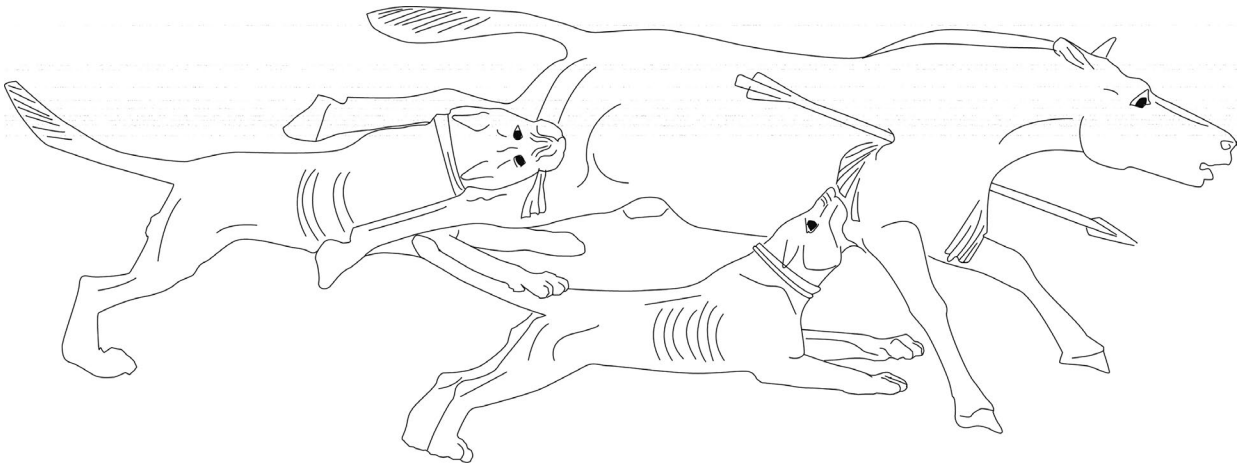

Figure 6: *Wounded onager attacked by hounds. Drawing after the relief BM 124877 photographed by the author.*

combines the posture of the elongated rear and that of the kick - an attitude that is not unlike that of the flying gallop, but here it seems less stretched.[28]

On the other hand, the second onager (**Figure 2** - depicted on the bottom right hand side of the image) is represented in the exclusive posture of the kick. This distinction places them in different time frames. The first is shown at the very moment when he changes his posture, trying both to throw himself forward and to repel his opponents: massive hounds. The kick of the second is complete, its hind legs are perfectly extended above its croup: its action has reached its maximum deployment.

In addition, some individuals are isolated both by the action in which they appear and by the fact that they are the only ones to be represented in this way. For example, there is only one onager to be shown rearing up (**Figure 1: 2; Figure 7**). And if this attitude differentiates him from the other equids, reinforcing his isolation, it is linked to the very reason that drives him to adopt it: the presence of two arrows crossing his abdomen through and through. The outcome of the hunt, fatal for this animal, is thus known from the outset by the observer who can only become aware of its imminent death. Isolated by his attitude, the animal is also alone in the face of his own death, an inevitable end that we can only wait and see.

Thus, the onagers are represented in very different postures, such as the fall, the frantic race translated by the elongated rear, or the capture, caused by both men and hounds. This multiplication of attitudes contributes to isolating individuals by locking them in a unique and particular context, linked not to the general hunting scene, but rather to their close context, from a confrontation with other characters, equines, canines or humans, to the definitive isolation of injury, fall or death.

The king's horses

Moreover, the representation of the disorganised onagers here is in contrast with that of the horses chasing them.[29] Indeed, these four individuals, thrown at a gallop, all adopt the posture of an elongated rear. Their similar posture allows them to form a coherent group composed of a large horse ridden by the king himself, followed by two eunuch riders, as shown by their lack of a beard, and a fourth horse. One of the eunuchs carries the quiver and arrows used by the monarch, the other, armed with a spear,

[28] Reade 2018b, 70, fig. 77.
[29] Reade 2018b, 72-73, fig. 78.

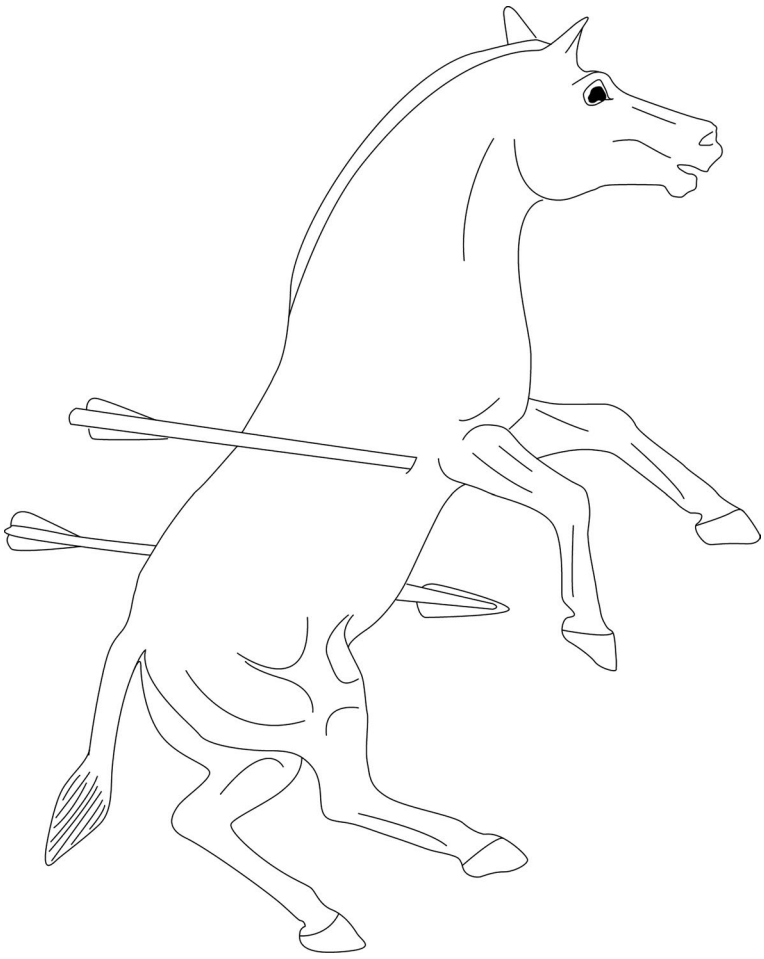

Figure 7: *Rearing up onager. Drawing after the relief BM 124878 photographed by the author.*

holds a second large horse by a lanyard. The succession of these four individuals, as well as the elongated movement in which they are represented, suggests a common movement that may seem evolutionary, but here we are not dealing with several representations of the same character, but with seven singular individuals: three men and four horses. And, if the great horses have the same function, that of carrying the king, and belonging to the royal guard, they differ from each other by their temporality. The first, on the right-hand side, leading the group, is currently ridden by the king, when the position of the second, placed behind the group, in the left hand side, shows that it will only be used in a second time: it is a replacement horse. The two smaller horses, also work in pairs. Both belong to the guards and if they are used simultaneously, they occupy different functions: leading the second royal mount, or assisting the sovereign in his hunting action by carrying his weapons. Although individualized, these figures form a homogeneous and uniform group thanks to the horses' posture, both in the action that drives them and in the certainty of its achievement leading inevitably to the death or capture of wild asses.

Conclusion

Thus, several elements contribute to the setting of a composition isolating the onagers from one another. On the one hand, they appear dispersed on the surface of the relief, isolated by the lack of ground lines or subregisters. On the other hand, the absence of any landscape or ornamental decoration places them in a deserted space in which they try to flee, alone. Furthermore, the multiplication of their postures enhances the opposition between them, wild asses and the king's horses, which move forward at the same pace, following the same leader, the monarch himself. Finally, the presence of a border enclosing the hunting action provides a framework for the scene and thus encloses the animals, assuring the observer of the inevitability of their fall. Ultimately, the general composition of the scene and the iconographic choices that govern it show one aspect of the Assyrian monarchy: the possibility of using constraining force beyond any internal limits in the picture. The king is preceded and followed by his men, dogs and horses to hunt wild animals. When the animals are hunted within enclosed spaces, characterized through nets or lines of armed men and their hounds, the constraint takes the strict form of an unshakeable physical frame within the image. However, in the onagers hunting scenes, the animals appear scattered on the surface of the relief, with no physical boundaries, no nets, no barriers of any kind, not even ground lines. The space seems borderless, each individual floating on the surface of the relief. Yet a boundary exists through the subterfuge of the frame of the sculpted space itself: a shift occurs from a frame that would act 'within the image' to the frame 'of the image'. The constraint then acts as an external frame which concentrates the use of force in that the galloping onagers see their course stopped by the edges of the relief, an element usually external to the action depicted and therefore, not taken into account. The onagers hunt, conducted here outside of any frontier sculpted into the image, is then enclosed by its depiction, and it is through the framework of the slab, and not the image, that the constraint unfolds.

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Up/Down, Close/Far, Front/Back: the Conceptualization of the Dynamics of Power in Hittite Texts

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Abstract

This paper discusses certain expressions attested in the Hittite diplomatic texts, in particular in treaties, which are based on verbs of motion or indicate directions, and which play a role in diplomatic discourse. It will be shown that, formally, these expressions can be considered as conceptual metaphors, according to the conceptual metaphor theory, developed by G. Lakoff and M. Johnson and they give us an insight into the system of thinking of the Hittites. The main conclusions are that these expressions are exploited in the making of diplomacy and that they can shed light on some aspects relating to the origin and training of the scribes who wrote the treaties.

Keywords

Hittite Language, Hittite Diplomacy, Conceptual Metaphor Theory, Peripheral Akkadian, Hittite System of Thinking

Introduction

In the Late Bronze Age, especially from the reign of Šuppiluliuma I onwards, the Hittite kings developed a web of international relations with other states of the Near East. As is well known, these relations could be of two different types. In some cases, the Hittite king shared the equal status of Great King with the other ruler (Assyria, Babylonia, Egypt, Mittani until the subjugation by Šuppiluliuma I and probably for a short period of time, Aḫḫiyawa – the so-called Great Powers' club).[1] In other cases, conversely, the relationship was unbalanced and the Hittite king was the overlord of the so-called vassals, or, to be more precise, the subordinate rulers (e.g., Amurru, Nuḫašše, Ugarit, the Arzawa countries, Ḫayaša). The relationships both with the parity and with the subordinate kings were issued, regulated and maintained by different types of written documents, in particular treaties, decrees and letters.[2]

In these documents, the dynamics of power and, in general, the relationships between the two kings are often defined by expressions that are based on verbs of motion or that suggest a specific orientation. The so-called subjugation treaties made extensive use of these kinds of expression. The goal of this paper is to present some of these expressions and to analyze their relevance in political and diplomatic discourse, as well as to draw some ideas about the way of thinking of the Hittites.

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[1] For this definition, Liverani 2000.

[2] The Hittite treaties have never been published together as a *corpus*. For the most important editions, see Pallavidini 2016, 22-26. For a recent overview of all manuscripts and fragments, see Devecchi 2015. The international decrees have been found for the most part in Ugarit, only four (dating back to the Hittite Empire) were discovered in the Hittite capital. For an overview of the texts and the editions, see Pallavidini 2016, 31-36. For the edition of the letters, see Hagenbuchner 1989; Edel 1994 (for the Hittite-Egyptian correspondence); Mora and Giorgieri 2004 (for the Hittite-Assyrian corpus) and Hoffner 2009.

The expressions

The first expressions involving verbs of motion or defining orientations are used to describe the beginning of the relationship between the Hittite king and the subordinates.

In particular, two expressions are attested. The first appears in CTH 42, the treaty between Šuppiluliuma I and Ḫukkana of Ḫayaša, as well as in CTH 68, the treaty between Muršili II and Kupanta-Kurunta of Mira-Kuwaliya. In the first text we read *kāša tuk* ^{m}*Ḫukkanan appinzin* UR.SAG-*an šarā daḫḫun;* 'I have taken you up, Ḫukkana, a lowly dog.'[3] In the second, with reference to the relation between Šuppiluliuma I and Mašḫuiluwa, the adoptive father of Kupanta-Kurunta *A-BU-YA=ma=an arḫa U-UL peššiyat n=an šarā dāš*; 'My father did not turn him out, but took him up.'[4]

The expression *šarā dā-* means on a literal level 'to take up', as for instance in the 'Deeds of *Šuppiluliuma*': EGIR=*az=ma=za* LÚ.KÚR ^{URU}*Gašgaš* GIŠ.TUKUL *dān namma šarā dāš;* 'but behind (my back) the Kaškaean enemy took up his weapon once again.'[5] In both treaties the implied meaning is however not literal. In order to give an appropriate translation of the figurative meaning of *šarā dā-* in the two passages taken into consideration, it is necessary to consider the broader context. Since in both cases the status of Ḫukkana and Mašḫuiluwa, respectively, is improved by entering into the sphere of power of the Hittite king, it is adequate to translate the expression with 'to elevate.'[6] The expression is thus constructed on an orientation down/up and, in particular, it conveys the concept that a transition from a worse to a better condition is a movement from down to up and therefore is constructed on the conceptualization of good meaning up. Since in both cases, this elevation of status on a historical-political level means exactly the opposite for both Ḫukkana and Mašḫuiluwa, that is the subjugation to the Hittite king, it is important to notice that the point of view is that of the Hittite king. Being a vassal, in fact, would have provided Ḫukkana and Mašḫuiluwa with, among other things, the protection of the Hittite king and his military, making them more powerful than before. Therefore, in this context, the expression conveys the idea, relevant in political discourse, that POWER IS UP.[7]

This inverse of this concept is strengthened by the expression used to describe the change of alliance of Aziru of Amurru and his subjugation to the Hittite king, Šuppiluliuma.[8] In CTH 49.II, the version in Hittite of the treaty between Aziru and Šuppiluliuma I, obv. I 24 we read *IŠ-TU* KÁ KUR ^{URU}*Mizri uit n=aš A-NA* GÌR.MEŠ ^{D}UTU^{ŠI} LUGAL.GAL *kattan ḫaliyattat*; 'He came from the gate of Egypt and he knelt down to the feet of My Majesty, the Great King.'[9] It is evident here that the subjugation was a decision of Aziru, so it was – at least up to a certain point – a voluntary movement from up to down and this is consistent with the orientation of the first expression taken into consideration. The only difference is that in the first two cases the subjugation was the result of an act of the Hittite king, therefore a movement from down to up; while in the second case the subjugation is an act of the vassal, therefore the orientation is the opposite.

The second expression that is used to define the beginning of a relationship between the Hittite king and another ruler who will become a subordinate, is attested in CTH 51, the treaty between Šuppiluliuma I and Šattiwaza, King of Mittani. The expression is ^{m}Šattiwaza DUMU ^{m}Tušratta ina ŠU-ya aṣṣabatma;

[3] CTH 42, obv. I 2-3. For the transliteration of the Hittite I, follow the guidelines of the *Hethitisches Wörterbuch*^{2}.

[4] CTH 68, obv. I 5-6.

[5] KUB 19.10, obv. I 16-17.

[6] For this translation, see Beckman 1999, 27.

[7] I very much thank the anonymous reviewer of my article who suggested the possibility to link this metaphor with the expression 'my Sun' (DUTU*ŠI*). This suggestion is very interesting, and it deserves more in-depth research that goes beyond the scope of this contribution.

[8] On the alliances of Aziru, see recently Devecchi 2012.

[9] On this expression, see Alaura 2005.

'I took you, Šattiwaza, son of Tušratta, in my hand.'[10] In general, expressions involving the 'hand', as we will see in more detail, suggest an idea of protection. In this specific case, the Hittite king takes Šattiwaza in his hand as a consequence of the escape of the Mittanian prince from his country.[11] This fact represents not only an act of protection, but the first step in the subjugation of Mittani to Ḫatti. Accordingly, the expression can be translated figuratively, with 'I took you, Šattiwaza, son of Tušratta, under my power.'

In the second expression, there is no verb of motion, rather an orientation is suggested, specifically indicating an orientation far/close. Proximity is therefore characterized as positive, the point of view being once again the one of the Hittite king.

The idea of proximity as positive is confirmed by other expressions that are often attested in the treaties. I refer here to the expression, in the Akkadian language, that indicates the stipulation of a treaty, i.e., riksa rakāsu that has the literal meaning 'to bind a bond,'[12] but is extensively used with the meaning 'to stipulate a treaty'.[13] It is attested, for instance, in CTH 41.I, obv. I 4, the treaty between Tutḫaliya I and Šunaššura, King of Kizzuwatna: riksam annēam ina berīšunu irkusu; 'they stipulated with each other this treaty.' The verb rakāsu is not a verb of motion but the meaning of the whole expression transmits an implicit indication of direction, since the concrete action of binding a bond implies in bringing together the elements that constitute the bond.

Another expression that conveys a similar idea, is also found in the treaty between Tutḫaliya I and Šunaššura: KUR ^{URU}Ḫatti u KUR ^{URU}Kizzuwatni lū šummuḫu; 'the land of Ḫatti and the land of Kizzuwatna become united',[14] where the notion of a friendly relationship (of alliance) is expressed by the idea of unity, that is the closest proximity. The concept of close proximity is also used to express the idea of protection in expressions that refer to the hand.[15] For instance, the locution ŠU.ḪI.A *araḫzanda ḫar(k)-* means literally 'to hold the hands around (someone).' It expresses the idea of protection, as we can see in the textual passage CTH 42, obv. I 22-26, in which it is stated: 'if you are not well-disposed to the person of My Majesty, the soul of My Majesty, and the body of My Majesty, and you do not hold me in a protective embrace (ŠU$^{ḪI.A}$-⌜*KA*⌝-*ya*=⌜*mu*⌝ *araḫzanda QA-TAM-MA Ú-UL ḫarši*) in the same way as you are well-disposed to your own person, soul, and body, and hold yourself in a protective embrace (ŠU$^{ḪI.A}$-*uš*=*za araḫzanda ḫarši*).'[16] It is clear that the embrace cannot be an actual one, so the idea that the expression conveys, is that of protection, as if the Hittite king were literally in the hands of the vassal. In the subjugation treaties, not only the protection of the Hittite king is regulated by a specific disposition, but also the clauses that regulate the military support that the subordinate ruler must provide to the Hittite king, which is fundamental to the alliance. In these clauses, the idea of proximity is also exploited, specifically to conceptualize the idea of support, as we can see, for instance, in the sentence *IŠ-TU* ŠA ^{D}UTU^{ŠI} *maḫḫan artati nu IŠ-TU* ŠA ^{D}UTU^{ŠI}-*pat* EGIR-*an ārḫut*; 'As you have stood on My Majesty, you shall continue to stand only on My Majesty.'[17] The verb *ar-* that literally means 'to stand', is also used in another expression that conveys the concept of help and support but with a different orientation: *nu zik* ^{m}*Ḫukkanaš* ^{D}UTU^{ŠI}-*pat aššuli paḫši* EGIR-*pa=ann=a A-NA* ^{D}UTU^{ŠI}-*pat arḫut;* 'You, Ḫukkana, benevolently protect My Majesty, and stand behind only My Majesty.'[18]

[10] CTH 51.I, obv. 56. The same expression is attested also in CTH 52.I, obv. 22.
[11] For an overview of the episode, see Beckman 1999, 44.
[12] CAD R, 347-355.
[13] CAD R, 99-100.
[14] CTH 41.I, rev. II 35.
[15] With reference to the expressions about the hand, see de Martino and Imparati 1998.
[16] Beckman 1999, 28.
[17] CTH 68, obv. II 7-8.
[18] CTH 42, obv. I 31-32.

In the first case, the expression is constructed on a close/far concept and the second expression is based on a front/back orientation. The same orientation also characterizes the phrase EGIR-*an tiya-* that means 'to go behind.' It can be used to conceptualize something more specific than the idea of support. In fact, the context in which this expression is attested may be interpreted in the juridical meaning of 'to become an ally', especially in combination with other expressions.

In CTH 42, obv. II 2, in fact, we read *našma apēdani imma* EGIR-*an tiyaši A-NA* ^{D}UTU^{ŠI}*-ma awan arḫa tiyaši;* 'if you go behind him and you go away from My Majesty.'

If the expression EGIR-*an tiyaši* can be translated as 'if you join him', the locution *arha tiya-* also has a very specific meaning. The act of going away from the Hittite king means, in fact, to break the alliance with him, as is also clear from the example in CTH 76, obv. I 7, that states: KUR ^{URU}*Wiluša A-NA* KUR ^{URU}*Ḫatti awan arḫa tiyat;* 'the Land of Wiluša defected from the Land of Ḫatti.' Therefore, a combination of the expressions EGIR-*an tiya-* and *arḫa tiya-* suggest a specific behavior, that a formal alliance is being broken and a new one, with a different overlord is being formed.

The expression *arḫa tiya-* represents the opposite of the expressions that conveys the idea of proximity: it is in fact the same orientation but in the opposite direction, since it is a movement from close to far, or, in other words, from proximity to distance. The same motion can also be seen in the expression KUR ^{URU}Kizzuwatni ana KUR ^{URU}Ḫatti ipṭur; 'the Land of Kizzuwatna separated itself from the Land of Ḫatti.'[19]

The continuation of the sentence is also very interesting in terms of orientation, since we read ana KUR Ḫurri isḫur; 'they turned to the Land of Ḫurri.'[20] The use of the verb saḫāru 'to turn' suggests a movement toward Ḫurri,[21] but this concept would contrast with the positive idea of proximity that the other expressions convey. How can we explain this ambiguity? A similar expression is attested in CTH 53, the treaty between Šuppiluliuma I and Tette of Nuḫašše. In this text, in obv. II 14-15 we read: KUR ^{URU}Mukiš KUR ^{URU}Ḫalpa KUR ^{URU}Kinza isaḫḫuruma itti LUGAL KUR ^{URU}Ḫatti inakkiru; 'the land of Mukiš, the land of Aleppo, the land of Kinza which should turn and become hostile to the King of Ḫatti.' The verb saḫāru is also used in this context, meaning 'to turn', but here the figurative meaning is explained by the verb nakāru which means 'to become hostile.'[22] Since turning is a movement with a front/back orientation, the idea of turning one's back to the Hittite king supports the concept of rebellion or betrayal.

The same concept is also present in the Hittite language, in two similar expressions that corroborate the meaning of 'to rebel, to revolt' given to the Akkadian term:

waḫnu-	to turn	to revolt, to rebel	Example: CTH 49.II, obv. II 18
EGIR-*pa waḫnu-*[23]	to turn back	to revolt, to rebel	Example: CTH 68, rev. III 32

The first corresponds to the Akkadian saḫāru and it is attested in CTH 49.II, obv. II 18-19: KUR ^{URU}*Mukiš* KUR ^{URU}*Kinza* KUR ^{URU}]*Nuḫašše=ya pidi waḫnuwanzi* [*nu A-NA* ^{D}UTU*ŠI kururi*]*yaḫḫanzi*; 'the land of Mukiš, the land of Kinza and the land of Nuḫašše turn and become hostile to My Majesty.' In the second expression,

[19] CTH 41.I, obv. I 7.
[20] CTH 41.I, obv. I 7.
[21] CAD S, 37-55.
[22] CAD N1, 159-171.
[23] For both expressions, see HHw, 191.

the idea of a front/back orientation is even strengthened by the term EGIR-*pa*, as in CTH 68, rev. III 51: *namma* EGIR-y*a=pat waḫnut*; 'then he turned back.'[24]

The action of becoming an enemy is also portrayed by an expression relating to an up/down orientation, attested both in Hittite and in Akkadian. In Hittite, the orientation is expressed by the verb *arai-* 'to rise',[25] of which there are two references in the treaties. One is in CTH 76, obv. I 75, in the sentence *mān=ta* ^{LÚ}KÚR [(-*ma*)] *kuiški arāi;* 'if some enemy rises up against you.' The verb refers to every possible enemy of the vassal of the Hittite king, while in the treaty between Šuppiluliuma II and Talmi-Teššup, King of Karkemiš, the term is more specific and refers to a confrontation between the Hittite king and another king of equal rank. CTH 106.II.2, obv. 46, in fact, states: *mān=a a-na* ^{d}utu^{ši} LUGAL *kuiški me-ḫi-Ir*-šu *arai;* 'But if some king of equal rank rises up against My Majesty.' The equivalent in Akkadian, the verb tebû,[26] is used in CTH 53, obv. II 48: šumma itti LUGAL KUR Ḫatti ^{LÚ}KÚR šanû itabbi; 'if another enemy arises against the king of Ḫatti.'

In both cases, the dynamic does not involve a subordinate king bound to the Hittite king by a treaty, but rather it considers the possibility of some enemy act against the Hittite king. However, the dynamic is very consistent with the idea that power is up, since the movement from down to up is finalized to acquire more political power, by challenging the authority of the Hittite king.

Defining the expressions

Now that the evidence has been presented, it is possible to draw some conclusions. Firstly, a question arises: is it possible to give these expressions a specific definition? In other words, are they attested randomly in the documents, or do they belong to a specific category? They all share one aspect, that their meaning in the treaties is to be understood as figurative and not literal.

According to the so-called conceptual metaphor theory, developed by Lakoff and Johnson, with the publication of the book *Metaphors We Live By* in 1980, expressions like those presented in this paper can be considered metaphors. A metaphor is not intended as a figure of speech, as we know it from literary or rhetoric texts but as 'pervasive in everyday life, not just in language but in thought and action.'[27] Metaphors are commonly used in every language and culture to conceptualize in more concrete terms an abstract idea, by mapping some element from a source domain (the concrete concept) onto a target domain (the abstract idea).[28] In particular, one of the most common conceptual metaphors, attested in the documentation under analysis as well, is good is up. We experience it in our everyday life, for example, when we say: 'I am feeling up today', meaning 'I am feeling good today.'[29]

A further remark that may be made about the expressions taken into consideration, is that they are orientational metaphors, i.e., metaphors that are based, in the words of Lakoff and Johnson, on our 'physical and cultural experience.'[30]

Concluding remarks

After having defined the expressions that have been presented as conceptual metaphors, a second question arises: how is this definition relevant in the study of Hittite diplomatic texts?

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[24] Here the reference is to Mašḫuiluwa joining É.GAL.PAP. For the full episode, see the translation of Beckman 1999, 78.
[25] See HW^{2} Band I:A, 244-248.
[26] CAD T, 306-321.
[27] Lakoff and Johnson 1980, 3.
[28] Lakoff and Turner 1989, 89-100.
[29] For this and further examples of the metaphors built on the up/down orientation, see Lakoff and Johnson 1980, 15.
[30] Lakoff and Johnson 1980, 14. For examples of orientational metaphors, see Lakoff and Johnson 1980, 14-17.

Before answering this question, a further remark needs to be made. As the work of Zoltan Kövecses pointed out, there has to be a distinction between universal, or at least cross-cultural metaphors and culture-based metaphors that are only present in a specific culture.[31] Empirical research has demonstrated that the metaphorical expressions present in different languages are metaphors based on experience, in particular, bodily experience; and since, in our capacity as human beings, our bodies function in very similar ways, the metaphors grounded in these experiences can potentially be universal.[32]

The documentation presented in this contribution is in two different languages, Akkadian and Hittite. Hence, an important issue that must be addressed is whether the two languages also represent two different cultures. It is not possible, within the limits of this paper, to provide a conclusive answer to this question, yet it is possible to highlight two relevant elements. Firstly, the documents show that the metaphorical expressions indicating a direction, or an orientation, are far more often attested in the treaties in Hittite. Secondly, when the expressions are present in treaties in Akkadian, often their figurative use, according to the CAD, is limited to the documents from Boğazköy – or Ugarit, that is from the area dominated by the Hittites (at least in the Late Bronze Age). This evidence suggests that the texts were written – or at least conceived – by Hittite 'native speakers',[33] who adapted, or in some cases translated to Akkadian, metaphors that were conventional in Hittite. This evidence might be analyzed more in depth towards researching the long-debated topic of the education and training of the scribes in Ḫattuša, as it can be a clue of the fact that also texts in Akkadian were written down by scribe of Hittite origin.

Nevertheless, it should be pointed out that treaties are documents with a juridical value and, therefore, all parties involved in the stipulation of the agreement have to concur with the conditions written down in the document, and, in order to do so, they need to understand the clauses. It is also important to note that while Akkadian was the *lingua franca* of the time, it was not necessarily the native language of all the treaty partners of the Hittite kings (and neither of the Hittites). On the other hand, the treaties stipulated in Hittite were not necessarily directed to people whose native language was Hittite. It is therefore possible to conclude that the metaphors, both in Hittite and in Akkadian, were understood by all parties involved in the diplomatic activity, because these metaphors, being based on bodily experiences, could be defined as cross-cultural and therefore were universally understood.

Therefore, these metaphors had a very relevant function in diplomatic discourse and defined a common ground of understanding, based on one single element that every culture shares, the concept of the body, or in other words, the epitome of being human. As such they represent the best way of bridging the gap between the variety of cultures present in the Ancient Near East in the Late Bronze Age.

Abbreviations

CAD = The Assyrian Dictionary of the Oriental Institute of the University of Chicago.

CHD = The Hittite Dictionary of the Oriental Institute of the University of Chicago.

CTH = Laroche, E. 1971. *Catalogue des textes hittite*, Paris: Klincksieck

HHw = Tischler, J. 2008. *Hethitisches Handwörterbuch – Mit dem Wortschatz der Nachbarsprachen, 2., vermehrte und verbesserte Auflage* (Innsbrucker Beiträge zur Sprachwissenschaft 128). Innsbruck: Institut für Sprachen und Literaturen.

[31] Kövecses 2002 and 2005.

[32] Lakoff and Johnson 1980, 8.

[33] I thank Lisa Wilhelmi for her discussion on this topic and I refer to her article for further details (see Wilhelmi 2020).

HW² = Friedrich, J. *et al.* (eds). *Hethitisches Wörterbuch. Zweite, völlig neu bearbeitete Auflage auf der Grundlage der edierten hethitischen Texte.* Heidelberg: Winter.

KUB = *Keilschrifturkunden aus Boghazköi*

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Apotropaic Representations on Late Bronze Age Ring Seals

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Abstract

Composite creatures are significantly depicted in ancient Near Eastern artefacts. They are the result of specific composition processes and iconographical evolution, can be represented as static or isolated images, connected to deities, or involved in narrative scenes, and were often engraved on seals. This paper focuses on seals and seal impressions from Anatolia and northern Syria dating to the Late Bronze Age. The selected material has a specific text-image relation in which texts appear together with supernatural creatures. This is clearly visible on a group of ring seals of Hittite tradition on which sphinxes, griffins, and two-headed eagles are placed beside the name of the owner. The supposed protective function of the composite creatures in such a position will be systematically analysed and discussed.

Keywords

Late Bronze Age, Hittite Seals, Ring Seals, Composite Creatures, Apotropaic Representations

Introduction

The art of the ancient Near East is rich with images of supernatural creatures and divine figures. In the 2nd millennium BC, from the Old Babylonian period onwards, specific animals, composite creatures,[1] and winged humans are often depicted alongside an object, a creature, a plant, a human being, a god, or another element. They are sometimes doubled in a symmetric structure. This antithetical composition puts the central element in evidence and suggests the idea that these creatures are there to worship or protect.[2]

This paper focuses on Late Bronze Age ring seals depicting composite creatures and powerful animals framing a very specific element: an inscription. In this group of seals, the framed text is short but very important, as is the name of the owner of the seal itself. Can we affirm that, in this case, the name is protected by the creatures flanking it?

To try to answer this question, this paper briefly introduces the following points:

1. Importance of composite creatures with prophylactic functions (textual sources);
2. Visual recognition of this role (images);
3. The case of ring seals;
4. Importance of the name;
5. Types of composite creatures and differences in their functions.

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[1] This terminology requires a clarification: composite creatures are imaginary hybrids formed of parts of different animals, of humans and animals, or of living beings and inanimate objects. See Wengrow 2014, 24-28; Bellucci 2018a, 53. They are also designated as *Mischwesen*; conversly, the use of the word monster to indicate composite creatures is debated (Verderame 2013; Sonik 2013, 107-113; Wengrow 2014, 24-28, with previous bibliography).

[2] See Porada 1987, 1; Black and Green 1992, 19-23.

Protective creatures in texts and art

The importance of composite creatures with a protective function is a complex topic that requires an in-depth explanation; for this reason, only a few general issues are addressed in this article. The apotropaic value of supernatural beings, commonly defined as 'demons', clearly appears above all in ritual texts of Babylonian and Assyrian traditions.[3] The *Utukkū Lemnūtu* texts,[4] for example, are instructions for performing magic rituals: they describe supernatural beings in order to make figurines resembling them; the figurines must therefore be buried in specific areas or destroyed to cast the evil away. Unfortunately, descriptions rarely match known iconographies and real artworks. The creatures are either named in texts with no description of their given features, or they are described with some detail, but none match the images of supernatural creatures that we know.[5] This is the case, for example, of a peculiar text labelled *Göttertypentext*, which includes a list of statues of various supernatural beings that combine animal and human features.[6] Although the text provides a high number of gods and demons and details of their descriptions, scholars have not identified corresponding images.[7] Nonetheless, the function of protection connected with supernatural beings that is described in written sources is crucial and, as such, it is represented in art. Composite creatures are sculpted on reliefs, sometimes on either side of a passage, and are reproduced as figurines, on metal items and seals. Seals and seal impressions provide, in particular, the most interesting association of figures and scenes and an extreme richness as to iconographies and types of supernatural beings. Even if we do not have textual sources and captions to provide us with the specific names and roles of each creature as we have for later historical periods – such as Ancient Greece and Late Antiquity – the recurrence of certain motifs allows us to speculate their apotropaic meaning.[8]

Late Bronze Age ring seals

Late Bronze Age ring seals are peculiar items that, until recent years, were known to exist only in small quantities and whose use was limited to a specific period (2nd millennium BC) and areas of the ancient Near East. The rings themselves are preserved only in sporadic cases and are made of precious metals (gold and bronze) or of shell. Impressions of ring seals were not so widely spread, but examples have been found in Anatolia, northern Syria, Cyprus, Luristan, Nippur, and Ur.[9]

Edith Porada was the first to propose a clear definition and description of ring seals in a publication on metal objects from Luristan.[10] She also identified three groups based on their shapes: sheet rings, lobed rings, and rings with a bezel. Animals or winged animals symmetrically flanking a plant or another element is a recognizable decorative scheme common to Luristan, Babylonia, and Syria, and it is recorded on two items from Mari and on Kassite ring seal impressions, none of which bear inscriptions.[11]

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[3] For a discussion on the use of the term demon, see Sonik 2013, 109-113. For a group of texts to perform rituals with different prophylactic function, and involving the use of images of demons, see Wiggermann 1992.

[4] See Geller 2007; 2016.

[5] Wiggermann 1992, xi-xii; Mander 2013, 150; Black and Green 1992, 15-21.

[6] For the Babylonian *Göttertypentext*, see Köcher 1953.

[7] As an example of a possible match text-image, see Geller 2011.

[8] Green 1983, 88. For an overview of supernatural beings and their possible visual correspondence, see Wiggermann 1992, 144-187; 1994; Westenholz 2004, 20-46.

[9] A list of examples is provided by Beyer 2001, 112, table 7. Among real seals are 16 rings made of shell from the Assyrian Tombs of Mari (Beyer 1982, nos 4-18), two rings made of metal from Ras Shamra/Ugarit (unpublished), and a golden ring seal from Konya, bearing an image of the goddess Šauška standing on a two-headed sphinx between two antithetical lions (Hogarth 1920, fig. 22). For the seal impressions from Ḫattuša, see Güterbock 1942, nos 222, 225-232; for Ras Shamra/Ugarit, see Schaeffer 1956, figs 54, 78, 100, 103, 106; for Nippur, see Matthews 1992, nos 182, 185, 186; and for Ur, see Stiehler-Alegria Delgado 1996, no. 335.

[10] Porada 1964, 16-19.

[11] Beyer 1982, figs 1-4 (Luristan and Mari); Stiehler-Alegria Delgado 1996, nos 335, 338 (Kassite glyptic).

However, ring seals made of metal and impressions of ring seals from Anatolia and Ugarit are very different. Created and used between the 14th and 13th centuries BC, they include Luwian hieroglyphic or cuneiform writing. A few publications in the last 20 years have sensibly incremented our knowledge on this last type of ring seal within the frame of the Hittite Empire. Dominique Beyer's volume on the seal impressions on the tablet found in Emar (modern Meskene, located in northern Syria) includes 70 examples of ring seals, so-called 'Syro-Hittite', and three examples of Kassite ring seals.[12]

Suzanne Herbordt's publication on the Nişantepe *cretulae* deposit in the Hittite capital Ḫattuša includes a huge number of impressions left by ring seals, 331, with 24% of these belonging to officials.[13] A second volume devoted to seals belonging to Hittite kings and queens from the same deposit does not include ring seals.[14] It seems, therefore, that the rulers of the Hittite Kingdom did not use such items in their office. On the contrary, kings ruling over cities at the periphery of the Empire used ring seals together with seals of other shapes. For example, at Ugarit in the 14th century, King Niqmadu and King Ammittamru, as well as Queen Šarelli, used their personal ring seals as alternatives to the dynastic cylinder seal.[15]

The numerous impressions of Hittite ring seals allow us to reconstruct the original ring as a regular band, approximately 0.6 cm wide at are metallic (bronze, silver, or gold), we can presume that they were made of metal too.[16] Syro-Hittite ring seals from Emar are similar, but a group of them belong to a different tradition displaying a frontal bezel, up to 1.5 cm high. All of them have engravings that almost always include text in Hieroglyphic Luwian or in cuneiform, and that may (or may not) be accompanied by images. Indeed, text is the most important element on the surface of the seal, since it bears the name of the owner.

Importance of the name and its presence on seals

The practical need to write names is clear: a person had to be connected with activities, properties, or responsibilities. A seal impression, for example, could be related to the seal owner without writing his name, but, quite obviously, its presence made the process of recognition faster and capable of surviving for a longer time.

Scholars have devoted several studies to names and name-giving in the ancient Near East, investigating meanings, traditions, and social and religious aspects linked to personal names.[17] Names are objects of rituals, quoted in mythological tales, and built by combining elements rich in meaning. For Sumerians, the name was the soul and essence of the person who received it, and a person did not exist until the moment they were named. Akkadian names normally have a positive meaning; for example, they contain theophoric elements in hopes that the god or goddess would bless the child. Hittite personal names can be theophoric, indicate relationships (for example ^{m}*Atta* = father) or family ties, include references to ethnicity, place of provenance or to geographical elements (for example names of mountains), [18] but were also chosen for their sound.[19] Nonetheless, mythological narratives and other texts describe the

[12] Beyer 2001, 121-145 (group B), 280-281 (group H). The term Syro-Hittite defines an artistic development born in northern Syria under the Hittite king Šuppiluliuma I (especially at Karkemiš) that merges characteristics of Hittite art and of Syrian art (Beyer 1987, 30).

[13] Herbordt 2005, 43-44, 51-55.

[14] Herbordt, Bawanypeck and Hawkins 2011.

[15] Schaeffer 1956, 78-86, figs 100-107.

[16] Herbordt 2005, 43 with footnotes.

[17] For an overview on Sumerian and Akkadian tradition, see, among others, Edzard 1998a; 1998b; for Hittite and Hurrian traditions, see Hoffner 1998; Wilhelm 1998. For more specific aspects and lists, see Laroche 1966; Tischler 2002; Zehnder 2010.

[18] On the semantic of names, see Zehnder 2010, 53-67.

[19] Hoffner 1998, 117; Zehnder 2010, 45-49.

act of giving a name as an important rite of passage.[20] A name does not influence the destiny of the child, but it represents that person throughout their life.

Late Bronze Age cylinder seals can bear inscriptions that include the name of the owner, his/her title, patronymic, and often the name of a tutelary deity, which can also be represented on the surface with a wide range of images.[21] Hittite stamp seals are almost always engraved with the name of the owner and his job or title, usually in Hieroglyphic Luwian, and/or in cuneiform writing. Hittite and Syro-Hittite ring seals, as a rule, indicate the name. Focusing on the two *corpora* of Emar and Nişantepe, we can add more information to this association.

Names are written clearly in Hieroglyphic Luwian – although cuneiform writing is also identified in a few cases[22] – and sometimes repeated in a symmetrical scheme. At Emar, it is very rare to observe any reference to a patronymic,[23] but it is common to see the indication of a job or title (**Figure 1**).[24] The scenario at Nişantepe (Ḫattuša) is quite similar: jobs and titles are very often indicated along with names, and they can be repeated more than once, with the most common job or title being SCRIBA (**Figure 2**).[25] The inscribed name is often accompanied by images along its side, and, as anticipated earlier, these images include composite creatures.

A fascinating aspect of the *corpus* from Nişantepe that requires further analysis is the possible presence of curious impressions of seals without a precise owner. The reconstruction of the original design of these seals is complete; hence, the name is not eroded or fragmentary but simply not indicated, even though the inscription in Hieroglyphic Luwian specifies a title or job.[26] Among those anonymous seals are also ring seals (**Figure 3**);[27] usually aniconic, they may have supernatural beings alongside the inscription, duplicated at the edges. In those rare examples, the title is emphasized instead of the name.

The presence of the name on a seal is very convenient in sealing practice. Through the engraving of the name, the seal is immediately linked to a precise person, witness, or functionary. However, a seal is not only a means of sealing goods or documents; in Mesopotamia, it is a powerful amulet, permeated with magical protection.[28] In Hittite Anatolia, this aspect is not observed, but we must keep in mind that Emar was located in a peripherical area and influenced by Mesopotamian and local traditions. We can reasonably think that, at the periphery of the Hittite Empire, religious beliefs, superstitions, and magical powers were given more consideration. The meaning of the seal as a talisman should retain its value, as in the Mesopotamian milieu. For this reason, we could expect a different quantity of composite creatures represented on seals produced and used at peripheral sites, and supernatural beings and animals represented on ring seals could show differences as to the preferred choices.

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20 Hoffner 1998, 120.

21 Collon 2005, 58-68. In particular, Kassite cylinder seals bear very long inscriptions (see Stiehler-Alegria Delgado 1996; Porada and Collon 2016, 55-85).

22 Cuneiform writing (alone or digraphic), for Emar, see Beyer 2001, nos B63-B70; for Nişantepe, see Herbordt 2005, nos 3, 137, 162, 217, 305.

23 Beyer 2001, nos B1, B41, B55 (where the last indicates the group of seals in the catalogue).

24 The hieroglyphic sign for SCRIBA (L. 326) appears in Beyer 2001, nos B4, B13, B21, B48, B53, B54, B56. For SACERDOS2, see Beyer 2001, nos B4, B55, B57.

25 Herbordt 2005, 52.

26 The so-called Labarna-seal was a stamp seal bearing royal titles but no name (Herbordt 2005, 33; Herbordt, Bawanypeck and Hawkins 2011, 35-39, 42).

27 A small group of ring seals with no name bear the title REX.FILIUS, SCRIBA-*la* (Herbordt 2005 nos. 771-773). To these we would like to add as a third group of ring seals bearing the signs VITA+*RA/I* (Herbordt 2005, nos. 667, 671, 672, 675) that might be interpreted as a title and not a name (on this group of seals and its possible use, see Mora 2019).

28 Stiehler-Alegria Delgado 1996, 73-74; Collon 2005, 100.

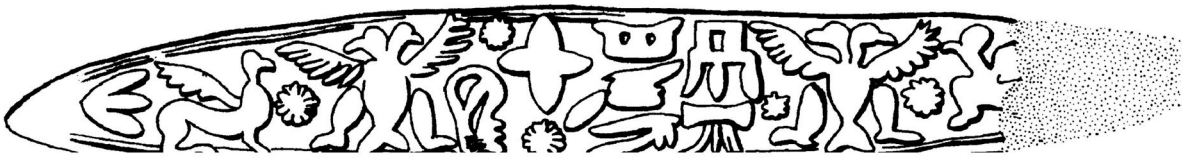

Figure 1: *Design of the ring seal of Bēlu-qarrād, son of Kāpī-Dagan, Beyer 2001, no. B4 (Copyright D. Beyer).*

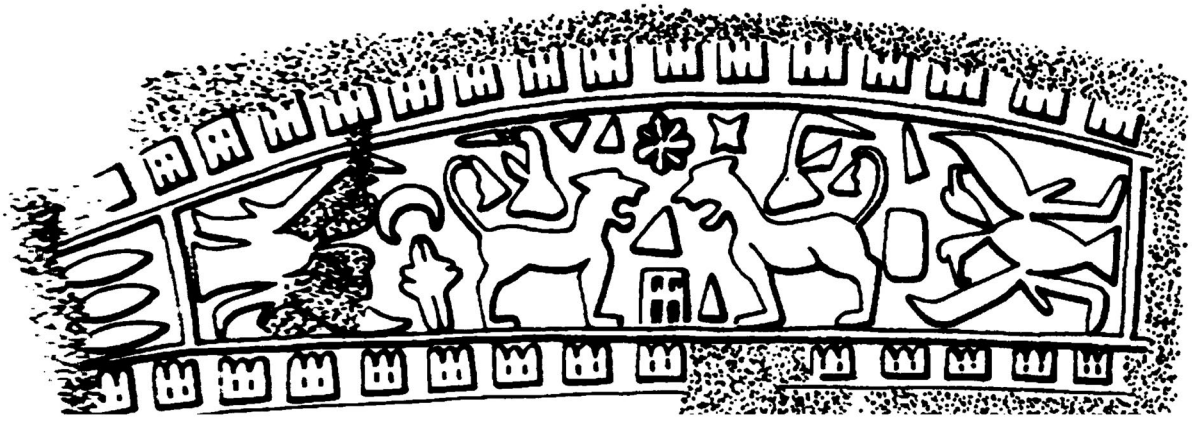

Figure 2: *Design of the ring seal of Šauškawalwi (?), Herbordt 2005, no. 382 (Copyright Archive of the Boğazköy-Expedition, DAI Berlin).*

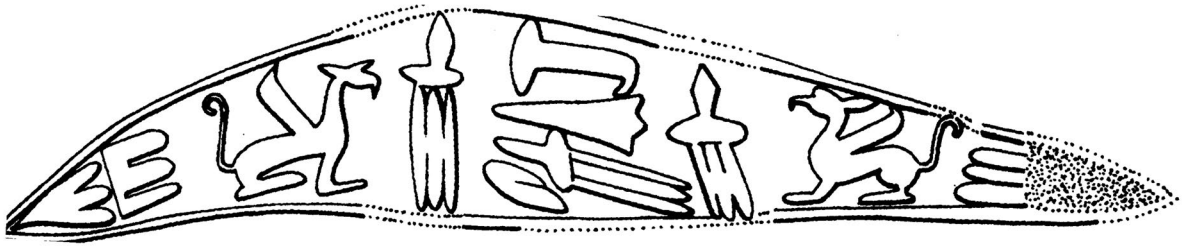

Figure 3: *Design of the ring seal of Hahlataruppasani (?), Herbordt 2005, no. 105 (Copyright Archive of the Boğazköy-Expedition, DAI Berlin).*

Types of creatures flanking the name

The following table (**Table 1**) lists composite creatures as well as natural animals that are represented by framing the name of the owner of the seal, their description (only in the case of the composite creature), and the number of impressions of ring seals in Emar and in Nişantepe that bear these creatures.

(Composite) Creature	Description	Emar ring seals (70)	Nişantepe ring seals (138)
Bull		2	7
Two-headed eagle	Bird of prey with two heads	13	54
Griffin	Bird head, lion body (sometimes bull body)	33	23
Ibex		2	3
Deer		0	4
Lion		12	8
Sphinx	Human head, lion body	5	0

Table 1: *List of composite creatures and natural animals represented as framing the name of the owner on ring seals in Emar and Nişantepe.*

Reading this table, we must consider the following caveats:

1. Due to the state of the impression(s), it was not always possible for scholars to reconstruct the edges of the original ring seals. This is significant to us, because (composite) creatures are usually engraved on the edges.
2. In many cases, aside from the name of the owner, there are two types of creatures on the same seal. Hence, the composition is heraldic or antithetic, but there is no exact correspondence.
3. There are variations in the scheme of composition that can include two pairs of different creatures on the same seal (in both cases, the number of creatures may be higher than the number of reconstructed seals).
4. In Nişantepe, along with this type of engraving schema of a name-protective creature, we often have ring seals bearing the inscription only, or ring seals depicting a complete narrative scene and no name, or the name placed in a corner.
5. Also included in this table are the examples from Nişantepe of anonymous ring seals, with the title framed by composite creatures.[29]
6. In Emar, a number of ring seal impressions include composite creatures in heraldic composition, but there isn't any inscription, or the name indicated is that of a god.[30]

We have observed three composite creatures flanking names: griffin, sphinx, and two-headed eagle. Although in the group of *creatulae* from Nişantepe and among Emar impressions, griffins appear employed in a guardian role, this composite creature is prominent within the findings from Emar (**Figure 2, Figure 3**).[31] The choice may be linked to a definite aspect of the mythology of the griffin that

[29] Herbordt 2005, nos 667, 771, 773.

[30] Beyer 2001, no. B49.

[31] List of Emar ring seals bearing griffins flanking the name: Beyer 2001, nos B1-B3, B5-B9, B11-B16, B18-B20, B23, B24, B28, B29, B32, B33, B35, B36, B38-B40, B47-B49, B51, B53, B65-B67. List of Nişantepe ring seals bearing griffins flanking the name:

is, unfortunately, lost to us, or it could be due to a local tradition. After a period of infrequent presence of griffins in artistic representations, these composite creatures served as great protagonists in Mittanian glyptic, whose designs had a certain influence on the iconographic repertoire of Emar's workshops.[32] As for the representation of griffins on ring seals from the capital, it is an evidence of continuity with the repertoire of more ancient stamp and cylinder seals found on tablets from Kültepe-Kaniš.[33]

The presence of the sphinx as a guardian of the name on ring seals is not observed on Hittite seals from the capital. Sphinxes are, of course, present in Hittite art, both monumental and miniaturist, including seals, such as the Konya gold ring quoted above.[34] They are, for example, standing on a god's arm on seals or guarding monumental gates in Ḫattuša, and they seem to have had a clear meaning for the Hittites not clearly indicated in texts, although the identification of at least one type of sphinx (e.g., the masculine two-headed sphinx on the Konya ring) as the *awiti*, sacred to the goddess Šauška,[35] while the regular sphinx, feminine and often in pair could be indicated with the plural name of *damnaššara*.[36] So significant as they seem to be, they were not represented on ring seals framing names and titles belonging to Hittite officers sealing in the capital. The tradition in Emar, at the periphery of the Empire, was clearly different; the repertoire of images come from Mesopotamian examples – with Mittanian, local Syrian, and Egyptian influence – and include sphinxes in the group of composite creatures or powerful animals flanking the inscription (**Figure 4**).[37]

Ring seals impressions from the deposit of Nişantepe show a prevalence of two-headed eagles,[38] although this creature is present in Emar as well.[39] Within the archive, two-headed eagles are represented very often on round stamp seal impressions too; however, on ring seals, they are duplicated and placed at the edges of the seal, often rotated 90°, flanking the name of the owner (**Figure 1, Figure 5**). Images of two-headed eagles are common in the Old Assyrian Colony Period,[40] its iconography transfers seamlessly to the artistic production of the Hittite kingdom, but quantities increase exponentially.[41] Drawing a full comparison between the two groups of impressions (Emar and Nişantepe) is not possible here. While in Ḫattuša the two-headed eagle was a very complicated symbol embedded with meanings that are still partly obscure to us, and engraved on functionaries seals as representatives of the king, at Emar it was employed on the ring seals and cylinder seals of local officials, as was any other fantastic creature

Herbordt 2005, nos 58, 65, 66, 68, 84, 105, 121, 168, 224, 227, 230, 255, 355, 370, 415, 417, 447, 516, 531, 540, 566, 569, 685.

32 Here, griffin is intended only to mean the bird-headed hybrid. On the development of this motif, see Bisi 1965; Bellucci 2013 with bibliography. Griffins are absent in Akkadian and Old Babylonian glyptics (Bisi 1965, 47-49). For Mittanian examples, see the lists in Stein 1993, 213; Porada and Collon 2016, 177. For the influence on Emar, see Beyer 2001, 204-205.

33 Özgüç 1959, tav. 5d; Bisi 1965, 111-112.

34 Hogarth 1920, fig. 22. On the development of the sphinx in the Late Bronze Age, see Gilibert 2011; Bellucci 2012, 51-54 with the previous bibliography.

35 On the topic of the identification of the *awiti,* see Bellucci 2012 with previous bibliography and Cammarosano 2018, 75, 300-301.

36 Bellucci 2012, 59-60.

37 Sphinxes flanking the name can be found in Beyer 2001, nos B1, B37, B46, B52, B57.

38 Two-headed eagles are a very complex symbol in Hittite Anatolia. On the origin and development of this iconographic motif in the Near East, see Fuhr-Jaeppelt 1972, 194-206; Bellucci 2009, 86-88; Pedde 2009; Chariton 2011. On its representation in Anatolia, see Alexander 1989, 152-155; Bellucci 2009, 88-95; Müller-Karpe and Müller-Karpe 2009, 197-200; Herbordt, Bawanypeck and Hawkins 2011, 62-64. For the hypothesis of the two-headed eagle as a hieroglyphic sign, see Lebrun 2004. List of Nişantepe ring seals bearing two-headed eagles flanking the name: Herbordt 2005, nos 3, 10, 48, 60, 75, 80, 84, 90, 110, 120, 131, 169, 177, 191, 224, 232, 233, 255, 285, 305, 333, 342, 350, 353, 360, 369, 379, 382, 415, 416, 467, 477, 482, 529, 531, 532, 543, 545, 546, 566, 570, 597, 622, 628, 644, 667, 684, 690, 740, 759, 763, 771, 773, 783.

39 List of Emar ring seals bearing two-headed eagles flanking the name: Beyer 2001, nos B2, B4, B5, B7, B8, B11, B18, B30, B31, B57, B59, B67, B68.

40 Alexander 1989, 152-155; Müller-Karpe and Müller-Karpe 2009, 197-200.

41 *Ca.* 20% of the seals reconstructed in Nişantepe bear clear image of a two-headed eagle, but numbers were certainly higher as the impressions are often too damaged in the area where this symbol is usually located.

(**Figure 2**). Hence, the two-headed eagle was included within the motifs represented on seals in Emar, with only a partial knowledge of its meaning. Misinterpreted, it is here a powerful guardian, like a griffin, sphinx, bull, and lion, but no longer a sign of royalty.

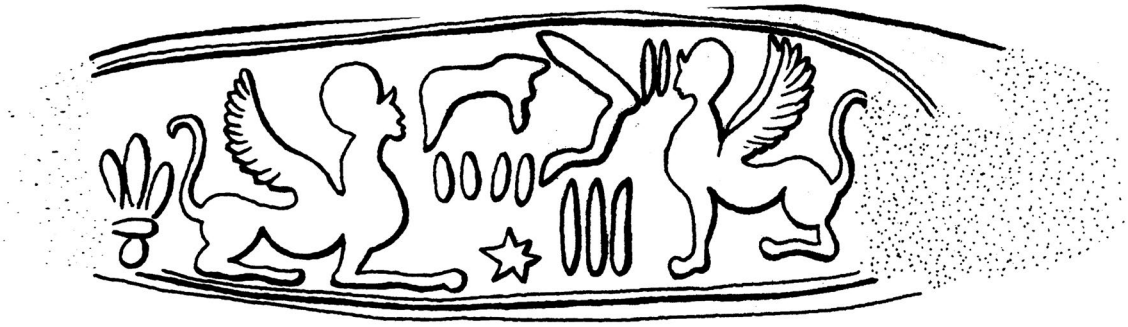

Figure 4: *Design of the ring seal of Aya-damiq, Beyer 2001, no. B37 (Copyright D. Beyer).*

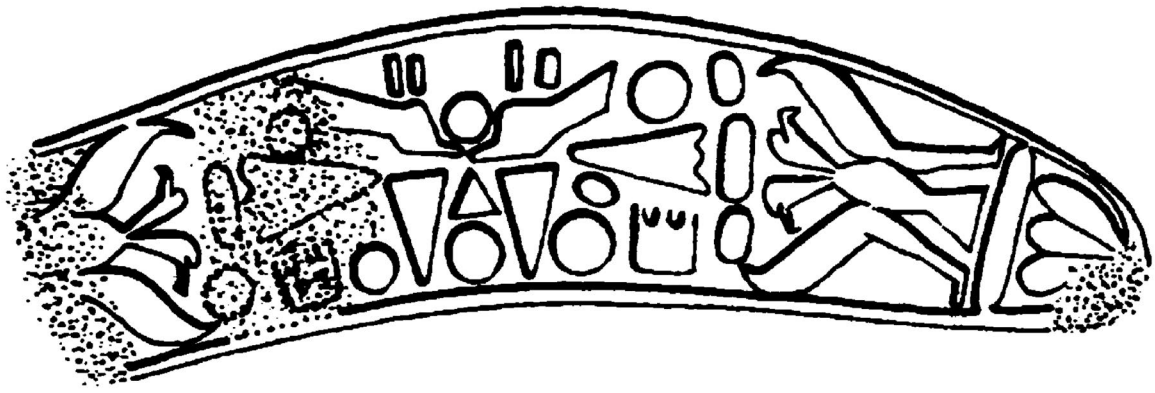

Figure 5: *Design of an anonymous ring seal, title REX FILIUS, SCRIBA-la, Herbordt 2005, no. 773 (Copyright Archive of the Boğazköy-Expedition, DAI Berlin).*

Concluding remarks: further comparisons between the two corpora

In the deposit of Nişantepe, many functionaries possessed more than one seal, usually round stamps, together with ring seals. According to several scholars, the choice between a ring or a stamp seal was probably influenced by the reduced space and the form of the clay lump that had to be sealed.[42] Prominent officials and lower-ranking functionaries were given the administrative task of sealing the *creatulae*.[43]

At Emar, local functionaries often selected the typology of the ring seal instead of the stamp seal. They were local Semitic people, using their seals to sign documents on tablets, such as testaments, private trades, loans, and inventories. Only a few of them had a secondary seal, but more often, the ring seal

[42] Herbordt 2005, 33-34.

[43] Herbordt 2005, 77-89, 110-111.

was their unique way of sealing. Their name, often Semitic, was written in Hieroglyphic Luwian.[44] The imitation of seal shapes and images of Hittite officers, encompassing the scheme of the name between composite creatures analysed here, is only partially fulfilled.

In previous pages we have referred to the practical and ritual importance of the name and addressed the possible use of seals as a talisman, confirmed for Mesopotamia. We examined seal designs especially on ring seals from the deposit of Nişantepe in Ḫattuša and in Emar, underlying the high quantity of seals bearing a recurrent schema: a few composite creatures or animals are flanking the name of the owner.

From the comparisons between the two *corpora*, it emerges that composite creatures employed in this role in the design are very selected. This is not unexpected for Ḫattuša, as it corresponds to the general situation of Hittite glyptic, but it is surprising for Emar, where the repertoire of composite creatures is rich, in particular on cylinder seals belonging to all glyptic styles.[45] This repertoire integrates *Mischwesen* known in Syria and Mesopotamia and in Anatolia and includes them in designs that are sometimes innovative and not only imitative. On ring seals, on the contrary, this is very limited: fantastic beasts and animals, flanking the inscription but also on anepigraphic ring seals, are restricted to those characteristic of Hittite glyptic, with the sphinx being the sole element of originality.

Griffins and two-headed eagles, often present on stamp seals and cylinder seals too, both in Ḫattuša and in Emar, have in my opinion a very different aim: the griffin holds an apotropaic function in all its representations and continues a role already attested in the Assyrian Colony period, while the two-headed eagle obtains it only in this specific composition.

Hence, even if we lack a mention of the griffin and of the two-headed eagle in texts that would facilitate our comprehension of the two symbols, we can still infer much about their roles and meaning from visual representation: their apotropaic function is confirmed and strengthened by the recurrent heraldic composition, limited specifically to those two creatures with local addition of the sphinx. The name of the owner, a very important element and, by a sort of metonymic transfer, the person himself, were as a result protected.

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[44] Beyer 2001, 120, 440-455.

[45] For a list of composite creatures represented on Emar seals and their iconography, see Beyer 2001, 372-379, 386-391. Scholars were able to reconstruct 480 seal designs, 150 among those bear at least one image of a hybrid creature. This represents 35% of the total and the figure gains importance when compared to the lower numbers attested in other sites in the area. In Hittite and Syro-hittite groups, figures follow the general trend, but as we limit to ring seals, composite creatures are included in 70% of the seals. Bellucci 2018b, 374-375, Table 1.

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Seal-Impressed Vessels at Hama, Syria (*c.* 2500-2000 BC)

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Abstract

During the second half of the 3rd millennium BC – a time of state formation and diffuse urbanization in the Near East – new kinds of food preparation tools and cooking and serving ceramics appear, alongside the proliferation of a new standardized range of vessels specifically designed for consuming liquids. Hama, in the Orontes Valley, seems to have been in this period at the centre of a West Syrian use of a new and improved cooking pot, characterized by the occurrence of seal impressions. This paper seeks to reconsider the evidence of seal impressed cooking pots from Hama J (8-1), making use of both published and unpublished vessels kept at the National Museum of Denmark. We discuss several aspects related to the typology, chronology, and petrography of the vessels, their find context, the technical characteristics of the seal impressions (i.e., position and orientation), as well as the iconography. This allows us to put forward some hypotheses about the dynamics of production and distribution of seal impressed pots at Hama and other western Syrian sites during the Early Bronze Age period.

Keywords

Hama, Syria, Seal-Impressions, Cooking Pots, Early Bronze Age

Introduction[1]

During the second half of the 3rd millennium BC – a time of state formation and diffuse urbanization in the Near East – new kinds of food preparation tools and cooking and serving ceramics appear, alongside the proliferation of a new standardized range of vessels specifically designed for consuming liquids. The latter include jugs, pitchers, necked jars, goblets and mugs manufactured in Simple and Painted Simple Ware, which are introduced into the table ware repertoire starting from the mid-3rd millennium BC.[2] At the site of Hama, in the middle Orontes Valley, besides the overwhelming appearance of new serving and drinking vessels, we can observe the introduction of specialized containers for preparing food, sometimes with a cylinder seal impression rolled on the rim or, more rarely, on the body of the vessel.

[1] This article is the result of a joint work; S. Lumsden and A. Vacca have dealt with the description of the Hama collection, the stratigraphic and typological analysis of the vessels, G. Mouamar carried out archaeometric analyses, V. Tumolo has addressed the study of the cylinder seal impressions. Introduction and conclusions have been written jointly.

[2] Mazzoni 2002; Vacca 2020; D'Andrea and Vacca 2019.

Hama seems, in fact, to have been at the centre of a western Syrian use of a new and improved cooking pot in this period.

In this article, we discuss the preliminary results of our analysis of seal-impressed pots coming from levels J8-1 at Hama and dating to the second half of the 3rd millennium BC (Early Bronze Age IV, henceforth EB IV, *c.* 2500-2000 BC), making use of both published and unpublished vessels kept at the National Museum of Denmark. We present the general features of the entire repertoire of seal-impressed vessels documented in EB IV levels at Hama, including both Simple Ware (SW) storage/transport containers and ovoid and globular hole-mouth vessels – possibly cooking pots, with a special focus on the latter. These specialized vessels are characterized by the co-occurrence of distinct physical and iconographic features: the ovoid or globular shape with a wide mouth, the frequent combing of the outer surface, the reddish/brownish porous fabrics rich in calcite aggregates, and the possible occurrence of cylinder seals impressions. In particular, the presence of cylinder seal impressions makes these jars quite remarkable and frequently discussed in the archaeological literature. Different explanations have been suggested for the purpose of seal impressions on jars, and a general agreement is far from being reached.[3] The present state of research still lacks studies combining systematic petrographic analyses with the investigation of a large corpus of stratified seal-impressed vessels analysed in a diachronic perspective. In this regard, the repertoire from Hama offers the opportunity of correlating these types of systematic investigations with the contextual and stratigraphic analysis of a large corpus of evidence uncovered at a single site.

In this paper aspects related to the seal impressions (i.e., position and orientation) and the iconography will be correlated with the variation in the physical features of the vessels – such as ware, dimensions, or shape – in order to detect information useful for a preliminary reconstruction of the dynamics of production and distribution of the Hama seal impressed pots. The observations derived from this study are nevertheless preliminary, since additional archaeometric investigations coupled with fingerprint analysis (currently being carried out by A. Sanders, University of Chicago),[4] and residue analysis are also being undertaken, in order to broaden the interpretative framework, shedding light on specific stages of the *chaîne opératoire* process and on consumption patterns.

The Hama collection

The large collection of seal-impressed vessels coming from Hama has a lot to offer for such a study. The Danish excavations at Hama, carried out in the 1930s, still provide some of the best evidence for mundane domestic contexts for the Early Bronze Age period in the northern Levant, with a broad horizontal exposure (over 1600 square meters) and a lengthy sequence (more than four meters of deposits). This study is part of a larger multidisciplinary project on the Hama J Period that has as its main goal the re-examination and publication of the whole corpus from these domestic contexts, based on the artefacts and the field documentation stored at the National Museum of Denmark.[5] As noted above, the Hama J Period roughly covers the second half of the 3rd millennium BC, that is, in terms of the Syrian chronology, the Early Bronze Age IV. It encompasses eight main phases, from J8 to J1, roughly corresponding to the EB IVA1-2 and the following EB IVB period.

Recent studies of Hama Period J based on the analysis of a large collection of artefacts stored in the National Museum suggest that, although Hama seems not to have been a large settlement (*c.* twelve ha), it nonetheless may have been a significant place during the second half of the 3rd millennium. The material culture from Hama and the information gathered from contemporary texts from Palace

[3] See, among others, Ben-Tor 1978; Mazzoni 1992; 1993; 2013; 2017; Flender 2000; Joffe 2001; Graff 2012; Thalmann 2013.
[4] Sanders 2019.
[5] See Vacca *et al.* 2018.

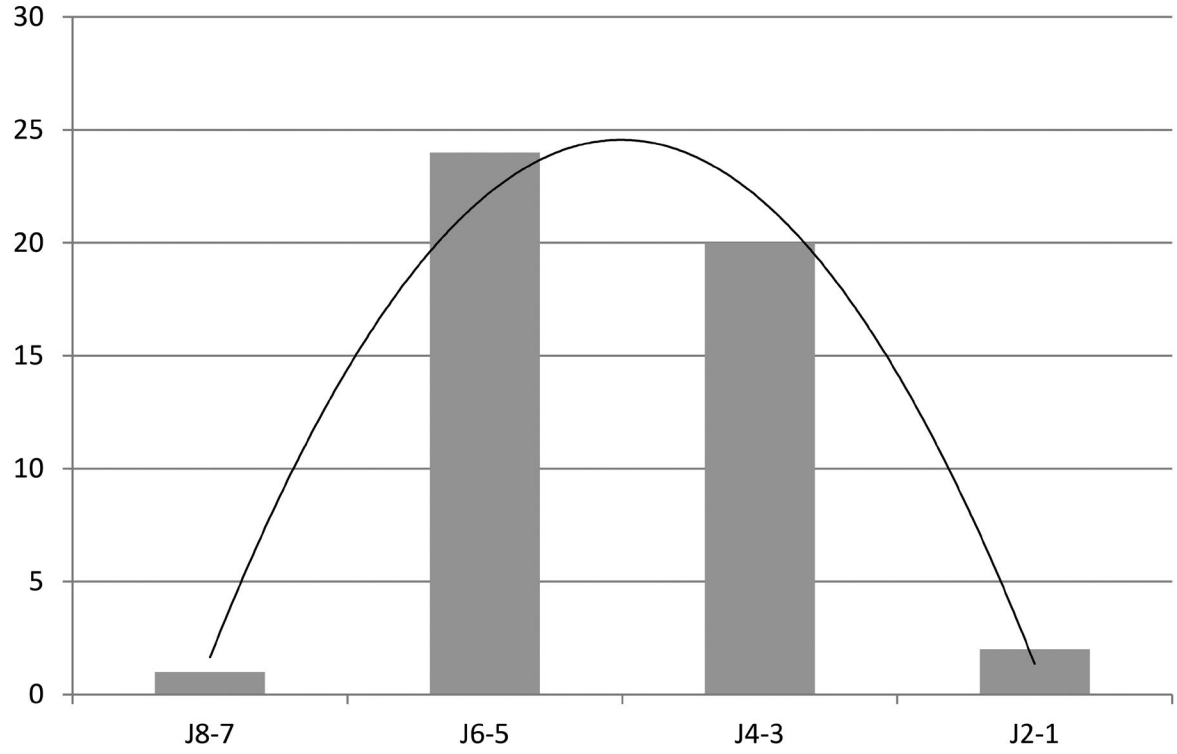

Figure 1: *Histogram showing the occurrence of seal-impressed vessels in the different Levels of Hama J.*

G archives at Ebla attest to broad regional and inter-regional connections for Hama,[6] and Ebla texts indicate that Hama was home to an important cult centre, which was a pilgrimage destination for the Ebla elite.[7]

The excavations of EB IV levels yielded a total amount of 76 impressed vessels in Simple and Cooking Wares, including jars, pots, and few bowls, kept both at the National Museum of Aleppo and at the National Museum of Denmark. Out of these 76, 49 are now in Copenhagen and they are for the most part still unpublished.[8]

In terms of chronology, the first appearance of seal-impressed vessels is documented in Level J8, which can be dated to the mid-3rd millennium BC.[9] The majority of the impressed vessels can be ascribed to Levels J6 and J5, which are dated to the EB IVA (*c.* 2450-2300 BC). A still large number of examples were collected from the following EB IVB Levels J4 and 3, while only 2 examples were associated with the latest Levels, J2 and 1 (*c.* 2300-2000 BC) (**Figure 1**).

[6] Edwards 2019; Vacca *et al.* 2018.

[7] Archi 2015; Bonechi 2016 with relevant bibliography.

[8] The 49 seal-impressed items kept at the National Museum of Denmark in Copenhagen consist of 24 cooking pots, 24 transport/storage jars, and one bowl. Further 17 seal-impressed cooking pots are at the National Museum of Aleppo. The seal impressed potsherds and vessels found during the Danish expedition of 1931-38, have been partially published by Ingholt (1940), Fugmann (1958) and Ravn (1960). In addition, further impressions – both kept at the Archaeological Museum of Aleppo and the National Museum of Denmark – were studied by Mazzoni (1992, 98-114, B87-B115, with further references) and Matthews (1996).

[9] For the dating of Level J8 see especially: Mazzoni 2002, 76; Vacca 2015; Mouamar 2017.

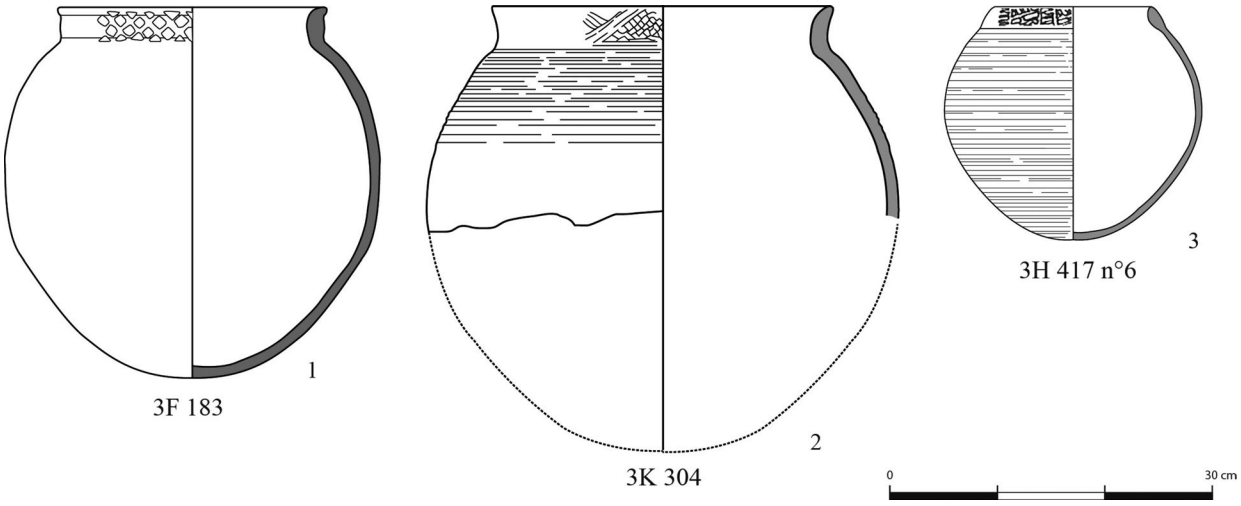

Figure 2: *Three main types of CW pots with cylinder seal impressions from Hama J: 1. vertical rim (3F 183); 2. everted rim (3K 304); 3. hole-mouth pot (3H 417). ©Nationalmuseet.*

Typological and contextual analyses

Three types of Cooking Ware (CW) pots can be distinguished among the Hama J assemblage: the everted-rim type (which is also the most frequent one, totalling 27 vessels), the vertical rim (12 items) and the hole-mouth pot (20 examples; see **Figure 2**).[10] The first two types are very similar in terms of overall vessel morphology and are characterized by an ovoid body and a swollen rim, elongated and everted (Type 1) or short and vertical (Type 2) (**Figure 2: 1-2**). The cylinder seal impression is typically applied on the rim or, in one case, the shoulder (see below). The third type encompasses globular-shaped, hole-mouth pots with thickened and protruding inner rim; the cylinder seal impression is usually rolled on the outer side of the rim (**Figure 2: 3**). Identical types, but not sealed, occur as well throughout Levels J8-1. The majority of these vessels are characterized by the occurrence of a similar surface treatment, consisting of a horizontal combing applied on the outer surface, although smoothed surfaces are also attested (see below). At Hama, the three pot types coexist and are documented by several vessels retrieved in domestic units from Level J8 to Level J1. The earliest evidence of seal-impressed pots comes from Level J8, when hole-mouth CW pots appear for the first time in the Hama assemblage, featuring parallel developments as those described for the Ebla region during EB IVA1.[11]

Similar corrugated, seal-impressed jars have been found in several central and northern inner Syrian sites, located between Ebla and Hama.[12] They come from both public and domestic contexts, suggesting that the distribution and utilisation of these containers cut across different levels of the society. Interestingly, Hama is the only site where different types of corrugated pots co-occur (**Figure 2**), suggesting a local production (also supported by archaeometric analyses) and a widespread demand and supply of these containers.

[10] We discuss here 73 Cooking Ware pots, including both plain vessels and pots with seal impressions.

[11] The hole-mouth CW pot is a diagnostic type of the EB IVA1 period (*c.* 2550-2450 BC) and it is attested side-by-side with the first goblet types introduced in Level J8 (Mazzoni 2002, 76; Vacca 2015). Hole-mouth pots documented at Ebla are generally unsealed, while the examples from Hama can bear cylinder seal impressions rolled on the outer rim (Fugmann 1958, fig. 58:3F 183; here **Figure 2: 3**).

[12] Mazzoni 1992, 98.

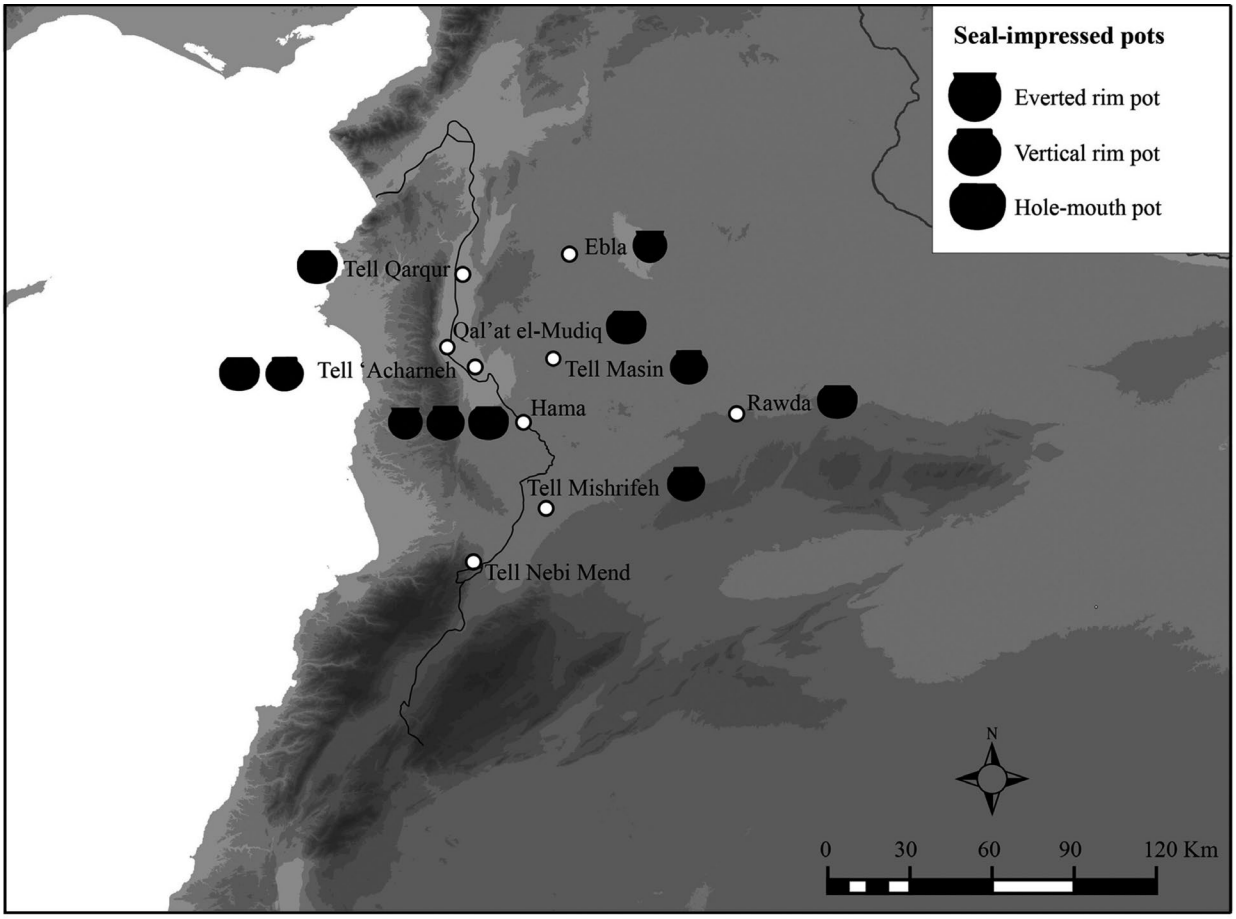

Figure 3: *Map with the distribution of seal-impressed pots.*

Overall, seal-impressed CW pots with vertical or everted rims are widely attested both in public buildings (Ebla, Royal Palace G) and private dwellings (such as Hama, Tell Qarqur, Tell Acharneh, Tell Masin, and Tell Mishrifeh/Qatna) (**Figure 3**).[13] At Ebla, the swollen and everted rim corrugated pot is the only type documented and occurs both in the sealed and unsealed varieties.[14] Conversely, the seal-impressed hole-mouth type has been found mainly in domestic buildings at sites located in the Middle Orontes Valley such as Hama, Tell Qarqur, Qal'at el-Mudiq, and Al-Rawda, although several vessels were retrieved in secondary contexts (**Figure 3**).[15] It is possible that these CW pots were produced by specialized workshops located in the Middle Orontes Valley, as the large number of examples found at Hama and other nearby sites seems to suggest.

Corrugated pots from Hama were retrieved in houses, stacked in rooms together with other vessels or in working spaces associated with grinding stones and other tools for food preparation. The position of some of these pots can be reconstructed thanks to the analysis of original sketches and object cards kept at the National Museum correlated with general plans drawn for each architectural level by the Danish

[13] Hama: Fugmann 1958, 59, fig. 65:3H 319 (J6), 64, fig. 74:3F 183 (J5), 69, fig. 85:3K 304 (J4). Tell Qarqur (Area A, out of context): Dornemann 2003, fig. 197. Tell 'Acharneh: Cooper 2007, 48, fig. 12 right. Tell Masin (level 3): Du Mesnil du Buisson 1935, pl. XLIX:25. Tell Mishrifeh/Qatna: Barro 2003, 91, fig. 16.

[14] Matthews 1996, 121-155; Peyronel *et al.* 2014, 20-24, fig. 10:1-5.

[15] Hama: Fugmann 1958, 53, fig. 8:3F 183 (J8), 65, fig. 75:3H 417 n°6 (J5), 74, fig. 93:3D 540 (J3). Al-Rawda (the vessels come from the stratigraphic sounding excavated in Sector 4): Castel *et al.* 2008, 48, fig. 19:RW1.2251.12. Qal'at el-Mudiq (Square B1, level 2): Collon and Zaqzouq 1972, fig. 7:AP.70.VI.3.1500. Tell 'Acharneh: Cooper 2007, 48, fig. 12 left.

team. For instance, in Level J5, which is the best preserved one due to its destruction by fire, the position of several pots was registered within different domestic buildings. A large house, located in the south-western sector of the excavation area (in square I10), and composed of at least six rooms giving access to the north to a courtyard or another sector of the same building,[16] yielded two seal-impressed pots. These hole-mouth types (3H417b and 3H471) were retrieved in room R.2, together with other preserved vessels and basalt grinding stones.[17] The blackened bottom of these pots suggests a prolonged exposure to fire.

Based on the analysis of seal-impressed pots from domestic contexts at Qarqur, S. Graff argues that these vessels served in the preparation of special foods, such as the bitter vetch, and therefore it was necessary to distinguish them by means of the seal impression from other cooking equipment for hygienic or ritual purposes.[18]

In Palace G of Ebla, corrugated jars occur in association with fireplaces, as well as in areas devoted to food storage or food processing activities, pointing to a multifunctional use. Nevertheless, the documentation from the kitchen room of the palace (L.2890) clearly shows that they were employed as cooking pots, and, at the time of the destruction of the palace, vegetable substances (and in particular wild herbs with medicinal properties) were boiling in them.[19] Ovoid corrugated jars, both sealed and unsealed with a capacity of 40 to 80 litres, were found in place above the hearths, while two others had fallen and were crushed on the floor. Due to the particular assemblage found in the Palace G kitchen, its segregated character, as well as its proximity to the Court of Audience, accessible through the Monumental Stairway – it has been suggested that the kitchen was used to prepare beverages to be distributed during convivial occasions.[20] The evidence from the kitchen of Palace G indicates that a functional distinction between sealed and not sealed ovoid corrugated jars cannot be proven, at least in this case. In fact, botanical analyses of plant remain from Ebla's kitchen show that both types of corrugated jars were employed for the preparation of the same kind of products. It seems, therefore, likely that the specific function of these vessels was not communicated by the seal impressions, but that it was instead connected to the peculiar physical properties of the pot.

Petrography

As for the manufacturing technique, the CW pots share similar characteristics concerning the grooving of the outer surfaces (probably functional for heat conductivity) and the mineral composition of pastes (**Figure 4**). Up to now 26 samples have been analyzed only with binocular magnifier.[21] Further analyses, including the characterization of petrofabrics and chemical analyses, are planned in order to explore our preliminary observations. What we can say based on these first data is that the majority of samples of seal-impressed pots have a spatic calcite-rich fabric, the angular and rhombohedral shape of the calcite fragments indicates that calcite crystals from an additional source were crushed and added to a clay raw material; the coarse calcite is observed by its fairly white interference colours (**Figure 4**). Spatic calcite-rich fabrics also characterize cooking pots with incised zigzags applied on the outer rim. These, however, appear prepared in a different way, with generally smaller sub-angular aggregates. Calcite temper gives the ceramics coefficients similar to that of clay, creating the thermodynamic suitability required for cooking pots. In other words, repeated heating and cooling will not damage

[16] See the plan published in Fugmann 1958, fig. 73.
[17] Fugmann 1958, fig. 75:3H 417 no. 6.
[18] Graff 2012, 37-39.
[19] Wachter-Sarkady 2013; Peyronel *et al.* 2014.
[20] Peyronel *et al.* 2014. A possible use of the kitchen as a pharmacy has been also put forward by Vacca *et al.* 2017.
[21] Archaeometric studies (petrographic and chemical studies) are currently being undertaken by G. Mouamar at the ArAr – Archéologie et Archeometrie, CNRS, Lyon.

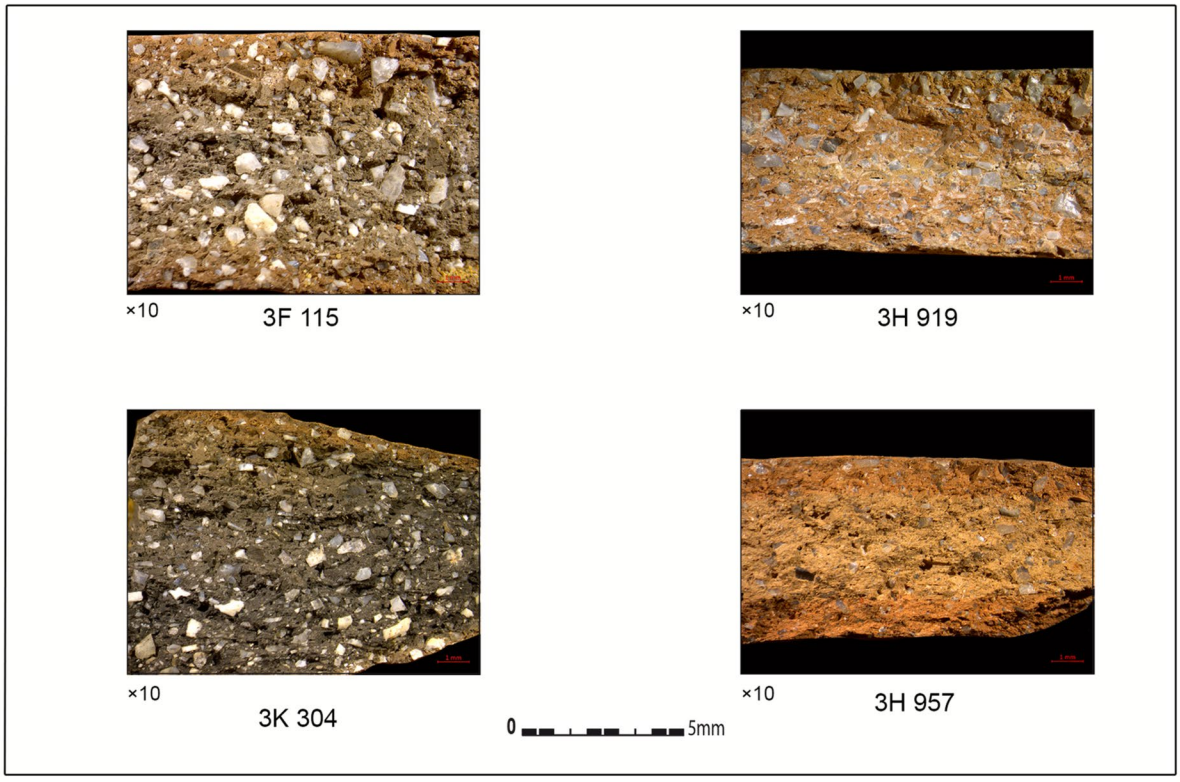

Figure 4: *Thick sections of selected sherds from Hama J showing the fabrics of four cooking pots (spatic calcite-rich fabric).*

the pot and the tabular shape of calcite grains helps prevent cracks and breakage, being more stable at higher temperatures.

Generally speaking, the fabrics employed for corrugated pots are basically different from that of 'common' CW pots, which are always characterized by basalt-rich fabrics. So, why produce different kinds of pots? Are the corrugated pots highly specialized vessels in terms of their performance, such as modern aluminium and stainless-steel cookware, or are they related to the production of specific foods? Targeted petrographic and chemical analyses are being carried out in order to investigate these aspects, as well as to clarify if a possible difference in terms of fabrics between sealed and not sealed pots existed.

The seal impressions

Consistent with the EB IV repertoire from the northern Levant, the Hama J seal impressions corpus consists only of cylinder seal impressions.[22] With the exception of one sealing, apparently created by a cylinder that was rolled vertically along the neck of a vessel (3D 658), the impressions were applied horizontally on the SW and CW jars – the latter including both hole-mouth jars and pots with everted or vertical rims (**Figures 5: 1**, **6: 1-4**). On the SW transport/storage jars, the seals were generally rolled along the shoulder or the upper body of the vessel (**Figure 6: 1-2**). In some cases (3C 662; 3B 800a-b + O17 I, 3H 194a-c; 3H 195), the impressions were applied twice, forming two parallel horizontal bands (**Figure 6: 1**). As for the CW pots, the seals were run on the rim of the three types of vessels (see above).

[22] Only one impression kept at the National Museum of Denmark (3H 623) seems to have been made by a stamp seal that was impressed several times in order to create a dense pattern. This item, uncovered from a context of Phase H (Middle Bronze Age), might represent a later development of the practice.

Figure 5: *Technical features of seal impressions and incised decorations from Hama, on CW pots: 1. horizontal strips with well-defined side edges of seal impressions; 2. incised decoration. Pictures not in scale. ©Nationalmuseet.*

One exception is represented by a cooking pot that has the cylinder seal impression applied on the shoulder, directly below the rim (3H 957). From many of the best-preserved items, it seems that the sealings on the cooking pots' rims originally consisted of short strips of a well-defined length that did not cover the entire circumference of the vessels (**Figures 5: 1**, **6: 3**). This technical aspect distinguishes the northern Levantine seal impressions from those of the central and southern Levant, as already noted by J.-P. Thalmann ('*Dans tous les cas, les empreintes de cylindres sur céramique du groupe SC sont donc bien des marques, ce qui les distingue radicalement de celles du groupe LC*').[23] Interestingly, non-seal-impressed CW jars from the same phases of Hama J (23 examples in Copenhagen, 1 in Aleppo) are similar in shapes and

[23] Thalmann 2013, 291.

characterized by incised decorations on the rim, consisting of horizontal parallel wavy lines or zigzags made by using a stick or pointed tool. They resemble the seal impressions not only in the position on the vessels, but also by the fact that – in the same way as the sealings – they also do not cover the entire circumference of the vessels but create strips with well-defined side edges (**Figure 5: 2**).

The majority of the seal impressions are characterized by purely geometric designs, consisting of simple motifs (i.e., net pattern) or designs created by the regular repetition of one basic element, such as parallel vertical lines (3E 916), oblique strokes (3K 301), zigzags (3K 292; 3H 793), and concentric lozenges (3F 183).[24] Running spirals/guilloches (3E 487; 3E 992: **Figure 6: 4**) find parallels in the central Levant, at Byblos and Sidon.[25] For the rest of the repertoire, geometric motifs are created by the use of different elements together, such as crosses and parallel strokes (3H 936), triangles and lines variously disposed (3G 399), triangles, rhomboids and herringbones (3E 995). Quite peculiar designs are created by superimposing two or three horizontal strips of regular motifs, such as crossing meanders and vegetal-like herringbone patterns (3E 468), or spirals, herringbones, and compartments filled with parallel hatches (3H 957).[26]

Vegetal and floral patterns are one of the hallmarks of the Hama repertoire: leaves, rosettes, and vegetal-like elements are widely depicted in diverse designs. Herringbone patterns (e.g., 3C 904; 3E 489) can be interpreted as simplified and stylized depictions of plants.[27] A design quite distinctive of the Hama repertoire consists of rosettes with linear elements at the top and the bottom, alternated with partitions filled by a vegetal-like herringbone design and a zigzag (3C 662), herringbones and a net pattern (3F 341), or herringbones vertically and horizontally disposed (e.g., 3B 800 + O 17 I, here **Figure 6: 1**; 3H 194; 3H 195; 3H 518 + 3H 525; 3K 359; 15906).[28] In a less-well designed version of this same type of scheme, the rosette is depicted in a star-like manner and further linear patterns were added (3K 360; 3K 290). The rosette and herringbone motifs can also be represented together with other types of geometric designs, such as the double spiral (3E 484), or with a figurative subject, such as the animal – maybe a gazelle – depicted on 3F 727+3D 540.[29] The rosette is possibly surrounded by two snakes in the latter representation, as well as in 3C 603.[30] A similar rosette surrounded by a snake characterizes the impression TM.75.G.280/18 from Ebla.[31]

The repertoire of figurative depictions at Hama, consisting of about 20 sealings, is dominated by two main themes: the herding and the dance scenes. The first type of representation possibly refers to an attitude of protection over the flock, as already proposed by S. Mazzoni, who suggested that these images would represent herding activities rather than hunting.[32] Such scenes of protection over the flock are depicted according to a quite standardized scheme. A human figure, which can hold a weapon

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[24] Ingholt 1940, 43: note 3, pl. XV:1; Mazzoni 1992, 152, B101, Tav. XXXIV.

[25] 3E 487: Ingholt 1940, 43: note 2; Mazzoni 1992, 151, B97, Tav. XXXIII. Byblos: Dunand 1950-1958, no. 19307, Pl. CXCV. Sidon: Doumet-Serhal 2006, 262: no. 5, Pl. 167:5.

[26] Mazzoni 1992, 154, B112, Tav. XXXV.

[27] Ingholt 1940, 43: note 6; Mazzoni 1992, 151, B98, Tav. XXXIII.

[28] 3C 662: Ingholt 1940, 34: note 1; Mazzoni 1992, 150, B92, Tav. XXXII. 3F 341: Ingholt 1940, 43: note 1; Mazzoni 1992, 152-153, B103, Tav. XXXIV. 3B 800 (a-b) + O 17 I: Mazzoni 1992, 149, B88, Tav. XXXII. 3H 194 (a-c): Mazzoni 1992, 153, B106, Tav. XXXIV. 3H 195: Ingholt 1940, 43: note 1, pl. XV:2, 42: note 6; Mazzoni 1992, 153, B107, Tav. XXXIV. 3H 518 + 3H 525: Matthews 1996, 144: no. 18, Tabs. II:18, V:18. See Mazzoni 1992, 75, A35, Tav. IX, XVII, XXI and 67-68, A4, Tav. IV, XI, XXIII for parallels.

[29] 3E 484: Ingholt 1940, 42: note 6, 43: note 2; Mazzoni 1992, 151, B96, Tav. XXXIII. 3F 727 (+ 3D 540): Ingholt 1940, 33: note 8, 42: note 6, 43: note 6, pl. XIV:6; Mazzoni 1992, 153, B105, Tav. XXXIV.

[30] Matthews 1996, 144: no. 14, Tabs. II:14, IV:14.

[31] Mazzoni 1992, 70, A15, Tav. VI, XIII, XXIV.

[32] 3F 68: Matthews 1996, 142: no. 3, Tabs. I:3, IV:3. 3H 380: Ingholt 1940, 42: note 5, pl. XIV:5; Mazzoni 1992, 154, B109, Tav. XXXV. 3H 373, on a bowl: Ingholt 1940, 42: note 5; Mazzoni 1992, 153-154, B108, Tav. XXXIV. Group I2b '*scene di pastorizia*': Mazzoni 1992, 46-57.

Figure 6: *Images on seal impressions from Hama, on SW transport/storage vessels and CW pots: 1. rosettes and herringbone motif, on SW (3B 800b); 2. dance scene, on SW (3A 665); 3. herding scene, on CW (3H 380); 4. running spirals/guilloches, on CW (3E 992). Pictures not in scale. ©Nationalmuseet.*

(likely a dagger: 3H 380, here **Figure 6: 3**), is associated with one or two quadrupeds – representing the flock – that can be positioned as facing each other (3F 68) or *tête-bêche* (3H 380; 3H 373). Further elements are also included in the scene: a herringbone design, probably representing a vegetal element (3F 68), and a scorpion (3H 38). These kinds of images seem to be popular in the northern Levant and eastern Syria, as documented by seal impressions from Ebla, Tell es-Suffane, Tell Mozan, Tell Leilan, Tell Brak.[33] To the south, this theme does not spread beyond Khirbet ez-Zeraqon.[34] The other type of figurative motif that characterises the Hama repertoire consists of dance scenes, depicting frontal figures with the arms open to the sides.[35] The arms can be bent slightly upward (3A 665; 3E 742), with the figures holding each other's hand. In 3A 665, the spaces left between the figures are filled by quadrupeds standing on triangles (**Figure 6: 2**). S. Mazzoni suggested an association between these scenes and the '*rituel de haut Syrie*' motif, already identified by Amiet.[36] In contrast to the herding scenes, this type of image seems to be mostly widespread in the southern areas. In fact, while it is known in the southern (e.g., Bab edh-

[33] From Ebla, TM.89.G.383/1: Mazzoni 1992, 76, A41, Tav. X, XVIII, XX; TM.68.D.30: Mazzoni 1992, 67, A3, Tav. IV, XI; TM.77.G.477: Mazzoni 1992, 71-72, A21, Tav. VI, XIV; TM.90.P.327: Mazzoni 1993, 405, A46, fig. 6, Pl. 73:2; TM.07.HH.636: Tumolo 2017, 169, fig. 2:2. From Tell es-Suffane: Mazzoni 2006, 384-385, Taf. 8b. From Tell Mozan: Matthews 1997, 289: no. 500, Pls. XXXVII.LVII. From Tell Leilan: Parayre 1990, 557-558: no. 4, fig. 28:4. From Tell Brak: Matthews 1991, 152: no. 14, fig. 2:14. According to E. Rova, the Levantine husbandry scenes would actually be the Levantine counterpart of the north-eastern Syrian 'master of animals' theme, consisting of both the local types of depictions and contest scenes (Rova 2006, 307).

[34] Tumolo 2019, 43-44 with further references.

[35] 3A 665: Ingholt 1940, 42: note 3, pl. XIV:3; Mazzoni 1992, 149, B87, Tav. XXXII. 3E 744: Ingholt 1940, 42: note 3; Mazzoni 1992, 152, B100, Tav. XXXIII. 3E 742: Matthews 1996, 143: no. 11, Tabs. II:11, IV:11.

[36] Mazzoni 1992, 103 with further references.

Dhra') and the central Levant (Sidon), for the northern Levant this theme seems to be found only in the southern part of the region.[37] Besides the Hama finds, one example is known from Tell es-Sour and none is documented from northern areas.[38]

Discussion and conclusions

This brief overview of the seal-impressed vessels from Hama has allowed us to put forward some preliminary observations, which will be further developed through targeted ongoing analyses. As for the typology of CW pots with cylinder seal impressions, the sites of the Middle Orontes, and especially Hama, show the broadest variability in terms of overall vessel shape. In fact, Hama yielded three different typologies of seal-impressed CW pots, co-occurring in the same find contexts.

As already noted by S. Mazzoni, apart from some differences, the sealings from Hama find most comparisons with the Ebla's material and they can be considered, in fact, as part of a cultural unity that included the area between the Nahar el-Quweiq and the Homs/Hama area.[39] However, although the impressions are of the same types, the distribution pattern of the types of jars that are impressed is different. In fact, the corrugated jars - both hole-mouth and with swollen rim, vertical or everted - are present at Hama, while at Ebla only the swollen rim type is impressed. Besides the geometric designs, which find strong comparisons in the Ebla's corpus, one of the motifs mostly documented at Hama is represented by the herding scenes, also well known in the rest of the Syrian region. On the other hand, the dance scenes – not documented at Ebla thus far – seem to connect Hama to the south, where these types of representations are widespread from Tell es-Sour and Sidon to the entire southern Levant, reaching Bab edh-Dhra'. A peculiar aspect of the Hama repertoire is represented by the impressions with rosettes+herringbone/plants images, which seem to have been a hallmark of the impressed SW jars at the site and find few comparisons in the Ebla corpus.

Based on this evidence, it is possible to hypothesize that the production of CW seal-impressed pots was centred in the Middle Orontes Valley and was distributed in a larger area encompassing the Ebla region. As far as we know from cuneiform texts from Royal Palace G, Hama was within the orbit of Ebla, and tied to the latter in socio-economic and socio-political terms. Thus, the similarities in the iconographic repertoire of both sites, as well as the local peculiarities of the Hama repertoire (both in terms of vessel morphology and themes carved on the cylinder seals), suggest on the one hand a strong influence between the two sites related to intense political and economic relationships, and on the other a certain degree of autonomy and regional organization of pottery production.

As already mentioned, different hypotheses have been suggested about meanings and purposes of the seal impressions. Since the corrugated globular pots of the Ebla-Hama region were also employed for cooking purposes, they differ from the repertoire of the seal impressed vessels coming from the rest of the Levant and eastern Syria and represent a unique case. On the other hand, as in the rest of the region, the themes and iconographies depicted are very diverse and find comparisons throughout different distribution areas. Some are more widespread and reveal larger connections, while others are more particular to the Ebla-Hama region.

Regarding the relation between the meaning of the depictions and the function of the seal-impressed vessels, it should be emphasized that until now it has not been possible to define any kind of correlation between the diverse scenes and motifs depicted and the variations in the physical features of the vessels, such as shape and dimensions, or in their find-contexts. However, through our multi-disciplinary

[37] Lapp 1989, 5-7, fig. 5; Doumet-Serhal 2009, 2, 9.
[38] Al-Maqdissi and Ishaq 2012, 8-9, figs. 3:a-b.
[39] Mazzoni 1992, 98, 114.

methodological approach, we have aimed at exploring other possible correlations, such as seal-impressions and vessels fabrics through targeted petrographic and chemical analyses. We are confident that, with further analyses, much more precise trends will be discovered. Consequently, this would allow us to suggest the location of the workshops producing the seal-impressed pots, and whether – and in which way – they were different from those producing the non-sealed ones.

Another line of investigation will be devoted to understand how these pots circulated and to detect the possible pattern revealed in their contents (through residue analyses). The accomplishment of this multi-disciplinary analysis on Cooking Ware pots from Hama will provide an opportunity to investigate the dynamics of production and distribution of the seal impressed vessels in the region, and to shed new light on their purpose(s). This will also contribute to the clarification of the dynamics that characterized the Early Bronze Age socio-economic system in the area, which has yet to be fully explored.

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Potmarks on the Lebanese Coast: A Medium of Communication in the Early Bronze Age

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Abstract

The signs often incised or applied on ceramics, collectively known as potmarks, are common to many archaeological sites in the Near East and Eastern Mediterranean. Despite their presence at numerous sites, and the fact that they aroused the intrigue of many archaeologists, there is no comprehensive agreement on their function. This paper, a part of a larger study dedicated to potmarks in the Bronze Age, takes a new approach in order to analyse the function of these marks and get us closer to understanding their meaning. From a large corpus of potmarks, it studies not only the marks themselves, but also consider wider context within the sites in which they are discovered, as well as their location on the specific vessels. By looking for common patterns within sign-vessel pairings and sign-placement, one is able to better understand the complex system that these marks formed.

Keywords

Potmarks, Early Bronze Age, Lebanon, Graphic Systems, Ceramics

Introduction

Communication in archaeological contexts can be investigated in several ways. One of the more obvious aspects of dealing with the communication in the past is considering written sources. However, several other systems of communication existed along these written sources or were present in the areas where no evidence of writing was identified. Such systems may in some ways resemble writing, however, they are distinct from it. These systems can be understood as a collection of graphic systems representing coherent sets of signs whose various compositions and combinations are highly codified.[1]

Potmarks, which are part of these graphic systems, are often described as impressed, incised, excised, or painted signs on ceramic vessels,[2] and were discovered at several sites in the Near East. Numerous researchers attempted decoding their functions, however, many of the older analyses present several shortfalls. Such shortfalls stemmed from the fact that potmarks were often studied in relation to writing,[3] or as a by-product of a study of specific groups of vessels, such as imported or decorated pottery.[4] As a consequence, contextual information was often completely omitted. In addition, many of these studies focused on small assemblages limited to one site, which led to varying interpretations of these signs.

1 Graff 2013, 31-33.
2 Sconzo 2013, 223.
3 Hirschfeld 1999, 9-12.
4 Hirschfeld 2007, 183.

Potmarks in literature

A thorough discussion of the history of research on potmarks is not in the scope of this contribution, however, a few recent studies should briefly be mentioned. Two important publications, both, due to the amount of potmarks they analysed as well as to their methodological approach, are the ones on potmarks from the Early Bronze Age sites of Khirbat az-Zayraqūn in Jordan,[5] and Tell el ´Abd in Syria.[6] According to Sconzo, a systematic approach of analysing potmarks should encompass noting the technique employed, the mark's relationship to the pot, type of marked vessel and its possible function, the chronological, spatial and functional context of the marked vessel or sherd and the nature of the find-spot, and the geographical, cultural and political environment in which the potmark was in use.[7] Furthermore, two additional studies should be mentioned as they focused on regional aspects of studying potmarks. One of these deals with potmarks from Late Bronze Age contexts in Anatolia, whereas the second research focuses on Late Bronze Age Cyprus and eastern Mediterranean.[8] The work of Hirschfeld sets a benchmark for modern studies on this subject. She emphasizes the importance of the micro and macro context of an individual potmark, which are considered as separate variables, each consisting of many sub-variables. On the micro-scale, these variables note the form of a potmark, its visibility and the type of the vessel on which it is located. On the macro scale, the geographical, cultural and political environment in which the potmark was used are discussed.[9] Based on Hirschfeld's approach, potmarks are considered as possibly representing an identification of a potter, workshop, merchant or an owner. They could denote quality or quantity of the content of the vessel, as well as price, batch, point of origin or destination or other information.[10]

Potmarks in Lebanon

While the above research focused on the Near East and the Eastern Mediterranean, there has been no significant study of potmarks in Lebanon despite the fact that numerous potmarks were discovered at several sites. These were occasionally published within wider ceramic studies, such as from Tell Fadous-Kfarabida,[11] Tell Arqa,[12] Kamid el-Loz,[13] Sidon,[14] and Yanouh.[15] This paper aims to fill this research gap and focuses on potmarks from the Early Bronze Age contexts on the Lebanese coast in order to offer a preliminary insight into potmarking practices in the designated region. The paper integrates several parameters, collected within a broader systematic study of potmarks in Lebanon,[16] in order to better understand the communication in the Early Bronze Age and points out the importance of integration of contextual data in the study of potmarks due to the large amount of information they carry.

So far, 450 Early Bronze Age potmarks from the Lebanese coast have been identified in the scope of this study. These potmarks come from four sites: Tell Arqa, Tell Koubba, Tell Fadous-Kfarabida and Sidon (**Figure 1**). The majority of these marks can be dated to the Early Bronze Ages II and III. All the potmarks considered in this paper come from settlements. Their find spots vary between public and

5 Genz 2001.
6 Sconzo 2013.
7 Sconzo 2013, 226.
8 Glatz 2012; Hirschfeld 1999; 2002; 2011.
9 Hirschfeld 1999, 22-23.
10 Hirschfeld 2002, 49.
11 Badreshany *et al.* 2005; Genz and Sader 2007; Genz and Sader 2008; Genz *et al.* 2010; Peršin 2021.
12 Thalmann *et al.* 2006; Thalmann 2016.
13 Catanzariti 2010-2011.
14 Doumet-Serhal *et al.* 2006.
15 Monchambert *et al.* 2008.
16 Peršin 2023.

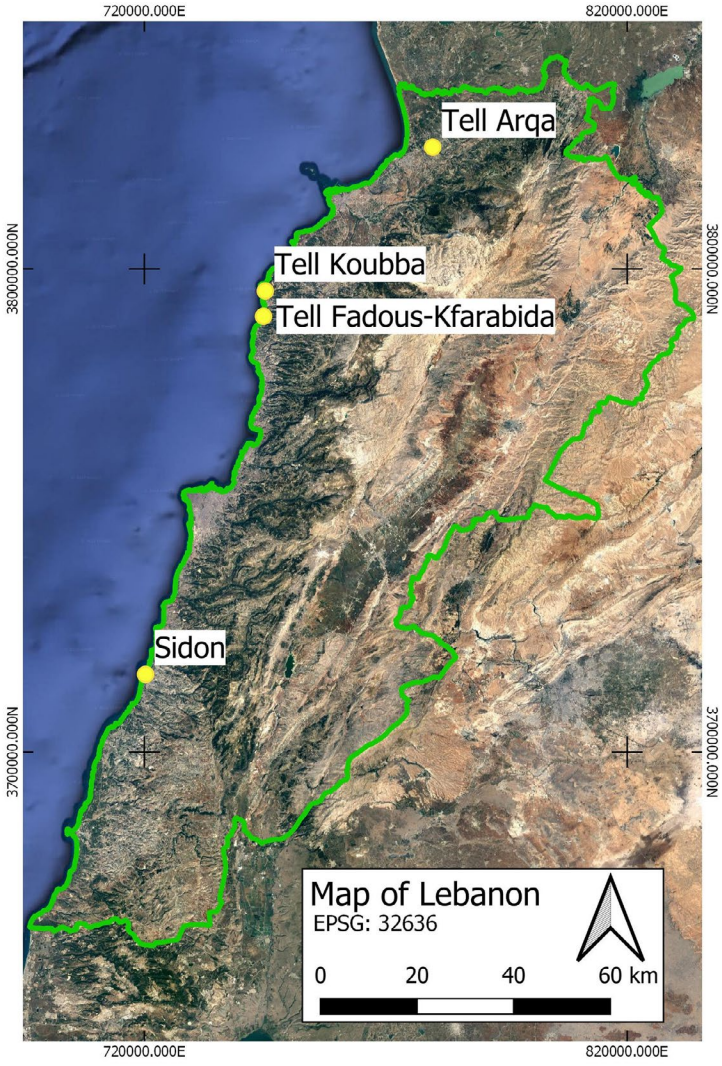

Figure 1: *Map of Lebanon indicating the sites discussed in the text.*

domestic buildings and they derive from floors or associated features, storage spaces below buildings and occasionally they come from streets.

Types of potmarks

Various signs are recognized and are divided into three major groups based on the marking techniques employed. The three groups consist of incised potmarks, applied potmarks and potmarks consisting of a combination of incisions and applications. No painted potmarks were identified in the Early Bronze Age contexts.

The incised marks (**Figure 2: 1-10, Figure 3: 1-3**) were created by incising forms into leather hard clay with the help of sharp or blunt tools, or were created post-firing, with the help of a sharp tool. On the other hand, applied potmarks (**Figure 3: 4, 8-10**) required forming a small piece of clay into the desired form and attaching it to the vessel before firing. Potmarks consisting of a combination of incisions

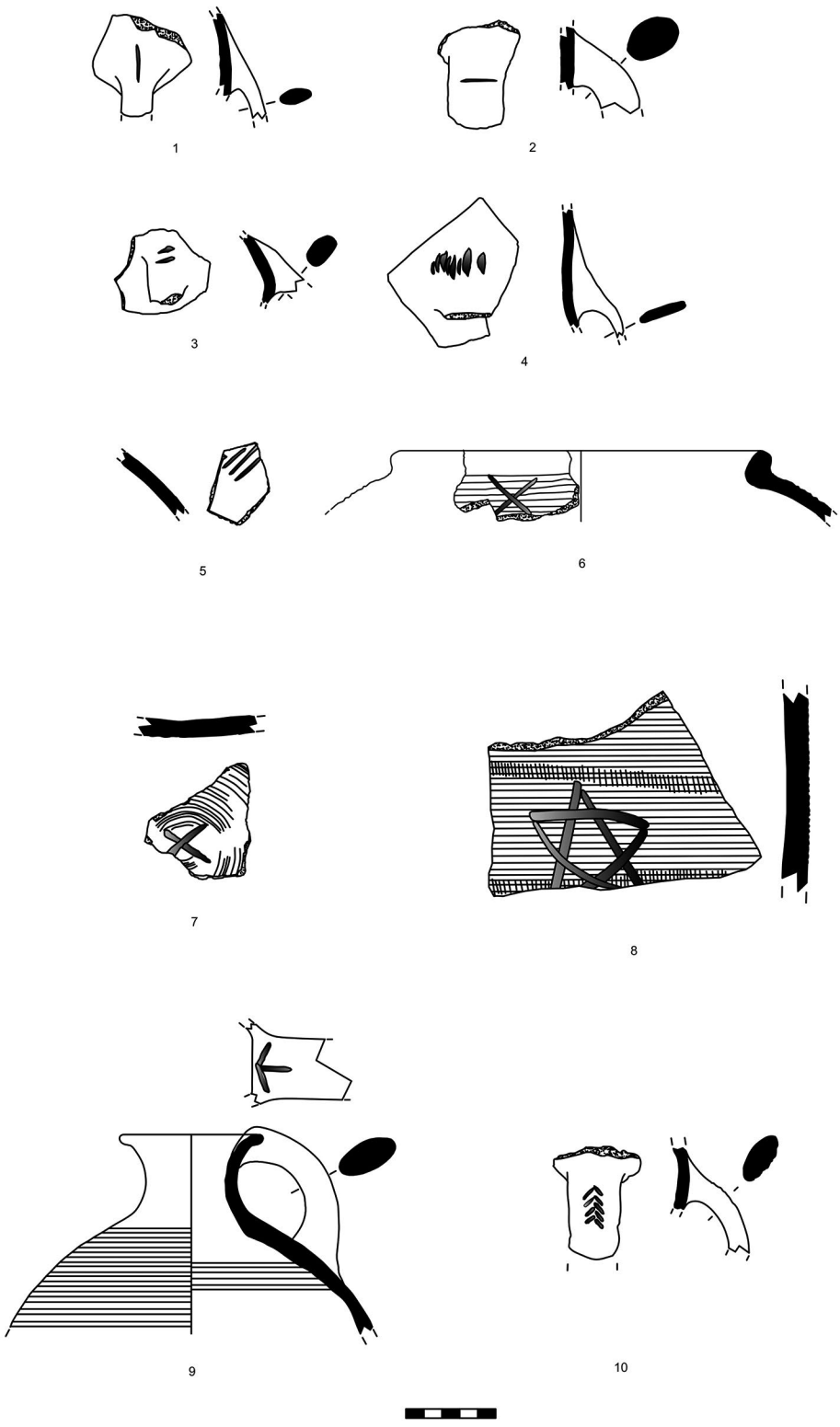

Figure 2: *Selected potmarks from the Lebanese coast in the Early Bronze Age.*

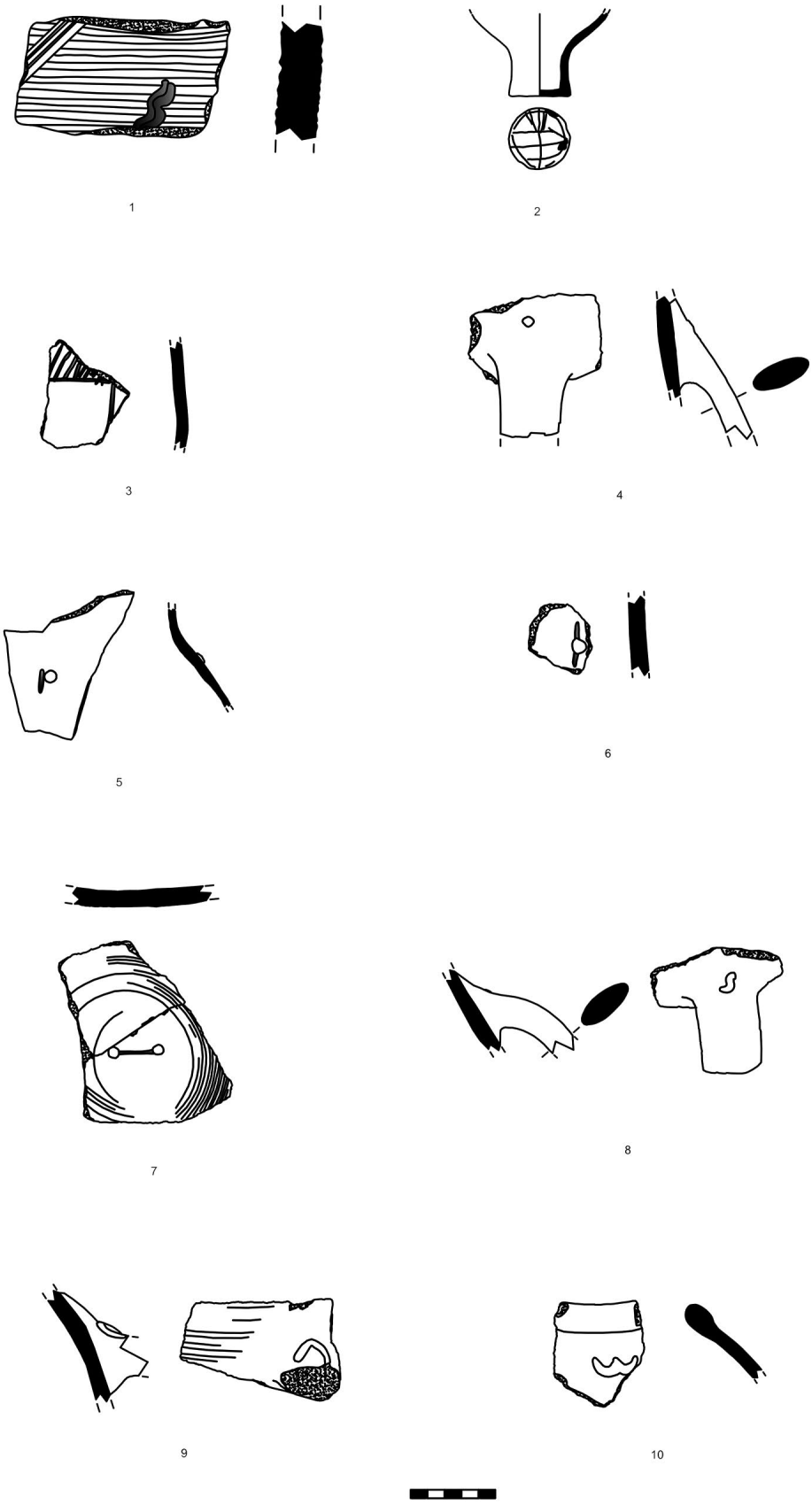

Figure 3: *Selected potmarks from the Lebanese coast in the Early Bronze Age.*

and applications (**Figure 3: 5-7**) were created by incising part of the potmark into the unfired clay and attaching a small application either next to the incisions or directly on top of them.

Within the presented assemblage, the majority of the studied potmarks were created prior to the firing of the vessel, while only a small number of potmarks were created post-firing. The latter show reduced variability in forms and a more linear use of incised lines, likely as scratching the hard surface of a fired vessel is more difficult than manipulating the malleable clay surface before firing.

Location and visibility of potmarks

The distribution of potmarks according to the types of the vessels on which they are located, is very uneven. The majority are located on vessels intended for storing or transportation, followed by cooking pots. A limited number of marks on platters or bowls are attested, while potmarks rarely appear on vats. In the cases of complete vessels, only one potmark per vessel is attested.

The visibility of the potmarks often coincides with the type of the vessel on which the mark is located. All the marks on storage or transport jars are in well visible places. These are either the top of the handle of the vessel, the neck, or the shoulder, and in rare cases, the upper body of the vessel. Jugs bear potmarks on the top of the handle or at the bottom of the handle. Occasionally, potmarks are located on the body of the jug and rarely on the base (**Figure 3: 2**), and in all these cases, the marks were incised post-firing. Marks on vats are located on the body or at the top of the handle, while marks on bowls are located on the outer side of the vessels. The only site where potmarks on platters are attested, is Tell Arqa.[17] All of these marks are located on the bases of platters, therefore not immediately visible to the user of the vessel.

One of the more intriguing groups of vessels when it comes to the location of an individual potmark, is defined by new evidence provided by this study. The group consists of holemouth and globular jars that are, based on the ware, often classified as cooking pots. It is known that cooking pots are occasionally marked, however the potmarks they bear were generally known to be located in very well visible places, often directly below the rim of the vessel. In a break from the generally known tradition, the evidence below shows that there is a number of potmarks located on the bases of cooking pots (**Figure 2: 7, Figure 3: 7**). So far, examples of such an unusual potmark placement are attested only at Tell Koubba and Sidon, therefore the reason for choosing the bases of cooking pots for marking at these sites is unclear. It is worth noting however that about ten percent of all the Early Bronze Age potmarks from Sidon are located on the bases of cooking pots, thus forming a substantial amount of the potmark corpus of the site. These intriguing marks come in a variety of forms, and do not generally differ from the rest of the signs found at the site except by their peculiar position. The above observations seem to indicate that choosing this location must have held some importance whose meaning is still unclear.

In general, however, potmarks were placed in very well visible positions, which indicates that their visibility played a major role in the production process. The majority of the marks are associated with handles, so the producer of the mark made sure that the user who would naturally go for the handle when using the vessel, would notice the mark. Why a smaller group of marks, specifically associated to platters at Tell Arqa and cooking pots in Sidon appear on the bases, is still being investigated.

The various signs of potmarks

Incised potmarks range in forms from simple individual incised lines to more complex signs, consisting of several linear or curvilinear lines. Simple incised lines are attested as an individual line that can be

[17] Thalmann 2016, Pl. 1: 1-2, 4-7, 10.

incised vertically, horizontally, or diagonally (**Figure 2: 1-2**); or come in groups of lines incised in a parallel manner (**Figure 2: 3-5**).

Complex forms are the signs that consist of several lines interacting with each other and forming a coherent single sign. Such complex signs represent, for example, a cross or an X form (**Figure 2: 6-7**), pentagrams (**Figure 2: 8**) or arrows (**Figure 2: 9**). It should be noted here that the terms referring to these forms are assigned here arbitrarily and do not necessarily reflect the original meaning of the sign in its past context.

Simple incised lines appear rather frequently and are attested at Tell Arqa, Tell Koubba, Tell Fadous-Kfarabida and in Sidon. The incised cross or X sign is attested as well at all the above-mentioned sites, while incised pentagrams and arrows have so far been identified at Tell Arqa, Tell Fadous-Kfarabida and Sidon.

Applied potmarks are represented by individual simple knobs (**Figure 3: 4**), groups of applied knobs, or take a more complex form, such as a snake application (**Figure 3: 8**) or ram's head application (**Figure 3: 10**). Snake applications are known from Tell Fadous-Kfarabida and Sidon. Various combinations of applied knobs with incised forms are known from Tell Fadous-Kfarabida and Sidon, with one example of an incised form with an applied knob coming from Tell Koubba. The fact that only one of such signs is known from the site until now, is likely due to the fact that not all of the Early Bronze Age ceramics from Tell Koubba have been so far studied.

Potmarks consisting of incised and applied marks are attested in a variety of forms, ranging from a simple incised line paired with an applied knob, to several incisions paired with a more complex application. In some instances, the application is positioned on top of the incision (**Figure 3: 6**), whereas in others, it is placed next to it (**Figure 3: 5**).

Discussion

The analysis of the Early Bronze Age potmarks from the Lebanese coast is still ongoing, nonetheless some of the proposed interpretations on the functions of potmarks from comparable sites can already be excluded. The fact that the potmarks are not evenly distributed on all types of vessels within the studied assemblage suggest that these are unlikely to have been used as potters' marks. In contrast, the variety of different signs identified at rather small sites do not seem likely to represent individual potters or workshops. With over one hundred different individual signs, it seems very unlikely that such a high number of workshops or individual potters would have been active in the area.

Potmarks are often interpreted as signs of ownership.[18] If this interpretation holds, then we would expect the repetition of the same signs on several vessels within specific rooms or buildings at the individual site, which would indicate that the sign is directly associated with the inhabitants of the specific building. However, the evidence from the Lebanese coast in the Early Bronze Age leads to a different conclusion. A variety of potmarks often appear inside the same room of a building, and on the other hand, the same signs appear at several different sites.

The fact that a large portion of these vessels were marked at their point of origin, indicates that the potter had an idea of what destiny awaited these vessels. Although it is occasionally stated in the literature, that the potmarks could denote the actual point of their origin, this does not seem likely for the assemblage at hand. The majority of the large vessels, such as *pithoi* and vats, bear the same marks as smaller vessels meant to be easily transportable. However, these large vessels are often produced

[18] Aston 2009, 48.

on site, and are not meant to be moved due to the impracticality of such action. Based on this fact, it then seems unlikely that the variety of signs appearing on vats on the same site would be related to their production origin. On the other hand, potmarks are sometimes also interpreted as denoting the point of destination of the vessel. Again, this does not seem to be the case for the assemblage at hand. Several types of marks are attested at different sites on the Lebanese coast, and examples of the same types of signs attested on vessels transported from Lebanon to Egypt are known, which indicates that vessels with the same sign were usually transported towards completely different destinations. Since most of the marks were created before firing, the interpretation that they would have been denoting a merchant does not seem likely.

Finally, the relation of the signs to the volume of the vessels they mark is highly unlikely. The same signs are often attested on small and large vessels on the one hand. On the other, a variety of signs can be identified on vessels of the same size. However, there still exist several other hypotheses that can neither be proved or disproved based on the presented evidence. For example, the hypothesis that these signs marked either the quality or price of the commodity it carried, remains open to interpretation.

No co-relation between an individual sign and its location on the vessel, its orientation, type of the vessel, the size of the vessel, ware of the vessel, the sites or archaeological contexts has so far been observed. For instance, the sign represented by an incised line with two applied knobs is attested at the base of a cooking pot coming from Sidon (**Figure 3: 7**), and is also found on a neck of a *pithos* from Tell Fadous-Kfarabida. Furthermore, the sign consisting of an incised wavy line located on the base of a platter at Tell Arqa, appears incised at the top of the jug handle in Sidon and in a form of a double wavy line also on a vat at Tell Fadous-Kfarabida (**Figure 3: 1**). An incised cross or X sign that is attested at Tell Fadous-Kfarabida below the rim of a cooking pot (**Figure 2: 6**), is also found at the top of a vat handle at Tell Koubba, as well as on the base of a cooking pot from Tell Koubba (**Figure 2: 7**).

These are only a few examples of the repetitious signs that show no obvious patterns in their distribution. Altogether, over a hundred individual signs have been identified, and although some of them are attested in larger quantities on the Lebanese coast, several of them are attested only one time. The reason for this imbalance is yet to be determined.

Conclusion

Although the general ceramic assemblages at the four sites may differ in the types of vessels represented, or their quantities, the potmarking practices seem to unite these sites in some way. The techniques employed in producing the potmarks, as well as repetition of several signs across the Lebanese coast, tentatively suggests a use of a graphic system known to a wider audience. The use of specific signs so far does not seem to be bound to a vessel type, its size, choice of location on the vessel, the size of the sign or a specific context. On the contrary, the same sign may appear in different sizes, at different locations on vessels and across a variety of vessel types, contexts, and sites. The studied potmarks do not seem to represent a potter or a workshop, an owner, a merchant, points of origin or destination or volume of the vessels. The message transmitted in a form of a potmark seems to have been communicated to an audience across a wider geographic space. As the message is due to its form restricted, it seems that the audience shared some common knowledge in decoding this message. By adding more data to the assemblage in the future, noting as many details as possible in relation to the individual potmarks and analysing them on a larger scale, this research aims to provide more answers on the Bronze Age communication in Lebanon.

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Personal Religion in the Ramesside Period from the Deir el-Medina Votive Stelae: A Case for the Study of Iconography

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Abstract

Votive stelae are a treasure trove of information for researchers on ancient Egyptian culture. Not only their iconographic analysis sheds light on the development of the artistic conventions in ancient Egypt, but the interpretation of their carved scenes and inscriptions transcends the boundaries of the artistic canon to encompass different private and social realms. In particular, as an intended means of private communication between the human and the divine, interpreting the functionality of votive stelae is instrumental to enhance our understanding of the practice of personal religion. Acknowledging that this task can be achieved by the study of iconography, this contribution outlines the interpretative elements brought about by the study of the interaction among the characters depicted on stelae found at the Deir el-Medina site.

Keywords

Deir el-Medina, Ramesside Period, Iconography, Personal Religion, Votive Stelae

Introduction

In this paper, I will argue the importance of iconography when it comes to analyzing the phenomenon of personal piety and how the interaction between the representation of concepts (e.g., depictions of actual objects, structures and places) and the contents of texts play a key role in the comprehension of how individuals could have perceived and experienced religion. Inscriptions in votive stelae have been largely studied. For this reason, in this paper I argue the perspective of those looking at stelae without understanding texts. Indeed, gesture, composition and depictions of 'actual' artefacts, structures and individuals would have been a key element for the majority of the Egyptian population to express their personal beliefs by leaving markers of religious identity. The majority of individuals could not read or write and as a result, they could only 'register' and perhaps 'experience' their appeal to divinity or deified beings by depicting cultic scenes or actions. The specific case of Deir el-Medina is appropriate because of its excellent preservation. Votive stelae located at the site and in its surroundings can provide information on the performance of cultic activities. In fact, personal piety is often studied by looking at private houses from Deir el-Medina.[1] Thus, stelae are not the only objects that provide information on cultic performance, but they also contribute to our better understanding of specific individual's lives. Similarly, general cultic equipment (offering tables, offering supports, incense-burners, portable shrines/altars) and specific artefacts used for communicating with gods (amulets, figurines, letters, ostraca, anthropoid busts) are also crucial elements that can provide the 'whole picture' of the religious action if they are all studied together.

[1] Weiss 2015.

Before reviewing the relevant literature on the topic, I would like to state that, according to recent studies on domestic religious practices,[2] evidence suggests that personal religious actions in households can be traced back to the Middle Kingdom (e.g., cultic structures and objects at Lahun, Askut or Mirgissa).[3] In fact, there is some consensus that a sort of continuity in personal piety existed since the end of the Old Kingdom onwards, 'disguised' to some extent due to matters of *decorum*.[4] Here the theory suggested by Baines argues that *decorum* would have affected depictions on monuments establishing in 'hierarchical terms what may or not may be depicted in what context'.[5] This of course, would have affected expression in art, including that on votive stelae.

On the other hand, the aforementioned studies on the so-called 'archaeology of religion' (from the materiality of religion)[6] have demonstrated that devotional 'sentiments' could have existed prior to the New Kingdom. As a result, votive stelae are included too within the artefacts that support this *continuum* in religious tradition over time. Furthermore, Bussmann's perspective that 'communication, written, visual or material, does not describe reality, but responds to something contested or controversial' needs more discussion.[7] Some artistic conventions in votive stelae (and other artefacts, structures, and decorations) represent concepts modeled by the Egyptian language that have adapted elements of the ancient Egyptian reality to express ideas, sentiments, and beliefs.

Personal religion in ancient Egypt: a brief literature review

The term 'personal religion' refers to the phenomenon of the individual devotional sentiment towards divinity expressed through religious actions such as the performance of rituals or daily cults that establish a close relationship between the individual and the deity.[8] It has similar denominations in Egyptological publications depending on the features of this phenomenon that experts want to stress, such as 'popular religion',[9] 'individual religiosity',[10] 'private religion',[11] 'personal piety',[12] 'religious practice',[13] among others. There is no consensus to name this individual religious attitude 'characterized by deep devotion and loyalty to one or more deities and the desire for direct contact with them' as summarized by Luiselli.[14] Nonetheless, personal religion can be traced back to the late Old Kingdom in diverse manifestations of the expression of personal beliefs. If we look at the evidence in houses and residential contexts provided by Moeller,[15] one can say that remains are poorly preserved and it is very difficult to attest the presence of cultic equipment. Nonetheless, according to Baines and Waraska,[16] tombs and temples seem to have been the main foci for individual cultic activity during the Old Kingdom. The main forms of expression of personal devotion linked to tombs and temples would have been: festivals,[17] contact with the dead, even in the form of contacting royal ancestors,[18] veneration for local officials,[19]

2 Weiss 2015; Mota 2015.
3 Mota 2015, 40.
4 Baines and Frood 2011; Baines 1990; 2017.
5 Baines 1990, 82.
6 Focused on two main realms: the communication with gods and with the deceased.
7 Bussmann 2017, 86.
8 Baines and Frood 2011.
9 Sadek 1987.
10 Pinch 1993.
11 Stevens 2006.
12 Baines and Frood 2011.
13 Weiss 2015.
14 Luiselli 2014, 105.
15 Moeller 2016, 161-166.
16 Baines and Waraska 2017, 21.
17 Baines 1991, 174.
18 Malek 2000, 243.
19 See the example of Abusir in Morales 2005, 313.

and responses to affliction and dangers.[20] This last expression can be exemplified in the three stelae of Amenisonbe to Wepwawet discussing the personal religion of this individual and 'his aspirations for the afterlife'.[21] Baines studies all the three stelae and argues that their spatial context (likely the funerary chapel and tomb) together with references to 'his / my god' implies some commitment on the part of Amenisonbe, an important official from the 13th Dynasty, to the god Wepawawet, and he compares this case with that of Sataimau's tomb in the early 18th Dynasty at Hagr Edfu, where 'Sataimau appears kneeling directly before the local gods'.

The Middle and New Kingdoms provide a wide range of examples of personal religion, in temples, tombs and houses, with private homes being the principal context for the study for personal religion. During the Middle Kingdom, the domestic contexts of Lahun provide archaeological evidence for personal beliefs, such as female figurines, incense burners, magic wands, stelae, etc.[22] Similarly, domestic altars were found, for instance at Lisht and Mirgissa, among other sites.[23] For the New Kingdom, evidence is more abundant, mainly from the well-known sites of Tell el-Amarna and Deir el-Medina.[24] Therefore, it seems that some sort of continuity in the personal religious practice can be traced from the Middle Kingdom until the New Kingdom. Hence, Bussmann's suggestion that from the late Old Kingdom to the New Kingdom, 'personal piety is the result of the gradual exclusion of people from access to the temples',[25] in my view, cannot be taken without questioning the possibility that personal religious practices took place in domestic contexts prior to the Middle Kingdom. The scarcity of preserved evidence makes it hard task to substantiate this assumption, however it does not imply that it did not exist. As a result, in this paper personal religion in the analyzed Ramesside period votive stelae will be understood as it had experienced changes in the 'style of display',[26] inherited from the art of the Amarna period, but I argue that those changes did not affect the continuity of individual religiosity.

The significance of iconographic analysis of votive stelae

The study of personal religion as the substantiation of personal devotional sentiment towards a specific deity or a deified individual, sometimes understood as personal piety, has been mostly focused on its genesis,[27] and the interpretation of votive stelae in regard to such a phenomenon has borrowed from their textual contents rather than from archaeological findings and material culture. Assmann, for example, has put forward the controversial thesis that personal religion, although rooted in the Amarna period, would not be in full blossom until the Ramesside period.[28] This has been claimed despite the evidence of manifestations of personal religion dating from the Amarna period.[29] This includes the large number of amulets found at the city of Tell el-Amarna and dedicated to different deities, which is a strong sign of the existence by that time of private cults dedicated to selected deities regardless of the monotheistic implications of the cult that was official at that period. Possibly, on the grounds of a probable radicalisation of the initial henotheism, the official cult was most likely not restricted to the Aten at the beginning of Akhenaten's reign.[30]

20 Baines 2009, 1-21.
21 Baines 2009, 12.
22 Szpakowska 2007; Mota 2015, 46.
23 Mota 2015, 172-173.
24 Stevens 2006 and Weiss 2015, respectively.
25 Bussmann 2017, 86.
26 Baines and Frood 2011, 17.
27 Wells 2014, 42.
28 Assmann 2001.
29 Luiselli 2008.
30 Hornung 2001.

It is now generally accepted that the picture of ancient Egyptian religious practice obtained by considering exclusively textual matter is at best incomplete,[31] and that this approach must be replaced with the joint study of text and iconography in order to enhance our understanding of both material culture and the immaterial realm that is being addressed. Votive stelae are artefacts of the archaeological record with a special significance in this regard. Throughout ancient Egypt elite (or sub-elite individuals at Deir el-Medina, for instance) individuals expressed their religious beliefs and their pious devotion towards selected deities by means of tokens such as amulets, figurines, graffiti, stelae, and even structures. Although these tokens functioned also as a display of social and economic status,[32] the visual and textual reliefs on votive stelae may have been designed to ensure that the offerings and daily cults continued during the physical absence of dedicators, perhaps from death or abandonment. Thus, they were not just intended to be means to the social display of an act of devotion at a particular point in time but, provided a material resource to ensure the sustained performance of the devotional act by reading its inscriptions and looking at the carved scenes.[33] The concurrent interpretation of these elements proves invaluable in disclosing the underlying net of relationships among individuals of the same family or between individuals and their chosen gods.[34]

The artefacts found at the village of Deir el-Medina are of particular significance concerning research on the practice of personal religion during the New Kingdom because of their good preservation and high artistic quality, which is accounted for by the social milieu of their makers. Indeed, members of this community included those who built and decorated the tombs of the Valley of the Kings and had an expertise at copying scenes for the royal tombs.[35] Interestingly enough, it is likely that at least some from among these craftsmen were literate, which is a feat for the standards of ancient Egypt, literacy being the prerogative of the social elite.[36]

Types of stelae at Deir el-Medina

The votive stelae found at the site of Deir el-Medina have been classified as *ꜣḫ-iḳr-n-Rʿ* stelae, Lucarne stelae, royal stelae, and ear stelae. Among their common features their vertical division in two registers particularly stands out, as does the appearance of the human figure, usually in the lower register, the upper one being generally reserved to the depiction of deities.[37] In this paper a total of 42 stelae were studied.

Stelae of the *ꜣḫ-iḳr-n-Rʿ* type seem to have been closely related to the cult of deceased relatives inasmuch as some of them were found in the second room ('sitting room') of the Deir el-Medina houses together with anthropoid busts which were most likely dedicated to ancestors. These stelae are generally made of limestone, typically 25 cm high, never exceeding 40 cm except for a single case which is 50 cm high.[38] They address one or two persons as dedicatees (only in a few cases they reach three), always expressing their relationship. No wives or children appear as offerers or dedicators. The dedicator is usually depicted holding a lotus flower in one hand and an *ankh* sign or a piece of cloth in the other, occasionally stretching out towards the offerings located on an altar. Dedicatees are often depicted kneeling or sitting on a high-backed chair, a stool or a block throne, and characterized as *ꜣḫ-iḳr and ꜣḫ-iḳr-n-Rʿ* in short

31 Wells 2014, 42.
32 Jacquet-Gordon 2003; Wells 2014, 45.
33 Weiss 2015, 155.
34 Bierbrier 1980; Davies 1999.
35 Černy 1973.
36 McDowell 1999, 4.
37 Sadek 1987, 201; Exell 2009, 20.
38 Demarée 1983, 174.

offering formulae. Most of these stelae present on their top a *šn* ring upon the water symbol (sometimes read as a 'purifying' sign) flanked by *wḏ3t* eyes or solar symbols. Divinities are seldom depicted.[39]

Lucarne stelae usually present a lunette depicting the solar bark and several forms of the sun god, including symbols related to the sky and Ra. They were manufactured from the 18th to the 20th Dynasties and the relatives of the dedicator were occasionally depicted. Similarly, they can include hymns praising the solar rising or setting.[40]

Stelae of the royal type are those dedicated to deified individuals or former (deceased) members of the community that became notable. Deified individuals were often kings or members of the royal family that were thought of as having attained divine powers and in this way became godlike beings.[41] King Amenhotep I and his mother Ahmose-Nefertari are among the most usual deified individuals in these stelae.[42] People appealed to individuals from all periods in order to heal illnesses or intercede before deities.[43] Non-deified but nevertheless significant members of the community were also asked to intercede, most likely from their assimilation to efficacious figures/spirits (*Akhw*), which granted them the powers to intercede before the gods.

Ear stelae, known by this name out of the depiction of disembodied ears in their iconography, have been interpreted by some experts as dedications by individuals suffering from 'bad ears' that needed healing.[44] Other authors understand the depiction of disembodied ears as more general representations of sensory organs by assimilation, in particular, with eyes, and argue for their intended functionality in the context of funerary rites to provide the senses that would be necessary for the deceased in the Afterlife.[45] An alternative interpretation has also been put forward based on the fact that no requests for the recovery of hearing or sight are mentioned in the stelae.[46] Indeed, the inscription 'who hears prayers' as title of the divinity together with the iconographic fact that the ears are generally depicted behind the deity support the thesis that they were actually understood to belong to the god to whom one was making an appeal. Ear stelae often appear in places of popular worship together with other votive stelae, and the drive for the depiction of the disembodied ears may have been the satisfaction of personal desires. In this regard, whether there was a specific code related to magic based on color, size, position, and number, has remained uncertain to researchers for a long while. Some of these unknowns have been reassessed recently by focusing on the placement of the votive ears in ear stelae and establishing a typology according to their epigraphic and anepigraphic elements, their provenance, and the number of depicted ears.[47]

The iconography of dedicators: gesture, offering, and composition

The classification of the attitudes of petitioners towards the divinity clarifies their symbolic core, among them kneeling as an expression of worship and humility or raised hands as a sign of praise and adoration. It has also been argued that the social origin of each individual may also be a conditioning aspect of the depicted gesture. Thus, kneeling would have been used by humble people whereas standing would have been reserved to individuals from a higher social level. Moreover, notable individuals would

39 Tosi and Roccati 1972, 226.
40 Wilbrink 2007, 1953-1954.
41 Ausec 2010, 38.
42 McDowell 1999.
43 Exell 2009, 42.
44 Sadek 1987, 265-267.
45 Bruyère 1939; Sadek 1987, 265.
46 Sadek 1987, 265-267; based on Blok 1928.
47 Toye-Dubs 2016, 39-40.

be allocated upper sections of the stelae whereas people less significant for the community would be depicted in lower areas.[48]

The human figures depicted on the Deir el-Medina stelae approach the depicted deities with different attitudes; in some cases, individuals are kneeling with raised hands (BM EA 328) while in others, they stand straight with raised hands (Turin 50033). The majority of individuals depicted kneeling are located in the lower register of the stelae. There are notable exceptions, though, such as in the Stela of Khabekhenet, where an individual is depicted kneeling in the lower register before the cow goddess representing Hathor (BM EA 555). Although Egyptian conventions imply the adaptation of the figures to the available space, the fact that Khabekhenet is depicted in front of the goddess may be a sign of high social status. Between him and the cow goddess stands a small masculine figure representing a deified prince. Space constraints or relative age (the prince being the younger of the two) would suffice to explain why the latter figure is smaller than Khabekhenet's.

In many of the stelae the dedicator or dedicators are accompanied by members of their family, usually wife and children. Only a few stelae depict the worshipping action performed in solitude (Ash. IV.62; BM EA 589; Cairo JE 43566; Liverpool M 13830; Louvre E 16345; Turin 50022, 50043, 50050, 50055, 50060, RCGE 14896, and RCGE 14900). In two cases the same individual is depicted in both registers (Ash. IV.62 and Turin RCGE 14896).

The compositional aspects of the scenes establish the order in which the depicted motifs are intended to be read, thereby lending meaning to and highlighting the relative importance of the depicted motifs.[49] What is at work in the stelae is actually the same conceptual system of representation found in the canon of ancient Egyptian art at large, encompassing hierarchy, disregard for perspective, and two-dimensionality among its most salient and recognizable attributes.

Nonetheless, the canon experienced changes throughout different historical periods of ancient Egypt regardless of the invariance of the fundamental conventions. Starting with the Amarna period, statues, reliefs, and votive artefacts display a turn of Egyptian art towards more realistic depictions, in some cases going from early stylization through realism to the opposite extreme of grotesque caricature in the exaggeration of facial and bodily attributes. After the Amarna interlude, tradition and innovation were combined. As a matter of fact, the Late New Kingdom is a period of particular splendor in terms of artistic activity, an outstanding achievement itself inasmuch as art was highly regarded and developed throughout the entire New Kingdom.

The depiction of physical offerings is common in votive stelae. These include offering tables with food and flowers, liquid offerings in some cases, incense burners, and cultic stands. Some stelae dating from the New Kingdom display physical offerings carved on their surface (BM EA 589 and Louvre E 16345). Visual offerings were intended to appease the gods or to perform daily worship to divinities and to deceased individuals. The physical depiction itself was usually the performing instrument, but sometimes visual offerings are accompanied by ancillary inscriptions detailing the offering from the dedicator. These should be read out loud for the further benefit of the receptors. In those cases where no visual offering is depicted a common formula is instead inscribed as the 'voice offering' specifying the food and the provisions,[50] namely, *prt-ḫrw t ḥnḳt k3w 3pdw ḫt nbt nfrt w ʿbt ʿnḫt nṯr im.sn.*

48 Sadek 1987, 200-201.
49 Verbovsek 2015, 144-145.
50 Tosi and Roccati 1972, 232.

The depicted space

Some stelae contain architectural details that may provide information about the place where the cult was conducted. The spatial context of the Deir el-Medina stelae changes in accordance with the stelae's intended functionality. Thus, the stelae dedicated 'to the able spirit of Ra' (*3ḫ-iḳr-n-R'*) were often located in the second room of the house, whereas other votive stelae were found mainly in chapels and tombs. Depictions of architectural structures may convey spatial references, too. This is the case of the Hathoric chapel setting the focal space of the cultic action in one stela (Turin 1658/RCGE 5732). Another, although containing no depicted architectural structures, bears an implicit reference to an intended space as the appearance of plants hints to the attached cult having been performed outdoors (Turin RCGE 14896).

The iconography of dedicatees

Depictions of deities do not always convey portraits of the divinities themselves but may be rather indirect representations (e.g., a statue).[51] More often than not the iconographic elements include the regular attributes of divinity such as sceptres, thrones, and crowns. The deities are depicted, in their anthropomorphic or in their zoomorphic embodiment, standing or sitting on a throne in the upper register of the stelae or in the lunette. The divinities addressed in the stelae have been classified into the groups described next.

Deified kings

The main deified individuals depicted in the stelae from Deir el-Medina are King Amenhotep I and his mother, Queen Ahmose-Nefertari, standing or sitting, jointly or individually (Turin 50033, 50034, 50050, RCGE 5737, RCGE 5689, and RCGE 14900).

The usual iconography has King Amenhotep I wearing the *Khepresh* crown with the *uraeus* and holding the *ḥk3* sceptre (or the flail) as well as the *'nḫ* symbol, while Queen Ahmose-Nefertari is depicted red-skinned, wearing the two-feather crown and holding the *'nḫ* symbol in one hand as well as the flail in the other (Turin 50034).

Foreign gods

One stela has Goddess Qadesh portrayed in her anthropomorphic manifestation and standing over a lion, naked and wearing the *modius* and the Hathoric wig while holding a snake and a bouquet of lotus flowers (Turin 50066).

Another stela depicts Astarte, the oriental goddess of war and death whose origins are most likely Cannanite,[52] in her anthropomorphic manifestation aiming an arrow at her enemies while riding a horse (Turin RCGE 14960).

Theban gods

Amun-Ra is depicted in his zoomorphic ram manifestation wearing the double-feathered crown (Cairo JE 43566 and Turin 50055).

[51] Exell 2009, 84.

[52] Tosi and Roccati 1972, 218-219.

Khonsu is depicted sitting on a throne and holding the solar disc with a half-moon on his head (Turin 50036). He is facing an offering table with food and bouquets of flowers.

Montu is depicted together with Amun-Ra and deified King Amenhotep I in his anthropomorphic manifestation standing and wearing the double-feathered crown (Turin RCGE 5737).

Solar gods

Ra-Harakhty is the main solar god whose representation is found in the Lucarne stelae. He is depicted with the falcon head, solar disc on top, while sustaining the *ʿnḫ* symbol and sitting on the solar bark (Ash. IV.62 and Turin 50043, 50074, RCGE 5584, and RCGE 5689). In the Stela of Ipuy, he is shown in his falcon-headed form and standing (Turin RCGE 5689).

Funerary gods

Osiris is one of the funerary gods depicted in the Deir el-Medina votive stelae (BM EA 359 and Turin 50009, 50010, 50011, RCGE 5689, and RCGE 14900). Though only six out of a total count of 42 stelae are dedicated to him, Osiris's cult as 'God of the Dead' became particularly important already during the Middle Kingdom. He is sometimes accompanied by other funerary deities such as Anubis (Turin 50010 and 50011) and Hathor (Turin 50009). He is represented with green skin as a sign of fertility (a black-skinned representation is also found) and sitting on his throne (Turin 50009, 50010, and 50011). His attributes are usually the *3tf* crown, the flail, and the *ḥk3* sceptre.[53] Although in some cases he is not depicted, the inscribed formulae identify him as one of the intended receptors (BM EA 359 and Turin RCGE 14900). In one case his representation appears on the left side of the higher register, standing and wearing the *3tf* crown, the flail, and the *ḥk3* sceptre, being furthermore accompanied by Hathor, Ra-Harakhty, and Amenhotep I (Turin RCGE 5689).

Anubis, the jackal-deity, is depicted in his *Mischgestalt* form sitting and holding the *w3s* sceptre in one hand and the *ʿnḫ* symbol in the other (Turin 50010 and 50011). As protector of the deceased, he is usually depicted together with Osiris, these stelae being no exception.

Ptah, the creator god according to the Memphite cosmogony, is depicted standing (Birmingham DB 153 and BM EA 328) or sitting (BM EA 8497). He is holding the *w3s* sceptre (Birmingham DB 153 and BM EA 328 and EA 8497) or sitting with the *ʿnḫ* symbol in his hands.

Hathor is portrayed in different guises. In two of them she is depicted in the upper register in her anthropomorphic manifestation, sitting while wearing the Hathoric crown (solar disc, cow horns, and uraeus as it can be seen in Louvre e 16345 and Turin 50011). Variations include those representations where she has the *w3s* sceptre, she is wearing the symbol of the west on her head (Turin 50009), or she is standing. Lastly, there are stelae where she is depicted in her cow form, identified as Hathor in her zoomorphic manifestation from the accompanying representation of Hathoric chapels (BM EA 555 and Turin 50010).

Meretseger, as 'the one who loves the Silence,' the patron goddess of the Deir el-Medina workmen, can be represented in her zoomorphic embodiment as a cobra (Liverpool M 13830 and Turin 50060 and 1658/RCGE 5732) or in her mixed human-snake form, either with snake head and female human body (Turin 50062) or vice versa. The Hathoric chapel depicted in one of the stelae (Turin 1658/RCGE 5732) contains a small image of Meretseger in a likeness to Renenut (or Renenutet), also a snake goddess from

[53] Tosi and Roccati 1972, 217.

the Egyptian pantheon mentioned in another stela (Turin RCGE 14896) and depicted with a snake head, wearing the Hathoric crown while sitting, holding the *ʿnḫ* symbol and the *w3s* sceptre.

The iconography of interaction in worship

The study of compositional form suggests the existence of two main types of interaction between dedicator and selected deity. The stelae of one type have the dedicator depicted in the act of appealing without any intermediacy agent. In those of the other the act of appealing is performed indirectly with the intermediacy of a third party, usually a king, although it may be a manifestation of some deity in a suitable zoomorphic form (e.g., the Mnevis bull of Re). The interaction in the latter cases is not as intimate as in those stelae where the dedicator appeals directly.

It has been suggested that an individual might choose to be depicted with an intermediary because of the necessity of acquiring access to a restricted deity or sacred space, to record an actual cult ceremony, or to signify social status by the iconographic substantiation of a relationship with an individual of a higher rank.[54]

In most of the stelae, individuals are depicted in the gesture of adoration giving offerings directly to deities or to deceased relatives, providing daily cult, making requests (ear stelae), or dedicating hymns to the gods. Nonetheless, there are some where one or two individuals appear together with the gods that receive the offerings or are appealed for intercession. In these stelae the third agent (whether it is a king, a god, or a deceased relative) is understood to work as an intercessor before the deity on behalf of the dedicator (BM EA 328 and Turin 50009, RCGE 5689, and RCGE 5737).

Thus, in the Stela of Karo (BM EA 328) the god Ptah is appealed through the intermediacy of King Ramesses II, depicted in the upper register making an offering to the god and followed by Vizier Paser, while in the lower register Karo and his son Huynefer kneel with both hands raised in adoration. This is a case where two high-ranking individuals are depicted interceding on behalf of Karo. Other stelae, generally of the *3ḫ-iḳr-n-Rʿ* type, depict deceased relatives appealing to divinity in exchange for the received offerings (Turin 50009 and RCGE 5689). Lastly, there are stelae that depict deified individuals such as King Amenhotep I and Queen Ahmose-Nefertari interceding before the gods (Turin RCGE 5737).

The textual contents of the atonement with the divinities

The interaction between dedicators and divinities, whether direct or through a mediating agent, aimed at establishing a relationship implying an exchange of offerings for divine favor. However, the nature of the intended reciprocity is not always clear. Indeed, there is no reciprocal action when offerings are given or when hymns and praises are made by the dedicator; no reward or favor is provided in return by the divinity, or at least is not specified in the text (unless intimacy with the divine was a reward itself),[55] as in the case of the stela where a solar hymn made by Amenemope is inscribed (Turin 50043).

Sometimes the donor sought to express his faith or devotion in specific social contexts or in private religious acts. However, the worshipper's faith was most often embedded in the daily cult to satisfy the gods in accordance with *Maʿat*, to ask directly for petitions, or to request divine favor or intercession before the divinities. As a result, the donor intended to please the gods more than to display or show his religious beliefs in official contexts. This is well known from the texts carved on some of the stelae, which are usually formulaic turns of phrase. Thus, in middle and in late Egyptian, 'worshipping' and 'giving praise' occur in the opening section of a prayer as the formulae *dw3* and *rdit ỉ3w*, respectively,

[54] Exell 2009, 21.

[55] Sadek 1987, 199.

while in the second part 'paying homage' and 'exalting' are found as *sn t3* and *sḳ 3y*, correspondingly. These expressions are commonly followed by the name of the deity or by the expression 'your *ka*.'[56] Derived terms such as 'beauty' (from 'beautiful'), 'in peace' (from 'peaceful'), 'humble,' 'poor,' 'servant,' etc., are also frequent. One stela contains 'Amen Ra the beautiful Ram' (Cairo JE 43566). The texts contain also meditations praising the glory of the divinities through descriptions of their qualities and the goods they bestow on men, or expressing humility, such as in the formula 'kissing the ground' (Abydene stelae), together with statements of good deeds by the dedicator such as 'I please him' or 'I please his *ka*.'[57]

In addition to the above, the texts mention visible offerings, most importantly incense and libations, described as 'all the pure things,'[58] textual references to other tangible offerings are unusual perhaps because they are already displayed as iconographic elements and space would not allow their depiction.

Votive stelae containing the aforementioned formulae are usually studied in connection with personal religion, but there is evidence of direct interaction between people and their selected gods in the form of petitions, supplications, desires, and pleas for help, from among which three main groups can be distinguished, to wit: spiritual offerings, material requests, and personal requests.[59] The latter shows a closer interaction with the divinity inasmuch as they are stereotyped and seek to improve the living conditions of the petitioners. A commonly found formula is 'life, prosperity and health.' Thus, in the Stela of Nebnefer (Turin 50060) a deceased lady worships Meretseger while stating: 'Life, force, and health for the *ka* of the mistress of the house, *Wab*, true of [voice].'

Formulae addressing intercession for the living and for the deceased are also common. Some of the stelae displaying an act of intercession before the gods by a third party reiterate this agency in their inscribed matter.[60] Furthermore, individuals expressed in formulaic terms their gratitude towards a divinity for listening and assisting in daily issues, healing illnesses, or providing spiritual help.[61]

Votive ear stelae are also commonly stereotyped with formulaic phrases as 'The one who listens,' and *3ḫ-ỉḳr-n-Rʿ* stelae present standardized formulae dating from the Middle Kingdom, such as 'I give an offering' or 'he gives an offering' in the form *ḥtp-dỉ* or *prt-ḫrw* ('voice offering'), and also *n k3 n* ('for the *ka* of') (Turin RCGE 14900).

Conclusions

This contribution outlines some of the insights on personal religion in ancient Egypt that can be gained from the study of iconography taking as a showcase the Deir el-Medina votive stelae. Iconography can be expected to convey substantial information because it could be read by most people whereas the meaning of textual matter was accessible only to the literate few. The visual and textual transmission of information recorded in votive stelae is an example of communication with the divine and at the same time, a means of expression of the personal belief and social display.

The combination of the cultic aspects revealed by iconographic analysis with the inscribed formulae found in votive stelae follows patterns that allow experts to establish a classification in terms of time periods and geographic locations. As intended vehicles of communication with the divine, the

[56] Sadek 1987, 202-203.
[57] Sadek 1987, 207-215.
[58] Sadek 1987, 216.
[59] Sadek 1987, 218-238.
[60] Sadek 1987, 221-227.
[61] Sadek 1987, 235.

iconographic interpretation sheds light on the perception that the users of votive stelae had of their personal relationship with divinities, on their actual worship practice, and on their social status. As facets of the intertwinement of religion and social organization they are invaluable pieces in tracing key changes in the evolution of spiritual beliefs at different times and places throughout the religious development of ancient Egypt.

Similarly, the study of iconography and texts of votive stelae from Deir el-Medina reveal that the inhabitants of the village expressed their religious beliefs by setting stelae as identity markers. These personal markers left a print in the religious practice through which the villagers presented and depicted themselves and their religious preferences, providing a holistic picture on how they saw the world. Such depictions were established and conceived for posterity, and they implied a contact point between the world of the living, the world of the deceased (e.g., *ȝḫ-iḳr-n-R'* stelae) and the divine realm. Furthemore, votive stelae from Deir el-Medina help us to understand personal religion as the religious identity of individuals, their selection of personal gods and goddesses, their likes, and dislikes and, in sum, how they perceived themselves and their surrounding. These stelae also depict humility and expiation before the divine. Based on the gesture, position and composition of the represented individuals involved in visual and textual communication, votive stelae play an active role in which the performer or the user becomes part of the religious recreated atmosphere. Through the recreation of this interactions between user(s) and stelae, these artefacts acquired their own meaning and they became a key part of the personal religious action developed in different contexts: houses, temples, chapels, and tombs. From the textual approach, the use of specific expressions, such as 'worshipping', 'giving praise', 'kissing the ground [for you]', or 'servant', among others, express the subordination of the mortal individuals before the divine powerful beings (gods, but also the deceased) who are the receptors of the visual and textual communication. In this communication established between the divine and the living, votive stelae become the vehicle for interaction in both directions: from the user to the divine, and from the divine to the user. In conclusion, despite the subordination of the human beings to the divine, it seems that some sort of reciprocity existed in some interactions and therefore, a close intimacy was generated between dedicators and dedicatees resulting in the phenomenon known as personal religion. Individuals worshipped the divine beings and in return, they obtained comfort, relief, forgiveness, and expiation, establishing, at the same time, a religious link with the gods in a process in which votive stelae were used as the channel of communication.

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Texts, Scenes and Rituals to Preserve the Memory of the Deceased in Private Tombs at the End of the 18th Dynasty in Thebes

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Abstract

In ancient Egypt, death was understood as a central experience that generated, on the one hand, a break between earthly life and the possibility of life in the Hereafter. On the other hand, death was an event that could be overcome, thus making connections and continuities within a community possible. In this sense, the paper focuses on the study of the different mechanisms or strategies developed by the high officials in Thebes to preserve their memory after death at the end of the 18th Dynasty. The approach to the epigraphic evidence of the selected tombs – of Huy (TT40), Neferhotep (TT49) and Amenemope (TT41) – takes into account three levels: the first level is based on the analysis of texts and scenes as a whole unit of sense; the second is based on the ritual practices, recitations and family participation in these rituals; and the third one is based on the spatial dimension that connect texts and scenes, and rituals to the tomb itself and the necropolis.

Keywords

Ancient Egypt, Private Tombs, Preservation, Memory, Mechanisms

Introduction

In ancient Egypt, death was understood as a central experience that generated a break between earthly life and the possibility of life in the Hereafter. At the same time, death was a situation that could be overcome, in the sense that it enabled connections and continuities between times, spaces and generations within a community. Related to this complementary duality, inherent to the Egyptian worldview and religion, the ancient Egyptian private tombs were understood as a magical spell, where the architectural structure, decorative program, rituals, funerary objects and functions allowed the deceased to overcome death and be eternally reborn.[1]

In this funerary context, the paper focuses on the study of the different mechanisms or strategies developed by the high officials in Thebes to preserve their memory after death at the end of the 18th Dynasty. The selected tombs to analyse are the tomb of Huy (TT40), the tomb of Neferhotep (TT49) and the tomb of Amenemope (TT41) from a wider group of monuments dated during the Reigns of Tutankhamun, Ay and Horemheb.[2] Their function of passage and memory associated with the transition

[1] Concerning the five functions of private tombs under the 18th Dynasty (secrecy, biographical or memory, cult, interface or passage and blocking) and the function of the temple in Ramesside Period, see Assmann 2003, 46-48. For other functions like protecting the body of the deceased, providing a ritual complex for the regeneration and projecting his or her personality in the next world and a place of commemoration for the living persons, see Hartwig 2004, 37. About ritual functions connected to the death cult and ancestor cult, see Fitzenreiter 1995, 96-102.

[2] The tomb of Huy is located in Qurnet Murrai and the tombs of Neferhotep and Amenemope in el-Khokha. The following private Theban tombs dating to the end of the 18th Dynasty complete the group: Parennefer-Wennefer (TT-162-), Sebekmes (TT275), Nay (TT271), Userhat (TT150), Hatiay (TT324), Amenmose (TT254), Roy (TT255), Neferhotep (TT50), Neferhotep and Nebnefer (TT6), Pennesuttai (TT156), Ramose (TT166).

to the Hereafter and, at the same time, the permanence in the world of the living justify the relevance of the tomb as historical evidence.

The epigraphic evidence of the selected tombs is analyzed taking into account three complementary levels: the first level is based on the analysis of 'biographical' texts and scenes as a complete unit of sense according to the uniqueness of the Egyptian writing system, in which components work as signs and as images.[3] The second one, is based on the study of ritual practices and the importance of the recitations. The third one, is based on the spatial dimension that links texts, scenes and rituals to the tomb itself and to the necropolis.

This paper takes into account the cultural memory perspective, which integrates tradition generating processes, the reference to the past and the identity or political imagination.[4] The cultural memory is connective by the transmission of the culture to a person and a social group. It is also symbolic, since it allows recovering the meaning of cultural objects from remote contexts and times. Moreover, through the written system it can permanently store the meanings that transcend a particular horizon of sense and create wider cultural senses.[5] It is cultural because it is built up institutionally and artificially; it is also memory, since it operates in relation to social communication.[6] This conceptual framework allows to explore the registration systems and the organization of the storage as a systematic and external form of communication, and to explore the construction of spaces of memory and monumental discourses and traditions (written and symbolically configured) that connect the social group inside the state to guarantee the circulation of the cultural sense. These levels can be applied to recognize the strategies used by the Egyptian officers to preserve the funerary memory.

Personal memory

When taking into account the complete decorative program of a private tomb, the first point to consider is the information recorded in the monument to identify the owner.[7] The analysis of the epigraphic evidence of the tomb considers the figures and texts as a unit that must be interpreted on different levels, as well as the ideographic sense of the Egyptian writing, which elaborates a complete message with the scenes.[8]

The first space where this information could be registered is on the façade and a good example of this is the tomb of Amenemope (TT41), called Ippi.[9] A double worship is dedicated to Anubis (right) and Osiris (left) on the architrave, and the columns of texts on the jambs of the entrance door included the names and titles of the owner and his family. The deceased is presented as royal scribe, overseer of Amun, Amenemope or Ippi, the wife is presented as mistress of the house and singer of Amun, Nodjmet and the mother of the owner is referred to with her name Inni.[10] Besides these main titles of the owner,

[3] Following the semiological perspective of Tefnin 1991. About the concept of image, see Belting 2001.

[4] The perspective was developed by Jan Assmann and Aleida Assmann, see Assmann 2008; 2011. The cultural memory is largely based on reference to the past and needs a testimony which must offer a difference from the present. In this sense, the past is a cultural elaboration that can be reconstructed through the memory, Assmann 2011, 33-36.

[5] Assmann 2008, 10-11; 2011, 23.

[6] Assmann 2011, 25.

[7] The identity information or memory function is located at the entrance or on the north stela of the vestibule, see Fitzenreiter 1995, 101, 104; Assmann 2003, 48. These proposals can be useful but are limited (in space) and require the study of all the rooms of the monument.

[8] The different levels are the structure of the monument, the walls, the registers, the scenes, the figures, the relationships between objects and figures, and the colors, see Tefnin 1991.

[9] We take here examples of texts and scenes around the main door, but the façade is completely decorated. For details, see Assmann 1991.

[10] About texts on the jambs and in the worship scene, see Assmann 1991, 68-69, Tf. 28.

many variants or extensions were recorded in different parts of the monument.[11] These read as follows: 'overseer, great of Amun, overseer of the cattle of Amun, chief of the Two Granaries or chief of central administration of Granaries, chief of God Granary and Lord of Eternity'.

Also in the tomb of Neferhotep (TT49), it is possible to recognise similar information placed on the façade, precisely the name and titles of the owner and his family and some variations recorded in different spaces.[12] The complete titles are scribe, the great one of Amun, overseer of the *neferut* of Amun and overseer of the cattle of Amun. Thus far, 50 funerary cones are known and present a regular inscription with the name and the main titles of Neferhotep and his wife Merytre.[13]

In the case of the tomb of Huy (TT40), there are unfortunately no remains of the decoration on the façade. For that reason, the analysis focuses on the scenes inside the tomb. The textual components of the scenes include the name of Huy, and different titles as 'the king's son of Cush (Nubian Viceroy), prince, royal scribe, overseer of the southern countries, the king's envoy in every land, fan-bearer to the right of the king, overseer of the cattle of Amun in the land, overseer of the gold-countries of Amun, divine father, beloved of the god', alongside some expanded versions of these titles.[14]

Different images connected to the position, the duties and the relationship with the king constitute another mechanism of self-presentation of the deceased. Scholars have highlighted the importance of these images, primarily located on focal walls of the transversal hall on either side of the access to the inner passage. Engelmann von Carnap stresses that the status of the owner influences the topic of these images.[15] Fitzenreiter considers the icons associated with the social representation in the Hereafter, changes and continuities concerning the provision and integration of the deceased to a family/colleagues social environment or to a political social environment (legitimated by the king).[16] Hartwig emphasises the connection with the regeneration and commemorative functions of the tomb.[17] Hofmann draws attention to the role of the deceased in relation to the king and to the artistic and iconic strategies of the owner to express an individual message.[18] While most of these analyses are focused on the entire 18th Dynasty, part of it, or in the Ramesside Period, we consider part of these previous studies as starting point of our own analysis.

Almost the complete vestibule of the tomb of Huy (TT40) is decorated with his promotion as viceroy of Nubia by the king Tutankhamun, the visit to the Amun Temple and the duties of the new position.[19] The west walls or focal points of representation, with a similar scheme on both sides, show the reception and control of the products by Huy, wearing a gold necklace, and the presentation of Nubian products (complete south side) (**Figure 1**) or Asiatic products (north side) to the enthroned king. On the right half of the north side, a worship to Osiris is partially preserved.[20] As Hofmann explains, Huy highlighted

[11] For the 21 variants and short and extended sequences of the titles, see Assmann 1991, 201-202.

[12] About the lintel and jambs of the entrance and the south round-head stela on the façade, see Davies 1933a, 48-51, Pls. XXXIV-XXXV. For the location of every title, see Pereyra *et al.* 2006, 19-20.

[13] In some cases, the funerary cones were arranged as a line at the top of the façade but only 34 cones were found during the excavation and were insufficient to furnish even one row along the frontage. See Davies 1933a, 6. For more information about the funerary cones of TT49, see Daressy 1892, 299, 318.

[14] In some inscriptions he is named Amenhotep. For variant titles like 'royal scribe of the king, beloved of him, overseer of the cattle of Amun in the land of Cush, overseer of the gold-countries of the Lord of the Two Lands', see Davies and Gardiner 1926, 5-7.

[15] Engelmann von-Carnap 1999, 379.

[16] Fitzenreiter 1995, 100-122.

[17] Hartwig 2004, 17.

[18] Hofmann 2012, 4-5.

[19] For reasons of space a full description of the scenes is not possible. About the east walls, see Davies and Gardiner 1926, Pls. IV-XI.

[20] About the west walls, see Davies and Gardiner 1926, Pls. XXII-XXIII, XIX, XXI.

Figure 1: *Control of Nubian products by Huy and presentation to the enthroned king Tutankhamun (TT40) (The Metropolitan Museum of Arts, Rogers Fund, 1930 (30.4.21). Creative Commons Zero (CC0) Public Domain Distribution of The Metropolitan Museum of Art, New York https://www.metmuseum.org/art/collection/search/548571).*

his relationship with the king Tutankhamun and showed his daily activities and professional success.[21] In addition, we can notice that Huy more closely followed the topics and style of pre-Amarna tombs. He focused on himself, his position related to Nubian and Asiatic regions, in correspondence to his titles, and linked to the king. It guarantees his life after death, associated to the good behaviour and to Osiris. Following Fitzenreiter criteria, the belonging, provisions and legitimation of Huy were strongly connected with his service to the king and his position.[22] The reintegration of Osiris in the funerary religion after the Amarna Period can be also stressed.

The tomb of Neferhotep (TT49) includes on the west wall, south side of the transversal hall, a relevant amarnian motif: the reward (gold necklace and provisions) of Neferhotep by the king Ay and the queen in the palace (in large scale) and the reward of the wife Merytre by the queen Tiy in the royal Harem (in smaller scale). Thus far, this is the only case in Thebes where a woman was rewarded, apart from the case of Tiy but in Amarna. *Neferhotep* leaves the palace on his chariot and on the lower register the banquet celebration finishes the sequence. On the north wall of the pillars chapel, the bouquet's reception by Neferhotep in the Temple of Karnak is represented, including the store-houses, garden and workshops to show part of the duties of his position.[23] These two scenes highlight a special close connection between the owners couple and the royal couple (with amarnian roots), as well as the role of Neferhotep as a very important official in the Amun Temple administration and his loyalty to the Theban god in this political transition.[24] Furthermore, the offering to Osiris scene (west wall, north side of the vestibule) stresses the perception of this god as king in the Hereafter/nocturnal sun and the owner's direct relationship with the gods, which is reinforced in the pillars chapel as a new legitimation environment.[25] Moreover, this can also be understood as an expression of the re-incorporation of solar and local religious beliefs.

In the tomb of Amenemope (TT41) on the east wall, north side of the vestibule the arrival of the deceased to his house on his chariot and the acclamation of people is depicted. Previous events are not preserved

21 Hofmann 2019, 27.
22 Fitzenreiter 1995, 96-97, 116-122.
23 About the reward and Amun temple scenes, see Davies 1933b, Pls. I, III.
24 Pereyra *et al.* 2006, 20.
25 About the offering to Osiris scene, see Davies 1933a, Pl. XXX.

but it is possible to argue that Amenemope was rewarded by the king in the palace. It is important to notice that this scene, connected to his position and relationship to the king, was not placed on a focal wall. On the other hand, the west walls are focused on the representation of different rituals and spaces in the Hereafter that allowed the deceased to finally stay before the enthroned Osiris (south side), together with the procession to the temple and supervision of activities by the owner (north side).[26] The position of the owner in the Amun Temple and the connection with the king were still important in order to show the reward event, but the continuity and existence in the Hereafter in close proximity to the gods (with strong solar components) was the main topic in his tomb. The requirements and the belonging of the deceased are provided here by the gods' community. This last feature, which is developed during the 19th Dynasty, is already represented in TT49 and TT41.

A relevant component linked to self-portrait is present in the tombs of Neferhotep and Amenemope: the sculptures of the owner and his wife which are located at the rear of the tomb following the east-west axis (**Figure 2**). As Hofmann stresses, they were a medium to represent the owners with features of realism such as Neferhotep's white hair and signs of old age, or with idealism, such as Merytre, Amenemope and Nodjmet being depicted as beautiful young women.[27] In addition, the statues became the main focal point of the monument from the entrance and received the sunlight daily as well as the offering, related to the death cult.

Hartwig has explained that a private tomb projects the personality and identity of the owner into the next world, that is, with all necessary physical aspects, duties or provisions that magically and symbolically had the power to exist in the afterlife.[28] Considering this statement and the reference to the past and the registration and storage systems (according to the cultural memory approach), the diverse elements recorded – name, titles, particular events, actions or duties of the position, statues – taken as whole written images can be considered the first way to express the personal identity of the owner.[29] Death was a relevant experience that showed the difference between the past and the present of a person and contributed to the development of the culture of remembrance. This past was organized and stored in correspondence with the Egyptian political and social codes. The recorded written images on the tomb create and make the material and systematic evidence or testimonies about the person visible (mainly through the name, titles and statues). These images stress the individual role among the high officials through the professional carrier and his connection with the king, the Amun Temple or the gods. They articulate the personal information and afterlife in an individual way in each particular tomb and imply a planning of the posthumous life (from the past into the future). The written images express the good behaviour during his life associated with the political position in the state (because of the relationship with the king or the gods) as legitimation of a new life in the Hereafter with a prospective feature. Thus, the material evidence, which is based on events or elements of the past, configured an institutional personal memory of the owner of the tomb with individual features that guaranteed his permanence from generation to generation or even after a century or more.[30]

[26] About the owner in his chariot scene, the places in the Hereafter and the procession to the temple, see Assmann 1991, Tfn. 31-32, 40-41.

[27] Hofmann 2019, 7-10. In TT49 there are two more couple of statues on both sides of the niche and in TT41 there are statues of the owner with osirian body in the courtyard, which we will consider later.

[28] Hartwig 2004, 37-40.

[29] The concept of written images comprises the inscriptions and scenes working together to elaborate a unique message according to the Egyptian written system.

[30] Permanence and continuity, implied in this individual funerary discourse, have their roots in the Egyptian background. About continuity and discontinuity of the Egyptian historic narrative, see Assmann 2005a, 36.

Figure 2: *Left: Main statue of Neferhotep and Merytre in TT49 (Photo © M. Silvana Catania, 2011). Right: Main statue of Amenemope and Nodjmet in TT41 (Photo © M. Violeta Pereyra, 2006).*

Family memory

Furthermore, we have also to consider the information recorded in connection to the family of the deceased in the tomb. In the case of Huy, his mother Wanho, his wife Taemwadjsi and his sons are mentioned with their names and titles and are depicted accompanying Huy after the visit to the Amun Temple.[31] His mother (with white hair to represent her old age) had the title of mistress of a house and his wife could have had the title chief lady of the harem of Tutankhamun. In the case of Amenemope, we have already mentioned his wife Nodjmet, his mother Inni and his father Neferti with their titles.[32] The tomb of Neferhotep (TT49) is also particular because his great-grandfather, grandfather, father, mother and wife are presented in texts as well as in paintings and sculptures (parents) in different parts of the monument.[33] The titles of the family members highlight their strong connection to the Amun Temple, where Neferhotep had a very important position shown by the above mentioned titles and scenes.[34] In the political context after the Amarna Period, it is worth mentioning that it was necessary to record and make visible that four generations in the family were connected to Amun's institutions.[35]

The family's social environment to which the deceased belonged is clearly present in these three tombs. The mutual cares and provisions inside the group were associated with the death cult and materialized through funerary rituals (performed by the son) or the offering to statues, following Fitzenreiter

[31] There is no mention of his father, maybe because he was related to the Amarna Period. Behind his mother four women are depicted, but the destroyed inscriptions do not allow to confirm their identities. For details, see Davies and Gardiner 1926, 5, 7, 15, Pls. X-XI.

[32] Nodjmet had also the titles of singer of Amun and beloved of the western Thebes, Inni had also the titles of singer of Amun, of Mut and of Chons and Neferti was a *sab* priest, see Assmann 1991, 214.

[33] For details, see Pereyra *et al.* 2006, 20-22. A young girl is depicted on the east wall, south side of the pillars chapel and she could be the daughter of Neferhotep, see Pereyra *et al.* 2006, 67-68, Fig. 25.

[34] The title of the great-grandfather Ptahemheb was scribe of *neferut* of the Amun Temple, of the grandfather Nebbuneb was scribe of the *neferut* (of Amun Temple), of the father Neby was dignitary of Amun, of the mother Iwy was singer of the Amun and of the wife Merytre were mistress of the house, singer of Amun, favourite of Hathor, lady of Cusae, singer of Amun in Karnak and favourite of Mut in Karnak, see Pereyra *et al.* 2006, 20-22.

[35] Pereyra 2009, 160.

proposal.[36] In TT49, the family has a strong presence, as shown by the 'parents' statues and offering tables displayed in front of Neferhotep's masculine ancestors, and it stresses the inclusion of not only the owner of the tomb, but his family too in this cult.[37] In this sense, the owner has a social role providing and caring for his family in the Hereafter, a mechanism that guarantees the conservation and transmission of cultural features associated with the funerary sphere.

Concerning the presence of parents in specific tombs, Seyfried stresses the role of the tomb in honouring the previous generations and in ensuring the continuity of the cult of the deceased.[38] Beyond this statement, the reference to past time is recognizable again in all the studied tombs with a retrospective feature through the evidence of the family tree. The written images make the generational connectivity permanent, which integrates not only the person, but also his family into a community, in particular in TT49 where four generations were included. Through these scenes and textual information evoking the past, the identity of the deceased and the family can be communicated and transmitted and can thus persist both as personal and family memory. Funerary memory stresses the political position of the whole family as well, links different generations and transmits a shared sense of continuity from a remote past to a present, while creating a sense of belonging to the community. In order to live eternally, the memory must first be created – in a material sense – through this complex of institutionally written images.

Ritual practices

The second level of analysis includes the ritual practices and recitations recorded in the tombs. One of these rituals is the funeral procession and burial.[39] In the tomb of Neferhotep (TT49) this topic includes: 1) the journey from East to West where the sacred bark with the mummy crosses the river, 2) the arrival to the west bank with the burial cortege, the transportation of the catafalque, offerings, provisions and 3) the rituals to the mummy and the entry to the tomb as a burial itself.[40] The tomb of Amenemope (TT41) includes in particular the last two sections with the arrival to the west bank, the funeral procession, and the rituals and burial with many details.[41]

Concerning TT49, we can consider the discourse delivered by the widow Merytre, in reference to the main bark that transports the deceased's coffin, other officials and provisions, which reads as follows:

> '(...) His beloved consort, the house-mistress and singer of Amun, Merytre, says: "I am here, sitting by your side, but I cannot hear (?) your voice (?). Stand up and go to your boat, to the face of Amun. Oh rowers...going to the land of eternity, O *neshmet* boat...The klent serpent (?)...You move away from me, to leave me alone (?)"'.[42]

[36] The death cult implies religious actions to ensure a) the passage of the deceased from the living word to the Hereafter through the burial rituals or b) the existence in the Hereafter through the statues, offering tables or the worships to the gods, see Fitzenreiter 1995, 96-98.

[37] The great grandfather and grandfather information is registered on the south wall, east panel of the vestibule, see Davies 1933a, 58. The location corresponds with that of collective rituals, see Fitzenreiter 1995, 105.

[38] Seyfried 1995, 223-228.

[39] In the tomb of Huy, different rituals to the deceased are depicted only on the sides of the space that could have been prepared for a stela on the north wall of the transverse hall, see Davies and Gardiner 1926, 31, Pl. XXXV.

[40] Upper register (north side) and upper and central registers (south side) on the east walls of the transverse hall, see Davies 1933a, Pls. XXII-XXIV, XX-XXI.

[41] South side of east wall, and south side of west wall in the vestibule, see Assmann 1991, Tfn. 35, 40.

[42] Davies 1933a, 39, Pl. XXII.

These words, in connection to the funeral procession express the image of death as an event that interrupts vital functions and separates the person from the family and community.[43] As a counterpart, the libation, incensing and purification performed over the mummy and the Opening of the Mouth ritual before accessing the tomb in TT49 and TT41 were aimed at reactivating body functions.[44] In the same sense, family members and colleagues had the aim of accompanying the deceased in that sad and dramatic situation. It is possible to recognize the primary social environment of the deceased taking part in the death cult to provide him, as part of this group, with a successful passage to his new life after death. From the cultural memory perspective, rituals allow to transmit and re-enact the cultural sense.[45] The relevance of these funerary rituals lay in their purpose of reactivating the physical body, and of restoring the existence of the deceased inside the community through the participation of the family and community, based on the connectivity principle between Horus-Osiris. These images evoke a transition between two spheres of human existence and are recorded in the transversal hall, which can be identified as a transitional or 'external' cult space.[46] The rituals work to re-member or re-unite the parts of the deceased person: the body, the identity and social relationships. The re-membering concept allows us to understand the deeper meaning of these rituals as ways to restore the personal identity, connected to the social identity, and to keep the memory of the owner of the tomb permanent.

Other practices referred to in the tombs are acts of worship to the sun god, usually located on both sides of the outer passage, which are related to the possibility to go out of the tomb during the day and to get back inside at night.[47] This movement of the deceased evokes the solar journey as a model of eternity and at the same time the preservation of the links with the community and earthly life, as he continues receiving solar rays or offering as what happens with the statues.[48] The latter are located on the western point of the tomb identified as an 'inner' cult place. These kind of rituals are related to the second aim of the death cult: to preserve the existence of the deceased after death with all its needs. At the same time, when these rituals are performed regularly, they are associated with the ancestor cult that aims to preserve the relationship between the living and the dead in the community.[49]

On this matter, in the tomb of Neferhotep (TT49) the wish of the deceased to participate in the Beautiful Festival of the Valley is recorded, in three main points from the west side (the niche) to the entrance: on the northeast pillar of the inner chapel, the south side of the first passage, and the south stela. On this pillar Neferhotep is depicted alone facing the main axe of the tomb and the inscriptions says:

> 'The scribe, the great of Amun, overseer of the cattle and the *neferut* of Amun in Upper and Lower Egypt, Neferhotep, justified. He says: How the one who follows Amun in his Fest of the Valley is invigorated. A beautiful day, (when) the sun rises and my happy eyes contemplate Amun, satisfied in Khenemet-ankh, according to his plans of the primeval times'.[50]

[43] About death as dismemberment and social isolation, see Assmann 2005b, 23-63.

[44] For details of each tomb, see Davies 1933a, 41, Pl. XXIV; Assmann 1991, Tf. 40.

[45] Assmann 2011, 23.

[46] Based on the functions of images and their distribution in the space in private tombs dated to the Old Kingdom, the following can be identified: a) burial space, b) 'inner' cult space, c) 'external' cult space and d) access area, see Fitzenreiter 2006, 66-67. This scheme can be applied to the rooms or zones in the studied tombs.

[47] About worships in TT49, see Davies 1933a, 53-54, Pls. XXXVI-XXXVII. About worships in TT41, see Assmann 1991, 70-72, Tfn. 29-30.

[48] They are connected to actions like worship, offerings, inscriptions and taking part in cults and celebrations, see Hofmann 2019, 7-8.

[49] Fitzenreiter 1995, 97-98.

[50] See Pereyra *et al.* 2006, Fig. 30.

In this celebration, the statue of the god Amun visited different funerary temples and in this path, the private tombs had the opportunity to be included on the processional ways. On the one hand, the renewal of the kingship cosmic energy was the main aim, but the officials could also participate in this celebration. On the other hand, it was the moment when the families visited the tombs and had a banquet in the courtyard as a complementary action to re-enact the burial banquet. Hartwig proposes the chapel also provided a space in which the identity of the tomb owner(s) was commemorated among the living who visited the tomb and met the dead.[51] In this sense, we consider that the participation of the family in this celebration works on a new level, by re-enacting the first ritual moment of the burial, and by restoring the identity of the deceased and his ancestors every year. To persist eternally, the subject of this memory needs to be connected to this first moment of performance and to the periodical rhythm of the celebration. The image concept implies the idea of the presence of an absence, the deceased, and this idea is related to the ancestor cult.[52] Thus, the festival had a commemorative aspect to preserve the memory of the deceased and his family alive in this world.

The above-mentioned rituals and celebrations permitted the overcoming of death through the preservation of the connectivity with the family and the community. The Beautiful Festival of the Valley recreated the connectivity between different levels: gods, the king and the community including the deceased, his family and friends. In this sense, the preservation of memory has a collective feature: in order to maintain the memory of the deceased in the future, it was necessary to have another person, a group or a community that annually recovered all the elements of the dead person. Thus, the rituals guaranteed that the deceased could be remembered and provided the base for the creation of a collective memory in the community.

In close connection with this collective participation in remembrance, we consider some prayers that were generally located in courtyards and included petitions to the visitors or readers (**Figure 3**). Part of the inscription of the south stela on the façade of TT49 says:

> 'Good is esteem, good is esteem! Good is the estimated, good is the estimated! who are [...] a burial equipped for me eternally or in each of its districts. Then you will recite all the stele of the lords [...] for you [...] arable land for the [*k*]*a* of the scribe, the great of Amun, Neferhotep (and) his wife, the mistress of the house, singer of Amun, Merytre'.[53]

A fragment of the worship to Ra on the stela of the façade of TT41 says:

> 'May you allow me to see you in the early morning at the entrance of my tomb, may my name be spoken, may it be founded [...] together with those of the parents. (...) May my name remain in the mouth of men without binding for ever'.[54]

This is another strategy to appeal to other people to that they say the name of the deceased, to pray using the repetition to preserve his identity, or in other words, not to be forgotten. As Assmann pointed out, 'a man lives when his name is pronounced', and this idea can be applied to these practices.[55] For the Egyptians, giving a name means creating, and repeating the name can be seen as a mechanism to revive and remember the person.

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[51] Hartwig 2004, 40-43.

[52] The name, the figure and the statue are images in the sense of presence of an absence, see Belting 2001.

[53] Translated by author and M. Violeta Pereyra.

[54] The worship to Ra located on the lower register of the extreme left stela, south side of the façade of TT41, see Assmann 1991, 44, Tf. 21.

[55] Assmann 2005b; 2011, 61.

Figure 3: *Left: South stela of the façade in TT49 (Photos © M. Silvana Catania, 2011). Right: Extreme left stela on the south side of the façade of TT 41 (Photos © M. Violeta Pereyra, 2006).*

Concerning these collective practices, expressed in the sentence 'please read this stela for the *ka* of NN', it is important to highlight the articulation between systems of storage and communication used to preserve the memory: the written one related to the materiality, visibility and avoidance of removal, and the oral one in association with the verbal repetition and creative power of the spoken words. Lastly, the courtyard became an important access zone and sacred place for these rituals that connected the world of the living with the realm of the dead.[56] The osirian statues in TT41 in the courtyard were integrated into the offering rituals, just as the recitations on the façade in these collective cults.

The tomb as a topographic text

The last topic to considerer is the reference to space, an important aspect from the cultural memory approach.[57] As the studied tombs are located in Thebes, it is important to consider the interaction among the geomorphological aspects – the mountains, valleys, the west plain –, the perception and symbolic

[56] The access, protection and liminal functions can be applied to the courtyard, see Fitzenreiter 2006, 67.

[57] Assmann 2011, 39-40.

meaning of the area and the architectonical aspects associated to the tombs, temples and processional ways.[58]

Some particular expressions or prayers registered in the tomb of Neferhotep (TT49) have to be noted: 'my tomb of eternity', 'my body can live in the necropolis', 'may I have a bark going to the West, the land of the justice', 'could your [tomb] be sustained and well provisioned in Thebes and could you be positioned in the necropolis'.[59]

Part of the worship of Huy (tomb TT40), to Osiris says:

> '(...) I have reached a good venerable age in favour of this good god. I am grown old. I have reached old age, my arms being strong administering for the king. (...) Grant thou me a great road in the necropolis, to come in and go forth from Rosetaw, to drink water from the river, and feast. For the *ka* of the king's son of Cush, Huy, justified'.[60]

Both cases express the idea of the tomb and the necropolis as reference points of belonging. We have mentioned before that the elaborated discourse of the professional career of the deceased, which highlights their bonds to the king and the gods, is based on stating the good behaviour of the official. These elements guaranteed the reception of a tomb by the king, which is considered the material and spatial point of reference to have a life after death. The tomb – as a royal honour – became the aim and constitutes another material evidence, a monumental one, of this good behaviour referenced in the past. It was also a social product of an individual or community, which was planned and built during the lifetime of its owner.[61]

Complementary to this, a tomb was the space in which the written images (texts and scenes) could be recorded and communicated. Besides being a sacred space, it was where rituals were performed and where the visitors' participation in the annual celebrations or the recitations were made possible. There is a feedback process between personal information, the reasons why he receives the tomb and the tomb itself that makes the identity of the owner, of his family and the performance of the rituals visible. The tomb can be understood as a ritual complex allowing the development of the cults of a particular group and the collective cults involving the living and the dead.[62] As the rituals were connected to the moment of the first burial ritual and to annual celebrations to preserve the memories in time, the tomb was indeed regarded as the material point that guarantees the permanence and stability of the memories in the space.

The presence of the family of the deceased in written images established the generational connectivity, on the basis of reference to the past. In this sense, the tomb can be considered as a spatial reference of the primary environment (family and colleagues) inside the community too. This idea can be in the same line of thoughts of Dorman, who explained that some particular tombs were planned as family funerary complexes, that is for the burial and for family commemoration and not only as an individual monument.[63]

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58 Pereyra *et al.* 2018, 45.

59 Davies 1933a, 49, 63, Pl. XXXIV; Pereyra *et al.* 2006, Fig. 28.

60 Davies and Gardiner 1926, 30, Pl. XXI.

61 Auenmüller 2014, 176.

62 Fitzenreiter 1995, 97, 102.

63 The analyses considered the epigraphic and archaeological evidence of three tombs dating to the reign of Thutmose III, see Dorman 2003.

The position of these monuments in the necropolis was important too. The study of the dimensions and the localization of the tombs has allowed to recognize the socio-political hierarchy of the power between members of the elite and the state in correspondence with the hierarchy of space in the Theban necropolis.[64] There was a connection between the orientation and localization of the private tombs and the mortuary temples of the kings and the processional ways.[65] In this sense, TT49 and TT41 are close to the north festival route, to the Hatshepsut Temple and Thutmose III Temple, and TT40 is close to the south festival route, to the Amenhotep III Temple. Taking part in this celebration emphasizes two aspects: the identity of the owner associated to his position in the state and the symbolic links during the celebrations, as it happens in the Beautiful Festival of the Valley. In the same way, when the name of the deceased is pronounced during the celebrations, his memory can be reactivated in two levels: the micro space of the tomb connected to the family and the macro space of the necropolis associated with the position and community.

In the case of the three studied tombs, the election of Thebes can be associated first with the service to the king or to the Amun Temple (or both) and because of this to the political environment, and secondly with the family environment.[66] In addition, the geographical influence of the zone of the position – Nubia in the case of Huy, and Thebes in the case of Neferhotep and Amenemope – together with the family tradition in the administration of Amun Temple were both identified. Thus, the location of the tomb can be connected to the functional duties and the local social embeddedness of the owner, according to the territorial concept.[67]

Finally, the distribution of the spaces was part of the planning of the state as well as the monumental aspect of the buildings connected to the eternal symbolism. The dimension and position of each tomb decided by the king could be seen as reflecting the political hierarchy in the past, which could be re-enacted in the celebration of the feasts every year inside the sacred and ceremonial landscape of ancient Thebes.[68] Despite the absolute secrecy of royal tombs, private tombs require a visible aspect (**Figure 4**). In this sense, the tomb and the necropolis made the identity of the deceased visible and eternal, by creating a reference point for memory and by providing a shared sense for the community. As a consequence, the tomb evoked memories not to be forgotten. It was not just a space that keep information, but a topographic text complex itself, which can materialize a monumental discourse.

Final remarks

The construction of an image of eternity in the Egyptian culture was related to the need to maintain social identity and integration. The mortuary religion was a centre of cultural consciousness, which influenced many other areas of Egyptian culture. The configuration and preservation of individual and family memory in the private tombs built in Thebes at the end of the 18th Dynasty, which were considered in this study, include reference points, dimensions or features and different mechanisms.

The first of these is reference to the past that perpetuates the memory in two dimensions: a prospective feature as a posthumous projection of the owner's life, by means of the registration and visibility of the name, position, relationship to the king or the gods during his life; and a retrospective aspect, by means of the registration of the position of his ancestors and family. The written images elaborate particular evidence of this past and configure the permanent identity of the owner and his family. This

64 Engelmann-von Carnap 1999; Manzi 2012; Pereyra *et al.* 2018, 124-138.

65 For details of the north and south festivals routes and the involved funerary temples, see Cabrol 2001, Pls. 5-6; Jiménez-Higueras 2020, 156-157, Map 18.

66 Fitzenreiter 1995, 115.

67 Auenmüller 2014, 176-182.

68 Pereyra *et al*. 2018, 45.

Figure 4: *View of the Theban necropolis and the tombs protected by the sacred mountain el-Kurn (Photo © M. Silvana Catania 2012).*

identity can be defined by personal elements (name, titles, statues). It is also defined by belonging to the political environment in all the cases, to the family and colleagues (stronger in TT49 than in TT40 and TT41) and to the gods community (more emphasized in TT41 and TT49 than in TT40).

The second is a reference to the community that restores and commemorates the existence of the deceased in two dimensions. A connective and collective dimension expressed by joining, re-membering the body, the identity and social relationships of the deceased and his ancestors through the rituals and participation of the deceased and his relatives in the celebrations of cosmic renewal. An evocative dimension expressed by the constant repetition of the name and the celebrations by the livings, recalling the presence of an absence. The rituals, associated to the death cult and the ancestor cult, integrate the written form, visible and durable, and the oral form, active and repeated, which is represented in detail in TT49 and TT41. The periodical performance of the rituals allows transmitting and preserving the memory through time.

The third is a reference to space, which commemorate and makes the individual and family identity permanent through two spatial dimensions: the building of the tomb (together with the written images) as a material, monumental and eternal testimony of the family and political position of the deceased in the state; and the localization of this monument in relation to others in the sacred space of the Theban necropolis. The latter was related to the possibility to re-enact the political and social position during the celebration of feasts every year and to configure a space of belonging.

In these three tombs, we can recognize that the references to the past, the community and the space, which are part of the funerary cultural memory, were configured and communicated by means of the inscriptions and scenes, and monuments, as well as the ritual practices and recitations. These individual developments express the historical process, yet within the frame of traditional and symbolic codes of record and storage established by the state.

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The Transmission of Priestly Science in Ancient Egyptian Temples of the Graeco-Roman Period: The Case Study of the Sacred Trees

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Abstract

As receptacles of the collective memory, Egyptian temples preserved the knowledge of both the divine and earthly world, with priests acting as researchers, compilers, and keepers of this sacred science. Memory streamed through the classification and recording of basic categories of *realia* in each geographical district, listed on papyrus rolls as well as carved on the everlasting stone of the temple walls. The purpose of this practice was the description of reality and its compliance with the cosmic order. Together with information concerning the local gods and other geographical and religious facts, the sacred trees section was an important entry in these texts. Despite being ephemeral environmental elements, sacred trees were indeed a somehow immutable part of the ancient Egyptian temple landscape, relating to mythological geography and religious practice. This paper aims to analyse the recurrence of botanical lemmata in the so-called 'geographical lists' of Graeco-Roman tradition, starting from the most complete instance engraved on the walls of the Temple of Horus at Edfu and then considering comparisons from other contexts as well as from papyri. The examination of textual sources and spatial distribution will contribute to the reconstruction of mythological, historical, and geographical traditions concerning ancient Egyptian sacred trees.

Keywords

Sacred Trees, Priestly Science, Edfu, Tebtynis, Geographical Lists

'Priestly science' in Graeco-Roman Egypt

Egyptian temples were always important foundations both in their religious function and in more secular activities, as economic pivots of the ancient society. After the Macedonian conquest of Egypt and the gradual penetration of Hellenistic culture in the country, these institutions started to loose their previous administrative scope to the advantage of the foreign control.[1] A new group of bureaucrats took on the management of the kingdom and Greek became the prevalent administrative language.[2] Priests, now relieved of the burden of some secular tasks, could concentrate on higher intellectual activities, such as theology and philosophy. Temples became the vessels of the collective memory, preserving the knowledge of both the divine and earthly world in their libraries,[3] with clergymen acting as researchers, compilers, and the sole keepers of this sacred wisdom.[4]

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1 Temples continued to represent the 'key local nodes' of the economy, and kept their administrative prerogatives, but were incorporated in Ptolemaic governance (Manning 2019, 115-116) and in its new redistributive networks (Muhs 2016, 241-243).

2 Muhs 2016, 211.

3 Ryholt 2019.

4 Sauneron 1988, 119-179.

Study and classification of categories of *realia* could give the priest an all-encompassing knowledge of the world. The practical aim of such a research activity, as Serge Sauneron pointed out, is always framed in spirituality.[5] It is in the Ramesside era that we can discern a growing interest towards a categorisation of reality, both in history and in geography,[6] but in Hellenistic times such need came to an unprecedented exacerbation.

Geographical lists

Among the many subjects priests and scribes had to master, on different degrees of specialisation, geography was of vital importance in the life of the country: it was through the study of nature and the world that, for example, the Flood could be predicted, measured, and taken advantage of.[7] Besides this 'practical geography' – collecting information on the configuration of Egypt, such as the names of the towns or the extension of arable and/or uncultivated land – there existed also a 'religious geography', devoted to the knowledge of sacred places and their features.[8] The exercise of observing the physical reality was a mean to disclose the deep divine nature of the universe, which was perceived to be mirrored by every existing landmark and every attested tradition inside Egypt's borders, thus complying with a manifest transcendent cosmic order.[9] The development of contemplative geography as a discipline can be followed on temple walls as well, where processions of offering bearers were carved; their iconography developed from representations of nondescript androgynous Nile figures carrying provisions into distinctive personifications of each *spꜣt*.[10] All *spꜣwt* had their recognisable individual characters, vocations, and traditions, and were depicted with their heraldic emblems on top of their heads, while bringing typical products – instead of common offerings – to the local sanctuary. One of the most complete instances belongs to the Temple of Horus at Edfu and is carved on the *soubassement* of the external walls of the inner shrine.[11] The so-called 'Geographical List' at Edfu consists of a canonical representation of the 42 personified districts of Ptolemaic Egypt lined along the lower part of the western, northern, and eastern façades of the sanctuary, but the figures are significantly alternated with texts reporting a brief description of each province. Edfu is not the sole known Graeco-Roman temple provided with a geographical procession; yet, it is paradigmatic for the genre, by virtue of its completeness and exhaustiveness. These concise indexes, though, were but a synthesis of far more narrative works, which described the religious geography of single districts and were kept in temple libraries. If very little survives of this production – with Papyrus Jumilhac being a rightfully celebrated instance – papyraceous tradition is nonetheless more generous with geographical lists.[12] These texts

5 Sauneron 1988, 124.

6 Possibly even earlier, if the 'Ramesseum Onomasticon' (pBerlin 10495) can be considered an antecedent for this practice (Gardiner 1947, 6-23). Since time immemorial, topographical maps were essential in running national mining enterprises, land surveys or even in stating the extension of sacerdotal properties, and king lists were the basic mean to organise the past in a historiographic manner. During the Ramesside period a new encyclopaedic approach perfused the intellectual production and laid the foundations for the development of a cultural memory in Egyptian temple communities of Graeco-Roman times (Ciampini 2017, 16).

7 Muhs 2016, 220-223.

8 Sauneron 1988, 152-153.

9 See J. Assmann's 'Kosmotheismus' theory (Assmann 2015, 159-163). See also: Von Lieven 2004, 167-169.

10 Sauneron 1988, 153-154. The term *sp(ꜣ)t* (Wb. IV, 97-99) refers to one of the 42 territorial units of the Ptolemaic and Roman administrative system. Traditionally, there are 22 *spꜣwt* in Upper Egypt and 20 *spꜣwt* in Lower Egypt. The word can be translated either as 'district', 'province', or 'nome' – the latter being the Greek designation. The number and order of the districts of Lower Egypt changed through time due to the fluid geography of the Delta region, periodically expanding as the Nile laid its sediments and as marshes were reclaimed and converted to arable land. This work follows Leitz's topographical notation (Leitz 2014).

11 *Edfou* I, 329-344; Leitz 2014.

12 Papyrus Jumilhac (Musée du Louvre E 17110) is a descriptive monograph dedicated to the mythography and geography of the 17th and 18th districts of Upper Egypt (Vandier 1961). The *Book of the Fayyum* is worth mentioning as well, as it was probably part of the same thematic group and is preserved in hieroglyphic, hieratic, and demotic (Beinlich 2013-2017).

also go under the modern names of 'priestly encyclopaedias' or 'geographic monographs'. The most relevant sources are two hieroglyphic papyri dating to the Roman period: the so-called 'Tebtynis Priestly Encyclopaedia' and the 'Geographical Papyrus' from Tanis. The 'Encyclopaedia' was found within the precincts of the Temple of Soknebtynis in 1931.[13] It was part of the library of the temple and had at least two hieratic copies for use and consumption of the local priesthood.[14] The hieroglyphic text has a parallel in the 'Geographical Papyrus' from Tanis, found by Petrie in 1884.[15] Like their stone counterparts, these papyri report essential information for each district, but lack the figurative addenda; instead, they present their content arranged in a typical layout consisting of a squared tabulation filled with geographical entries. The traditional list of 42 nomes – sometimes abbreviated to 39, following the ancient administrative subdivision effective from the New Kingdom to the early Ptolemaic period – is compiled with annotations for basic categories, such as: 1. the name of the *spꜣt*, written with its emblem; 2. the deduction, i.e., the available surface of the province, measured in cubits and subtracted from the total area of the province itself; 3. the main town of the district; 4. the local worshipped gods and/or goddesses; 5. the main sanctuary; 6. the sacred lake of the region; 7. the titles of the priests operating in the sanctuary; 8. the titles of the priestesses operating in the sanctuary; 9. the sacred barque in the temple; 10. the sacred channel leading to the Nile; 11. the sacred trees in the district; 12. the divine necropolis or the sacred mound (*iꜣt*);[16] 13. the main festivals celebrated in the region; 14. the local interdictions (*bwt*); 15. the divine snake of the nome; 16. the land allocated to agriculture (*ww*); 17. the hunting reserve located in the swampland or the swampland itself (*pḥw*). The result is a synthetic – yet extremely exhaustive – overview of the highlights of each nome, in a handbook condensing as many traditions as possible in the reduced modular space of the tabulation.

Sacred trees in Egypt

Sacred trees can be defined as a meaningful object of ancient religious thought and practice.[17] In ancient Egypt, they were planted in the temple precincts and could also grow in the areas of the divine necropolis, especially in groves on top of the funerary mounds.[18] They are frequently mentioned in religious texts of the later periods, their names usually being *šnw-nṯrw/nṯry*, 'divine trees' and *šnw-ḫw*, 'protected trees' or simply 'sacred trees'.[19] Geographical lists often introduce them with the *rḫ šnw-nṯrw m spꜣt tn* formula, that is 'knowing the divine trees in this province'.[20] Priestly manuals, such as the 'Tanis Papyrus', simply head their section *rn n šn*, 'name of the tree'.[21] The preferred word for 'tree' is *šn*;[22] such lemma is peculiar, since it could add further meaning to the matter: the Egyptian language had other generic words to identify wood species,[23] but *šn* refers to the plant whose branches or foliage crown the trunk as hair frames a person's face;[24] this could refer to homophone *šnỉ*, and to the expression *šnỉ-tꜣ* employed to identify vegetation.[25] The use of the semantics of the human body seems a

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13 PSI I 2 + pCarlsberg 54 + pTebt. Tait Add. 1 a-f + pBerlin 14412i = pTebt. (Rosati 1998).

14 pCarlsberg 182 + PSI I 77 (Fragment L 12,28 – 21,2) = pTebt. H II (Osing 1998, 230-247); pBerlin 14447 + PSI I 78 (Fragment D 3,8 – 11 + x) = pTebt. H III (Osing 1998, 267-272).

15 pLondon BM EA 10673a = pTanis (Petrie 1889; Yoyotte 2013).

16 In the 'Geographical List' at Edfu the names of the sacred trees – usually three – form with the next *iꜣt* section a proposition by use of the preposition *m*, so that a relationship between sacred groves and divine funerary mounds in the provinces is made explicit (for instance, as in *nbs ʿrw šnḏt m ỉw-wʿb* for the Ombite nome, *Edfou* I, 337, 6). See also: *Edfou* I, 337, 1; Leitz 2014, 404.

17 The definition follows Hunt 2016, 3.

18 Koemoth 1994, 67, 165-170; Baum 1988, 304-305.

19 Koemoth 1994, 70; Aufrère 1999, 124-125; Leitz 2014, 404.

20 Aufrère 1999, 124.

21 Aufrère 1999, 125; Leitz 2014, 404.

22 Wb. IV, 498-499. Only pTebt. H II preserves *'rn n ḫt'* (pTebt. H II, L 21,1).

23 For instance, *šꜣ* (Wb. IV, 400), *ḫt* (Wb. III, 341), and *nht* (Wb. II, 282-283).

24 Aufrère 1999, 125. Hence the writing with the hieroglyph of the hairlock (D3).

25 *šnỉ* translates to 'hair', but also 'foliage' (Wb. IV, 500); *šnỉ-tꜣ* is literally 'the hair of the earth' (Wb. IV, 501).

step towards the personification of the object and could, thus, denote an empathetic attitude in respect to what was felt like a living being, very similar to nowadays sensitivity.[26] The life of some trees was, in fact, defended: *šnw-ḫw* were literally safeguarded, and many interdictions prevented anyone from damaging them or even touching them.[27]

Sacred trees in the geographical lists

Sacred trees appear in the geographical lists in basic associations of three elements, usually in a recognisable order – first tree, second tree, and third tree – but variants are known. The entries are grouped together according to literary and mythological tradition and are thus evocative of the religious identity of every single nome.

The collection of all the data from the available sources offers the following picture (**Table 1**, **Table 2**):[28]

Upper Egyptian Nomes	*Sacred Trees*	*Source*
I. Ombos[29]	*nbs ꜥrw šnḏt* *nbs* […] *šnḏt*	*Edfou* I, 337, 6. pTebt. H III, D 3,11.
II. Apollinopolis	*ỉšd šnḏt ỉmɜ* *ỉšd šn*[*ḏt*] *šnḏt ỉšd ỉmɜ* *ỉmɜ ỉšd šnḏt* *šnḏt ỉšd ỉmɜ*	*Edfou* I, 337, 12. pTebt. H III, D 3,17. *Edfou* II, 25, 209-211. *Edfou* V, 397, 1. *Dend.* IX, 39, 113.
III. Latopolis	*nbs šnḏt ksbt* *bɜḳ* *ksbt šnḏt* *nbs*	*Edfou* I, 338, 2. *Dend.* IV, 254, 20. pTebt., 22,3. pTebt. H III, D 3,21.
IV. Thebes	*ỉšd šnḏt* *ỉšd šnḏt ksbt* *ỉšd*	*Edfou* I, 338, 7-8. pTebt., 22,3. pTebt. H III, D 4,4.
V. Coptos	*ỉmɜ ksbt*	*Edfou* I, 338, 14.
VI. Dendera	*ỉšd šnḏt* *šnḏt* *šnḏt nbs* *ỉmɜ ỉšd šnḏt ṯrt nht ksbt mɜmɜ tm* *rn šɜ-nṯr ỉšd ksbt ṯrt rn ḥt-nṯr kwnt*[30]	*Edfou* I, 339, 3. pTebt., 23,6. *Edfou* VI, 115, 9. *Dend.* VI, 154, 3-4. *Dend.* VII, 140, 7-8.

Table 1: *Sacred trees of Upper Egyptian Nome.*

[26] For an interpretation of ancient ecological sentiments in the theological perspective see: Hunt and Marlow (eds) 2019.

[27] Porphyry asserts that mistreating a tree was considered a crime in Egypt (*De Abstinentia* 1.21; *De Vita Pythagorae* 39), and Plutarch remarks that some priests of the cult of Osiris were not allowed to uproot any fruit-bearing plant (*De Iside et Osiride* 35, 365B). See also: Aufrère 1999, 124-125; Attfield 2019. A similar interdiction is attested in Egyptian sources of the Roman period (*Esna* III, 197, 25-26).

[28] For other elaborations, see: Baum 1988, 304-334; Aufrère 1999, 128-203; Leitz 2014, 404-406.

[29] The texts on the Hadrian Gate at Philae also mention a *nht wrt*, 'an ancient sycamore tree', and a *ỉw/ỉwy šps* plant (not identified) among the species growing above the tomb of Osiris at the Abaton of Philae (Junker 1913, 14, 52-53). See also: De Maré 2016, 8-9.

[30] This passage on the southern doorjamb of the entrance to the eastern staircase at Dendera mentions 'the name of the divine tree: *ỉšd*, *ksbt*, and *ṯrt*; the name of the divine grove: *kwnt'* (Dend. VII, 140, 7-8). It is the only known attestation of the

Upper Egyptian Nomes	*Sacred Trees*	*Source*
VII. Diospolis	*šnḏt nbs* [*šnw*] *nbw ꜥɜw nb*[*s*] *ỉmɜ*[31] *šnḏt nbs*	*Edfou* I, 339, 8. pTebt., 24b,3. pTanis, 11,2.
VIII. Thinis[32]		
IX. Panopolis[33]		
X. Aphroditopolis	*ỉšd šnḏt*	*Edfou* I, 339, 18.
XI. Hypselis	*šnḏt nbs* *nb*[*s*]	*Edfou* I, 340, 6. pTebt., 26b,2.
XII. Antaeopolis	*nbs*	*Edfou* I, 340, 12.
XIII. Lykopolis	*šnḏt*	*Edfou* I, 341, 1.
XIV. Cusae	*šnḏt*[34]	*Edfou* I, 341, 7.
XV. Hermopolis (Hare)	*šnḏt wꜥb*(*t*) *ḥꜥw*[35] *šnḏt* *šnḏt*	*Edfou* I, 341, 13. pTanis, 12,2. pTebt. H II, L 15,24.
XVI. Hermopolis (Oryx)	*ỉšd nbs šnḏt* […] *šnḏt nbs*	*Edfou* I, 342, 1. pTebt. H II, L 15,28.
XVII. Kynopolis I	*nbs ỉsr* *ỉšd nbs ỉsr* *ỉšd ỉmɜ šnḏt nbs ỉsr nht ꜥrw*	*Edfou* I, 342, 7. pTebt. H II, L 16,4-5. pJumilhac, XII,11.
XVIII. Kynopolis II	*ỉšd* *ỉšd* *ỉšd ỉmɜ šnḏt nbs ỉsr nht ꜥrw*	*Edfou* I, 342, 12. pTebt. H II, L 16,10. pJumilhac, XII,11.[36]

Table 1 cont.: *Sacred trees of Upper Egyptian Nome.*

like, and probably refers to different locations for different sacred trees. It is possible that the grove was one of those composite thickets growing on top of the divine funerary mounds in the necropolis.

31 The reading has no parallels; the integration has been proposed by G. Rosati, 'all the great trees' (Rosati 1998, 40, note s). C. Leitz reads simply '*nbs ỉmɜ*' (Leitz 2014, 405).

32 Strabo mentions an acacia grove in Abydos (Geographica 17.1.42).

33 Iconographic evidence suggests *ỉmɜ* or *ksbt* were the sacred trees of Akhmim (Aufrère 1999, 143).

34 The signs are barely intelligible in this passage: the first edition of the texts reads *ḫm ꜥɜ*, but a reading *šn ꜥɜ* was later proposed (*Edfou* I, 341a, note x). We accept the reading *šnt* (=*šnḏt*) as recommended by C. Leitz (2014, 405), even if consistent with a non-traditional writing of this lemma.

35 The *šnḏt*-tree of the Hare Nome was unique. At Edfu, it is said to be 'pure of body', thus compared with a divine entity (Edfou I, 341, 13).

36 Since Papyrus Jumilhac describes the mythological geography of the 18th nome including some sanctuaries of the 17th, it is sometimes difficult to match the sacred tree to the proper district. These are the mentions in the text: *nbs šn nṯr, 'nbs* is the divine tree', at *Ḥwt-nsw* (18th nome, pJumilhac, XIX,14); *ṯrt ḫwnt,* 'a young *ṯrt*-tree', at Saka, where there was also a 'Lake of the *ṯrt*-tree' (17th nome, pJumilhac, XX,22); *ỉmɜ ḫt ḫw*, '*ỉmɜ* is the sacred tree', in *Nỉwt nt iḫt* (pJumilhac, XXI,8-9); *nbs ksbt šnw ḫw*, '*nbs* and *ksbt* are the sacred trees', at *Mr-nfr* (pJumilhac, XXI,16); *ỉšd šn ḫw*, '*ỉšd* is the sacred tree', at *Mn-ꜥnx* (pJumilhac, XXI,20); *nbs šn ḫw*, '*nbs* is the sacred tree', in *Pr-nbt-ꜥḫwy* (pJumilhac, XXII,3).

Upper Egyptian Nomes	*Sacred Trees*	*Source*
XIX. Oxyrhynchus	*ꜥrw* *ꜥrw* *ỉmɜ šnḏt*	*Edfou* I, 343, 1. pTebt. H II, L 16,15. *Edfou* VI, 122, 1.
XX. Herakleopolis	*šnḏt* *šnḏt*	*Edfou* I, 343, 6. pTebt., 30,3.
XXI. Akanthopolis	*ỉšd šnḏt* *šnḏt*	*Edfou* I, 343, 12. pTebt. H II, L 16,25.
XXII. Aphroditopolis	*ỉmɜ* *ỉmɜ* [*šnḏt*] *ỉmɜ*	*Edfou* I, 344, 1. pTebt., 31a. pTebt. H II, L 17,2.

Table 1 cont.: *Sacred trees of Upper Egyptian Nome.*

Lower Egyptian Nomes	*Sacred Trees*	*Source*
I. Memphis[37]	*ỉšd nbs šnḏt* *ỉšd b(ɜ)ḳ* [*nbs*] *ỉšd b(ɜ)ḳ nbs*	*Edfou* I, 329, 14. pTebt., 31b,2. pTebt. H II, L 17,8.
II. Letopolis	*nbs šnḏt* […] *šnḏt* *nbs* […] *nbs šnḏt ṯrt*	*Edfou* I, 330, 6. pTebt., 32,12. pTanis, 13,2. pTebt. H II, L 17,14-15.
III. Gynaikopolis	*ꜥrw tmɜ* *ꜥrw* *ꜥrw tmɜ*	*Edfou* I, 330, 12. pTebt., 32,12. pTebt. H II, L 17, 19-20.
IV. Prosopis	*nht šnḏt* *šnḏt* *nht šnḏt*	*Edfou* I, 331, 1. pTebt., 33,2. pTebt. H II, L 17, 26-27.
V. Sais	*šnḏt twr nbs* *nht šnḏt n Nt ỉšd nbs*	*Edfou* I, 331, 7-8. pTebt., 33,2.
VI. Xois	*šnḏt nbs* *šnḏt*	*Edfou* I, 331, 13. pTebt. H II, L 18,10.

Table 2: *Sacred trees of Lower Egyptian Nome.*

[37] Curiously, the topography of Memphis is constellated by the presence of the *nht*-tree, but this entry is never reported in these sources. S. Aufrère postulates that the cult of this sacred tree at Memphis was not included in the high tradition of Edfu for it had a more popular vocation (Aufrère 1999, 157-159). If so, the mention in other texts of the temple tradition cannot be explained. For instance, the Geographical List of the names of Hathor in her temple at Dendera (*Dend.* IX, 34-39; Cauville 2015, 37-76) contains two utterances referring to her cult at Memphis. Utterance 16 reads: *n Ḥwt-ḥr nbt ỉwnt nb(t) nht ḥnwt ỉnb-ḥḏ nfr(t) ḥr nb(t) nhwt rsyt* ('to Hathor, Mistress of *ỉwnt*, Mistress of the Sycamore-tree, Sovereign of *ỉnb-ḥḏ*, beautiful of face, Mistress of the Sycamores of the South'; Utterance 71 reads: *n Ḥwt-ḥr nbt ỉwnt ḫntt š m nhwt* ('to Hathor, Mistress of *ỉwnt*, who presides over the Lake with the Sycamore-trees / surrounded by Sycamore-trees'). The question remains on how this tradition was not kept elsewhere in Egyptian temples. The same issue could be offered by the ephemeral cult of an ancient Memphite god, *Ḫry bɜḳ.f,* 'He who is under his *bɜḳ*-tree'; this divine form was later absorbed by major local deities, such as Ptah and Thot (Koemoth 1994, 252-254). This tradition was preserved in papyraceous sources, but not included on the *soubassement* of the sanctuary at Edfu. If a common archetype can be recognised for most of the sacred trees geography – as suggested by the recurrence of the same species in the description of each nome – it must be noted that sometimes local *scriptoria* operated singular choices.

Lower Egyptian Nomes	*Sacred Trees*	*Source*
VII. Western Harpoon	*nht šnḏt* *šnḏt imɜ*	*Edfou* I, 331, 17-332, 1. pTebt. H II, L 18,16.
VIII. Eastern Harpoon	*ỉšd nbs* *ỉšd nbs* *ỉšd*	*Edfou* I, 332, 6. pTebt. H II, L 18,22-23. pTebt. H III, D 10,3.
IX. Busiris	*ỉšd nbs šnḏt* […] *nbs* […] *nbs šnḏt*	*Edfou* I, 332, 11. pTebt. H II, L 18,28. pTebt. H III, D 10,9.
X. Athribis	*ỉšd nbs* *ỉšd* [*nbs*] *ỉšd šnḏt ṯrt*	*Edfou* I, 332, 16. pTanis, 14,2. pTebt. H II, L 19,7.
XI. Pharbaithos	*šnḏt ꜥrw*	pTebt. H II, L 19,13.
XII. Sebennytos	*ḥb*(*y*)*t šnḏt* *šnḏt ḥbyt* *ḥbyt*	*Edfou* I, 333, 8. pTebt. H II, L 19,19. pTebt. H III, D 11,3.
XIII. Heliopolis	*ỉšd šps* *ỉšd šps*	*Edfou* I, 333, 12-13. pTebt. H II, L 19,27.
XIV. Sile	*šnḏt ksbt*	*Edfou* I, 334, 11-12.
XV. Hermopolis	*nbs šnḏt ỉšd* […] *ỉšd*	*Edfou* I, 333, 18. pTebt. H II, L 20,4-5.
XVI. Mendes	*ỉšd šnḏt nbs* *ỉšd šnḏt nbs*	*Edfou* I, 334, 6. pTebt. H II, L 20,12.
XVII. Diospolis	*Mwt tɜ šnḏt ỉšd* *Mwt dɜ* (*-tɜ*) *šnḏt*	*Edfou* I, 334, 17. pTebt. H II, L 20,25.
XVIII. Bubastis	*ỉšd* *ỉšd šnḏt*	*Edfou* I, 335, 6. pTanis, 19,4.
XIX. Tanis	*ỉšd šnḏt*	*Edfou* I, 336, 1.
XX. Arabia	*nbs šps* *nbs* *nbs šps*	*Edfou* I, 335, 11. pTanis, 19,4. Naos of Sopdu (CG 70021)

Table 2 cont.: *Sacred trees of Lower Egyptian Nome.*

The recurring botanical lemmata in the geographical lists can generally be related to well-known plants and trees of the environment of ancient Egypt. All of them were common economic staples and endemic in the Nile Valley, but, above all, they were important mythological, cultic, and symbolic objects. Identification is sometimes uncertain. The *šnḏt*-tree has been recognised as a species of acacia (*Acacia nilotica* (L.) Willd.);[38] its traditional writing for the Graeco-Roman period is *šnt*,[39] as in all the considered instances. Its mythology pertains to the solar theology and to aggressive female deities, such as Bastet,

[38] Helck 1975, 113-114.
[39] Wb. IV, 521.

Sekhmet, or Neith;[40] in fact, the 'Tebtynis Encyclopaedia' mentions one *šnḏt n Nt* among the sacred trees of Sais, and acacia is known to have been used to craft bows and arrows, the traditional weapons of the goddess.[41] A deified acacia of the goddess Mut was possibly a sacred tree in Diospolis.[42] At Edfu, the tree is presented as a hypostasis of Horus smiting enemies for the king, again with apotropaic function.[43] The *nbs*-tree has been identified as modern sidder (*Ziziphus spina-christi* (L.) Willd.);[44] it is linked to the solar sphere and to belligerent divinities charged with the defence of Egyptian borders (Sopdu) and cosmic order (Shu), especially at – but not limited to – Saft el-Henna.[45] *ꜣšd* can possibly refer to *Balanites aegyptiaca* (L.) Del. or to *Mimusops schimperi* Hochst.[46] The writing is often *išt* in Graeco-Roman texts.[47] It is the solar tree *par excellence*, dwelling in Heliopolis and worth the title *šps*, 'noble'.[48] The *imꜣ*-tree has a very uncertain identification, possibly with *Maerua crassifolia* Forssk.[49] The spelling is either *imꜣ* or *im*.[50] It was used in kingship ceremonies, for example at Edfu, where the king is portrayed while receiving *regalia* under its shadow.[51] *Moringa peregrina* (Forssk.) Fiori is allegedly ancient Egyptian *bꜣḳ*,[52] from which an oil was extracted for pharmacopoeic and cultic use; the spelling *b(ꜣ)ḳ* is also attested in the lists.[53] The sacred tree was believed to assure continuity at the turn of the new year and, together with *išd* and *imꜣ* branches, it was used in offering rituals at Edfu to vivify kingship.[54] *Nht*, the sycamore tree (*Ficus sycomorus* L.), is the one represented in the Egyptian general determinative for 'tree' (M1), and has a long tradition of female deities inhabiting it, both in cosmic and nurturing roles;[55] the most important tree goddesses were Nut,[56] Isis, and Hathor, who is also the titular deity of a Memphite sanctuary where her sycamore form was possibly worshipped.[57] One *nht wrt*, 'an ancient sycamore tree', divine of nature, was venerated at Philae and periodically watered with the milk of a black cow.[58] For some trees, then, this preeminent condition resulted even in an independent cult, not just as divine hypostases, but as autonomous entities: the columns of the Hypostyle Hall of Edfu bear a list of deities and the three outstanding trees of the sanctuary are included (*šnḏt ꜥꜣt*, *išd šps* and *imꜣ wꜥty*).[59] The word *ṯrt* refers to the willow (*Salix subserrata* Willd.),[60] which was the important object of a festival in Dendera,[61] and an Osirian attribute.[62] A species of tamarisk (*Tamarix spp.*) was referred to with the term *isr*, although accurate

40 Baum 1988, 318-319.
41 Western and McLeod 1995.
42 Osing 1998, 247. See also: *Edfou* I, 334, 17; pTebt. H II, L 20,25.
43 *Edfou* I, 174, 4; 299, 2.
44 Wb. II, 245, 10; Lucas and Harris 2012, 446; Baum 1988, 169-175.
45 Baum 1988, 169-176; Pancin 2023. Saft el-Henna's topography is characterised by the presence of the *nbs*-tree: the main sanctuary was *Ḥwt-nbs*, inhabited by Horus *ꜥꜣ ḫnty nbs*, Hathor *ḥr(t)-tp nbs*, and Sopdu *ꜥꜣ ḫnty nbs* (Naville 1887, pls. 1-6); according to the sources, their cult statues were made of *nbs*-wood (Naville 1887, pls. 5.4, 6.5), so to intensify the connection with the local theological frame.
46 The argument has not been settled yet, but there are elements to identify *B. aegyptiaca* with the *išd*-tree and the *Mimusops spp.* with another Egyptian plant, *šwꜣb* (Germer 1982, 942-943; Caneva 2016, 42).
47 Wb. I, 136.
48 Kákosy 1980, 182-183.
49 Baum 1988, 183-196.
50 Wb. I, 79, 7.
51 Ibrahim 1975, 50-52.
52 Baum 1988, 129-135.
53 E.g., in the 'Tebtynis Encyclopaedia' for the Memphite nome (pTebt. 31b,2). See also: Wb. I, 423, 9.
54 Aufrère 1999, 130-131.
55 Buhl 1947, 80-97; Germer 1986, 113-114.
56 Billing 2002.
57 Buhl 1947, 86. Also *supra*.
58 Junker 1913, 14.
59 'The Great Acacia, the Noble *išd*-tree, and the Unique *imꜣ*-tree' (*Edfou*, II, 25, 209-211).
60 Baum 1988, 196-199.
61 *Dend.* IX, 95-96; *Dend.* XIII, 199-202.
62 Koemoth 1994, 215-222.

identification is not possible.[63] Another species of acacia (*A. tortilis* Forssk.) can possibly be identified in the *ksbt*-tree;[64] the writing fluctuates between metathetical *kbs* and emphatic *ḳsb* in the record, the feminine ending being discretional. The only palm-tree is mentioned in the crypts at Dendera among the sacred objects of the district: it is the palm *mɜmɜ*, identified with *Hyphaene thebaica* L., i.e., the doum-palm.[65] The *twr*-plant is not properly a wooden tree, but some species of reed.[66] Some other lemmata still await identification: it is the case of the well-attested *ʿrw*-tree,[67] sacred to Seth;[68] yet unidentified is also the *tmɜ*-tree,[69] while a kind of fig-tree has been proposed for *kwnt* ;[70] unknown is also the plant *ḥbt*, which is determined by a herb sign and thus seems not to have been a wood species.[71]

The transmission of phyto-geographical and phyto-mythological traditions

Given that sacred trees tend to be grouped together for each district, some considerations can be made on recurring associations in the lists. It seems possible that a common model could have existed, since the sources often conform to a precise grouping of trees; nonetheless, different *scriptoria* might have bequeathed different traditions, as in the most emblematic case of the Memphite nome. It is the repetitions in the lists that would thus point to an archetype – now lost – with an encyclopaedic intent. The Egyptian fascination for exploring, observing, categorising, and describing *realia* can be traced back to the Middle Kingdom, with a growing interest in the New Kingdom and the Third Intermediate Period. Works such as the 'Ramesseum Onomasticon' or the 'Onomasticon of Amenope' already reveal the scribe's attitude towards organisation.[72] If such an *Urtext* existed for the geographical lists – and for their tree-sections – some textual recurrences in Graeco-Roman times could be more easily explained. For Upper Egypt the groups '*išd šnḏt*' and '*šnḏt nbs*' are often repeated. These three plants, identified as *Balanites*, acacia, and sidder, are endemic of the South. In a country with poor biodiversity for wood species, and scarcely any growing trees, the cultural choices seem inevitably driven towards what is at hand. It is not surprising, then, to find the same names attested in different districts. But the progressive arrival and installation of foreigners had brought several new Mediterranean cultivars in the Nile Valley and Egyptian temples had already managed to plant and grow exogenous species at least as back as the New Kingdom.[73] Furthermore, exotic essences were looked for and eagerly included in ritual practice.[74] Even so, these species are not mentioned in the lists. It would appear that the selection of sacred trees depended on the same conservative character that regulated *res sacra* in a wider perspective. In other words, the choice was the result of a coherent and aware reflection of the scribal community dealing with its lore and its past. The process is more evident in the geographical accounts of Lower Egyptian nomes: here, the same Upper Egyptian associations tend to recur, but those desert plants – more fitting in a southern environment – should be out of place in the marshy northern region. The reason

63 Wb. I, 130; Baum 1988, 200-206.

64 Baum 1988, 158-160.

65 *Dend.* VI, 154, 3-4; Baum 1988, 106-119.

66 Wb. V, 252.

67 P. Koemoth proposed an identification with *Acacia seyal* Del. (Koemoth 1994, 182), but it remains uncertain (Aufrère 1999, 128).

68 Baum 1988, 326; Koemoth 1994, 67.

69 Variant *tm* (Wb. V, 307). It is possibly another Sethian plant (Baum 1988, 326).

70 *Ficus pseudo-sycomorus* Decne. or *Ficus virgata* Reinw. ex Blume (Aufrère 1999, 127).

71 The most promising comparison is with demotic *ḥbɜyt*, a plant used to make crowns (Reymond 1976, 107). S. Aufrère mentions the toponym *Pr-ḥbit*, Behbeit el-Hagar, where Isis *nbt ḥbt* and Osiris *ḫnty ḥbt* were venerated (Aufrère 1999, 174-175). See also: Koemoth 1994, 46-47.

72 Gardiner 1947, 13, 35-40.

73 One could think of the attempts at the transplantation of frankincense trees at Deir el-Bahari soon after Hatshepsut's famous Punt expedition (Dixon 1969, 55-65).

74 Consider, for example, the use of imported timber in funerary and/or religious activities (Gale *et al.* 2000, 334-371; Lucas and Harris 2012, 429-439).

might be a cultural one, derived both from the necessities of the transmission practice and from the literary milieu these communities were soaked in. It is possible that the editors of these texts had no botanical disposition, and that they were not interested in giving the actual landscape description of the Two Lands. On the contrary, vegetal associations such those reported and copied over and over in the geographical lists were possibly demanded by religious requirements; the lack of conformity to an ancient Egyptian environment might not be due to misinformation or ignorance; instead, the scribe had to make choices, for his final purpose was to describe reality in a 'practical' way – that is religious – framing it with the rigid criteria of myth and theology. In this way, he was continuously urged to have a thorough knowledge of both local and national traditions, to identify the most fitting tree for that particular myth, god, or local practice, thus being entrusted with the guarantee of a coherent adhesion to Egypt's cultural memory.

Abbreviations

Dend. IV = Chassinat, É. 2012. *Le temple de Dendara IV*. Troisième édition. Le Caire: IFAO.

Dend. VI = Chassinat, É. and F. Daumas 2006a. *Le temple de Dendara VI*. Deuxième édition. Le Caire: IFAO.

Dend. VII = Chassinat, É. and F. Daumas 2006b. *Le temple de Dendara VII*. Deuxième édition. Le Caire: IFAO.

Dend. XIII = Cauville, S. 2011. *Le temple de Dendara XIII. Traduction. Le pronaos du temple d'Hathor. Façade et colonnes* (Orientalia Lovaniensia Analecta 196). Leuven: Peeters.

Dend. IX = Daumas, F. 1987. *Le temple de Dendara IX.* Le Caire: IFAO.

Edfou I = De Rochemonteix, Le Marquis and É. Chassinat 1984. *Le temple d'Edfou I*. Deuxième édition revue et corrigé par S. Cauville et D. Devauchelle. Le Caire: IFAO.

Edfou II = Chassinat, É. 1987-1990. *Le temple d'Edfou II*. Deuxième édition. Le Caire: IFAO.

Edfou V = Chassinat, É. 2009a. *Le temple d'Edfou V*. Deuxième édition. Le Caire: IFAO.

Edfou VI = Chassinat, É. 2009b. *Le temple d'Edfou VI*. Deuxième édition. Le Caire: IFAO.

Esna III = Sauneron, S. 1968. *Le temple d'Esna (194-398). Esna III*. Le Caire: IFAO.

Wb. I till Wb. V = Erman, A. and H. Grapow 1971. *Wörterbuch der Aegyptischen Sprache I-V*. Berlin: Akademie-Verlag.

Egyptian textual sources

Architectural elements

Naos of Sopdu (CG 70021) = see Naville 1887.

Papyri

pBerlin 10495 = see Gardiner 1947.

pBerlin 14412i = see pTebt.

pBerlin 14447 = see pTebt. H III.

pCarlsberg 182 = see pTebt. H II.

pCarlsberg 54 = see pTebt.

pJumilhac = see Vandier 1961.

pLondon BM EA 10673a = see pTanis.

PSI I 2 = see pTebt.

PSI I 77 = see pTebt. H II.

PSI I 78 = see pTebt H III.

pTanis (pLondon BM EA 10673a) = see Petrie 1889.

pTebt. (PSI I 2 + pCarlsberg 54 + pTebt. Tait Add. 1 a-f + pBerlin 14412i) = see Rosati 1998.

pTebt. H II (pCarlsberg 182 + PSI I 77) = see Osing 1998.

pTebt. H III (pBerlin 14447 + PSI I 78) = see Osing 1998.

pTebt. Tait Add. 1 a-f = see pTebt.

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Codifying Culture: The Making of Phoenician Style

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Abstract

Museums have been displaying collections of Phoenician material for the past century. Today however, with the established understanding that the Phoenicians probably never identified as such themselves, can we consider this material to be a conscious representation of their culture? This paper traces the historiography of labelling Phoenician material in archaeology and museums, material which has often been categorised by default, because it did not belong to other more clearly defined civilisations. I investigate the origins of the identification of Phoenician culture, be it within literature or archaeology. Certain visual features and object categories were considered Phoenician trademarks, although they may not necessarily have been intended as such. My aim is to reconsider both the visual cues and the objects that have been used in the past to qualify material as Phoenician in order to understand how the label was formed and what it means to identify material as Phoenician today.

Keywords

Style, Phoenician, Museum, Art History, Identity

Introduction

'The Phoenicians are the only nation of the Canaanites which can pretend to occupy a conspicuous and well-understood place in the history of art.'[1] This claim features in the introduction of one of the earliest comprehensive volumes about the Phoenicians. Today, the word Phoenician refers to the Iron Age (1200-333 BCE) population of several city-states of the central Levantine coast. The Phoenicians are renowned for having established settlements across the Mediterranean, giving rise to Punic culture in Carthage starting from the 6th century BCE.[2] Recently, the idea of Phoenician and Punic identity has been questioned, notably because the current definition is heavily laden with an Orientalist inheritance and an over-reliance on the classical sources.[3] These studies all offer interesting insights and alternatives to the traditional Phoenician narrative from a theoretical and archaeological perspective. What is often left out, however, is the material culture itself; especially given the fact that this material is presented as Phoenician in museums today and exists outside the academic context in which the term is being rethought.

My aim in this paper is to begin bridging this gap by applying a critical perspective to museum collections labelled as Phoenician. Because this paper is based on definitions of the terms Phoenician and Punic laid out by museums, I will adopt these terms based on these definitions for the sake of clarity and to better address issues of identities from within the museum. I will present several case studies focusing on material belonging to museum collections which have been labelled Phoenician based on stylistic

[1] Perrot and Chipiez 1885, 14.

[2] Sommer 2007, 98; Garbati 2016; Secci 2018; Pilkington 2019.

[3] For these discussions, see Vella 1996; Garbati and Pedrazzi 2016; Martin 2017; Quinn 2018; and Oggiano 2019.

criteria in order to deconstruct the formation of Phoenician style. It is now well-established that Phoenician identity is made of a multiplicity of constructs and of variable layers which cannot be taken at face value in the modern sense. However, to gain a better understanding of Mediterranean dynamics in the first millennium BCE, it is important to understand how these categories were constructed and are currently presented in the context of today's museums. In sum, this paper will provide an account of the creation of Phoenician style since the inception of Phoenician archaeology and a critical overview of how this has affected the presentation of Phoenician collections, working towards an alternative approach to interpret and present them.

Fabricating Phoenician style

Beginning this paper with a quote from 1885 was not meaningless. This statement is quite telling when it comes to the general academic feeling about the Phoenicians in 19th-century Europe. Focusing on this period is also crucial to understanding how the concept of 'Phoenician' has been shaped. This is something to note because the legacy of the evolution of Phoenician archaeology and its effect on the material we define as Phoenician today has too often been neglected, both in museums and in recent publications. The first scholars to publish monographs about the Phoenicians emerged from there, some of the most prominent ones include Movers, Kenrick, Renan, Clermont-Ganneau, Perrot and Chipiez, and Rawlinson.[4] Apart from Renan's, who attempted to excavate half a dozen of sites within the space of a year,[5] these volumes are based on non-contextual material. This is significant in two ways: firstly, some of this material is still at present on display at various museums, and secondly, this implies that the initial definition of material as Phoenician was primarily based on style.

The aforementioned authors have varying opinions about the Phoenicians. However, all of them seem to agree on something: that Phoenician art was both a predecessor to the apogee of Classical Greek art while at the same time never achieving a comparable potential.[6] Phoenician art was also viewed as an undefinable hybrid. In the words of Rawlinson: 'What is superior has the appearance of having been borrowed. Egyptian, Assyrian, and Greek art, each in turn, furnished shapes, designs, and patterns to the Phoenician potters, who readily adopted from any and every quarter the forms and decorations which hit their fancy.'[7]

The idea that Classical Greek art represents the climax of ancient civilisation and fulfils the maximum potential of human achievement was a well-anchored model since the Renaissance. In terms of defining Phoenician style, it is especially impactful in the sense that when they were first studied, Phoenician materials were considered inferior vis a vis Greek culture. Among the consequences of this perspective was the fact that many artefacts considered less interesting were disregarded, and more focus was put on spectacular finds.[8] A more delayed effect of this neglect is the renaissance of Phoenician archaeology in the 1960s, with the works of scholars like Moscati and Niemeyer.[9] This new wave of interest in the Phoenicians came with a much more comprehensive archaeological method. However, most monographs about the Phoenicians carry the legacy of the 19th century to this day, and despite the inclusion of new research and a clear consciousness of the complexity of defining the identity(/ies) of these people, they still follow the same general model and often paint a fragmentary picture divided into basic categories such as religion, art, or funerary practices.[10]

4 Movers 1841; Kenrick 1855; Renan 1864; Clermont-Ganneau 1880; Perrot and Chipiez 1885; Rawlinson 1889.
5 Renan 1864, 3.
6 Rawlinson 1889, 136; Perrot and Chipiez 1885, 1.
7 Rawlinson 1889, 263.
8 Martin 2017, 95.
9 Ciasca 1997, 27; Karageorghis 2004, 86; Niemeyer 1983; Moscati, 1988.
10 See, for example, Krings 1995; Markoe 2000; Fontan and LeMeaux 2007.

Prior to going into further details, let us return to the idea of hybridity. This concept is deeply anchored in the 19th-century Phoenician archaeology and its root in antiquarianism, art history and classics. Simply put, upon encountering material outside archaeological context, the aforementioned scholars were puzzled by their composite nature. They recognised Egyptian, Greek, or Assyrian motifs, but rendered in an unfamiliar and mixed manner.[11] On the other hand, these authors were familiar with the idea of the Phoenicians as portrayed by the classical sources: talented craftsmen, skilful merchants and master seafarers. It therefore made sense to associate these well-manufactured yet strangely hybrid objects found in all four corners of the Mediterranean with this population. Put simply, these scholars perceived the first millennium BCE Mediterranean as a patchwork of separate large cultural entities brought together by the maritime, commercial, and industrial activity of the Phoenicians.

Thus, the idea of Phoenician style was born out of materials found outside contexts and associated with people based on a stereotypical portrayal in secondary sources. Phoenician style was therefore constructed on the basis of hybridity and otherness, from an external (and orientalist) perspective, applying foreign artistic codes to a wide array of material that deserves to be studied as its own entity rather than as an eclectic mixture formed by elements borrowed from 'artistically superior' civilisations. Phoenician identity as it was conceived for a long time was, therefore, a product of style rather than the inverse. The question of Phoenician identity is being reconsidered today (most recently by Quinn 2018), but materials carrying the label 'Phoenician' based on stylistic characteristics continue to be displayed in museums, some of them along with the stereotypical ideas about the Phoenicians mentioned above.[12] In the rest of this paper, I will examine several case studies presenting evidence of material defined on a stylistic basis in academia while at the same time taking into consideration their current situation in museum displays.

Phoenician trademarks, some case studies

Iconography

The concept of hybridity that planted the seed for the fabrication of Phoenician style relied heavily on an iconographic perspective. Some motifs encountered on portable material, such as the famous metal bowls and ivories, but also on more monumental architecture, such as stelae, Astarte thrones, or architectural elements, were quickly associated with the Phoenicians. Many of these symbols such as the sign of Tanit, the bottle idol, or the crescent disk continue to be considered trademarks of this culture to this day.[13] Others such as the winged sphinx and the winged sun disk are now approached with more pragmatism, yet their initial designation as Phoenician has often led to their current places in museums (**Figure 1**). These motifs also make for an excellent illustration of how the idea of a Phoenician style based on hybridity was formed. Sphinxes were known from both Egypt and Assyria, but the way they were depicted on so-called Phoenician material merged an Egyptian style for the sphinx itself and a more Near Eastern one for the way in which the wings were portrayed.[14] This therefore led to their association with the Phoenicians who, according to their description by the classical authors, would have been in an ideal position to adopt characteristics from both civilisations and adapt them to different supports. Often found on the same objects as winged sun disks or crescent disks, winged sphinxes therefore participated in turning these symbols into Phoenician icons.

The Tanit sign, on the other hand, was not initially included in the corpus of Phoenician trademarks, since it is not generally found on the refined types of objects that interested early scholars. I have nonetheless

[11] Rawlinson 1889, 175.
[12] Martin 2017, 22.
[13] Ferjaoui 2007, 144; Wolff *et al.* 2018.
[14] Brown 1992, 9.

Figure 1: *Roman period lintel with a winged sun disc exhibited in the Phoenician gallery at the Louvre. Photo author's own.*

decided to include it in this study because of the significance it takes on in later scholarship where it becomes systematically associated with the Phoenician presence in the Western Mediterranean.[15] However, this sign has recently started to emerge in the East, where it remains much less popular (**Figure 2**).[16] Given its uneven distribution, the extent to which this is a symbol of Phoenician culture is debatable.[17] It undoubtedly takes on a particular significance, especially considering the types of objects on which it most frequently occurs, but it is more likely that this significance is not linked to an identity marker common to all the people we refer to as Phoenicians.

A similar case can be made for the crescent disk, the winged sun disk, and the winged sphinx. While these motifs are encountered on a more varied assemblage of artefacts, their distribution is more confusing than revealing. All three can be encountered far outside the Phoenician cities, which would suggest that they are not exclusively a Phoenician motif. Arguably, some of these objects might have been traded or even commissioned, but this commercial aspect would take away from the primary symbolic power of the iconographical signs, often to add another layer of meaning to them or the objects carrying them.[18] Another argument against the idea that they were Phoenician identity markers is the fact that some (sometimes all) of these motifs are absent from key areas such as Malta, the Levantine coast, or Sardinia. Moreover, the winged sphinx, which has the most widespread distribution, exhibits significant visual differences between the examples from Southern Spain and those from Assyria (especially in the case of the ivories).[19]

The identification of the Phoenicians with symbolic motifs such as the winged sphinx, winged sun disk, crescent disk, and Tanit sign is therefore flimsy and outdated, as demonstrated by their uneven

[15] Moscati 1988, 136.
[16] Bordreuil 1987, 82.
[17] Quinn 2011, 397.
[18] Feldman 2014, 178.
[19] Feldman 2019, 379.

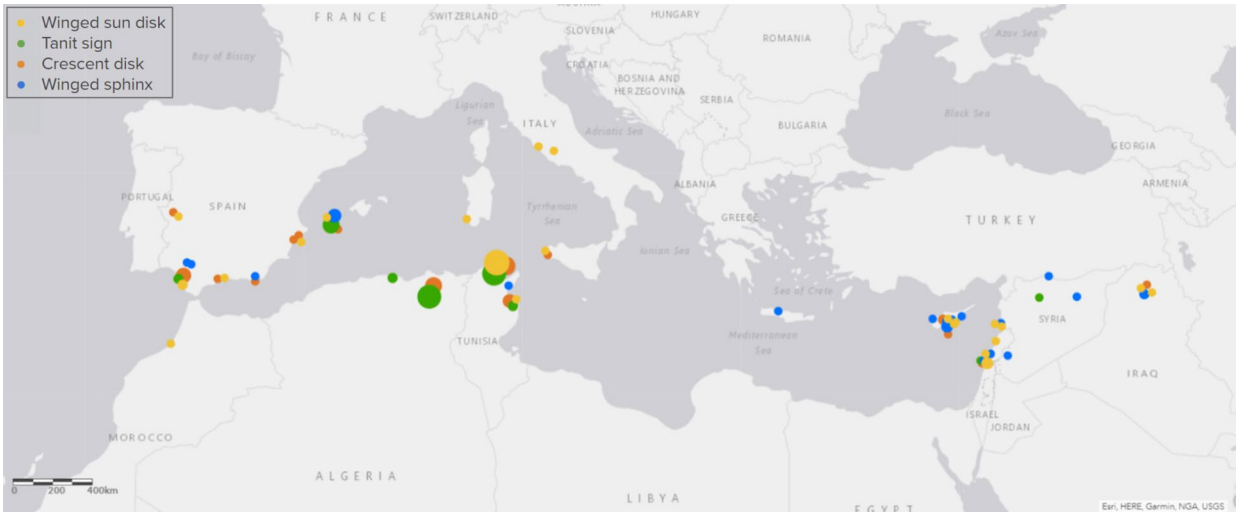

Figure 2: *Distribution map of the Tanit sign, winged sun disk, crescent disk, and winged sphinx. Author's own.*

distribution and the variability of supports they appear on.[20] While it is not excluded that these symbols could have some interpretative significance, they cannot be taken at face value and considered unique Phoenician identity markers simply because they appeared alongside inscriptions or displayed mixed characteristics. I would, therefore, advocate for a re-examination of each symbol in order to gain a better understanding of their individual significance in particular contexts rather than attempting to fabricate an identity based on isolated iconographical cues.

Anthropoid sarcophagi

Phoenician identity has also been ascribed to groups of objects regardless of the presence of the aforementioned iconographic motifs. A particularly interesting example of such an assemblage is the anthropoid sarcophagi, which were found in the Levant, Cyprus, Malta, Sicily, and Andalucia. Their provenance forms a representative corpus of the main Phoenician settlements. None of the anthropoid sarcophagi features any of the symbols discussed in the previous part, as most of them are aniconic. Yet, these artefacts have historically been considered typically Phoenician and are always displayed within the Phoenician sections of museums.[21] Both at the Museo de Cadiz and at the National Museum of Beirut, they are among the highlights of the collection. So far, this all seems consistent and unproblematic. However, the complexity appears once we examine the labelling of these sarcophagi, which almost invariably refers to them as 'of Egyptian style' or 'of Greek style'. Once again, we are faced with the concept of hybridity and the idea that Phoenician art was borrowed and adapted. The association of the word style with foreign cultures is particularly striking here as if to denote the absence of a truly Phoenician style. Yet, this type of sarcophagi is exclusively found at sites associated with the Phoenicians, and although it does derive from Egyptian prototypes and some of the specimens are markedly Hellenised, these objects remain unique in the first millennium Mediterranean.[22] The picture painted by these sarcophagi and their museological interpretations is therefore extremely complicated. On the one hand, it is a group of artefacts that is exclusive to Phoenician sites and invariably associated

[20] The map is based on data extracted from objects on display in museums. It might therefore be a victim of sampling bias based on the fact that some museums with Phoenician material were not included in the dataset (for instance the Carthage museum which was closed for renovation) and that some artefacts might be in storage.

[21] Fontan 2007.

[22] Martin 2017, 43.

Figure 3: *A terra cotta anthropoid sarcophagus at the National Museum of Archaeology of Malta. Photo author's own.*

with this culture, while on the other the focus on hybridity curbs their understanding as a standalone assemblage.

However, the fact that anthropoid sarcophagi are exclusive to the Phoenician world does not necessarily mean that they are representative of the Phoenicians as a whole. They are expensive to manufacture: the most luxurious ones are made from imported marble, but more cost-efficient terracotta specimens are also attested (**Figure 3**). This type of sarcophagus was therefore popular among various segments of society, as long as they had the means to afford it. It would, therefore, be fallacious to consider anthropoid sarcophagi a staple of all Phoenician culture, as they were most probably reserved for a wealthy elite.[23]

Another argument against considering these sarcophagi as emblematic of Phoenician style is their date. They peak between the 6th and 4th centuries BCE, a short couple of centuries given that the Phoenician period spans an entire millennium. It would, therefore, seem more appropriate to consider them a temporary fashion rather than a key component of Phoenician style, fashion being a more fluid concept allowing for more variations than the rigidity imposed by the term style.

[23] Martin 2017, 67.

Figure 4: *The tomb from Chorrera. Photo author's own.*

Looking at general funerary customs all over the Phoenician world, it becomes even more evident that anthropoid sarcophagi cannot be considered representative of the entire Phoenician population. Archaeologists have often relied on funerary practices to define identities.[24] In the case of the Phoenicians, this principle cannot be applied because of the tremendous variability in burials across cities. In some cases such as Achviz and Khalde for instance, inhumation and cremation coexist in the same necropolis and sometimes in the same tomb groups.[25] This diversity is echoed all over the Mediterranean: Malta has evidence for both cremation and inhumation in shaft tombs; inhumation in architectural type sarcophagi is attested along the Levantine coast, cremation is widespread in Tyre, Carthage, and Iberia, however, it occurs alongside a plethora of stelae at Carthage which are less present in Tyre and Iberia, while the latter exhibits cremation burials in alabaster jars, a unique phenomenon attested only in Spain. There is even a tomb from Chorrera featuring an alabaster jar cremation burial encased in a circular stone structure reminiscent of a sarcophagus created for the urn (**Figure 4**). This incredible range in funerary practices therefore strongly revokes the practice of using burials as a means to determine identity.

Despite their unique character and their traditional association with the Phoenicians, anthropoid sarcophagi cannot be taken as a staple of Phoenician style because of their cost of manufacture, their

[24] See, for example, Laneri 2007.

[25] Mura 2016, 104.

relatively short chronology, and the fact that they exist alongside a myriad of other funerary customs. That being said, I am not trying to take away the significance these sarcophagi certainly had for the groups that used them, but the key here is that they only had this representative meaning for a certain group during a limited period rather than for the entire Phoenician population.

A case of consistency? Pottery

The two cases treated above advocate for a heterogeneous picture which could lead to a model detaching itself from the idea of a unified Phoenician identity. Some recent studies (most notably Quinn 2018) have indeed started to argue that the concept of a Phoenician identity is entirely a construct and that the study of Phoenician identity should focus on much smaller entities. However, this approach falls victim to a major flaw: there is evidence for strong parallels in certain categories of material culture. Scarabs, for instance, are attested all over the Mediterranean during the first millennium BCE.[26] Nevertheless, their extremely wide distribution and the well-established fact that they originate in Egypt make it difficult to associate them with the Phoenicians.

Pottery, on the other hand, presents a more significant pattern. Without going into typological details, there is clear evidence for the echoed use of both red-slip and bichrome wares, as well as some key shapes such as mushroom and trefoil lipped jugs and pilgrim flasks, in Phoenician sites from the Levantine coast to the western Mediterranean. Despite some regional variations, the fact that the pottery record is so consistent across Phoenician sites exclusively must point to a common ground. Unlike scarabs, this assemblage is not regularly featured outside the Phoenician world. This restricted distribution is crucial because it indicates that despite the great variability in many aspects of material culture, there is a common thread linking these people together. Moreover, because the pottery is quite recognisable, it can help determine Phoenician presence at a site.

The red slip and bichrome forms form a strong basis for consistency, but they are subject to fluctuations from site to site and region to region. In Cyprus for instance, bichrome wares predate the period of Phoenician establishment,[27] and red-slip ones are only attested starting then.[28] The tradition of bichrome pottery in Cyprus testifies to a long history of exchange between the island and the Levantine coast. In other cases, such as southern Spain, the red-slip wares are produced in the tradition of the Eastern Phoenician cities but in local clay.[29] In Carthage, the local element is reflected in some variations in the shapes themselves but still in red-slip. The fact that pottery varies locally but keeps following the same general direction is more significant than it seems. Pottery was not imported from Phoenicia but produced locally which indicates the production of this type of pottery by Phoenician settlers, or at least an influence strong enough to affect local production.

When it comes to the treatment of pottery in museums, it is also surprisingly uniform. Almost all museums included in the dataset display the pottery in a similar manner.[30] Apart from the Louvre, where it is distributed in showcases based on geographical findspots, and the British Museum which groups all the Phoenician material in the same showcase, the museums I studied tend to regroup the pottery and display it in one showcase. Different museums have variable frequencies of the use of the

[26] Boschloos 2018, 123.
[27] Schreiber 2003, 307.
[28] Bikai 1987; Karageorghis 2005, 34.
[29] Whitaker 1974, 60.
[30] At the time of writing, a total of 14 museums: the Louvre, British Museum, Beirut National Museum, American University of Beirut Archaeological Museum, Cyprus Museum, Limassol District Archaeological Museum, Idalion Museum, Bardo Museum, National Museum of Archaeology of Malta, Museo Arqueológico Nacional, Museo de Málaga, Museo de Sevilla, Museo de Cádiz, and Museo de Huelva.

term Phoenician itself; some prefer to use a different designation altogether for the Phoenician period. This is the case of the Museo de Huelva, which speaks of an Orientalizing period, and of the National Museum of Beirut which refers to the traditional three ages instead of dividing its displays based on cultural terms. Nevertheless, even the museums that restrict their use of the term Phoenician label the pottery as such.

There is nothing ground-breaking in the fact that pottery is relatively consistent across Phoenician sites. In fact, the uniformity of displaying Phoenician pottery shows that this category of objects is incontestably a common thread linking cities but also museums across the Mediterranean. What becomes an issue is this segregation of the pottery, which is often treated as an isolated category, reserved for typological specialists. This is one of the reasons why pottery finds itself confined to supposedly less interesting showcases while more spectacular objects take centre stage. In Phoenician archaeology, this has been problematic because such objects have also been at the core of studies about Phoenician style and by extension identity.[31] It is actually quite ironic that in this case, it is the pottery, which is often associated with culture-historical typologies of ethnicity and identity that is consistent.[32] I am not arguing for a definition of Phoenician style or identity based on pottery, but that materials need to be studied in conjunction rather than grouped into categories that were not necessarily relevant in Antiquity. On the other hand, pottery demonstrates that overly scrutinous art-historical criteria might not be the most judicious way to track identities.

Glass

Ever since the classical authors, glass has always been associated with the Phoenicians.[33] This pairing can be found in the earliest archaeological monographs about the Phoenicians of the 19th century, but it is also echoed in recent handbooks and exhibitions.[34] This phenomenon is reflected in museums as well. For example, both the British Museum and the American University of Beirut Archaeological Museum present glass as a typical Phoenician production. However, the nature of this association is quite different from the one linked to the visual symbols discussed above. Glass is not treated as a staple of Phoenician style, but rather as a typical example of Phoenician craftsmanship. In fact, glass objects, especially in museums, are seldom discussed for their aesthetic qualities, and they are not regrouped stylistically or typologically. Yet, the association of glass with the Phoenicians remains one of the most powerful. This is likely due to the credit the classical authors gave the Phoenicians for the development of this technology. Glass is attested much earlier than the first millennium, but the legacy of the classical sources has played a large part in making it an emblem of the Phoenicians.[35]

Glass is a unique case within the corpus of material considered typically Phoenician. As we have just seen, it is associated with this culture more from a technological aspect than a stylistic one, which brings it close to the way the pottery is treated. However, the quantities of pottery recovered from Phoenician sites surpass those of glass by an enormous margin, which could explain why pottery is sometimes taken for granted. As glass is a much rarer material, it can be safe to say it was more prized, bordering on the category of luxury goods. The content of glass artefacts must also have been more expensive than that of most ceramics. They most likely contained perfumes and unguents, another argument for the fact that these were luxury goods.[36] However, they are not usually mentioned along with other such artefacts. This could be explained by the fact that glass objects adhere to a more coherent distribution:

31 Martin 2017, 95.
32 Ucko 2003, xiv.
33 Moscati 1988, 97.
34 See Kenrick 1855; Perrot and Chipiez 1885; Rawlinson 1889; Krings 1995; Fontan and LeMeaux 2007; Aruz *et al.* 2014.
35 Moscati 1988, 97.
36 Barthelemy 1995, 514.

they are mainly found at Phoenician sites, and therefore they do not need to be stylistically proven to be Phoenician. Moreover, the fact that they are so clearly associated with them in scholarship (whereas the link to metal bowls, for instance, is based on one line from the Iliad), also favours an easier association between glass and the Phoenicians.[37]

Although this pairing is based on often unreliable sources, the treatment of glass artefacts both by archaeologists and by museums tells us one thing: that we do not need a stylistic approach to relate materials to people. The association of glass with the Phoenicians might be amplified considering that they were not the only people making and using glass in the first millennium Mediterranean, but it shows that we could try focusing on technological or functional aspects to reach a more comprehensive understanding.

Tridacnas and the Orientalizing terminology

Another concern with using style as a marker of identity relates to boundaries. Given that a lot of the material that has been called Phoenician on a stylistic basis is non-contextual, it can be difficult to assess the degree of authenticity, foreign influences, and local imitations. This case is well illustrated by the tridacna shells found around the Mediterranean. One of these was used as the cover of the catalogue of one of the latest exhibitions of the Phoenicians: *La Méditerranée des Phéniciens de Tyr à Carthage* (Paris, 2007). This shell belongs to the collection of the British Museum, where it is not currently on display. Because of its provenance (Vulci), it is part of the Department of Greece and Rome, and the online catalogue labels it as Phoenician/Etruscan/Eastern Mediterranean. The fact that such an object was considered a highlight of an important Phoenician exhibition when its origin is so uncertain is telling. Moreover, out of twenty museums, I only encountered one fragment of a tridacna shell on display within a Phoenician showcase: at the Louvre, from unknown provenance. Stucky has studied this object category and found that based on their distribution, it is more likely that they originate from the Southern Levant.[38] Tridacna shells are relatively evenly spread out in the Eastern Mediterranean, but there are almost none from the central Levantine coast, and most of the unworked specimens are found around the Red Sea. It is therefore quite puzzling that the same volume which published this study picked this object as its feature image. In this case, the aesthetic qualities of the engraved tridacna shell might have taken precedence over its significance in the Phoenician context.

However, objects such as tridacna shells are still relevant to discussions about Phoenician style because of their composite nature and the part they played in defining key concepts of the first millennium Mediterranean such as Orientalizing. The controversy surrounding this term has already been addressed by many scholars, notably Riva and Vella.[39] The outcome of their volume, based on several case studies, shows that the term is both ambiguous and multifaceted, and that its uses are extremely variable. Interestingly, the term Phoenician is faced with similar problems because of the way it has been defined, constructed, and manipulated by different groups. Orientalizing is perceived as a less controversial term because it does not hold ethnic connotations, and was therefore used to label material displaying generally Eastern attributes without having to commit to a specific origin.[40] This can be observed in jewellery, a category of material that tends to be less rigorously sorted into typological categories than others. Hence, jewellery displaying motifs such as palmettes or rosettes found in the central or western Mediterranean is often called orientalizing because this style is challenging to define and its precise origin difficult to pinpoint. The complexity of identifying jewellery based on style reflected by the use of the terms oriental or orientalizing is linked to spatial and chronological overlaps in this category of

[37] Feldman 2019, 372.
[38] Stucky 2007, 218.
[39] See Riva and Vella 2006.
[40] Purcell 2006, 22.

objects, in addition to the heredity factor which keeps certain pieces in use for generations. Despite its shortfalls, the term oriental has therefore been preferred to Phoenician in some cases where the composite nature of artefacts was too strong to claim a purely Phoenician origin.

In some museums, the term orientalizing is not solely restricted to artefacts or assemblages, but it is used as a periodic designation. This is the case for example of the Museo de Huelva, where it is a way to foster inclusivity: speaking of a Phoenician period in the Western Mediterranean can lead to a narrative excluding the locals and the interactions they had with the Phoenicians.[41] A major shortfall of this approach, however, is the ambiguity generated by the term. It can indeed be quite misleading that orientalizing can designate a period or a style, and that it takes on a different meaning in different contexts. Moreover, Orientalizing cannot be considered a viable alternative to Phoenician for an obvious reason: how then would we refer to the Phoenicians in the Eastern Mediterranean? Restricting the labelling to Orientalizing in the West and Phoenician in the East would only deepen the gap already existing in Phoenician scholarship between East and West while ignoring the consistency discussed above.

On the other hand, the word orientalizing is also quite lazy and superficial: it attributes eastern origins to objects or trends without going into detail. As a consequence, depths of meaning are erased from the histories of objects. For example, many of the artefacts and motifs considered Orientalizing or Phoenician have roots deeply anchored in Egypt. This is the case of scarabs, the *wedjat*, the lotus flower and palmette, the smiting god, and Hathoric figures among others.[42] When found around the Mediterranean and labelled Orientalizing or Phoenician, these objects lose their Egyptian connection. The word Orientalizing, because it is inclusive and takes into account the different interactions in the Eastern Mediterranean, is isolating because it is not precise enough. The word Phoenician has the opposite problem: being too precise.

Discussion

I tackled this paper with the intention of understanding how Phoenician style was formed and how it, in turn, informed the idea of Phoenician identity. The case studies discussed show an extremely intricate picture, supporting the fact that identity and culture are not best defined based on stylistic grounds. In order to understand the paradigm of the first millennium Mediterranean, we should go back a few hundred years. Finds from the Late Bronze Age point to a world system composed of many entangled networks communicating between each other without the vehicle of a centralised core.[43] This translates to something referred to as the Late Bronze Age international style: usually luxury objects catered for elites around the (eastern) Mediterranean.[44] After the 1200 BCE crisis, archaeologists and museums seem to forget about this connectivity and regroup materials in cultural bubbles such as Etruscan, Phoenician, or Oriental. This is largely due to the legacy of classics since the graeco-roman sources treat the people of the first millennium Mediterranean as distinct cultural groups whereas they do not address the distant Late Bronze Age. However, recent studies showing clear continuity in certain areas, especially the Phoenician coast, call for a revised approach.[45] It was previously believed that a dark age took over the entire Eastern Mediterranean, leaving contacts cut and populations isolated, but it now seems more likely that despite economic decline, some cities continued to flourish and exchanges were still taking place during the early Iron Age.[46] This theory is supported by evidence from the Western

41 E. Aguilera, pers. comm. May 2019.
42 Fletcher 2004, 51.
43 Hodos 2009, 224.
44 Manning and Hulin 2008; Feldman 2002; Knapp 1998; Sherratt and Sherratt 1991.
45 Aruz *et al.* 2014, 2; Tubb 2014, 132; Fontan and LeMeaux 2007, 18.
46 Sommer 2007, 100.

Mediterranean attesting contacts between eastern populations and locals. I, therefore, advocate for a more integrated approach when it comes to the system of the first millennium Mediterranean, and that what we refer to as Phoenician style was probably a phenomenon comparable to the Late Bronze Age international style.

In fact, evidence shows that the material defined as Phoenician based on style tends to be unfamiliar material from unknown contexts. From tridacna shells to metal bowls to ivories, artefacts which have carried with them the label of Phoenician based on stylistic criteria since the 19th century are rare and expensive. They are often associated with elite classes and seldom recovered from the Phoenician cities, which points to the fact that they were probably catered to a certain social group in different regions.[47] Moreover, this type of luxury goods is not typically associated with the Phoenicians in museums, indicating that the stylistic approach does not take prevalence there.

What is paradoxically both natural and striking is the fact that the majority of objects individually labelled as Phoenician in museums are either from known contexts or they are assemblages exhibiting consistency like the pottery. The stylistic approach is not the prevalent one because of its hypothetical nature which is contradictory to most museums' missions of displaying material with clear and to the point interpretation.[48]

Museums may have the key for archaeologists to begin thinking about the material in an innovative manner rather than grouping it in taxonomic categories that were probably irrelevant in the past. Instead of focusing on iconographic and stylistic markers, technology might be another telling factor when it comes to identifying different groups. Going back to the very basis of style, and considering what makes distinct styles in the first place, it might be worth looking at technology as the first factor. Starting from the process of conception and manufacture of objects instead of the final product would foster an analysis based on artefact biographies, more suited to the context of the Mediterranean in the first millennium. Because of the connectivity and exchanges taking place, artefacts were bound to take on different meanings from the moment they were conceived until their deposition, and even afterwards in their recovery leading to their current places in museums. A contextual approach focusing on artefacts and their histories as opposed to groups of similar looking but isolated artefacts is therefore required at this point.

Separating Phoenician artefacts into luxury and everyday goods, less spectacular material only complicates the picture and impedes our understanding of a global narrative. In addition to the contextual understanding of each artefact, the construction of a sensible narrative would be favoured by an integrated approach, considering the relationships and interactions from object to object, object to people, and people to people. There is a more complex phenomenon happening than can be analysed in isolation. Using a stylistic basis to define material has made of the word Phoenician an identity of objects rather than an identity of people.[49] This highlights the importance of moving to a contextual approach in order to study Phoenician material more successfully, but perhaps the real issue lies in our obsession with identity. Whether or not the objects considered in this paper were manufactured by the Phoenicians and whether or not they are representative of Phoenician identity might not be relevant questions anymore. The term Phoenician is too deeply anchored in the current archaeological world, and it is part of the history of this material anyway, making it difficult to get rid of. However, instead of starting by looking *for* the Phoenicians, maybe we should simply go back to looking *at* the artefacts because after all style is all a matter of perspective.

47 Martin 2017, 96.
48 O'Neil 2004, 192
49 Riva and Vella 2006, 13.

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Come, Tell Me Where You Live! Perceptions of Local Antiquity and Cultural Awareness in the Region of Koya

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Abstract

The conservation of cultural heritage and cultural awareness are mutually entangled in the processes of documenting the cultural landscape of a region. Recent archaeological investigations conducted by the Archaeological Survey of Koisanjaq/Koya Project (Kurdish Region of Iraq) between 2015 and 2018 have highlighted the multi-cultural character of this region, often treated as a peripheral historical space. After a short overview of the project, this paper discusses the methodology applied by the project, re-examined against the background of previous archaeological and anthropologic research in this area, and presents case studies for new directions in recording the cultural heritage.

Keywords

Surface Archaeology, Anthropology, Cultural Heritage, Remote Sensing, Iraq

Introduction

The conservation of cultural heritage and development of cultural awareness are both crucial and widely debated topics in countries experiencing the effects of conflicts, particularly those which have also suffered from long political and/or cultural isolation. Considering that such processes are closely linked to a systematic recording, regions lacking updated assessments require the development of specific, conscious policies designed to provide an efficient and clearly defined documentation. The Kurdish Region of Iraq, which had until recently experienced a long period of relative cultural isolation, is currently undergoing intense field investigations that are greatly contributing to our knowledge about the cultural heritage landscape of Northern Iraq. However, the hilly and mountainous nature of most part of this region, combined with further elements of the current socio-economic state of the region, pose numerous challenges for scientific site reconnaissance methods.

This paper aims towards a discussion of methods of site reconnaissance in use by the ongoing Archaeological Survey of Koisanjaq/Koya (ASK) Project (**Figure 1**). Re-examined against the framework of previous archaeological and anthropologic research in the Kurdish Region of Iraq, the discussion is meant to develop some perspectives on the discourse of cultural awareness among the local communities.

The pioneers: archaeological and anthropologic fieldwork

The first, intense wave of pioneer investigations in the Transtigrine region, conducted in the 19th century CE, was mainly dedicated to the discovery of the Assyrian capitals.[1] Subsequent research projects, mostly conducted between the late 1920s and 60s, remained few and were predominantly brief (**Table 1**).

[1] Larsen 1996.

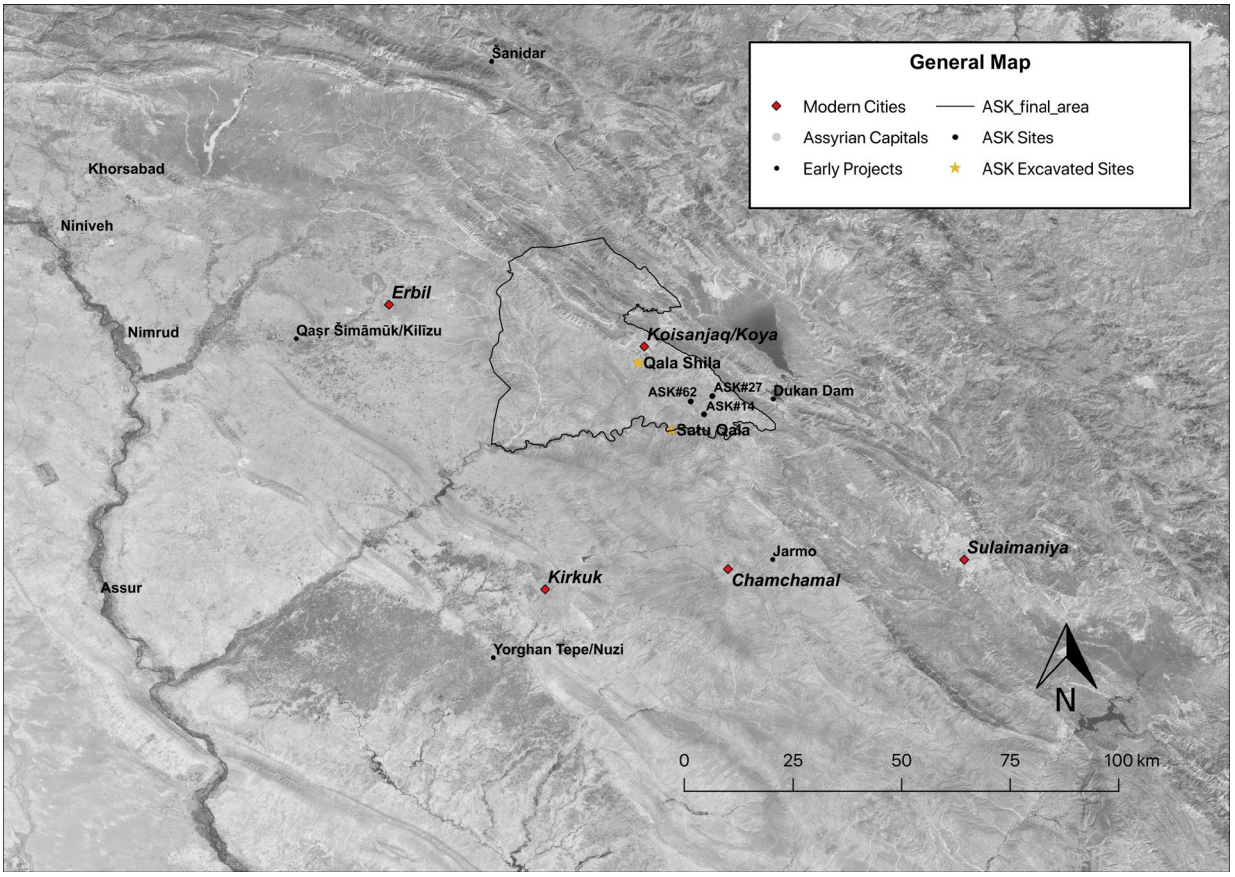

Figure 1: *General Map of Northern Mesopotamia and mentioned sites. Basemap Esri Satellite Imagery. ©ASK Project.*

Year	Project	District	Publication
1853	Tell Awaynah (H. Layard)	Erbil	Anastasio 1995, 196 (with previous bibliography)
	Between the World Wars		
1928	Zarzi (American School of Prehistoric Research/ The Percy Sladen Memorial Fund)	Sulaimaniya	Garrod 1930
1933	Qasr Shamamok/Kilizu (Missione Archeologica Italiana in Mesopotamia)	Erbil	Furlani 1934 Furlani 1935 Anastasio 2007 Anastasio 2008
1931-37	Tepe Gawra (The University Museum of the University of Pennsylvania)	Nimrud	Anastasio 1995, 202-203
1933	Jerwan (Oriental Institute, University of Chicago)	Dohuk	Anastasio 1995, 209
1934	Baradust (Peabody Museum)	Erbil	Safar 1950

Table 1: *Archaeological Projects conducted in the districts of Erbil, Dohuk, and Sulaimaniya until 2000.*

Projects in 1940s and 1950s			
1948	Tell Ibrahim Bays (Iraqi Department of Antiquities)	Erbil	al-Amin and Mallowan 1950
1948	Tell Aqrah (Iraqi Department of Antiquities)	Erbil	al-Amin and Mallowan 1950
1948	Kawala Kandal (Iraqi Department of Antiquities)	Erbil	al-Amin and Mallowan 1950
1951-58	Shanidar Cave (Smithsonian Institution/Columbia University)	Erbil	Solecki 1971
1948-55	Iraq-Jarmo Project (Oriental Institute, University of Chicago): Jarmo Kaywaniyan (Erbil) Karim Shahir Gird-i Banahilk Tell Barak Barda Balka Gird-i Chay Palegawrah Spilik	Sulaimaniya	Braidwood and Howe 1960 Braidwood *et al.* (eds) 1983
Dukan Dam Excavation Projects (1952-1960)			
1952-53	Dukan Cave	Sulaimaniya	Anastasio 1995, 201
1956-58	Kamarian	Sulaimaniya	Anastasio 1995, 201
1956-58	Basmusian (State Board of Antiquities and Heritage, Iraq)	Sulaimaniya	Abu As-Soof 1970
1956-58	Tell ed-Dem (State Board of Antiquities and Heritage, Iraq)	Sulaimaniya	Abu As-Soof 1970
1957-58	Shemshara (University of Copenhagen)	Sulaimaniya	Ingholt 1957 Anastasio 1995
Projects in 1960s and 1970s			
End of 1950s	Tell Begum (State Board of Antiquities and Heritage, Iraq)	Sulaimaniya	Hijara 1997
1959-60	Shamlu (State Board of Antiquities and Heritage, Iraq)	Sulaimaniya	al-Janabi 1961
1960-61	Bakr Awa (State Board of Antiquities and Heritage, Iraq)	Sulaimaniya	al-Husaini 1962
1966-68	Qalinji Agha (State Board of Antiquities and Heritage, Iraq)	Erbil	Abu As-Soof 1966 Abu As-Soof and es-Siwwani 1967 Abu As-Soof 1969 Hijara 1970; 1972
1971	Gird-i Resh (State Board of Antiquities and Heritage, Iraq)	Sulaimaniya	Hijara 1975; 1977
1973-78	Yasin Tepe (State Board of Antiquities and Heritage, Iraq)	Sulaimaniya	Anastasio 1995, 227
1987	Qala Shila (Directorate of Antiquities, Sulaimaniya)	Erbil	Kawes 2008

Table 1 cont.: *Archaeological Projects conducted in the districts of Erbil, Dohuk, and Sulaimaniya until 2000.*

The lack of systematic archaeological research in specific areas of North Iraq, largely due to the upheavals of recent history had until recently left a large part of this region as a *terra incognita*. Having been scientifically neglected for years, this area, has, since 2009, been undergoing a period of strong cultural regeneration. Particularly in the Kurdistan Region of Iraq, covering the modern governorates of Dohuk, Erbil, Sulaimaniya, and Halabja and recognized as a regional government by the Iraqi federal constitution of 2005, fieldwork conducted in the past ten years by a large number of international teams, in cooperation with local institutions, has considerably changed our understanding of the geo-political processes in antiquity.[2]

This fortunate phase of archaeological research in Iraqi Kurdistan occurs almost a century after the first pioneering investigations in the area. While the fieldwork of the past century had followed archaeological trends in incorporating methods borrowed from the natural sciences, it had also fostered a keen interest in the local culture and the traditions of the country. In some cases, archaeologists during their fieldwork had begun to gather rich documentation on the daily life of the region, bolstered by insights into the local traditions - the recent emphasis on social media can easily be seen as an outgrowth of these same developments. It can be argued that much of this work relegated ethnographic interests to a secondary position, while anticipating the tastes of a western audience for exotic and adventurous stories. This pattern is neatly reflected in published memoirs and popular excavation accounts. In her book 'Digging Beyond the Tigris', Linda Braidwood described the everyday life of the team during fieldwork at Jarmo. The work focuses on the trip itself, the logistics, and the work team, but also provides a few glimpses of local cultures, limited to working interactions with locals, for example visits to the Bazar of Sulaimaniya or the wedding of a co-worker.[3]

Kurdistan proved to be particularly attractive for this sort of travel accounts. Its characteristic social hybridity, composed of numerous multiethnic and multireligious communities as well as the combination of tribal and non-tribal organizations provided a large potentiality for ethnographic investigations. The social peculiarities of the Kurdish communities soon captured the attention of anthropologists as well. Both Edmund Leach and Frederik Barth described the socio-political organizations of different areas of Iraqi-Kurdistan. Leach's fieldwork, conducted at the end of 1930s, focused on the area of Rawanduz, on the Upper Zab, while Barth, who spent several months with the Jarmo expedition documenting social organization and the basics of the local economy, investigated the area of Chamchamal south of the Lower Zab at the beginning of 1950s.[4] The latter begins a short paper on his work with the statement: 'the archaeologist who is familiar with the practices of modern rural people in the area where he is excavating is therefore at an advantage when it comes to interpreting his findings'. The statement succinctly expresses the interdisciplinary environment of the expedition in seeking to integrate stratigraphic and typological investigations with data from both the natural sciences and anthropology.[5]

A similar intellectual background, corresponding to the interests of ethnoarchaeology in 'village studies', guided the work of Ralph Solecki.[6] Working in Shanidar, he combined archaeological fieldwork with anthropological investigations on the function of the caves as seasonal shelters among the modern

[2] For a short overview on the federalization process of Iraq with particular focus on the case of the Kurdish region, see Kelly 2010, 726-731. For an overview of ongoing projects, see Kopanias and MacGinnes 2016.

[3] Braidwood 1953.

[4] Leach 1940; Barth 1953.

[5] Barth 1952.

[6] This discipline, as part of ethnoarchaeological studies, consists of investigations of physical shape, social structures, and economic processes of traditional villages as models for early societies. Pioneering have been the studies of Watson (1979), Kramer (1982), and later, Horne (1994) in Iran. See a wider overview in Verhoeven 2009.

inhabitants of the area and systematically recorded social relations, material culture, pastoral activities, and short-range mobility.[7]

Furthermore, Solecki, recognizing the unique wealth of Kurdish musical traditions, collected a selection of audio recordings of folk songs, including a short description of the different genres, the provenience, and the content of each song.[8] Aside from their crucial role in linguistic studies, audio archives for the oral tradition of this area, including songs of varied contents on topic as diverse as love, war, and politics, represent an unconventional source of insights into several aspects of Kurdish culture, including literature, land use, and history.[9] This large, variegated repertoire reflects several regional, ethnic, and religious nuances and can be considered a rich depository of alternative historiographic traditions. To these oral sources we can add another body of work rarely utilized by archaeologists outside of the country: in this same period, Iraqi scholars had themselves engaged in intensive field-research and the collection of data. It is this prolific historiography, reflecting upon the land and its own traditions, that remains, until now, the reference point of local education.[10]

The renaissance: archaeology, satellite imagery, and robotics

The cultural renaissance of Iraqi Kurdistan can readily be read in the establishment and development of countless cultural institutions, including universities, art and language academies, and cultural heritage institutes. The archaeological projects, including surveys and excavations, form only a small part of this renewal.[11] The developing technologies in use in field archaeology, including the application of remote sensing from satellite imagery, unmanned aerial vehicle (UAV) imagery recording, and developments of 3D models of monuments and sites, have greatly contributed to constructing an evolving assessment of the archaeological landscape.

Excavations at Satu Qala, identified as the ancient Middle Assyrian provincial capital of Idu, conducted between 2010 and 2013 were one of the earliest international projects in the district of Koisanjaq/Koya, located southeast of Erbil, as well in the whole Kurdish Region of Iraq. The fieldwork revealed unexpected political developments in the region at the turn from the 2nd to the 1st millennium BCE, which have in turn opened a number of research questions and underscored the need for wider regional surface investigations.[12] As the excavations also represent, so far, the only archaeological excavations in this region, the district of Koya has largely remained an archaeologically unexplored space (**Figure 1**). A regional assessment is all the more pressing since the economic development of the region has begun to impinge directly on the sites recorded there. The start of the Archaeological Survey of Koi Sanjaq/Koya (ASK) Project has thus provided a renewed opportunity to develop an adequate research methodology to address this need.

[7] Solecki 1979.

[8] The song collection has been published initially on vinyl record (see Solecki 1955), recently it has been made available on digital support by the Smithsonian Institution (available at: https://folkways.si.edu/kurdish-folk-songs-and-dances/islamica-world/music/album/smithsonian).

[9] See, for example, the work of MacKenzie (1961; 1962) on Kurdish dialects. Numerous aspects of Kurdish oral culture are treated in Allison 2010.

[10] See, for example, the monumental history of Baqir 1955, or, more specifically for the history of Koya, Huwezi 1972; 1984.

[11] Kurpiewska-Korbut 2018, 114-119; Kopanias *et al.* 2015; Kopanias and MacGinnis 2016.

[12] See Pappi 2016; 2018.

The Archaeological Survey of Koi Sanjaq/Koya (ASK) Project

A multi-disciplinary initiative

The Archaeological Survey of Koi Sanjaq/Koya (ASK) Project, begun in 2016, has the main aim to provide an updated archaeological assessment of the region and to investigate the developing settlement patterns in a diachronic perspective.[13] The fieldwork is conceived as a multi-disciplinary project, including surface and stratigraphic investigations, meant to explore the developing cultural landscape of a region which has been, so far, only partially recorded by the Atlas of Archaeological Sites of Iraq in 1970s.[14]

The regional survey has so far recorded over 90 archaeological sites of different sizes, including archaeological mounds and hill- and flat-sites. The survey is also documenting other topographic or architectural features, including caravanserais, fortifications, and local shrines, as well as irrigation infrastructures such as springs, wells, underground irrigation systems (*karez* or *qanāt*), and natural features considered of cultural interest. All these features have been digitally mapped into a geo-database. Surface materials have been systematically collected and analyzed according to their find spots.[15]

The ongoing investigations, based on sampled micro-regions, revealed a site density of 0.3 sites/Km^2. This value, indicating a diachronically good level of urbanization of the area, is comparable to those of other regions of Northern Mesopotamia.[16] Preliminary examination of the surface ceramic materials of the sampled areas indicates an expanding urbanization and land-use from the end of the 3rd millennium BCE to the Middle and Neo-Assyrian Periods. Though the record reveals a slight decrease in the Post-Assyrian and Hellenistic periods, the area also underwent a process of re-urbanization from the Parthian period onwards (**Figure 2: 1**).[17]

Comparable materials for regional dating are so far available only from the excavations at Satu Qala. The survey will thus be paired with stratigraphic investigations at the site of Qala Shila, begun with a pilot-season in 2018, which are intended to correct the chronologic indeterminacy of almost 40% of the surface materials collected during the survey. Both the spatial analysis and the data gained by the survey fieldwork indicate Qala Shila as a prominent land marker of the region, which served as a nodal point linking this region with the Lower Zab in the south, the plain of Erbil in the west, and the passes towards the Raniya Plain to the east. The site (**Figure 3**), which consists of twin mounds, is surrounded by a lower town and seems to have played a particularly central role in the Middle and Late Bronze Ages. The location, size, and richness of surface materials, which range from the Neolithic to the Early Islamic Period, make Qala Shila the most promising site where a complete, stratified sequence can be gained and from which a ceramic chronology can be further developed for the whole region.[18]

Remote sensing and field interviews

The pre-fieldwork analysis of imagery was based on declassified CORONA satellite imagery taken between 1968 and 1970, before the urban growth and intensive, mechanized agriculture which radically altered

[13] The project has been conducted since 2015 under the direction of the author with the endorsement of the University of Innsbruck (Austria) and the Freie Universtät Berlin (Germany), in cooperation with the General Directorate of Antiquities of the Kurdish Regional Government of Iraq and the Koya University.

[14] Directorate General of Antiquities 1979.

[15] Pappi *et al.* in preparation.

[16] Ur *et al.* 2013, 111-112

[17] Pappi *et al.* in preparation.

[18] Pappi in preparation.

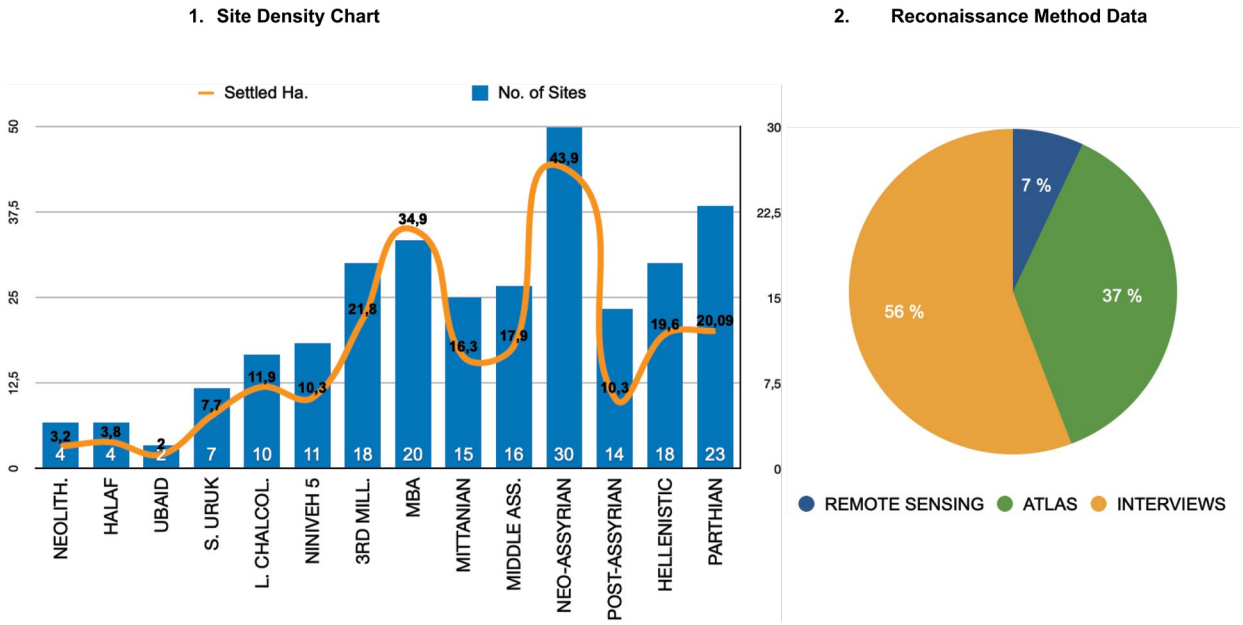

Figure 2: *1. Archaeological Survey of Koisanjaq/Koya (ASK) Project, diachronic overview of regional site density. 2. Archaeological Survey of Koisanjaq/Koya (ASK) Project, reconnaissance method data. ©ASK Project.*

the archaeological landscape. This could be compared with the data gained from the panchromatic OrbView 3, taken between 2003 and 2007, and the available multispectral commercial imagery. Together, these supply the main dataset for remote sensing analysis. In a first stage, the integration of the existing data with those gained by the analysis of satellite imagery suggested a large number of potential archaeological sites. The analysis has also led to a number of false positives, as the physical morphology of the region's hilly plains prevents a clear distinction of natural and anthropogenic features based on satellite imagery alone.[19] Both the natural morphology of the area and the developing cultural landscape have thus given impulse to integrating systematic field interviews into the fieldwork methodology. A set of questions designed to ascertain sites of cultural interest and developments of the cultural landscape within the past years was submitted with the support of the local authorities to specific members of the local communities who might have preserved local memories of individual villages. This combined methodology, to be improved in the coming seasons, had a positive impact on the results of the reconnaissance. The rate of newly discovered archaeological sites on a sampled area measuring *c.* 150 Km^2 (**Figure 2: 2**) increased by about 40%.

A preliminary assessment of a developing cultural landscape

Fieldwork conducted between 2016 and 2018 has so far suggested a settlement pattern consisting of few archaeological multiphase-mounds of several sizes and a large number of medium- to small-sized hill-sites, most of which measure less than 5 hectares, located on slopes or on flat tops.

A preliminary assessment of the data has also revealed how the extending urbanization and the developing local economy have left human footprints in the landscape. The historical developments of the recent past, including a greater imprint related to the Anfal campaigns conducted by the Iraqi army at the end of 1980s, had a dramatic impact on the socio-economic landscape of the area.[20]

[19] Kolinski 2016.

[20] Human Rights Watch 1993.

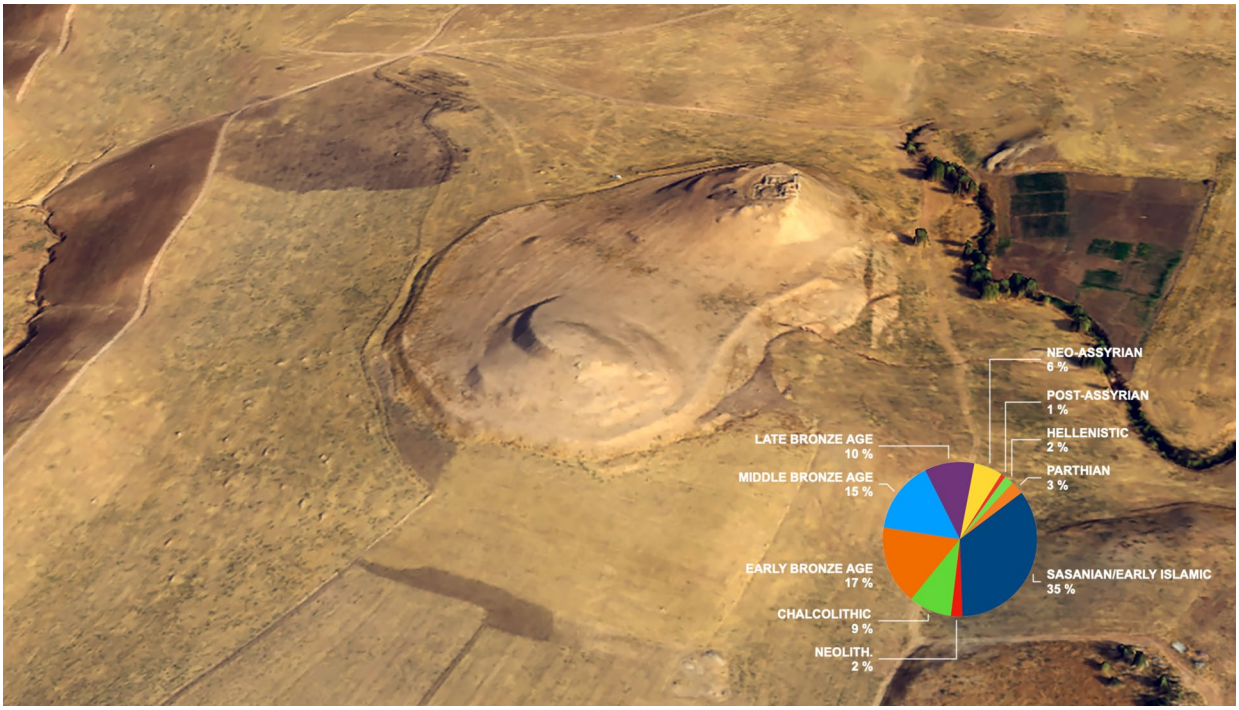

Figure 3: *Qala Shila, ASK #7, 3D model based on UAV record taken in 2018 and diachronic overview chart of the surface ceramic materials. ©ASK Project.*

Evidence of such developments in the cultural landscape of the region have been systematically recorded since the beginning of the project. Three case-studies (**Figure 1**) provide three different examples of developments of the socio-economic landscape in the recent past related to (1) expanding urbanization, (2) the exploitation of natural resources, and (3) regional demographic processes: (1) Satu Qala (ASK#39), (2) Gird-i Quchak (ASK#27), and (3) Gird-i Chragh (ASK#62). The analysis of each has greatly benefited from the support of oral narratives.

1. The monitoring and systematic recording of the site of Satu Qala (ASK#39), conducted since 2010, reveals how the expansion of the modern settlement, including substitution of mud-brick with concrete architecture, in combination with intense land-use, including mechanized agriculture and intensive animal farming, have gradually obscured surface features indicative of earlier settlements. The CORONA satellite images taken at the end of 1960s (i.e., Missions KH4A 1039, KH4B B, 1107, 1110) show a modern settlement largely confined to the archaeological mound. The images also reveal surface chromatic anomalies indicative of past settlement in the area surrounding the archaeological mound (**Figure 4: 1**). In contrast, the OrbView 3 satellite imagery, taken in 2005 and 2006, shows how the hastening socio-economic regeneration in the Kurdistan Region of Iraq between 2006 and 2013 has changed aspects of rural centers of the area (**Figure 4: 2**) by substituting the traditional mud-brick houses with concrete buildings (**Figure 4: 3**). The socio-economic developments reflected in the urban texture of the village find an historical voice in a number of interviews with senior members of the community of Satu Qala conducted during the excavation fieldwork in 2011.[21] Finally, as documented by the UAV documentation taken in 2018, the intensive construction of infrastructures for fisheries developed by local authorities

[21] The project, including a number of audio-video interviews with specific members of the local community, to explore the economic processes and the social developments of the recent past, has been conceived and conducted by Dr Kozad M. Ahmed (University of Sulaimaniya). I owe to him and to the whole community of Satu Qala my gratitude for sharing ideas and valuable materials on the oral history of the site.

Figure 4: *1. Satu Qala, declassified satellite imagery Corona, taken in 1967 (KH4A, Mission 1039); 2. Satu Qala, commercial satellite imagery OrbView 3, taken in 2005 and 2006; 3. Satu Qala, basemap satellite imagery OrbView 3, mapping based on UAV Recordings taken in 2018: traditional mud-brick village, in brown, concrete modern houses built after 2010, in beige, fish ponds built in 2014, in yellow. ©ASK Project.*

between 2013 and 2014 now precludes extensive investigations in many areas of the potential lower city of the site (**Figure 4: 3**).

2. The case of Gird-i Quchak (ASK#27) shows how smaller settlements in particular, which so far represent most of the recorded sites of the research area, are gradually disappearing under the developing economic infrastructures. This site, only one of several examples in the area, has been severely harmed by the combination of mechanized agriculture and by industrial systems for the extraction of natural gas (**Figure 5**). The Corona imagery of the site (**Figure 5: 1**), which was already listed in the Atlas of the Archaeological Sites of Iraq, indicates a well-defined low mound and blurred evidence of a limited surrounding settlement. Though the modern industrial system has been located just next to the archaeological site (**Figure 5: 2**), excavations within the area of the gas field yielded painted ceramic materials. These indicate that the extent of the site was not limited to the low mound. Fieldwork conducted in 2016 and subsequent investigations conducted within the area of the industrial settlement revealed that the archaeological site was much larger than the evidence highlighted by the remote sensing.[22]
3. The town of Ashti (ASK#14) became a symbol of the socio-economic regeneration in the region of Koya after the aerial raids of the Anfal campaigns. Formerly known as Kharabe, the town was severely affected by the 4th Anfal raid conducted by the Iraqi air force on the Lower Zab in 1988.[23] The area was attacked by Iraqi Aircraft in May 1988, as recorded by a memorial monument at the entrance to the town.[24] The old mud-brick village, built on the top of one of the most significant archaeological sites of the research area (ASK#14), has since been abandoned. The new settlement, rebuilt since the 2000s, extended northeast, benefitting from the reconstruction policy implemented by the local authorities with the support of international organizations. Other small sites located south of the city of Koya and east of Taqtaq, such as Gird-i Chragh (ASK#62), underwent a similar experience, and provide not only evidence of ancient settlement, but clearer evidence of settlement developments affected by the historical events of the more recent past. In the case of Gird-i Chragh, the analysis

[22] The ASK Project is grateful to Mr Hemin Naman Kawes (Antiquity Service, Koya) and to the management of the gas field for their support during the fieldwork, providing useful information on the excavation process and allowing our team to access the restricted area to collect surface materials.

[23] The site was renamed Ashti in 1999 (Resûll 2015, 24), meaning 'peace' in Kurdish-Sorani, to commemorate the dramatic episodes of the recent history, and to celebrate the beginning of an urban and social regeneration of the area.

[24] Human Rights Watch 1993, 177-181.

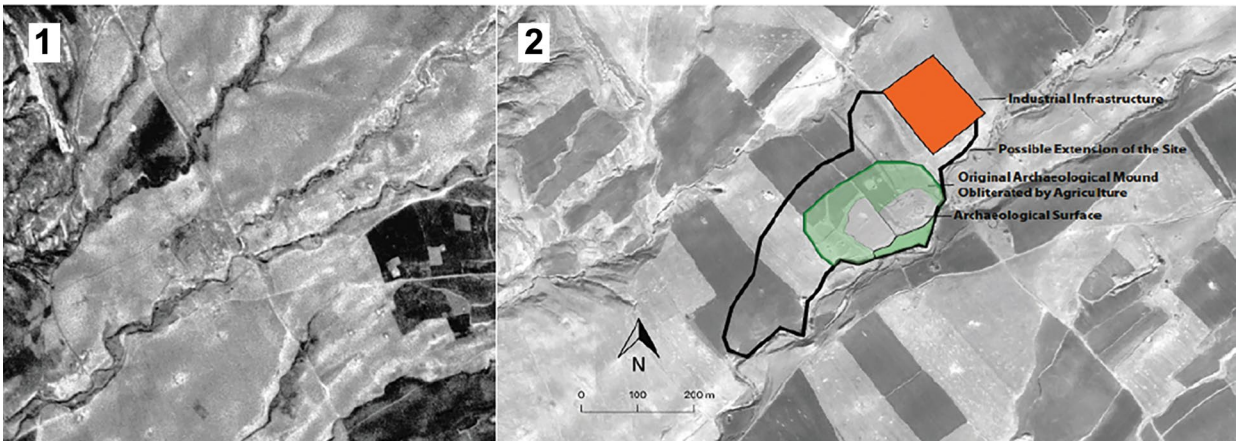

Figure 5: *1. Gird-i Quchak (ASK#27) declassified satellite imagery Corona, taken in 1967 (KH4A, Mission 1039); 2. Overview of morphologic developments of the site, based on fieldwork (GPS mapping 2016), base map satellite imagery OrbView 3. ©ASK Project.*

of the Corona imagery together with the fieldwork have revealed the existence of an abandoned village of mudbrick houses measuring *c.* 2 hectares, located on the slope of the high terrace of an adjacent wadi (**Figure 6**). In this case, the current local settlement has been reduced to only one household.

In all these cases, interviews with members of the local communities have not only yielded a successful method in recording archaeological sites, but provided multiple oral histories of the economy, social mobility, and developments of the cultural landscape. Short interviews, together with handwritten notes taken in the field have, so far, been collected in a small audio-video archive (**Figure 7**).[25] Methodology, recording techniques of interviews, storage, and use of the data will continue to be developed in the next seasons.

Such collection of audio-video recordings has the aim to collect during the interviews the oral sources in combination with visual evidence from the environment. This type of recording also allows for the documentation of oral consent from the person being interviewed for confidential or public use of the data. A discussion about how to conceive a digital infrastructure fitting to a developing archive and how a public or scholarly audience could access and use it is still in progress.[26]

[25] In this experimental phase the project highly benefitted of the expertise of Mr Hemin Naman Kawes, archaeologist, employee at the local antiquity service, department of Koya, who provided contacts to some members of the local communities and conducted himself a number of informal interviews.

[26] A first preliminary meeting, generously sponsored by the Austrian Ministry of Foreign Affairs and by the University of Innsbruck, has been held at Innsbruck in July 2018, where a small group of specialists in the field of Archaeology, Oral History, Field- and Visual Anthropology, i.e., C. Pappi, K. Novacek, L. Starkova, B. Truschnegg, H. Lashkry, and L. Fales, where discussing topics and possible research questions related to the projects in Koya. In the name of my co-organizer B. Truschnegg and the participants, I am also very grateful to his excellency Dr Michael Desser, Austrian ambassador of Jordan and Iraq. Unfortunately, after helping to initiate and support this workshop, he passed away in May 2018. Beside his diplomatic career, he held a PhD in History, and showed his enthusiastic interest and support for the project in its early stages during his visit to the project team in Koya in April 2017.

Figure 6: *Gird-i Chragh (ASK#62), overview of the demographic developments of the modern settlement, based on remote sensing analysis of the satellite imagery, i.e., Corona, Orbview 3, and fieldwork (GPS mapping 2017), base map satellite imagery OrbView 3. ©ASK Project.*

Figure 7: *Frame still from an audio-video recording showing an interview made by Mr Hemin Naman Kawes, employee of the local antiquity service and ASK Project team member, with a senior member of the remaining household at Gird-i Chragh. ©ASK Project.*

Figure 8: *The ASK Project Training Program. Teachers and students of the Koya University attending a seminar on recording ceramic materials. ©ASK Project.*

Raising cultural awareness among the local communities

The interviews thus serve both as a method of reconnaissance and as a source for the historical narratives of landscape developments of the recent past. The project has greatly benefitted from the invaluable support of the colleagues of the local antiquities service, who have both collaborated in collecting information on the territory and systematically shared insights into the methods, the research questions, and the aims of the fieldwork. This mutual communication with the local communities ensured an enthusiastic cooperation in the field and a remarkable contribution to the research.

Finally, to improve the dissemination of methods and data, since 2016, the scientific initiatives of the fieldwork have also extended to a teaching program in field archaeology. This program, based initially on the close partnership with the Departments of History and Geography of the Koya University, aims to convey a basic knowledge of field archaeology within the curriculum of the Faculty of Education.[27] Small groups of students and teachers are trained in the methods of archeological survey fieldwork, including seminars and internships aimed to provide insights into the use of Geographic Information Systems, as well as in the process of recording surface ceramic artefacts, in their significance as primary sources for the diachronic reconstruction of the historical landscapes (**Figure 8**). In particular, the training is aimed to better define the idea of a developing cultural landscape which is not only limited to a number of sites, monuments, and artefacts, but studies as a result of human processes, including settlement shifts, urbanism, and land-use, throughout the centuries.

[27] I am really grateful to Prof. Dr Robert Rollinger, director of the Institute of Ancient History and Ancient Near Eastern Studies of the University of Innsbruck, Dr Wali M. Hamad, president of the University of Koya until 2022, Dr Haidar Lashkry, vice-president for scientific and post-graduate studies, and Abubaker Othman Zendin (Emeritus General Director of Antiquities of Iraqi Kurdistan) for their support in integrating experience and knowledge of field archaeology into the curriculum of the Faculty of Education of the Koya University.

Since 2018, the ASK project has also benefitted from the technical support of the faculty of Engineering of the Koya University, which has provided in exchange internships for students of the program of civil architecture in topographic recording and 3D modelling of archaeological finds.[28]

Both of these initiatives have the aim to build up an awareness of cultural heritage among students of Education and Architecture, who in turn represent the future generation of teachers at schools and who will shape the primary and secondary education of young citizens – the coming representatives of the local stakeholders, in more fashionable terms – who will mould the future cultural landscape of the country.

Conclusions and some future perspectives

In conclusion, the experiences of the Satu Qala and the Archaeological Survey of Koisanjaq/Koya (ASK) Projects has highlighted the urgent need for developing a common systematic strategy in the conservation and promotion of cultural heritage in the region. The fieldwork so far has focused on a few relevant topics which seemed most conducive for the development of such a strategy: (1) the dissemination of data, the (2) mutual exchange of information between local communities and specialists, and (3) the development of policy focused on the conservation and the promotion of cultural heritage.

As an immediate response, the scientific results of the Satu Qala fieldwork seemed to have had a positive impact on the local communities. The enthusiasm in re-discovering the ancient history of the site has been reflected in the media and in popular literature. Unfortunately, the lack of a focused dissemination of data, aimed to inform the local community about the site's potential, combined with the partial lack of a specific policy supported by the local government, was unable to prevent the constant urban and economic development of the site, which has helped to drown out the evidence of ancient urbanism. In contrast, the short experience of the Archaeological Survey of Koya (ASK) Project has also revealed the great potential of the inclusion of oral sources among the reconnaissance methods. Focused interviews with specific members of the local communities have the aim not only to detect or investigate the recent developments of the cultural landscape, but they also aim to establish and maintain a mutual exchange among scholars and communities. Furthermore, beside the cooperation with the antiquity service, the engagement of local academia in the achievement of common scientific goals and in the concept of focused training serves as a first link between the archaeological projects and the local researchers, establishing an interdisciplinary discourse in the cultural milieu of the region, including medieval and modern history, art and urban planning. This local cultural network would mainly raise awareness about the cultural heritage in the communities and would encourage the involvement of local stakeholders in the development of a conscious policy of exploitation of the environmental resources, including the development and regeneration of some branches of the service sector, such as tourism and education, based on the public consumption of cultural heritage.[29]

The developing landscape of the region of Koya certainly deserves a careful investigation to ensure a careful record and a proper preservation of the cultural landscape. Field-interviews, combined with a training in visual anthropology and seminars aimed to investigate the socio-economic developments of the recent past will be improved and will continue to complete the research questions of the project, hopefully building up a cultural environment, aimed to support local historians in an early stage of their careers in the re-collection, the analysis, and the preservation of oral history sources. In some cases, this

[28] The project owes gratitude to Dr Mohammed Zangana, dean of the Faculty of Engineering (FENG) of the Koya University until 2022 and currently president of the same institution, who graciously offered logistic support.

[29] Koya University has hosted a number of international conferences and workshops on these topics. See, for example, Lashkry *et al.* 2019.

oral tradition represents almost the only available historical source. It thus deserves to be emphasized as a crucial aspect in the reconstruction of the local history on local and international levels, becoming a key research factor to access multi-dimensional and multi-faceted identities in relationship to the cultural landscapes of the region.

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Session 8 —
Produce, Consume, Repeat.
History and Archaeology of Ancient Near Eastern Economies

Making New Sense of Ancient Economies. Markets, Networks, and Social Orders in the Pre-Islamic Near East

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Abstract

For more than a century, scholars have fought it out over the nature of ancient economies. The Near East, with its relative abundance of evidence, strong scholarly tradition, and long history as a zone of trade, transit and production, has been at the core of the conflict. Recent theoretical and methodological advances, including the rise to prominence of New Institutional Economy and Social Network Analysis in scholarship on the ancient world, have revived a discourse that long seemed to have gone stale. This chapter outlines the historiographical background along with recent developments. The argument is made that the potential for the study on ancient Near Eastern economies as a field integrated with political and social history is now better than ever.

Keywords

Economy, Primitivism, Substantivism, New Institutional Economy, Social Network Analysis

Background: Ancient history and competing modernities

Modern traditions of Classical as well as Oriental scholarship were largely defined in the late 19th and early 20th centuries, amidst rapid societal change, including the breakthrough of industrial capitalism, the nation state, and ultimately democracy. The new times threatened established notions and interests, including the ideas, prevalent since the renaissance, challenged since the enlightenment, but now seriously threatened for the first time, that the ancient world had anything valuable to teach the present or that it could serve as some kind of ideal or model for modern times. Either because the Greek and Roman civilizations were superior in some way to modern or because the Oriental civilizations represented the Biblical past. This general change of sentiment led historians of the ancient world, especially in Germany, to set out to demonstrate the continued relevance of the classical past by highlighting its similarities with and direct influence on their modern world.[1]

Theodor Mommsen, the preeminent Roman historian, used terms such as 'Bürgermeister' (mayor) and discussed political parties in the Roman republic. Pioneers in ancient economic history, such as Eduard Meyer, Julius Beloch amongst others, tried to demonstrate that Greek and Roman economies resembled domestic capitalist laissez-faire economies and the international imperialist policies of their own time.[2] Though this might seem anachronistic and naïve to the contemporary observer, it is in essence little different from our own attempts to make our subjects relevant through the study, for instance, of globalization, multiculturalism or identity in the ancient world. Nevertheless, careful scholarship remains crucial, both past and current, as a primary rationale for studying the past is that it remains relevant to the present.

[1] Schneider 1990.

[2] Schneider 1990; Finley 1979.

In parallel to the modernizing movement within ancient history, knowledge about the world outside Europe grew vastly, not least due to imperialist ventures and Orientalist scholarship. In Asia, Africa and the Americas, ethnographers and anthropologists took up the study of so-called primitive societies, in which they also, in line with the general view of history at the time, as a continuous process of progress, saw the distant past and origin of western societies. It was only to be expected that someone at some point would commit the sacrilege of asking whether the Classical and Oriental civilizations might also be examples of such primitive societies.

Thus emerged two schools of thinking about the ancient economies. One, derogatorily labelled 'primitivists' by their opponents, was championed by scholars such as Karl Bücher (1847-1930), Max Weber (1864-1920), and later Johannes Hasebroek (1893-1957).[3] They sought inspiration from social anthropology and sociology, perceived ancient production as being primarily geared toward subsistence, exchange taking place mainly as gift giving and through non-commercial mechanisms such as rent, taxation and tribute, and claimed that market trade was a late innovation, of limited importance. Their opponents, the self-proclaimed 'modernists' such as Eduard Meyer (1855-1930), Julius Beloch (1854-1929), and later Michael Rostovtzeff (1870-1952), emphasized integrated market economies, economic government policies, and an entrepreneurial middle class of businesspersons and family firms as the motors of ancient economies.[4]

This debate long remained restricted to classical studies, Orientalists having not seriously taken to the study of economic history yet, but primitivism had been inspired by early social anthropology, and returned there through the work of Karl Polanyi (1886-1964), whose book *Trade and Markets in the Early Empires* was co-edited by anthropologist Conrad Arensberg (1910-1997) and economist Harry W. Pearson.[5] It also contained a chapter by the famous Assyriologist A. Leo Oppenheim (1904-1974). The main argument of the book was that economic action in premodern times was mostly embedded into social relations, the temple in the Near East and the *oikos*, that is 'household', in the Mediterranean, rather than negotiated in price-setting markets. Economic resources were indeed exchanged by trade, but more often through reciprocity or redistribution based on status hierarchies. In the ensuing debate Polanyi's point of view was called 'substantivism', as he argued that economic action must be understood in context of its social setting (or substance) while the view of his opponents was called 'formalism', as they argued that the laws of economic science were independent of time or social context.[6] This debate continued to influence the non-classical, anthropologically oriented directions in archaeology, for instance the work of Marshall Sahlins (1930-2021) in his *Stone Age Economics.*[7] Moses I. Finley (1912-1986) revived primitivism in the classical disciplines with his *Ancient Economy*, where he made the still valid observation that trade and commercial activity was of low status in most of the ancient world, and argued that status generally took prevalence over profit in economic decision-making.[8] While the original primitivists found limited resonance in the scholarly community, Finley's work had enormous impact, so much so that by the 1980s and 90s trade that was a relatively marginal phenomenon had become something of a factoid, often claimed, but rarely argued, and much scholarship on ancient economies had turned towards history of culture and mentalities.

Since then there has been both a certain scholarly fatigue and a sharp reaction. On one hand neo-modernist approaches have focused on refuting the primitivist/minimalist paradigm and on bringing

[3] Bücher 1893; Bücher 1922; Hasebroek 1931; 1966; Weber 2006.
[4] Bücher 1893; 1922; Beloch 1902; Rostovtzeff 1932.
[5] Polanyi *et al.* 1957.
[6] Cook 1966; Dalton 1969.
[7] Sahlins 1972; Elardo and Campbell 2006.
[8] Finley 1973.

ancient economic history in line with more recent periods.[9] On the other hand, as outlined in more detail below, scholars have continued to look for concepts and models that allow the study of the impact of institutions other than the market on the allocation of resources. Additionally, the more precise and less charged terms of 'minimalists' and 'maximalists' have been suggested, according to the role scholars ascribe to trade in ancient economies rather than to how they compare it to the modern world.[10] Yet even this might in some cases be misleading, as it is perfectly possible to hold that trade was important, but nevertheless embedded in social structures.[11]

This summary does not make justice to the nuance and complexity of the debate on the nature of the ancient economy.[12] However, three brief points may serve as basis for moving the discussion forward. First, the original primitivists were clearly wrong when they claimed that there was no trade and no markets in the economic sense of the word, that is as price-setting institutions, in the ancient world. Market mechanisms are well attested in many settings, and there is no reason to assume that market conduct was not part of the human spectrum of behavior from the outset. Second, also the original modernists were wrong, when they underplayed the significance of resources changing hand by a number of institutions other than market trade. This remains the case even today. Modern states are far more redistributive in nature than anything the ancient world could come up with, for instance government spending in the USA at *c.* 35% of its GDP, the traditional flagship of free enterprise.[13] Third, few would today advocate a purely minimalist or maximalist interpretation of the ancient economy, and significant work is being done by scholars leaning in both directions.

Economic transactions and social institutions

Moving beyond the scholarly deadlock, however, required the dichotomy to be broken. One scholar who recognized this early was Douglass C. North (1920-2015). Already in 1977 North published an article subtitled 'The Challenge of Karl Polanyi' where he stated that throughout history there have always been mechanisms other than the market that influence the allocation of resources, and that economics as a discipline needs to find a way to address that.[14] He became one of the pioneers of the school known as New Institutional Economics, which study the influence of institutions on economic performance. North developed a framework for historical analysis where he described the world in terms of what he called organizations and institutions.[15] By organizations he referred to groups of people pursuing individual *and* common interest through partially coordinated action. Examples could be a modern sports club, a state, a merchant association, a robber band or a nomadic tribe. Institutions he famously described as 'the rules of the game', being the patterns of interaction between groups as well as between individual agents.[16] Institutions could be anything from marriage and friendship, through market trade, to the custom of letting soldiers pillage a conquered city for three days and then leave the survivors in peace. North described premodern societies, 'natural states' in his terminology, as dominated by political organizations, that is organizations specialized in the containment of violence.[17] 'Violence' is used here in the tradition of Weber as 'force', with the state in the modern period understood as the

[9] See e.g., Silver 2009; Temin 2013; and also the explicit quantitative approaches of the prolific *Oxford Roman Economy Project* http://oxrep.classics.ox.ac.uk/publications/ (accessed 17.03.2020). See Bowes 2021 for a recent critique.

[10] Horden and Purcell 2000, 143-152.

[11] As exemplified by Nicholas Purcell's concept of 'unnecessary dependences', Purcell 2016.

[12] Succinct reviews focusing on the Classical world include Manning and Morris 2005; Bang 2007; Manning 2018, 3-71; Bowes 2021. See Graslin-Thomé 2009 on the debate in Oriental studies. With regard to anthropology, see Elardo and Campbell 2006.

[13] International Monetary Fund World Economic Outlook Database, data for 2018, https://www.imf.org/external/pubs/ft/weo/2019/02/weodata/index.aspx (accessed 18.03.2020).

[14] North 1977.

[15] North 1990; North *et al.* 2009.

[16] North *et al.* 2009, 13-18.

[17] North *et al.* 2009, 18-21.

only organization that may legitimately use force within a territory.[18] In the premodern world no such monopoly existed. Organizations would use their capacity for violence to act in a rent-seeking manner, for instance through war, tribute, or extortion, but also through protecting and taxing trade if that was in their interest. In North's view the market is the most effective institution for allocating resources, but it is constantly under pressure from rent-seeking organizations. Rent-seeking means trying to increase one owns share of wealth without adding value. Examples include seizure, tribute, or taxation without offering anything in return apart from abstaining from violence.[19] This was quite normal in the ancient world, compared to modern democracies, where taxes at least in principle are indirectly decided by the electorate and balanced by providing transparent and working institutional environments, labelled 'open access societies' by North.[20]

North's work on economic history spans more than 40 years, over which his approach moved from Marxist inspiration to seeing modern, liberal market economies as the best, albeit imperfect, system available. In a critical review, Matthijs Krul has summed up North's view of the development of institutions. These emerge through negotiations between rent-seeking elites about how the resource represented by the capacity of violence is best applied in order to maximize revenue.[21] In North's view markets would historically tend towards order rather than violence.[22] In plain words this means that in most cases elites would find themselves economically better off by leaving exchange to price-setting markets. This of course does not imply that they would abstain from using force in related contexts, for instance in order to collect taxes or to restrict trade to places where it could be controlled and taxed.[23]

Providing a way out of the theoretical dead end of the modernism-primitivism debate, New Institutional Economics have made considerable inroads in the study of the ancient economy parallel to the revival of the modernist approach.[24] An early example is Luuk de Ligt's study of markets and fairs in the Roman Empire,[25] which makes extensive use of anthropological theory and evidence. De Ligt makes the point that most markets in the Roman world were probably periodical. Some of them are better characterized as fairs, and had local, regional and/or interregional coverage. The periodical nature of fairs is significant, as harvest times and seasonal patterns of communication in many cases led to strict seasonality. Interregional fairs had a large catchment area and ditto turnover. Luxury goods were important. These gatherings would often last for three to eight weeks. Many transactions had the nature of entrepôt trade, which means that goods were carried directly to the market in order to be sold there rather than passing through a chain of transactions.[26] In this way social, practical and environmental constraints shaped the operation of markets as physical meeting places as well as price-setting institutions. Also relevant in this context is Peter Bang's comparison of Roman markets, in the institutional sense of the word, with the better documented Mughal-period bazaar, where, information was frequently imperfect, political interference was commonplace, risks were high, and transaction costs corresponding.[27] Bang draws on modern anthropological work, including that of Clifford Geertz (1926-2006), who, when studying bazaar trade in Morocco, noticed that uncertainty was often countered by turning economic transactions into

18 Weber 1992.
19 North *et al.* 2009, 18-21.
20 North *et al.* 2009, 21-25.
21 Krul 2018, 72.
22 Krul 2018, 88-89, 115, 132.
23 See e.g., Seland 2010.
24 Bang 2008; Scheidel *et al.* 2007; Morris and Manning 2005; Droß-Krüpe *et al.* 2016; Droß-Krüpe and Ruffing 2022.
25 De Ligt 1993.
26 De Ligt 1993, 14-25, esp. 15.
27 Bang 2008.

social ties, through repeated dealings, friendship and even pseudo kinship.[28] Both models describe the operation of markets in the economic sense of the word, as price-setting arenas, but also how they were influenced by social, political and environmental factors, that is the institutional environment emphasized by North.

The example of trust networks in Roman trade with the east

An obstacle to trade, even today, is the problem of establishing trust. Lack of trust increases transaction costs connected with information gathering, monitoring, and enforcement. A major contribution of New Institutional Economics to the study of ancient economies has been to develop models of how trust is created in situations where there is no legally binding contract and where agents have imperfect information.[29] The pre-Islamic Near East has a rich record of examples of how price setting markets and other institutions interacted in processes of exchange. Below, a number of sources and episodes shedding light on relations between the Roman world and neighboring regions in the early centuries CE are discussed. Arguably they have wider significance than that immediate context, not in the sense that all ancient societies were the same across time and space, but in the sense that they represent examples of possible modes of operation that would likely be found also in other settings.

A telling account of how political, social and economic institutions come together is the 1st century geographer Strabo's report of the rise of caravan trade across the Syrian and Mesopotamian deserts.[30] Strabo is apparently writing about the period in the 2nd to 1st centuries BCE, when the Seleucids had been pushed out of their possessions east of the Euphrates, and when their territories in Syria were encroached upon by nomadic peoples establishing polities in the transitional zones between good agricultural land and the pasturelands of the Syrian-Mesopotamian dry steppe.

In Strabo's account, the Euphrates Valley, which had been the convenient axis of exchange between Syria and Mesopotamia since the Middle Bronze Age, had been split into a series of smaller polities maneuvering between Parthian, Seleucid and later Roman control. Each of the polities represents an organization in the economic sense of the word, seeking to raise revenue from passing trade by either exerting or abstaining from the use of violence. As a result, the transaction costs have become so high, that merchants are entering into a contract with a third actor, the *Skenitai*, literally tent-dwellers, that operate in the desert next to the Euphrates. These nomads offer protection and transport through the Desert, thus avoiding the tax collectors along the river.

This process may be read in the context of a market with several agents each offering protection to merchants. Each supplier of protection also has the option of resorting to violence, which, however, would ruin the opportunity for repeated dealings by breaching trust. For the merchants, transaction costs and uncertainty are decreased by dealing with a single provider of protection and transport rather than several. For nomads getting paid for conveying traders safely through the desert by offering protection and transport gives a higher return than predating on them.

This business model seems to have been extremely successful, and goes far towards providing context for the rise of polities in the Syrian Desert in this period: Hatra and Palmyra. For Hatra, evidence for this kind of activity is unfortunately almost absent, even if it seems likely that it was going on, for Palmyra the evidence is ample.[31]

[28] Geertz 1978.
[29] E.g., Landa 1994; Wickström and Landa 2018.
[30] Strabo, *Geo.* 16.1.27.
[31] For Palmyra see Millar 1998; Gawlikowski 1997; Seland 2014.

While Palmyrene trade is epigraphically well attested, the only literary text directly mentioning the activity is by the Roman historian Appian, who wrote in the 2nd century CE, but who is recounting the first recorded interaction between the Romans and Palmyra, when Marcus Antonius had his cavalry set out to plunder the city in 41 BCE.[32] This was done simply as a revenue-raising measure, a good example, if there ever was one, of rent-seeking behavior. In the text Appian explains that the Palmyrenes had earned their wealth from conveying trade in Indian and Arabian products from the Parthian to the Roman Empire. The passage might be read in the light of that from Strabo discussed above, and shows how the Palmyrenes had assumed the role of middlemen. High risk, lack of trust, and transaction costs involved with negotiating the political landscape between the empires made it difficult for Romans and Parthians to trade directly. The Palmyrenes on the other hand possessed infrastructure and expertise, and enjoyed the necessary trust on all sides, as their successful record of caravan trade for almost 300 years attests to.

Seemingly, Strabo was aware of the problem of transaction costs even if he lacked the terminology. There is also a second interesting source with regard to this, namely the Syrian historian Herodian, who wrote a history of the Roman Empire in the period 180-238 CE. The work contains an alleged letter from the Roman emperor Caracalla to the last Parthian great king, Artabanus IV. Caracalla suggests an alliance between the two empires, under his own control obviously. One of the many advantages would be, 'since the Parthians produced spices and excellent textiles and the Romans metals and manufactured articles, these products would no longer be scarce and smuggled by merchants; rather, when there was one world under one supreme authority, both peoples would enjoy these goods and share them in common'.[33]

Whether this letter is authentic or not it reveals imperial attitudes towards trade and traders in the early 3rd century CE. The merchants conveying trade between the Parthian and Roman Empires, a group in which the Palmyrenes figured prominently, are considered smugglers responsible for a situation of scarcity. As things happen, Caracalla was killed shortly afterwards and Artabanus had other problems on his hands, namely the still ongoing struggle with his brother Vologases VI, and the emerging power of the Sasanians. The Palmyrenes continued for another 60 years, doing business everywhere from Rome to India and Yemen. I argue elsewhere that the reason they were so successful was that they were connecting to local social networks in the places they operated. For instance, they attached themselves to elite networks by taking civic and government offices in the Parthian client-kingdom of Mesene. They are also attested as taking part in religious worship and honoring local deities in the places they visited, showing their willingness to operate across group-boundaries.[34]

A final example is the story of the usurper Firmus, depicted in the 4th century *Historia Augusta.* The work is notorious because it is full of demonstrably invented episodes and characters,[35] and most commentators find it improbable even that Firmus actually lived.[36] While that might well be the case, we can still use his literary portrait to say something about attitudes towards traders in the period. According to the *Historia Augusta,* Firmus was an Alexandrian businessman, originally from Seleucia in Syria, who was a friend of Zenobia and who took control of the Palmyrene faction in Egypt after her defeat. He is said to have led a short and unsuccessful uprising. Firmus is described as incredibly rich having made his money from trade with India. Apart from his relationship with Zenobia and the Palmyrenes, he is also said to have been on good terms with the Saracens and the Blemmyes, that is the inhabitants of the Arabian and Egyptian Deserts.[37] The important information that can be gathered from Firmus'sc short

[32] App. *B Civ.* 5.9.
[33] Hdn., *Roman History* 4.10.
[34] Seland 2016.
[35] Pausch 2009; Johnston 2012.
[36] Poignault 2001; Bowman 1976, 158-159; Hartmann 2001, 403-10.
[37] Johnston 2012*, Hist. Aug.,* Firmus, Saturninus, Proculus and Bonosus, 3-6.

biography is that it was his social networks that enabled him to carry out trade across group boundaries. Good relations with the Palmyrenes, the Blemmyes and the Saracens enabled him to establish trust and thus handle the significant insecurity involved in long-distance and cross-border trade in the volatile third quarter of the 3rd century CE. Adding to the historicity of the setting that Firmus operated in, if perhaps not of the figure himself, is the reported 2019-discovery of an inscription to the king of the Blemmyes at the Roman Red Sea port of Berenike.[38]

Palmyra was destroyed in 273 CE, and we have no evidence of Palmyrene trade after that. In the treaty of Nisibis, between the Roman and Sasanian Empires dated to 299 CE, that city is designated as the only legal place of transaction between the two empires.[39] At that point treaties, monitoring and enforcement had taken over the role of providing an environment of trust in cross-group dealings on the eastern border of the Roman Empire.

Social networks and the ancient economy

The implication of New Institutional Economics is that trade may be studied in terms of social networks.[40] This is a good fit for the study of the Ancient Near East, as much of our evidence deals with personal connections rather than with commercial transactions.

Network studies have gained traction, especially in archaeology, but also in history and oriental studies over recent years.[41] This is a welcome development as it allows us to bridge the divide between social, economic, and other kinds of relations; and as it also provides the opportunity to process different kinds of data, say objects, places, and texts, within the same methodological frameworks.[42]

There is, however, a range of network approaches available, with different uses and strength. Two main approaches may arguably be discerned. One takes the evidence as its point of departure and uses network methodologies, theories and models in order to describe, analyze and simulate patterns in the data.[43] These methodologies have their strength with relatively large and complete or at least representative datasets. Analyses of large corpora of texts and archaeological data are examples of fruitful applications, and this could be described as the deductive, formal, and quantitative approach to network analysis.

A second approach also starts from a set of evidence, for instance the limited textual and epigraphic evidence of Palmyra partly discussed above, and uses a network analysis model to lend meaning to that material.[44] Examples include the famous 'Strength of Weak Ties' model by Mark Granovetter; the 'Small World Network' model by Stanley Milgram and others; Ian Hodder's concept of 'entanglement' or the different varieties of Actor-Network-Theory, or also the analysis of ancient economies in terms of organizations and institutions as outlined above.[45] This would be an inductive and qualitative approach, where our pre-understanding in the form of network theory adds value to the data. While network analysis software might be useful in visualizing and representing the resulting networks, the data lacks the numbers necessary for a quantitative analysis. It is true that the second approach lacks statistical robustness, but formal and quantitative modelling also entails assumptions and premises with unknown correspondence to what actually took place in the past. Moreover, the application of

38 Radowska and Ast 2020.
39 Cic. *Leg.* 1.3.
40 Seland 2017.
41 E.g., Brughmans *et al.* 2016; Knappett 2011; Malkin 2011; Hodder 2012; Hodder and Mol 2016.
42 Teigen and Seland 2017.
43 Examples with relevance for the pre-Islamic Near East include Ruffini 2008; Brughmans and Poblome 2016; Evans *et al.* 2012; Glomb *et al*. 2018.
44 E.g., Malkin 2011; Collar 2013; Seland 2013.
45 Milgram 1967; Granovetter 1973; Hodder 2012; Latour 2005.

network methodologies to small datasets adds an element of testability sometimes lacking in traditional humanities, and perhaps the qualitative approach makes up for lack in rigor through greater explanatory potential. Arguably both approaches allow us to better appreciate how past societies operated and to approach ancient economies as embedded in a social structure of which market institutions were also an important part.

Although the controversy on the role of markets in ancient economies was arguably as much about the modern world as about history, current scholarship about the remote past continues to be informed by present-day concepts, models and debates. The trend of conceiving ancient societies as social networks is clearly a reflection of our modern preoccupation with the phenomenon. Nevertheless, in contrast to the 19th and 20th century controversies regarding the nature of ancient economies, networks thinking has the advantage of being open to diverse evidence, questions and approaches. Hopefully, this flexibility will allow us to understand these societies on their own terms rather than than imposing modern categories or templates upon them.

Abbreviations: Ancient authors and their works

App. *B Civ*. = Appian, *Bella civilia.*

Cic. *Leg.* = Cicero (Marcus Tullius). *De Legibus*.

Hdn. = Herodianus.

Hist. Aug. = Historia Augusta.

Strabo, *Geo.* = Strabo, *The Geography of Strabo.*

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Deciphering Skills of the Prehistoric Painting Technique: Case Study of the Painted Pottery of the 5th Millennium BCE from Tall-e Bakun A (Fars province, Iran)

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Abstract

Skill, one of the aspects of craft production, has not been thoroughly investigated because of the difficulty of assessing it from archaeological evidence. Recently, skill has received more attention because it can be a good indicator for understanding the communities of practice, where apprentices with varying degrees of skills learn the knowledge and techniques required for craft production. In this paper, the detailed observation results of the painting skill on six complete ceramic vessels with an identical motif are presented. The observed materials are from a Chalcolithic site (4500-4100 BCE) — Tall-e Bakun A (Fars province, Iran) — and are curated at the Institute for the Study of Ancient Cultures of the University of Chicago. The presence of skill differences at Tall-e Bakun A is demonstrated. This study sheds new light on craft production.

Keywords

Chalcolithic, Iran, Tall-e Bakun A, Skill, Communities of Practice

Introduction

Archaeologists have investigated the organization of craft production by studying archaeological materials.[1] While scales and contexts of craft production were intensively approached as important aspects for analyzing the organization, one of the critical attributes of craft production—skill—has been given less attention.[2] Therefore, some archaeologists have recently approached the organization of craft production from the perspective of learning or communities of practice.[3] As a theoretical concept, communities of practice originate from social anthropology. Jean Lave and Etienne Wenger emphasize participation in a community of practice, which plays a significant role in learning practice.[4] The most significant concept in their learning theory of participation in a community of practice is 'legitimate peripheral participation.' It refers to the idea that an apprentice was allowed to join a community of practice legitimately, and she/he developed her/his skill starting from observation and trivial work, and progressing to the most important work in the community, namely 'full participation.' In addition, apprentices can contribute to forming/shaping the identity of the community of practice through legitimate peripheral participation, as well as transform the community of practice through conflicts with other participants. This learning perspective requires a focus on skill differences in craft production to demonstrate the presence of apprentices, middle craftspersons, and skilled practitioners.

1 Costin 1991; 2001; 2005; Duistermaat 2016.
2 Kuijpers 2017.
3 Wendrich 2013; Castro Gessner 2008; Crown 2014; Roddick and Stahl 2016.
4 Lave and Wenger 1990.

To approach communities of practice, this article presents an analysis of skills from archaeological materials through a case study of well-preserved painted pottery vessels found at the Chalcolithic site of Tall-e Bakun A, Fars Province, Iran. Before proceeding to the case study, I elaborate on the concepts and previous studies of skill in archaeology to lead to a better direction for the skill analysis of archaeological materials (4500-4100 BCE).

Skill and painted pottery: Concepts and analytical methods

To begin with, skill is defined as the proficiency with which apprentices and skilled practitioners acquire or maintain techniques through participation in communities of practice. Subsequently, I introduce a theoretical concept of skill from an anthropological perspective by introducing the concept of skill of anthropologist Tim Ingold.[5] He points out five dimensions of skill: 1) the absence of a boundary between a user and used tools for skilled practices; 2) the denial of the Cartesian perspective that distinguishes physical attributes from mental ones in skilled practices; 3) the importance of sensual adjustment in skilled practices; 4) acquisition of skilled practices through the participation in communities of practice; and 5) the denial of the prefigured designs of manufactured objects in the brains of skilled practitioners. According to Ingold, skill is generated in the emergent relationship between humans, things, the environment, and the mental templates of the crafts.[6] His relational view is in line with material engagement theory, which denies Cartesian dualism between the mind and the body in cognitive archaeology.[7] As discussed below, this explanation of skill helps review previous studies of skill in archaeology and problematizes them by assuming and classifying the a priori character of skill as just physical.

Technical skills, or errors, in pottery making are generally much more difficult to analyze than the sequence of pottery-making techniques because the plasticity of the clay allows potters to correct and modify the mistakes that occur during the forming process and surface treatment. An exception is the painted decoration, which is difficult for potters to modify after a mistake and is the easiest attribute for archaeologists to observe with the naked eye. Generally, the painting skills of ancient materials were approached qualitatively based on both their esthetic quality and the amount of labor required for painting.[8] However, Patricia Crown objectively approached the skill assessment of painted pottery to discuss learning in the pre-Hispanic American Southwest.[9] To identify ceramics painted by children, Crown focused on poorly-decorated pottery. She listed and coded the design attributes by applying the criteria used in education and psychology to assess the mental and physical development of children.[10] She classified 18 attributes into two skill types: (1) attributes indicating the cognitive development of infants based on educational psychology and (2) attributes indicating motor control in executing designs. Furthermore, she tallied the codes to calculate a total score and then divided the obtained numbers by the highest possible score to normalize the total score. I refer to her method as the 'skill score analysis.'

Gabriela Castro Gessner developed the Crown's skill score analysis further to analyze technical skills of Halaf-period potters that produced painted vessels at Fıstıklı Höyük and Tell Sabi Abyad.[11] She subdivided the attributes of painting into three attributes (likeness, care, and skill) within the framework proposed by Anthony Giddens. This framework classifies knowledge concerning practices into two types of

5 Ingold 2000, Part III.
6 Ingold 2000; 2013; 2018.
7 Malafouris 2013.
8 Alizadeh 2006, 73.
9 Crown 1999; 2014, 79.
10 Crown 1999, 31-35; Crown 2001, Table 1.
11 Castro Gessner 2008.

knowledge. First, the knowledge that is routinized and inexplicable is called 'practical knowledge'. The second type of knowledge, 'discursive knowledge' allows us to prefigure the practice with intention. According to Castro Gessner, whereas likeness and care belong mostly to discursive knowledge, skill belongs to practical knowledge.

In addition to skill score analysis, there are several methods of analyzing painting skills. Reinhard Bernbeck used another objective method for approaching painting skills to consider technical skill at Tol-e Bashi, a Neolithic site in Iran: the measurements of lengths and angles of a highly-frequent and lowly-variable motif.[12] He also discussed the possibility that the Neolithic craftsperson's painting skill regressed when she/he took a break for a long term. Thus, he distinguishes skill acquisition (enskilment) from the reacquisition of skills (re-skilment). Furthermore, qualitative observation of painting skills is also useful. Massimo Vidale *et al.* selected approximately 15 badly-painted potsherds from a collection of 10,000 potsherds from Shahr-e Sukhteh.[13] By carefully observing errors and brushworks (thickness and direction), they discovered the archaeological traces of potting apprenticeship and the presence of collaboration with experienced potters.

Among the above-reviewed methods, this study adopted skill score analysis to approach the painting skills of painted pottery. In addition, Crown and Castro Gessner classified a priori character of skill (Crown—cognitive attributes and motor control; Castro Gessner—skill, care, and likeness). However, I argue that the measurement of errors and brushworks and the subsequent consideration of the character of the painting skill is better than a priori classification of skill characters. Next, I present a case study of skill score analysis using painted pottery from the Chalcolithic period in southern Iran.

The Chalcolithic period in southern Iran: Tall-e Bakun A

The Chalcolithic period in the Kur River Basin (**Figure 1**) is called the Bakun period (*c.* 5000-4000 BCE). In this cultural period, potters in Fars Province produced beautifully painted vessels featuring human and animal motifs, as well as geometric motifs. Numerous previous studies have argued for increasing social complexity and craft specialization during the Bakun period.[14] In these studies, the Bakun painted pottery and its production were used as critical clues for investigating these topics. While William Sumner and Abbas Alizadeh argue for the presence of specialist potters controlled by élites, James Fraser outlines the possibility of household production. However, there are few concerns about learning to paint pottery, except for Bernbeck and his colleagues.[15] Bernbeck and his colleagues presented and described a poorly painted vessel, the possible work of an apprentice found at the site of Rahmatabad. They also indicate the potential to approach skill differences during the Bakun period based on archaeological evidence. Through the skill score analysis of painted vessels from Tall-e Bakun A, this paper draws upon their suggestion and expands a learning-oriented perspective on pottery production studies through the skill score analysis of painted vessels from Tall-e Bakun A.

Tall-e Bakun A is approximately 150 m long, 120 m wide, and 5 m high. After the initial excavation by Ernst Herzfeld in 1928, Alexander Langsdorff and Donald E. McCown conducted large-scale excavations in 1932 and 1937.[16] At present, a large portion of vessels with completely preserved rims, which were unearthed during the excavations, are preserved at the Institute for the Study of Ancient Cultures (ISAC) of the University of Chicago. In 1956, Namio Egami and Seiichi Masuda of the University of Tokyo

[12] Bernbeck 2010, 106.
[13] Vidale *et al.* 2014.
[14] Sumner 1994; Alizadeh 2006; Fraser 2008.
[15] Bernbeck *et al.* 2005; Pollock 2015.
[16] Herzfeld 1932; Langsdorff and McCown 1942.

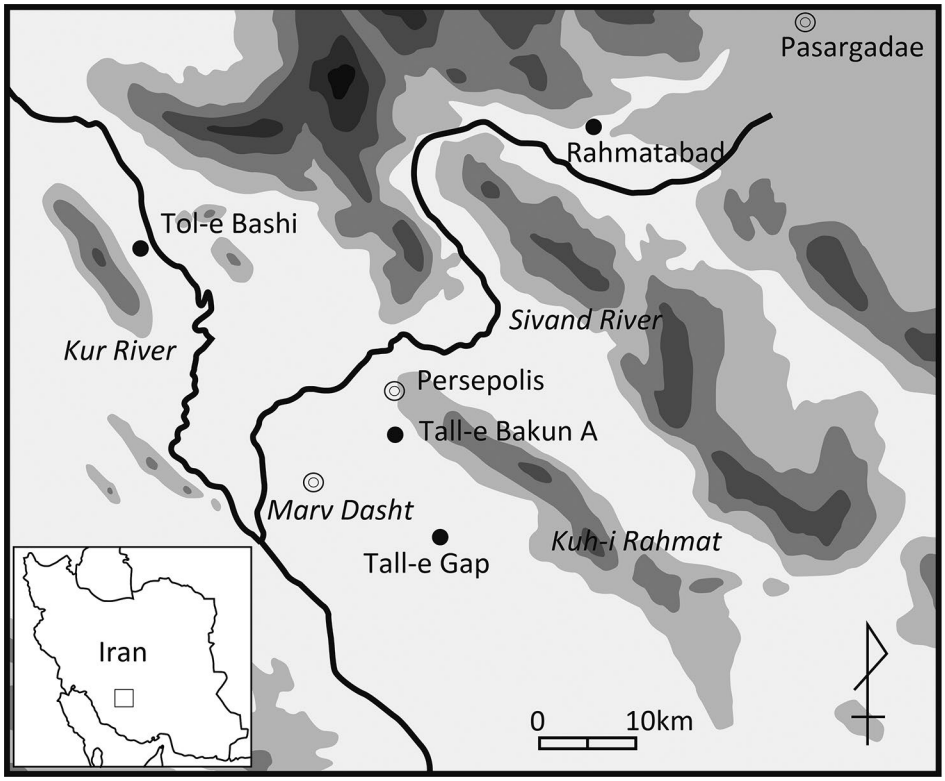


Figure 1: *Map of the Kur River Basin.*

Iraq-Iran expedition conducted small-scale sounding in the southwestern part of Tall-e Bakun A.[17] In 2004, Alizadeh also conducted small soundings at Tall-e Bakun A and collected samples for radiocarbon dating, ranging from *c.* 4500 to 4300 BCE, the late Bakun period.[18] Eleven pottery kilns of the Bakun period were discovered during these past excavations, indicating that pottery production was conducted at the site. During the time of Tall-e Bakun A in the Bakun period, painted decoration became more complex and elaborate, implying the development of painting skills within the community of potters. Hence, the materials found at this site are suitable for examining painting skills in this period.

Materials

I demonstrate the difference in painting skills by comparing complete vessels with an identical motif using skill score analysis. This comparison, using the complete vessels with the same motif allows determining errors caused by poor handling. The most suitable motif for the skill score analysis in the ISAC collection was a 'zigzags and boxes' motif, Type VIIIA in McCown's classification (**Figure 2**).[19] In total, six well-preserved vessels with this motif were observed from the collection (registration numbers A20096, A20097, A20099, A20118, A20289, and A20290). Four vessels were found in Level III (*c.* 4500 to 4400 BCE), whereas the remaining two (A20097 and A20290) were unearthed from Level IV (*c.* 4400 to 4300 BCE). This motif is the most frequent among the well-preserved vessels stored at the institute. This motif was also found at Tall-e Gap in Level 10 and designated as Design Type Ic1 by Toshihiko Sono in the

[17] Egami and Masuda 1962.
[18] Alizadeh 2006.
[19] Langsdorff and McCown 1942, 41. McCown named it 'vertical zones of zigzags joined by horizontal bands.'

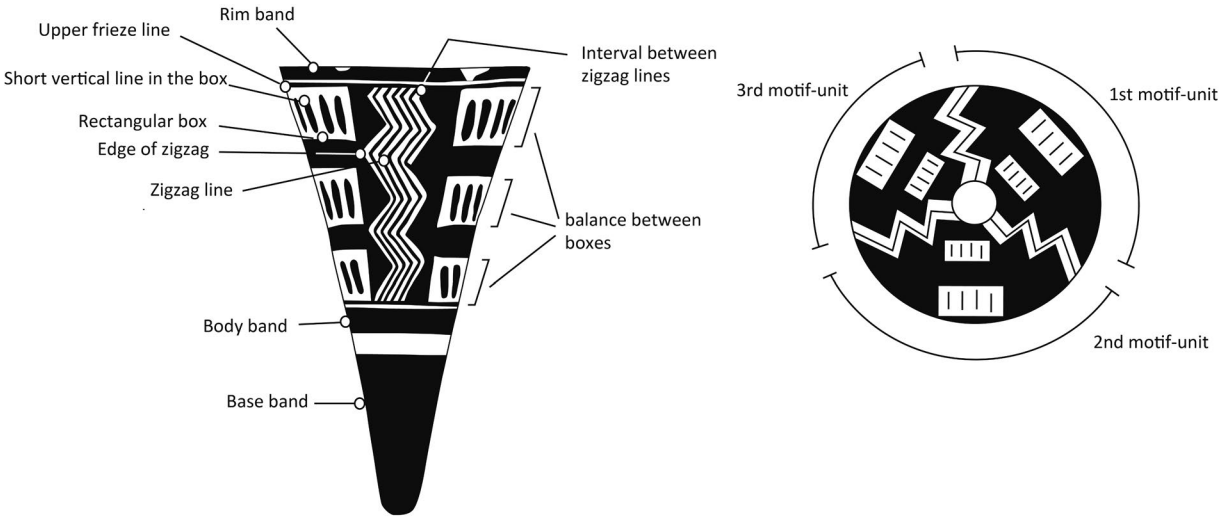


Figure 2: *Terminology of the microstylistic analysis of the motif 'zigzag and boxes.' (Drawing after Langsdorff and McCown 1942, Pl. 36:14).*

excavation report.[20] The here studied vessel are either funnel-shaped (A20118 and A20290) or beakers (A20096, A20097, A20099, and A20289).

Eighteen variables for microstylistic analysis

The terminology for the variables considered to compare the microstylistic attributes of the 'zigzags and box' motifs is defined and described in **Figure 2.** The motif complex consists of two types of patterns: rectangular boxes and zigzag lines. The first motif component, a vertical row of two or three box motifs, comprises one motif. Each box has a horizontal line of short vertical lines inside the box. Furthermore, the second motif component, the zigzag line motif, consists of a horizontal line of one to five vertical zigzag lines, except for two outer delimiting lines. One zigzag line motif and one row of rectangular box motifs comprise one motif unit. The remaining friezes were filled with black paint. For the microstylistic analysis of the 'zigzags and box' motif, 18 variables (V) related to errors were set up as follows:

V1) number of the motif units (**Figure 4**);
V2) number of boxes in one motif-unit;
V3) overlap of horizontal lines/bands with other horizontal lines/bands (**Figure 4**);
V4) inconsistency of the departure and terminal of the horizontal lines/bands (**Figure 4**);
V5) number of short lines in the upper, middle, and lower boxes;
V6) evenness of the boxes' height;
V7) overlap of the box motif lines;
V8) number of motif lines that overflow across the horizontal lines/bands (**Figure 4**);
V9) starting points and directions of the zigzag lines (rightward or leftward);
V10) number of zigzag lines departing/reaching the upper/lower frieze lines;
V11) difference in V10 between the departing lines and the reaching lines;
V12) number of edges of the zigzag lines;
V13) reaching point of the zigzag lines (lower frieze line or sideline of the box);
V14) evenness of the intervals between the zigzag lines;

[20] Egami and Sono 1962, 7, Table 14.

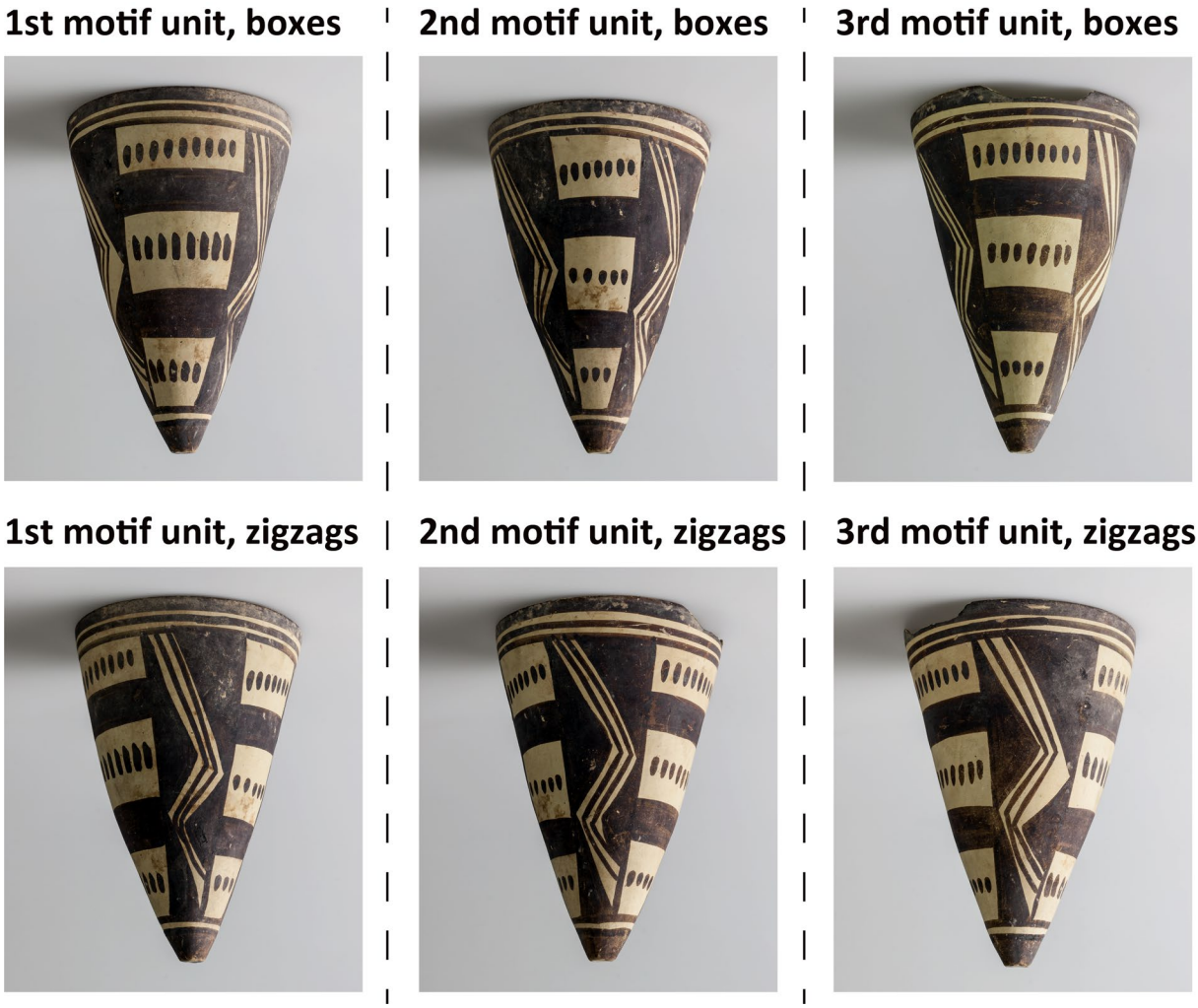


Figure 3: *Motif units (boxes and zigzags) on A20096. (Photo by and courtesy of ISAC).*

V15) overlap of the zigzag lines;
V16) number of zigzag lines that overflow across the motif;
V17) number of zigzag lines that overflow across the horizontal lines/band; and
V18) number of paint drops.

An example showing all 18 variables: A20096

I examine these variables by illustrating an example (A20096; **Figure 3**). A20096 contains three motifs (V1). Each motif unit has rows of three boxes (V2). The horizontal lines/bands do not overlap with the other horizontal lines (V3). The starting and terminal points of the horizontal lines are well connected (V4).

Concerning the variables related to the rectangular box motif, in the first motif unit, there are nine vertical short lines inside the boxes in the upper row, eight in the middle row, and five in the lower row. Those in the second motif unit are seven, five, and three, respectively. Those in the third motif unit are nine, seven, and four, respectively (V5). The height of each rectangular box within each motif unit is

uneven in all motif units (V6). The box lines do not overlap with the interior vertical short lines (V7). No line overflow of the box lines was observed (V8).

Concerning the variables of the zigzag line motif in A20096, the zigzag lines start from the left edge (V9). There are two zigzag lines, except for the first motif unit (V10). Whereas the number of zigzag lines departing from the upper frieze line and the number of zigzag lines reaching the lower frieze line is equal in the second and third motif units, these numbers are different in the first motif unit (V11). There are two edges of zigzag lines in all motif units of A20096 (V12). The terminal point of the zigzag lines in all the motif units is not the lower frieze line, but the left side of the lowest box because of the narrower space (V13). The intervals between the zigzag lines are uneven in all motif units, especially in the third motif unit (V14). The zigzag lines in all the motif units overlap with the next zigzag lines (V15). Whereas the overflow of the zigzag lines beyond the zigzag motif itself was not confirmed (V16), the overflow of the zigzag lines beyond the lowest box was observed at the first and third motif units (V17). Finally, a total of ten paint drops were found on the exterior surface of A20096 (V18).

Results of microstylistic analysis of 18 variables

The results of the microstylistic analysis of these attributes are summarized in **Table 1**. Some of these attributes (V1, V3, V4, and V8), which were not well presented in A20096, are shown in **Figure 4**. Among the 18 attributes, the number of short lines in the rectangular boxes in each row of each motif unit (V5) are further investigated. This attribute tends to be the same or similar between motif units. In the best example (A20118), there are four (upper box), three (middle box), and two (lower box) short lines in each motif unit (**Figure 4: V5**). However, except for this example, there were insignificant differences in the number of short lines in each motif unit. The most varied one is A20097 (first motif unit: 17 [upper box] and 11 [lower box]; second motif unit: 12 [upper box] and seven [lower box]). As the number of short lines in one box is proportional to the length of the rectangular box, it is suggested that the more fluctuating these numbers are, the more unbalanced (inconsistent) the lengths of the rectangular boxes (or proportion of each motif unit). In short, the variability of V5 in one vessel can be a marker of the evenness of the horizontal lengths of each motif unit. The median standard deviation of V5 between each row of the motif unit was 0.82.

Tallying skill score from eleven variables of errors

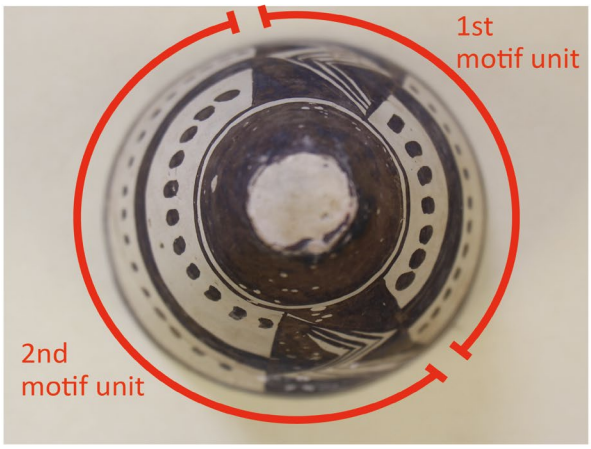
In reviewing analytical methods of painting skills, I pointed out the problem of classifying the character of skill a priori before analysis. For example, was a line overlap an indicator of an apprentice's poor-skilled handling in this case? Was a line overflow a marker of sloppiness in an experienced potter? These attributes cannot be classified a priori into a specific character of the painting skills. The interpretation of the relationship between the character of the skill and variables is possible only via microstylistic analysis. Without classifying the nature of technical skill, I tallied with variables, which I judged as errors in calculating skill scores. Eleven variables indicating inconsistency, unbalanced proportion, overlap, overflow, and drop (V3, V4, V5, V6, V7, V8, V14, V15, V16, V17, and V18) were interpreted to indicate an error due to either lack of experienced skill or lack of careful attention.

Eleven variables concerning errors in each vessel were converted to a skill score using the method proposed by Castro Gessner.[21] The variables were converted into yes-or-no questions. Variables V3, V4, and V15 (overlap and inconsistency) are already in the form of 'yes' or 'no.' As for quantitative variables (overflow and drops: V8, V16, V17, and V18), 'yes' indicates that the sum of mistakes in one vessel was more than one, whereas 'no' implies zero mistakes. For V5, a standard deviation of more than 0.82

[21] Castro Gessner 2008, 427-428.

Reg. no	V1	V2	V3	V4	motif order	Rectangular box motif						Zigzag lines motif										Skill score
						V5			V6	V7	V8	V9	V10		V11	V12	V13	V14	V15	V16	V17	V18	
						Upper	Middle	Lower					Upper	Lower									
A20096	3	3	no	no	1st unit	9	8	5	uneven	no	0	left	2	1	yes	2	box	uneven	yes	0	2	4	0,51
					2nd unit	7	5	3	uneven	no	0	left	2	2	no	2	box	uneven	yes	0	0	3	
					3rd unit	9	7	4	uneven	no	0	left	2	2	no	2	box	uneven	yes	0	1	3	
A20097	2	2	yes	no	1st unit	17	11		uneven	no	0	left	3	3	no	2	box	uneven	yes	3	0	6	0,36
					2nd unit	12	7		uneven	no	0	left	2	3	yes	2	box	uneven	yes	1	0	7	
A20099	3	2	no	yes	1st uit	7	4		even	yes	0	left	4	4	no	1	frieze line	uneven	no	0	1	1	0,50
					2nd unit	5	5		uneven	yes	0	left	4	4	no	1	frieze line	even	no	2	0	0	
					3rd unit	4	4		uneven	yes	0	left	4	4	no	1	frieze line	even	no	3	3	1	
A20118	3	3	no	yes	1st unit	4	3	2	even	no	1	right	4	3	yes	5	frieze line	even	yes	0	0	1	0,67
					2nd unit	4	3	2	even	no	1	right	3	3	no	5	frieze line	even	no	0	0	2	
					3rd unit	4	3	2	even	no	1	left	3	3	no	4	frieze line	even	no	0	1	2	
A20289	3	2	no	no	1st unit	15	10		uneven	no	0	left	4	3	yes	2	frieze line	uneven	yes	0	0	0	0,79
					2nd unit	11	7		uneven	no	0	left	4	3	yes	2	frieze line	a bit even	yes	0	0	0	
					3rd unit	11	7		uneven	no	0	left	5	4	yes	2	frieze line	a bit even	yes	0	0	0	
A20290	3	3	no	no	1st unit	6	5	4	even	no	0	left	4	4	no	2	frieze line	even	no	0	0	0	0,94
					2nd unit	5	5	4	even	no	0	left	4	4	no	2	frieze line	even	no	0	0	3	
					3rd unit	6	5	4	even	no	0	left	4	4	no	2	frieze line	even	no	0	0	1	

Table 1: *Results of the microstylistic analysis of the 'zigzags and boxes' motif on six vessels.*



V1) number of motif unit (A20097)

V3) overlap of the horizontal lines/ band with the other horizontal ones (A20097)

V4) inconsistency of departure and terminal of Horizontal lines/band (A20099)

V8) number of motif line overflow across Horizontal lines/band (A20118)

Figure 4: *Diagnostic examples of V1, V3, V4, and V8 of the 'zigzags and boxes' motif at Tall-e Bakun A (Photo by T. Miki and ISAC. Courtesy of ISAC).*

(median of the standard deviation of V5) in each row indicates 'yes.' As for V6 and V13 (balance between boxes and zigzag line interval), uneven indicates 'yes.' The results are shown in **Table 2.** 'Yes' answers yielded zero points, and 'no' answers yielded one point. The skill total point refers to the total number of 'no' answers for each vessel. For these questions, the more 'no' answers the vessel had, the higher the skill total point the vessel was given. When 'yes' and 'no' answers for one variable (V5-V18) were mixed in one vessel across multiple motif units, the score was subdivided by the number of motif units.[22] Skill total points were divided by the number of questions, and the results were named skill scores. Each score ranged from zero at the minimum to one at the maximum. The total skill points and skill scores are presented in **Table 3.**

[22] For example, V6 of A20099 has two yes and one no. Therefore, the score point (one point, number of no) was subdivided by three (number of motif-unit A20099).

Reg. no	V3	V4	Rectangular box motif						Zigzag lines motif				V18
			V5			V6	V7	V8	V14	V15	V16	V17	
			upper	middle	lower								
A20096	no	no	yes	yes	no	yes	no	no	yes	yes	no	yes	yes
						yes	no	no	yes	yes	no	no	yes
						yes	no	no	yes	yes	no	yes	yes
A20097	yes	no	yes	yes		yes	no	no	yes	yes	yes	no	yes
						yes	no	no	yes	yes	yes	no	yes
A20099	no	yes	yes	no		no	yes	no	yes	no	no	yes	yes
						yes	yes	no	no	no	yes	no	no
						yes	yes	no	no	no	yes	yes	yes
A20118	no	yes	no	no	no	no	no	yes	no	yes	no	no	yes
						no	no	yes	no	no	no	no	yes
						no	no	yes	no	no	no	yes	yes
A20289	no	no	no	no		yes	no	no	yes	yes	no	no	no
						yes	no	no	no	yes	no	no	no
						yes	no	no	no	yes	no	no	no
A20290	no	no	no	no	no	no	no	no	no	no	no	no	no
						no	no	no	no	no	no	no	yes
						no	no	no	no	no	no	no	yes

Table 2: *Conversion of variables related to errors to 'yes' and 'no' answers.*

Reg. no	V3	V4	Rectangular box motif				Zigzag lines motif				V18	Skill total point	Skill score
			V5	V6	V7	V8	V14	V15	V16	V17			
A20096	1	1	0,33	0	0	0	1	1	0	0,33	1	5,66	0,51
A20097	0	1	0	0	1	1	0	0	0	1	0	4	0,36
A20099	1	0	0,5	0,33	0	1	0,66	1	0,33	0,33	0,33	5,48	0,50
A20118	1	0	1	1	1	0	1	0,66	1	0,66	0	7,32	0,67
A20289	1	1	1	0	1	1	0,66	0	1	1	1	8,66	0,79
A20290	1	1	1	1	1	1	1	1	1	1	0,33	10,33	0,94

Table 3: *Tally of skill total points and skill scores from the variables related to errors.*

Interpreting characters of painting skill from the skill score

The vessel with the highest skill score was A20290 (0.94), and with the lowest was A20097 (0.36). The median skill scores were 0.59. Therefore, a skill difference in painting the 'zigzags and boxes' motif at Tall-e Bakun A was determined. I separated the vessels with scores higher than 0.59 (A20118, A20289, and A20290) from those lower than 0.59 (A20096, A20097, A20099). The purpose was to interpret the characteristics of the variables related to errors by considering the relationship between high/low skill scores and the variables. V3 (horizontal line overlap), V5 (uneven motif-unit proportion), V7 (box line overlap), and V16 (zigzag line overflow across motif) appeared only in vessels with low skill scores. V6 (unevenness of box height) and V14 (zigzag line interval) also appeared more frequently in samples with low skill scores. These variables related to errors were interpreted as markers of a lack of experiential skills. In contrast, variables V4 (inconsistency of horizontal lines), V8 (box line overflow across horizontal lines), V15 (zigzag line overlap), and V18 (paint drop) occurred regardless of the skill score. These variables may be markers of the lack of attention in these samples.

The relationship between skill scores and seven variables (V1, V2, V9, V10, V11, V12, and V13), which were not used for tallying the skill scores (**Table 1**), was examined subsequently. Three patterns emerged. First, two motif units (V1) only appeared in the sample with the lowest skill score (A20097). Two motif units might be the result of a lack of an explicit rule concerning the number of motif units. Second, although A20118 has a higher-than-average skill score (0.67), it has the exceptional characteristics of V9 (irregular direction of zigzag lines) and V12 (inconsistent number of zigzag edges), which the others do not have. Two zigzag lines start from the right side (V9), and V12 differs between the motif units in A20118. The outliers observed in A20118 are interpreted as either a lack of careful attention or intentional deviations. Third, the zigzag lines reaching a box (V13) were only observed in vessels with low skill scores (A20096 and A20097). This is likely a result of the unplanned alignment of box motifs due to a lack of experienced planning.

Correlation between skill scores and other attributes

Furthermore, the correlation between skill scores and horizontal design structures is discussed to determine their relationships with dexterity in the other technical steps. First, the most frequently designed structural pattern is without a body band. The other was with a body band (A20290). The vessel with a body band had the highest skill score (0.94). This structural component gives the painters a broader space above the lower frieze line by locating the line on the middle part of the body. This suggests the presence of an explicit rule concerning the strategy for painting the motifs neatly.

Second, the correlation between painting skill, vessel form, size, and pottery-making techniques, such as forming, slipping, and firing, is also addressed. It should be noted that the observation of technical traces in complete vessels is restricted, and the identification of the details of pottery-making techniques is limited. The vessels with high skill scores were funnel-shaped (A20118 and A20290), whereas the others were beakers (**Table 4**). Unlike beakers, funnel-shaped vessels required one more technical step to form: drilling the interior of the bottom using a stick-like tool. The rim diameters of the beakers ranged from 11 to 15 cm, and their heights ranged from 16 to 18 cm. The rim diameters of the funnel-shaped vessels were between 11 and 13 cm, and their heights were between 18 and 22 cm. The correlation between the size and skill differences among the beakers was unclear. Pottery-making techniques (forming and slipping) also did not show correlations with skill differences. The vessels might have been formed and slipped by skilled practitioners, whereas apprentices only engaged in painting. Another hypothesis is that an apprentice first mastered other techniques and then moved to painting.

Reg. no.	Horizontal design structure pattern	Vessel form	Rim diameter (cm)	Height (cm)	Forming	Slipping	Skill score
A20096	without a body band	beaker	11	16	coiling? without potter's wheel	yes	0,51
A20097	without a body band	beaker	15	18	coiling? without potter's wheel	yes	0,36
A20099	without a body band	beaker	15	16	coiling? without potter's wheel	yes	0,50
A20118	without a body band	funnel-shaped vessel	12	19	coiling? without potter's wheel	yes	0,67
A20289	without a body band	beaker	11	approx. 16-18	coiling? without potter's wheel	yes	0,79
A20290	with a body band	funnel-shaped vessel	13	approx. 21-22	coiling? without potter's wheel	yes	0,94

Table 4: *Correlation between skill scores, horizontal design structure patterns, vessel sizes, vessel forms, and pottery-making techniques of the vessels with the 'zigzags and boxes' motif.*

Third, another discovery sheds light on an important step of the pottery-making techniques, namely firing. A20289 had a vaporized imprint of the 'zigzags and boxes' motif on its inner surface. Imprints occurred when the painted pottery pieces were piled on each other in the kiln and then fired. This demonstrates that vessels of the same size with the same motif (zigzags and boxes) were piled together and fired in the same pottery kiln. The meaning of painting the same motifs on the same-shaped pottery and firing them together in the painted-pottery making communities remains unclear; however, further analysis of this activity sheds new light on the organization of pottery production of Tall-e Bakun A.

Fourth, if one assumes that the painter draws a horizontal line on a vessel standing on its rim with a brush using her/his dominant hand and rotates the vessel using her/his other hand at the same time, the dominant hand of the painter can be identified from the direction of the painting. A20099 shows a right to left direction of the lower frieze line (**Figure 4: V4**), indicating that the painter used her/his left hand to rotate the vessel, implying that the painter was right-handed. The painters of A20096 and A20097 were also right-handed.

Excavated contexts of the analyzed ceramics

The presence of skill differences in the same motif was demonstrated through this analysis. This result becomes much more interesting when integrated with data concerning the excavated loci of these vessels. A20289, A20096, and another badly-preserved poor-skilled vessel with zigzags and boxes motif were found together next to a pottery kiln in Room 2 of Building III at Level III. In addition, when these vessels were discovered, A20096 was inside a beaker with a zigzags and boxes motif. In total, three beakers with zigzags and boxes motifs, four beakers with another motifs, one conical bowl, one flint knife, and one spindle whorl were found from this room. A20290 and A20097 (the highest skilled and the lowest-skilled samples) were also found in one locus: Room 2 of Building XVII at Level IV, where a small pottery kiln was located. A stone macehead and a rubbing stone was also found in this room. Although both contexts of analyzed vessels show the proximity to pottery kilns, other pieces of evidence concerning

pottery production was not found in these contexts. Hence, whether these vessels were produced and used in the excavated loci or were just brought from other production loci to the excavated loci is still unclear. If the former is true, it is possible that 'zigzags and boxes' was the motif that an apprentice had to learn at some stage of his or her apprenticeship. If the latter is true, one possibility is that dwellers of these buildings (especially Room 2 of Building III) stored many drinking vessels (beakers) for serving some food or liquid in this room. However, why did the dwellers of these buildings collect pottery with an identical motif?

Concluding remarks

This paper analyzed the painting skills of painted pottery to shed light on craft production from the perspective of learning and communities of practice. After reviewing previous studies on painting skills, a skill score analysis without a priori classification of skill characters was performed. The case study on complete ceramic vessels with an identical motif (zigzags and boxes) revealed two points.

1. The skill differences in the pottery-painting community were demonstrated. This suggests that not only skilled painters but also craftspersons with poor to middle skills engaged in painting practices in the community. Furthermore, the nature of errors (lack of experience or lack of attention) was considered following the skill score analysis.
2. The correlation of the skill score with other pottery attributes and excavated contexts indicated further information about painting practices at Tall-e Bakun A.

These results provided new perspectives to pottery-production studies in the Bakun period, which previously have focused on the production context and craft specialization. It also presented a new direction to the discussion of craft specialization. In previous studies, only potters with distinguished painting skills were highlighted and discussed, while those without such skills were disregarded. These results will deepen further craft-production studies in the Bakun period. In addition, in this final phase at Tall-e Bakun A, painted decoration became the most complex and elaborate of the Bakun period. To enable such a development of motif-variability, long-term apprenticeship would have been required. These results indirectly support this possibility.

In this study, I investigated a painted motif and complete vessels. In future studies, more varieties of painted motifs should be considered in skill analyses. In addition, a large portion of preserved materials is in the form of potsherds rather than complete vessels. Therefore, a more refined strategy is required to analyze painting skills from partly-preserved potsherds. By solving these problems, a more vivid reality of craft production in the Chalcolithic village can be revealed.

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Persian Female Weavers in the Persepolis Economy

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Abstract

One of the areas in the study of the Persepolis archives is that of dossiers on working groups. These rich sources can improve our comprehension of the economic mechanisms and administrative structures within the institutions of Persepolis. One particular group, the so-called *pašap*, has so far remained mysterious; a new unpublished discovery clarifies the nature of their work as weavers. Despite the inclusion of some male workers, *pašap* groups as a whole are often marked as female. In the present study, dozens of texts from the *pašap* dossier in the Persepolis Fortification Archive will be treated with special focus on the identification, rations, geography, and analysis of the procedure of work activities of these weavers through contextual analysis.

Keywords

Pašap, Female Weavers, Female Workers, Persepolis Economy, Ration

Introduction

The Persepolis Fortification Archive (PFA) yields valuable information on various working groups in the Achaemenid era. The archival documents, mainly written in Elamite, were found on the northeastern edge of the Persepolis terrace by Ernst Herzfeld in 1933/4.[2] As the PFA is essentially a ration-centered archive, its main goal is to record the payments to workers, travelers, royal elites, etc. In the process, the archival system occasionally labels workers with geographical, ethnic or occupational designations, and occasionally connects them to royal elites and/or courtiers. One can generally assert that a study on occupational designations is more unwieldy than research on other topics, especially if an etymological problem could pose a barrier to the investigation.

The present study deals with one of these working groups, called *pašap*. Little research has been done so far on the identification of these *pašap*. The first and probably the most important treatment of the subject is Kawase's paper which argues that *pašap* were working groups of female weavers.[3] Her thesis was based on 23 texts, the corpus available to her at that time. The fact that Kawase had access only to the published texts led Brosius, who herself was aware of only 34 texts, to recognize that her evidence was not enough for such a conclusion.[4] Accepting Kawase's identification of *pašap* as weavers, however,

[1] I wish to express my appreciation to Wouter Henkelman for commenting on an earlier draft of this paper. My thanks also to Annalisa Azzoni for providing the reading of a single line of Aramaic epigraph on PF 0999. Needless to say, any remaining errors are mine.

[2] The excavator never published a full report, but it was his successor, Erich Schmidt, who provided us with a satisfactory report on the excavations at Persepolis. For reports on the excavation of these tablets, see Schmidt 1953, 40-41. Herzfeld has just briefly referred to the tablets (Herzfeld 1934, 231; 1941, 226, 271; even shorter in 1938, 11, note 1). A comprehensive review can be found in Henkelman 2008, 69-85 and Stolper 2017.

[3] Kawase 1984 followed by Uchitel 1991, 129.

[4] Brosius 1996, 155-156, 163-166. She had further less-weighty arguments to reject Kawase's suggestion (see for example Brosius 1996, 165).

Briant believes that this team worked wool and made a series of cloth.[5] Of importance is the observation that this particular teamwork is marked by a feminine determinative and treated as specialist workers.

Currently, as many as 60 *pašap* texts are available to us, all of which have been studied in the present contribution. Though in light of a discovery, Kawase's argument for the identification of *pašap* as weavers has been proven correct, one should not stop at this point: the *pašap* dossier contains valuable information on various infrastructural levels of practical mechanisms of the Persepolis institutions, which merits further investigation.

Though I do not intend to mention every pre-Achaemenid piece of evidence of ancient female weavers to contextualize the Achaemenid evidence, it might be useful to briefly mention some earlier attestations. I believe one can claim that Achaemenid *pašap* workers are a continuation of an old tradition. Female weavers in Elam are already attested in three documents from the time of Gudea, which mention female weavers from a locality called Elanir. In two of these texts (MVN 6 105 and 492), the women are designated as weavers by the Sumerian term uš-bar.[6] To be added to this dossier, it might be useful to mention an early second-millennium cuneiform archive from Chogha Gavaneh (ancient Palum) in Kermanshah province, western Iran, where dozens of clay tablets in Akkadian were found. In their analysis of these texts, Abdi and Beckman concluded that 'Chogha Gavaneh seemingly sustained itself through the raising of sheep and the cultivation of grain, as well as perhaps by the production of textiles in workshops staffed primarily by women.'[7] Of course, a full survey of the evidence requires a more detailed study. Yet, Persian female weavers may be seen against the background of older traditions.

Identification of *pašap* as weavers

The smaller corpus of Aramaic texts within the PFA contains some important information on the Achaemenid administration. Although the importance of Elamite as the most prominent language used in the PFA has often been stressed, in this case, it is a single line of Aramaic written on the left margin of the obverse of PF 0999 that informs us about the nature of *pašap* as weavers.[8] The Aramaic writings found in the PFA are currently under investigation by Annalisa Azzoni, who has generously given me access to her reading of the Aramaic line on PF 0999 and has provided me with her comments on it. She reads *ptp ʾšprtʾ* on PF 0999. According to Azzoni, the last letter looks more like a *yodh* in the photographs, but an *aleph* makes more sense grammatically, as feminine plural emphatic. It is noteworthy that Raymond Bowman had read *zšprtʾ*, which suggests the final *aleph* as well. Azzoni is certain about the initial *aleph* versus *zayin* in the reading suggested by Bowman. So, if the reading is correct, it would mean 'rations (for/of) the female weavers.'[9] Aramaic *ʾšpr* is a loanword from Akkadian *išparu*.[10]

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[5] Briant 1996, 443. He also refers to PF 0058 - PF 0077 in which the delivery of skins to treasuries is mentioned; he suggests that the needed wool for weavers perhaps have come from this source (Briant 1996, 454; see also Briant 1979, 154). Note that it is attested in Greek sources that Persian kings received wool, among other things, from local producers (Strabo, *Geog*., XV.III.21; see Jones 1966). Aristotle discusses different kinds of revenue, a fifth of which comes from cattle and is called tax on animal products (*Oeconomica*, II. I. 1-5 [=1346a]; see Forster 1920). Briant refers to these attestations to stress the importance of the productions of pastoral sectors (Briant 1979, 137, with note 4). The abundance of flocks of every kind is reported in post-Achaemenid sources, in the area around Persepolis (Diod, XIX, 21. 3; see Stronk 2017, 428; Briant 1979, 144, note 44). Also, one should make mention of the Elamite *mar-na* (NN 2252:4) which betrays Iranian **varna*-, 'wool; garment made of wool' (Tavernier 2007, 445 [4.4.11.2]), though this attestation is outside of the dossier of Persian weavers.

[6] Steinkeller 2013, 299.

[7] Abdi and Beckman 2007, 48.

[8] For the general manners of use of Aramaic in the PFA and its importance, see Azzoni 2008; 2017. Hallock briefly informs us of the occurrence of a single line of the Aramaic writing on PF 0999 but yields no more details (Hallock 1969, 289).

[9] Personal communication Annalisa Azzoni.

[10] Akkadian *išparu* occurs as a loan in other languages (cf. *CAD* I-J 255-257 s.v. *išparu*). It is attested in the other (later) Aramaic dialects, but the present attestation would be the only one in imperial Aramaic, and the only feminine overall, which is of

Taking this small but crucial piece of evidence into consideration, it becomes clear that Kawase was right in her recognition of *pašap* being weavers and that Brosius' rejection of this interpretation was overly cautious. Kawase's position was inspired by the Iranian etymology that Hinz first suggested, and EW later endorsed for *paša-*.[11] The word is a transcription of Iranian **pas-*, 'to bind, to tie,' as attested in Avestan, Middle Persian, Parthian, Khotanese, etc. Hinz and Koch accordingly translate the plural *pašap* as 'Schneiderinnen.'[12] With the Aramaic observation, Hinz's suggestion finds solid ground. Therefore, we can safely consider *pašap* as weavers.

The main focus of Kawase is on PF 0999, in which we deal with three main sub-groups of workers: *tukli huttip*, *kansukka huttip*, and *luplak huttip*. She argues that *tukli* is 'undoubtedly a product of wool' and the second and third materials have been interpreted each as 'a kind of mantle;' because of *the* presence of '(sesame) oil makers,' *pašap* workers were engaged in weaving wools, not in sewing.[13] In this particular text, *pašap* are dealing with *tukli*, *luplak*, *kansukka* and Ì. The latter is the sumerogram for oil. Kawase takes this oil as sesame oil and argues that since sesame oil has been used from the Sumerian time onwards for fulling, then *pašap* must be weaving (of wool).[14] A table is probably more applicable to demonstrate a clearer picture of the relation between products, rations and professions in PF 0999:

A quick look at the **Table 1** shows that those workers who make *bariš* products receive more rations compared to those who make *ramiya* products. Most probably, this is the reason why EW has interpreted *bariš* as 'edel, Künstlerisch, superfein.' If we take *ramiya* as 'fine,' which is reasonable, I think it is safe to interpret *bariš* as 'super fine;' but as will be described (see below), the term could be interpreted in a broader context as 'precise.' A link to the Iranian term 'bārīk' has convinced me that it should even be interpreted as 'delicate.'

Despite the ambiguity of the nature of *luplak* and *kansukka*, the link between *tukli* and garments can be safely confirmed.[15] *kán-su-ka*$_4$ (PF 0999:19-20, 22) and *kán-su-uk-ka*$_4$ (PF 0999:15) probably transcribe an Iranian term, **kančuka-*, which means 'cloak, coat.'[16] This, Kawase's argument on the use of oil, Hinz's suggested etymology of *pašap,* and most importantly, the new reading of the aforementioned Aramaic epigraph by Azzoni (see above) lead to strong support for the identification of *pašap* as weavers in the broad sense.[17]

great importance (personal communication Annalisa Azzoni). See also Kaufman 1974, 59 (with note 136 for references) for the attestations of the Akkadian term in other (later) Aramaic dialects.

11 Hinz and Koch 1987, 163-164 (EW s.v. *pa-šab-be*, *pa-šá-be*, *pa-šá-ip*, etc). Cf. Hinz 1971, 287 with note 58. See also Hinz 1973, 172; Kawase 1984, 22.

12 There is even a Hittite cognate: *paske-*, 'to plant,' see Cheung 2007, 299, s.v. **pas-*. Comparing with an Avestan root, *fšu-*, *fšav* and middle Persian *šobān* and Persian *šobān*, *čupān*, Arfaee interprets the term as 'shepherds' or 'food producers' (Arfaee 2008, 282, s.v. *pašab*, see also Arfaee 2008, 145). It remains unclear how he connects the aforementioned Avestan root to the word; however, it is clear that his interpretation is not justifiable within the context (Fort. 5206). The Achaemenid Elamite term for shepherd or herdsman is *batera* (Henkelman 2011a, 7; Cameron 1948, 163-164)

13 Kawase 1984, 23. The huge amount of flour attested in PF 0999 also led to an assumption that these *pašap* workers must have been 'bread bakers' (Henkelman 1997, 344; he no longer stands by this idea [personal communication]).

14 Kawase 1984, 23, with note 21.

15 *Tukli* is attested in the so-called Acropole texts. For instance, see S 281:10 (N. 120 in Scheil 1907, 107; for his translation of *tukli* as 'étoffe, écharpe, lainage;' see Scheil 1907, 215). See also Henkelman 2011b, 605, note 85 where he cites S 281:29, PAP 6 TUK 6 ⌜BE⌝ *pár-sìp da-*⌜*at*⌝*-ia-*⌜*na*⌝*-ip* ⌜*du-iš-da*⌝ and translates it as '6 *tukli* garments (and) 6 (*kuktu* garments), Persians from Dat(ti)yana- received.' See also Henkelman 2003, 96 on S 108:9, reading 1 *tuk-li pu-ur-na*, '1 *tukli* [made] of *pur*.' See also S 135.

16 Tavernier 2007, 445 (4.4.11.1).

17 Despite the assumption of some researchers (for instance: Koch 1990, 217), it is noteworthy that clothing is not mentioned elsewhere in the PFA. Briant notes that Aramaic glosses on PF 0857, PF 0858, and PF 1587 refer to clothing items (Briant 1979, 153, note 98). He refers to Dandamayev, but neither Dandamayev claims such a reading nor does Aramaic evidence support this (Dandamayev 1973, 11; Cf. Hallock 1969, 246, 247, 442).

Female workers	Male workers	Product	Ration (barley)
--	1 *huttira* (maker)	*tukli bariš* (delicate *tukli* garment)	45 l.
--	2 *huttip* (makers)	*luplak bariš* (delicate *luplak*)	45 l.
10 *huttip* (makers)	--	*tukli bariš* (delicate *tukli* garment)	40 l.
6 *huttip* (makers)	--	*luplak bariš* (delicate *tukli* garment)	40 l.
---	1 *zilpira*	--	40 l.
---	2 *huttip* (makers)	Ì (oil)	30 l.
21 *huttip* (makers)	---	*tukli ramiya* (fine *tukli* garment)	30 l.
18 *huttip* (makers)	---	*kansukka ramiya* (fine cloak)	30 l.
7 *huttip* (makers)	---	*luplak ramiya* (fine *luplak*)	30 l.
1 *huttip*[l] (maker)	---	*luplak ramiya* (fine *luplak*)	25 l.
1 *huttira* (maker)	---	*tukli ramiya* (fine *tukli* garment)	25 l.
1 *huttira* (maker)	--	*kansukka ramiya* (fine cloak)	25 l.
2 *huttira!* (makers)	--	*luplak ramiya* (fine *luplak*)	20 l.
3 *huttip* (makers)	--	*kansukka* (cloak)	20 l.
7 *huttip* (makers)	--	*Tukli* (garment)	20 l.
---	1 *zilpira*	--	20 l.
--	1 *razaka* (dyer)	--	20 l.
1 woman *takdudum*, wife of the *zilpira*	---	--	20 l.
1 girl	2 boys	--	15 l.
5 girls	6 boys	--	10 l.
5 girls	2 boys	--	5 l.

Table 1: *Products, rations and professions in PF 0999.*

The network of weavers

Our dossier, as mentioned, contains 60 texts of different levels of importance. 23 texts from PFA are already translated and published in Hallock 1969 and studied in Kawase 1984.[18] One more related text can be found in the Persepolis Treasury archive.[19] 25 more texts from the PFA mentioning *pašap* were transliterated by Hallock and are currently being prepared for publication by Henkelman.[20] Eleven more unpublished fragmentary texts have been edited by Stolper, available to me through the OCHRE database.[21]

[18] PF 0847, PF 0875, PF 0876, PF 0999, PF 1012, PF 1089, PF 1090, PF 1091, PF 1128, PF 1129, PF 1165, PF 1171, PF 1184, PF 1200, PF 1201, PF 1203, PF 1236, PF 1590, PF 1606, PF 1608, PF 1790, PF 1794, PF 1848.

[19] Brosius correctly adds a text from the Persepolis Treasury Archive (PT 6; Brosius 1996, 137-138), the previous reading of which by Cameron 1948, 93 (PT 6:3-5) was corrected by Hallock 1960, 97.

[20] NN 0132, NN 0249, NN 0397, NN 0406, NN 0674, NN 0783, NN 0916, NN 0983, NN 0987, NN 0992, NN 1218, NN 1241, NN 1404, NN 1410, NN 1620, NN 1653, NN 1734, NN 1887, NN 1914, NN 2134, NN 2391, NN 2405, NN 2622, Fort. 01017, Fort. 05206. Wouter Henkelman has given me access to all of these texts. The last text, Fort. 05206, was published in Arfaee 2008, 145.

[21] Fort. 0287-101, Fort. 0505-101, Fort. 0570-101, Fort. 1344-103, Fort. 1537-102, Fort. 1526-104, Fort. 1542-101, Fort. 1748-102, Fort. 2080-107, Fort. 2337-101, Fort. 2342-103. These texts are mostly poorly preserved. EW (s.v. *pa-šap*$_6$) suggests that the term may be read in one of the so-called Elamite Nineveh letters (Nin 19:8). Yet, after examination of Weissbach's autograph (Weissbach 1902, 195, n. 19), this reading remains uncertain, especially when one takes the fragmentary nature of the text into consideration. I wish to express my gratitude to Kiumars Alizadeh for drawing my attention to Hinz's reading.

The first remarkable sub-category is that of the single leading woman receiving 50 l per month. This sub-category appears in PF 0847, NN 0397, NN 0783, NN 1404, NN 1653, NN 2134, Fort. 2337-101, and Fort. 0570-101.[22] The number of women receiving 50 l in the last text is missing. Of great importance is the observation that in the PFA women normally receive 20 l. It means that the female leaders in these texts received 2.5 times more than an ordinary female worker. Note also that there are also significant numbers of female workers in the same texts who received 40 l (i.e., twice the standard).

Six of the aforementioned texts (PF 0847, NN 0397, NN 0783, NN 1653, NN 2134, and Fort. 2337-101) are significantly analogous in terms of numbers, gender ratio, and ration levels; moreover, *Irtuppiya* acts as supplier in them and the responsible director is *Iršena.*[23] Seal PFS 0004* is used on all six tablets. The number of 40-liter women varies between 33 and 34, another indication that the same group of *pašap* workers is referred to in this subset.

NN 1404, by contrast, contains a sub-group of 65 (?) women who receive 30 l and seems to refer to a different team (different supplier and different place). Another particular aspect of NN 1404 is the presence of one man who receives 40 l and a much lower number of 40-liter. women (16). Some other texts are very similar to NN 1404 in terms of rations, number of workers, and gender, but they do not explicitly mention that the workers are *pašap*.[24] In all of these texts, a single man receives 40 l and the number of 40-liter women is comparable with that of NN 1404. One can safely assume that these texts refer to the same team as NN 1404, an important indication that our *pašap* dossier can probably be extended still.

Several texts show a huge amount of rations, including barley, grain, *tarmu* (wheat?), sesame, *pit* (figs; fruit), sheep/goats, beer and wine; this can be used to argue for the large numbers of *pašap* workers.[25] Sheep and/or goats as rations are generally rare in the archive. The fact that meat is distributed among the weavers shows their economic value for the institution.

Those women who receive 30 l of *wine* in PF 0875, PF 0876, PF 1012, PF 1790, NN 1887 and Fort. 1344-103 are called *araššara*. In one exceptional case, PF 1790, we deal with five *araššara* women, each receiving four heads of sheep/goats per annum.[26]

PF 0865, PF 0866 and NN 1524 list personnel of a 'treasury' or craft-center (restored in NN 1524) receiving barley rations. Among these is one woman *araššara* receiving 50 l of barley; Kawase suggested that these women should be considered as *araššara*.[27] Following this idea, Brosius recognized that the 50-liter barley women in the *pašap* texts are probably also *araššara* or in a position similar to it. It would furthermore seem that 30 l of wine belonged to the same remuneration scale as the 50 l of barley.[28] *Araššara* perhaps means

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[22] I have excluded Fort. 0570-101, because it is very poorly preserved and for the fact that it includes three unclear sub-groups of workers.

[23] *Iršena*'s responsibility is described in the formula PN *damanna* and in one case (Fort. 2337-101) in the formula PN *šaramana. damanna* is a conj. IIIm form of *da-*. PN *damanna* is normally translated as 'assigned by PN' (Cf. Hallock 1969, 679-680, s.v. *damanna*). *šara-* literally means 'to cut [off], divide, apportion' (Hallock 1969, 754, s.v. *šara*). Here, I follow Henkelman's interpretation: 'under responsibility of PN' for PN *šaramana* (see e.g., NN 2541:33-34 in Henkelman 2011a, 4).

[24] Texts comparable to NN 1404 are: PF 0930, PF 0931, PF 0932, NN 0048, NN 2528, Fort. 6365.

[25] PF 1590, PF 1606, PF 1608, PF 1794, PF 1848, NN 0916, NN 0987, NN 0992, and Fort. 1748-102. Numbers of workers which appear only in NN 2622 and Fort. 1748-102 support our argument. The low rations in the dossier of the weavers attested in NN 0406, NN 1218, NN 1887, NN 1914, NN 2391, Fort. 01017, Fort. 2342-103, Fort. 1344-103 are due to different reasons.

[26] The fact that PF 1790 informs us of five *araššara* women who are called by name shows that their individuality was recognized by the administration. The status of these women is particular, since they receive sheep/goats, a rare commodity in the PFA (see Brosius 1996, 149).

[27] Kawase 1984, 21-22, 25; Kawase's suggestion has been followed by Brosius 1996, 147, 150-151, 155-156.

[28] Brosius 1996, 156. This is not a general principle in the archive, however, see Henkelman 2005; 2008, 475-478; and 2011c, 96, note 20, where he demonstrates that normally ten liters of wine is as worthy as 30 l of grain and one average sheep or goat normally equals 100 l of grain.

'great (person), chief.'[29] It may be assumed that the term *araššara* as a specific designation in the expression *araššara pašabe-na* meant 'chief of weavers' or something close to it.[30] If *araššara* is a term used only to qualify the chief or supervisor of weavers, here again it might lead to the extension of our *pašap* dossier.

The extra rations paid to weavers also deserve mention. Though different terms are used to refer to them, their small amounts reveal their nature as a bonus.[31] In agreement with the previous studies on the larger dossier of mothers of newborn children in the PFA, the reward for weaver mothers who gave birth to boys was doubled: 20 l barley or 10 l wine/beer, in accordance with the whole dossier of mothers within the PFA.[32]

Other groups mentioned together with the *pašap* are either ethnic or occupational designations. Ethnic groups mentioned in the *pašap* texts are *iškudrabe* and *turmilap*, hence respectively, Skudrians and Lycians.[33] The scribes of the Fortification Archive typically attempt to gather information on the distribution of a particular commodity. In the process, different groups might be already mentioned together simply because they have received the same commodity.[34] This administrative purpose explains the co-occurrence of unrelated groups, such as ethnic groups and the weavers.

There are also two texts where an *el-nuškira*, conventionally translated as door-keeper (which probably refers to sort of safety guards), occurs with an *araššara pašabena* (chief of weavers). Door-keepers are mentioned together with weavers in the Neo-Sumerian period to control the inputs and outputs of workers.[35]

Yet, this is not always the case: some of the occupation designations attested along with 'weavers' do point to an institutional framework. The terms *kapnuškip* (Fort. 05206) and *razaka* (PF 0999) occurred most

[29] The connection between the other form of *araššara* (pl. *araššap*), that is *iršara* (pl. *iršap*), with the term *matištukkašbe*, the etymology of which is certain, has led to this interpretation (Hallock 1969, 704; cf. Kawase 1984, 22). Hinz has showed his skepticism of Hallock's interpretation (Hinz 1971, 267, note 31 after Hinz 1952, 238-240; discussed by Koch 1983, 36, note 104). Cf. EW, s.v. *a-ráš*, *a-ráš-ša-h-ši-ik-ra*, *a-ráš-šá-ip*, and *a-ráš-šá-ra.* Based on the different contexts in which *matištukkašbe* and *araššara* occur, this identification has become the subject of some doubt (see Brosius 1996, 146-147). But if one takes the occurrence of *iršap* (PF 1076) and compares it with that of *matištukkašbe* (PF 1063, PF 1064, NN 2114), it becomes clear that in fact these two terms refer to the same group: a group of two women and one man who are supplied for by Uštana and in total receive 90 l of wine. As a result, *iršara* can mean 'chief.' *Araššara* backformation from Elamite *iršara* (< *riša* 'great') is based on aural perception of the word by Iranophone scribes (personal communication Wouter Henkelman); this means that the interpretation suggested by Hallock can be taken into account, yet one should beware of considering *araššara* and *iršara* as the same occupational designation.

[30] See also Brosius 1996, 146-163. She translates the expression as '(female) supervisor of *pašap* (women)' (Brosius 1996, 147). To the five texts cited by her (PF 0875, PF 0876, PF 1012, PF 1790, NN 1887), one should add Fort. 1344-103.

[31] Terminology of these bonuses:
Karmaziš (0.2 l monthly payment to each worker, always referring to flour): EW (s.v. *kar-ma-zí-iš*): 'vielleicht = ap. **garmačiš* oder **garmačia*.' Tavernier (2007, 507 [5.3.4.31]) cautiously relates it to **garma*, 'warm'.
kamakaš: EW (s.v. qa-ma-ak-kaš) suggests the Old Persian **kāmaka*, 'Wunschkost' as the root. Tavernier (2007, 408 [4.4.3.5]) refers to the root **kāma-ka-*: 'reward, bonus, lit. wish, desire, special rations of provisions because of special prestations'.
The etymology of *sat* is unknown; (0.5, 0.7, 1 1. and 1/30 of one head of sheep/goat monthly payment to each worker); Hallock (1969, 35) suggests that it could simply mean 'food'.
zanam: Following Hinz (1973, 90-91) who suggested a Median etymology (*zaina-) 'Prämie, Bonus,' and consulting Gershevitch, EW interprets it as 'Gratifikation, Bonus' (EW s.v. *za-a-na-um*; 0.5 l monthly payment to each worker). Cf. Tavernier 2007, 411 (4.4.3.20).
The etymologies of *Zaššizzam* (one liter monthly payment to each worker), and *zizal* are unknown.

[32] Briant 1996, 448; Kawase 1984, 21; Koch 1994, 131. For the classic attestation of mother receiving awards, see Safaee 2016-7, 118.

[33] In general, for the attestations of ethnic groups in the archive see Henkelman and Stolper 2009; Henkelman 2011a; 2018.

[34] See Brosius 1996, 148.

[35] Lafont 2016, 156. For a Sumerian text related to weavers that mentions part-time workers and also a door-keeper, see Garcia-Ventura 2016, 187.

probably in relation to the presence of weavers. The former, which is a general term, is usually translated as 'treasurers,' but actually denotes craftsmen of various specializations occupied in regional craft centers.[36] The arguments for the connection of the occupational designation *razaka* and weavers will follow (see PF 0999 below).

Geographical landscape

Only 39 out of 60 texts in the *pašap* dossier clearly mention a locality. Altogether we are dealing with the toponym mentioned in **Table 2**.[37] Once, in the text Fort. 1017, the expression 'to the King' is used as a geographical destination.

Weavers were active in most parts of the region under the purview of the Persepolis administration: the only exceptions are the northern and southern clusters, where no weavers are as yet attested. This geographical distribution is another indication of the significance of their work for the institution. The most common area remains the Fahliyān region; this must be due to the high production of raw

Toponym	Area	Occurrences
Tašpak	Fahliyān region	6x
Liduma	Fahliyān region	5x
Zappi	Fahliyān region	5x
Baktiš	Kāmfīrūz region	4x
Hidali	Fahliyān region	3x
Kaupirriš	Kāmfīrūz region	3x
Narezzaš	Persepolis region	3x
Matannan	Persepolis region	2x
Atek (Atuk)	Fahliyān region	1x
Dašer/ Zakzaku	Fahliyān region	1x
Hišema	a station on the royal road from Persepolis to Susa	1x
Hunar	Fahliyān region	1x
Kurra	between the Fahliyān and Kāmfīrūz regions	1x
Pamiraš	?	1x
Parmadan	Ardakān plain	1x
Tikraš	Persepolis region	1x
Tirazziš	Persepolis region	2x
Umpuranuš	Fahliyān region	1x
Uranduš	Persepolis region	1x

Table 2: *Geographical distribution of weaver's work activities.*

[36] See Stolper 2000.

[37] Since PT 6 belongs to the Persepolis Treasury Archive, it should be related to the Persepolis region or near it, even though a toponym is missing in the text. For a survey of the toponym in the PFA, from which our table has very much benefited, see Henkelman 2008, 481-509 (with references).

materials needed for weavers by the pastoral population.[38] In this region, the animals produced by semi-autonomous (agro-)pastoralist inhabitants could be exchanged with the staple commodities produced by the Persepolis economy, which is the institution represented by the PFA.[39]

PF 0999

Due to space constraints, I give the text of PF 0999 in translation only.[40] The reproduction presented here is accompanied by some remarks to clarify the choices I have made.

Translation:

> [1-3] 36270 (l. of) grain, allocation from Karkiš, 107 weaver workers received as rations.[3-4] For a period of 13 months, they monthly receive 2790 (l. of) grain. [5-7] From the first month to the intercalary 12th (=13th) month of the 24th year. [7-9] One maker of delicate *tukli* garments, two makers of delicate *luplak*, total three, each 45 l. [9-12] Ten women, makers of delicate *tukli* garments, six women, makers of delicate *luplak*, one *zilpira*, total 17, each 40 l. [13-17] Two oil makers, 21 women, makers of fine *tukli* garments, 18 women, makers of fine *kansukka* (cloaks), seven women, makers of fine *luplak*, total 48, each 30 l. [17-21] One woman, makers (*sic*!) of fine *luplak*, one woman, maker of fine *tukli* garments, one woman, maker of fine *kansukka* (cloaks), total three, each 25 l. [21-25] Two women, maker (*sic*!) of fine *luplak*, three makers of *kansukka* (cloaks), seven makers of *tukli* garments, one *zilpira*, one dyer, one *takdudum* (?) woman, wife of the *zilpira*, total 15, each 20 l. [25-26] two boys, one girl, total three, each 15 l. [26-27] Six boys, five girls, total eleven, each 10 l. [27-28] Two boys, five girls, total seven, each 5 l.

Both *bariš* and *ramiya* qualify the preceding term, *tukli* (garment). *ramiya* also qualifies other productions in the same text: *kansukka* (cloak) and *luplak*; *bariš* qualifies *luplak* but not *kansukka*. *ramiya* may also qualify flour and roasted barley.[41] Hinz interprets it as 'fein' derived from OP **ramya-* (EW s.v. *ramiyam*). **ramya-* is interpreted as 'nice, kind, pleasant.'[42]

EW s.v. *bariš* has these interpretations: *edel, Künstlerisch, superfein*, considering it to be a loan from OP **bārya*. These interpretations for these qualifications show the excellence of the garments. While discussing an Iranian loan in Aramaic, De Menasce compares his evidence with Middle Persian *bārīk kār* and Persian *burridan*, which means 'to cut.'[43] This occurrence of the MP *bārīk* may be suitably adopted in contexts of the *pašap* dossier. Hinz interprets *bārīk* as 'fein, dünn.'[44] It is correct that *bārīk* in new Persian means 'thin,' and the meaning 'superfine' may well fit. Yet, it may be more accurate to interpret it as 'precise' or better 'delicate.'[45]

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[38] See note 5.

[39] For the animal exchange, see Henkelman 2005.

[40] For edition see Hallock 1969, 288-289. My thanks to Wouter Henkelman for providing me with both the photographs of the tablet and his transliteration.

[41] Hallock 1969, 747, s.v. *ramiyam*.

[42] Tavernier 2007, 281 (4.2.1351).

[43] De Menasce 1954, 162. The connection with Iranian *bārīk* is followed by Tavernier (2007, 404 [4.4.2.3]; 2007, 412 [4.4.5.4])

[44] Hinz 1973, 41.

[45] For the meaning of 'precise' for *bārīk* in a broader context in MP, see, e.g., *ēn-iz ē wēnīhēd bārīkīhā pad rāst-nigerišnīh kū …* (Dēnkard 3.80) ('It is also seen with a right and precise look;' my thanks to Yusef Saadat who brought this to my attention). Hinz (1973, 41) prefers a reconstruction as **bārya-kara-* and takes it with a similar meaning as **ramya-kara*, 'nur eben eine Stufe höher'.

razakka has been interpreted as 'painter.'[46] In the context of textiles and garments the proper interpretation is dyer. EW suggests an OP root **razaka-* and relates it to the NP *raz* i.e., 'Färber.' *Razakka* should be a kind of occupational designation that completes the tasks of weavers. It is not hard to imagine that a dying activity could be done during the process of production of garments, and as such, a *razakka* could be expected along with weavers.

The interpretation of EW s.v. *zi-ul-pi-ra* as 'Zuschneider' is a mere guess. In PF 0999, there are two *zilpira*, one is receiving 40 l of grain and the other 20 l. The second one's wife is mentioned with the designation (?) *takdudum*, the meaning of which is not clear; she is receiving as many rations as her *zilpira* husband receives. There are also 21 accompanying children, boys and girls, who must be co-workers of *pašap*, perhaps their apprentices.

Conclusion

This paper contributes to the problem of identification of one of the most frequently-attested female working groups in the Persepolis economy. I have also tried to deal with their procedure to shed light on the general view of Persian women and how they were integrated within an economically active institution. In the process, I have dealt with the rations, geographical backgrounds, administrative procedures, and the production of these Persian weavers, who were significantly specialized and were identified by Persepolis administrators as such.

Abbreviations

CAD = The Assyrian Dictionary of the Oriental Institute of the University of Chicago (Oppenheim and Reiner (eds) 1960).

EW = Hinz and Koch 1987.

Fort. = Fortification Texts transliterated by Matthew Stolper.

MVN = Materiali per il vocabolario neosumerico.

PF = Persepolis Fortification texts in Hallock 1969.

PFA = Persepolis Fortification Archive.

NN = unpublished Fortification texts read by Richard Hallock and prepared for publication by Wouter Henkelman (who generously provided me with his transliteration and translation of these texts).

PFS = Persepolis Fortification seal.

PT = Persepolis Treasury texts.

S = text from the Acropole archive at Susa published in Scheil 1907.

[46] Tavernier 2007, 430 (4.4.7.99).

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Shops in Ancient Berytus: New Data from Old Excavations

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Abstract

The excavations in Beirut (Roman Berytus) since the mid-nineties have revealed a large portion of the Romano-Byzantine city, which unfortunately remains mostly unpublished. The excavated sites yielded several shops which supplied their neighborhoods with countless goods. This paper focuses on the difference between the small shops in the heart of residential areas (the Eastern Quarters / Martyr's Square) and those located closer to the main streets of the city. Comparing the finds from these two types of shops, as well as their architecture and development through the Romano-Byzantine Period sheds some light on the economic interactions within Roman Berytus. Finally, better preserved sites in the Roman world in general, and the Roman Near East more specifically, provide a reliable background to better understand the economic role that these shops played within the urban fabric of the Roman Colony of Berytus.

Keywords

Roman Near East, Ancient Beirut, Shops, Architecture, Spatial Analysis

Berytus

Beirut, Roman Berytus, is one of the main Eastern Mediterranean coastal cities due its favorable location. The city sits on a promontory that jets out into the Mediterranean from the narrow coastal plain, which provided safe anchorage for Beirut bound ships. The location of the harbour is disputed.[1] In addition to the maritime connection, the city was well connected by land, as it is located along the north-south *via maris* that stretches from Antioch to Jerusalem and is attested by numerous milestones, as well as in many traveler and pilgrim accounts from the 4th and 5th centuries.[2] On the other hand, communication between Beirut and the interior is evidently more arduous due to the presence of the Lebanon Mountain range. However, a road connected Berytus to Heliopolis (modern Baalbek) in the Bekaa Valley, as represented in the Peutinger Table. Archaeological evidence of this road is meagre compared to the *via maris*, and is restricted to three milestones located between the two cities.[3]

After being overshadowed by its coastal neighbors for the good part of the 1st millennium BC, the city's fortune turned with the onset of the Roman Empire.[4] After the defeat of Mark Antony at the battle of Actium (31 BC), Octavian re-structured the Roman Army into a professional unit, and reduced its size by discharging 300,000 soldiers,[5] compensating them with land or cash bonuses.[6] As part of this scheme,

1 Hall 2004, 15.
2 Goodchild 1949; Hunt 1982.
3 Abou Diwan and Doumit 2017, 227-228.
4 Perring *et al.* 2003, 195.
5 See Cooley 2009, 3.
6 Gilliver 2007, 184.

Berytus was re-founded as Colonia Iulia Augusta Felix Berytus and settled by veterans from the Legio V Macedonica and VIII Gallica.[7] In the following centuries, Berytus grew beyond its Hellenistic limits while attracting an ever increasing array of people, most notably law students who came to study law in its auditoria, best known from Zacharias' Life of Severus,[8] prompting Libanius of Antioch to refer to the city as 'lovely Beirut, Mother of Laws' in several of his letters.[9] The city was on a upward trajectory until the mid-6th century when the AD 551 earthquake and the subsequent tsunami destroyed the city. Tales of death and destruction are well known in many of the historical sources of the period. Agathias recounts the tale of a 'violent earthquake in Constantinople and in many parts of the Empire', as a consequence of which 'the lovely city of Berytus, the jewel of Phoenicia, was completely ruined and its world-famous architectural treasures were reduced to rubble heaps'.[10] John of Ephesus (*c.* AD 507 - 586/588), probably drawing on texts from John Malalas gives a detailed account of the tsunami associated with the earthquake, in which the 'the sea at God's will had retreated and withdrawn from Beirut and the other coastal cities of Phoenicia for a distance of nearly two miles', prompting scores of people to rush to the seabed to retrieve treasures and goods from the sunken ships, only to be surprised by the 'tremendous surge of the sea, rushing up unobserved to return to its original depth'.[11] The destruction of the city in AD 551 marked the end of the 'Jewel of Phoenicia'.

Post-war excavations

Although Beirut did not recover in antiquity, it did develop into a modern hub in the middle east in the mid-1900s. The Lebanese Civil War that broke out in 1975 and would last until 1990 resulted in the destruction of many parts of Beirut, including the central district which sits on top of the ancient city. The subsequent reconstruction was preceded by large scale rescue excavations in the city center in an effort to recover the city's past before its remains are reburied for the foreseeable future.

Today, more than 200 rescue excavations are registered in the Beirut Central District, in addition to countless others in the neighboring zones of Gemayze and Ashrafieh. The aim of this paper is to examine the data from the excavations of the 1990s in order to understand the distribution of shops in the city, as well as the variations between shops lining the main streets, as opposed to those relegated to the alleyways. In order to achieve this, I look at two contemporary buildings from Late Antique Beirut, Building 5 in Bey-006 as well as Building 109-2 in Bey-109.

Bey-006 and Bey-109 were both excavated during the flurry of excavation activity in the 1190s, preceding the urban revival of the Lebanese capital. The first site was excavated over two years between 1996-1997 while the second was excavated over a little more than a month in 1997. The time difference can be ascribed to the difference in size between the two, as well as the level of preservation of the vestiges.

The shops

Architecture

The shops of Bey-006, Building 5, occupied between the 2nd and the 6th centuries, consist of a row of elongated rooms opening up to a *c.* 6 meters wide portico which leads to one of the main east-west streets of the ancient city (**Figure 1**), which is thought to link the hippodrome, located to the west

[7] Millar 2006, 170.
[8] Zacharie le Scholastique, *Life of Severus.*
[9] Macadam 2001-2002, 205.
[10] Agathias Scholasticus, *The* Histories, see, Frendo (ed.) 1975.
[11] Jeffreys *et al.* (eds) 1986.

Figure 1: *Shops in BEY-006. Blue zones: commercial activities, green zones: residential or storage spaces, red zones: outside areas used that could be used to display goods (after Perring* et al. *2003).*

of the city, with the city center.[12] Building 5 is a combination of three main units, each composed of two sub-units. These sub-units were divided into two rooms, a larger street facing room and a smaller backroom. The units were separated by narrow spaces (2.10 meters wide) which the excavators deemed to be staircases.[13] In the absence of any masonry steps, one would presume that the stairs were wooden, a common practice noticeable in Herculaneum Pompeii,[14] as well as Ostia where only the first two to three steps were constructed from stone or concrete.[15] This common practice is also documented in the well preserved city of Trimithis, in the Dakhla Oasis in Egypt, where multiple buildings are preserved along with the remains of their staircases, often constructed of wood.[16] The absence of hard evidence confirming the function of these narrow rooms as staircases in Beirut opens the door for other functional possibilities, one of which is that these rooms acted as access-ways leading to the backrooms, and thus providing a private entrance to their occupants. Such a configuration enhances the separation between private and public spaces by creating a buffer zone, which is otherwise non-existent (assuming the shop itself is a public space). Such divisions between the private and public sphere were common in the Greek world (e.g., Olynthos, Athens) and were often enforced by the presence of a large hallway which ensures

12 Perring et *al.* 2003, 211.
13 Perring *et al.* 2003, 209.
14 Adam 1999, 410.
15 Hermansen 1982, 213.
16 Davoli 2019, 47.

that passersby are not able to peek into the private domain.[17] This design is also attested at Delos,[18] as well as different cities within the Greek East such as Sepphoris, where this is attested in the House of Dionysus as well as the House of Orpheus,[19] and Apamea's Maison aux Consoles.[20] The back rooms can be assigned several possible functions ranging from a small domestic space for the shop's owners to a storage unit related to the commercial activities taking place in the front room, such as the case of most of the shops in Sardis.[21] According to the excavators, Building 5 was constructed in the 2nd century AD and was continuously renovated throughout the following four centuries, culminating in the placement of a mosaic floor in the portico in AD 525-551 bearing a series of Greek letters marking the entrances of the shops.[22]

Even though the preservation state of the remains in Bey-109 are substantially poorer than those of Bey-006, mainly due to the numerous Ottoman pillars dotting the site, the architecture of these shops shows clear contrasts with the ones discussed above. The building in question here, Building 109-2, is dated to a period between the 4th and 6th centuries based on lamp fragments as well as coins recovered from occupation deposits, and thus is contemporary with the shops in Bey-006. Building 109-2 is not completely preserved and seems to continue towards the west. The preserved remains consist of 6 rectangular shaped rooms each granted a street access to either Street 109-1 or 109-2 passing to the north and south of the building. Each of the six preserved rooms is thought to be accessed from the street through a shop spanning door, a common feature of Roman shops,[23] while no internal access-ways were excavated connecting the rooms. This means that each room is only one step away from the exterior, providing a very low level of privacy and high level of permeability between the outside and inside.[24] This is what one would expect from a commercial building as the owner would logically want to increase the number of visitors of their shops as well as the amount of visible area to the outside.[25]

The main difference in design between the two sets of shops is the fact that the ones in Bey-006 represent two-room units while those of Bey-109 are single room units. It is tempting to imagine that the back rooms in Building 5 (Bey-006) are in fact small living spaces used by the shop owner, reminiscent of the medianum style apartments of Ostia, more specifically the Domus del Ninfeo;[26] alternatively, these same rooms could be used for storage, thus increasing the merchandise capacity of their respective shops.[27] The lack of a back room in Building 109-2 deprives the shop owners from extra storing space, as well as the possibility of living behind their shops. However, although no physical remains support such a claim, it is possible that a staircase is placed on the outside of the building leading into upper living quarters, or alternatively a ladder was placed inside the room on the ground floor. In general, the design of this building fits within the category of 'stand-alone' shops, similar to the shops of Block G2 in Dura-Europos.[28]

So far, by looking at the architecture, we are able to see that the shops in Bey-006 are more spacious, provide a possible private space for its tenant and extra storage space for its good, all of which are not

17 Nevett 1999, 155.
18 Trümper 2007.
19 Weiss 2018.
20 Balty 1980.
21 Crawford 1990.
22 Perring *et al.* 2003, 218-219.
23 Hartnett 2017, 60.
24 Hillier and Hanson 1984, 145-147.
25 Hartnett 2017, 60.
26 Daum 2015.
27 Crawford 1990.
28 Baird 2014, 190.

available in the shops of Bey-109. The next aspect that we will investigate is the location of these shops and the streets that they open on to.

Streets

Besides the noted dissimilarities in the architecture of the shops from both sites, the biggest and most significant difference lies in their location within the urban fabric, and more importantly, the streets they face. The shops in Bey-006 are set along one of the principal thoroughfares of the ancient city, a *decumanus* that connects the hippodrome to the west with the city center to the east of the shops; as well as possibly acting as a processional way according to the excavators (possibly related to the entertainment games at the hippodrome).[29] Supporting the latter claim are the numerous altars found along the stylobate as well as along its reconstructed projection.[30]

In fact, the shops were not directly open to the street, but opened onto a *c.* 6 meters wide portico (see **Figure 1**) that unified the facades of buildings and provided shelter from the sun in the summer, and rain in the winter.[31] This setting is certainly advantageous for the shop owners eager to benefit from the increased social activities within these protected spaces.[32] The setting of these shops provides ample reasons for inhabitants to come and walk along this portico: shade, the presence of a large baths 50 meters to the east, excavated in Bey-045,[33] a possible nymphaeum 30 meters to the east of the shops as well as several altars along the stylobate ensured a constant supply of city dwellers to this area.[34] Even without such attractions, streets, and porticoes in particular, were a primary socializing location for the 'not so well off' city dwellers,[35] associated with drunkenness, fights and crime.[36] In addition to the dense traffic patterns that the advantageous location provided, the portico provided ample space for the merchants to display their goods beyond the limits of their stores, as seen in **Figure 4** of a relief depicting the sale of cloths and cushions in a colonnade in 1st century Rome. We know from numerous written sources that the streets of Roman cities were generally full of clutter. Libanius boasted about the commercial activities in Antioch by pointing out how full its porticoes are of wooden stalls.[37] The streets of Rome were in fact so cluttered by merchandise, prompting Domitian (AD 81-96) to intervene to regulate Rome's streets that were overcome by shops. This is most vividly presented by Martial's praise of the Emperor's intervention, contrasting the unbearable situation where 'the rash shopkeepers had taken over the whole city; no threshold stayed within its own threshold.' with that after Domitian's intervention where 'no wine jugs are chained up to encircle columns, and the praetor does not have to walk straight through the mud anymore, nor does the grimy cook shop monopolize the whole street. The barber, the barman, the cook, and the butcher all respect their own thresholds. Now it is Rome, just recently it was one big shop'.[38] One can imagine that such situations were not exclusive to Rome, but were mirrored in other cities of the Empire, in our case, Berytus, and that the owners of the shops along the *decumanus* certainly benefited greatly from such added space. In fact, this was archaeologically attested in shops W1 and W2 at Sardis, where the owners arranged for an extension of their shops well into the portico area, disrupting pedestrian traffic in the process.[39]

[29] Perring *et al.* 2003, 210.
[30] Perring *et al.* 2003, 211.
[31] Kaiser 2011, 50.
[32] Holleran 2012.
[33] Thorpe 1998.
[34] Perring *et al.* 2003, 211.
[35] Hartnett 2017, 48.
[36] Viitanen *et al.* 2013, 61.
[37] Lib, *Or. 11.245.*
[38] Martial, *Epigrams. 7.61*, see Nisbet (ed.) 2017.
[39] Crawford 1990, 37.

Figure 2: *Shops in BEY-109. Blue zones: commercial activities, red zones: outside area that could be used to display goods.*

A different picture emerges when we check the shops in Building 109-2. The building is located between two narrow streets. Street 109-1 to the north, which is 2 meters wide (considered as an alleyway rather than a street) and Street 109-2 to the south which is 5 meters wide. The location of the building in general is far from the city's main streets, 85 meters away from the southern *decumanus*, 126 meters away from the *cardo maximus* in Bey-004,[40] as well as over 200 meters from the extension of the northern *decumanus* which passes in front of Building 5 (Bey-006). The general location of this building is away from the main arteries of the city and is thus subjected to a different nature of interaction with the inhabitants. As seen in **Figure 2**, three shops open to the Street 109-1 and the others to Street 109-2. All six shops are not located within a portico, as no evidence of such an installation was recovered during the excavations; which means their doors opened directly on the unpaved street, or possibly a rather narrow sidewalk devout of any protection from the rain (besides possibly small balconies jutting outwards from the upper story). The implication of such a setting is that these shops lacked any space to display their goods on a rainy day due to the muddy nature of the streets beyond their thresholds. The fact that Street 109-2 is 5 meters wide offers a possible access to one-way cart traffic; while Street 109-1 is 2 meters and is likely to have been exclusively pedestrian, which would complicate the transport of goods sold in these shops.

From the above, it is clear that the shops of Bey-006 held a remarkable advantage over those of Bey-109 when it comes to their physical location and the degree of interaction with the adjacent streets,

[40] Saghieh-Beydoun *et al.* 1998-1999.

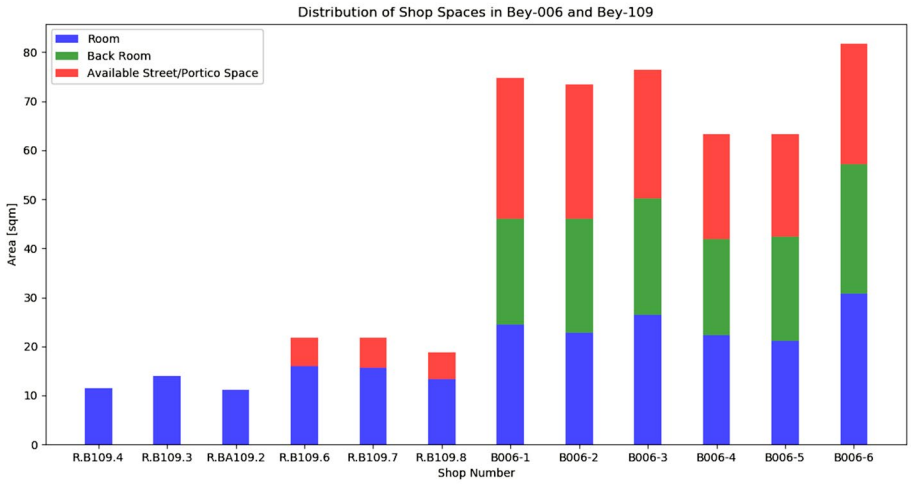

Figure 3: *Area distribution by shop.*

as well as on the level of displaying their goods (**Figure 3**). The Bey-006 shops, equipped with a larger space, as well as a possible storage unit in the back, could display their goods along their inner walls (a wall-hugging object distribution can be seen in Sardis, e.g., Shops W.1 and E.13,[41] as well as in Room 1 in Paneas as well as in the portico.[42] On the other hand, the shops of Bey-109 are restricted to the inside of their shops in winter due to the nature of their location; more specifically, the north facing shops are open on a narrow alleyway and thus cannot display their wares outside their threshold without blocking circulation.

Trade, goods, and development

While the nature of the excavated material does not allow for a specific identification of the nature of traded goods and/or services in these shops; we can only speculate about these by looking at the economic base of the city.

The social and economic life of Berytus was certainly dominated by merchants and artisans,[43] and more so by those involved in the silk trade and weaving (or possibly re-weaving) according to Procopius.[44] These artisans seemed to have gained enough affluence that their children were attending the Beirut Law School, prompting a complain from Libanius.[45] Certainly silk and weaving were not the only industry, but this highlights the fact that artisans attained a high degree of wealth in Beirut. In addition to the trade in silk, the city's law school attracted many students and professors who generated demand for a specific type of goods (stylus, papyrus, etc.) which must have been supplied in the city.[46] Nonetheless, we cannot determine the nature of the goods or services sold in the studied shops due to the lack of evidence. However, we can infer from the latest mosaic bedding (6th century AD) of the portico that the owners of the shops on Bey-006 were turning a decent profit. The mosaic which features Greek letters is very likely paid for by the owners of the shops. Such practice was common in the Empire, and is most notably seen in Pompeii where the pavement often changed in nature in front of different

41 Crawford 1990; Harris 2004.
42 Israeli 2008, 109.
43 Hall 2001-2002, 151.
44 Procop., 25.13-14.
45 Lib. *Or.* 62.21.
46 Hall 2004, 36.

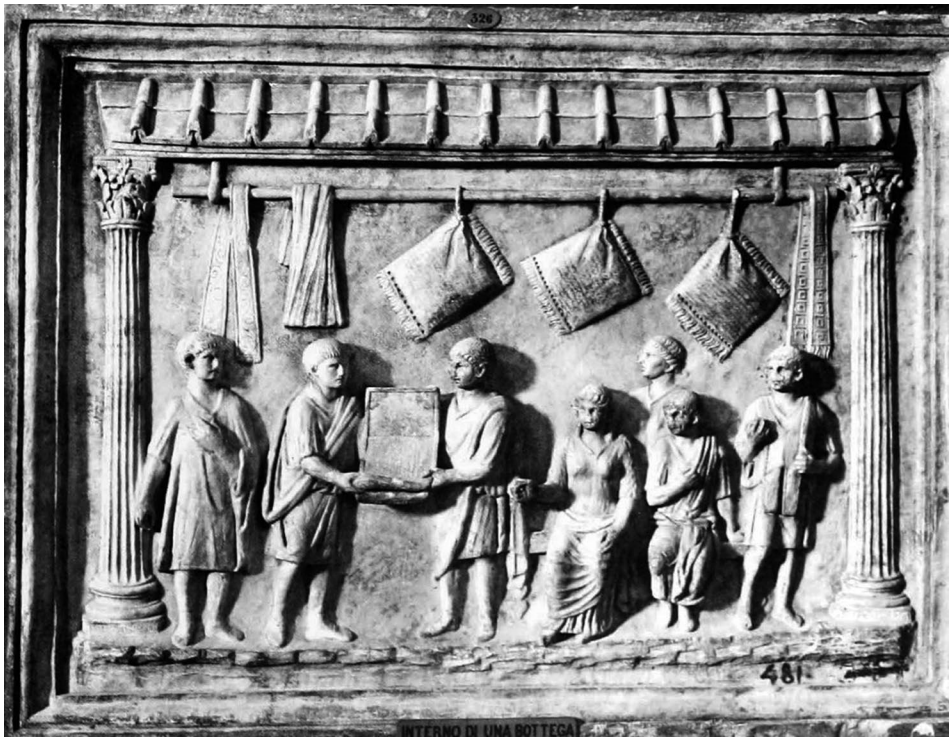

Figure 4: *Relief depicting the sale of cloths and cushions in a colonnade in Rome, 1st century (after Crawford 1990).*

buildings, and was often separated by a small row of stones.[47] In addition, many of the sidewalk sections between building thresholds and street edges seemed personalized and maintained over a prolonged period of time indicating an active refurbishment on the part of the building's inhabitants/owners;[48] the best preserved example of such a practice is the House of the Faun which features a mosaic with the word HAVE, which extends the house owner's salutation to the passersby.[49] Other examples include the marble floor in front of the Stabian Baths as well as the fist sized gray stones pavements in front of the Temple of Augustan Fortune.[50] Such embellishments certainly helped attract the attention of the public to the house, bath, temple, or whichever building they were placed in front. A similar function can be attributed to the mosaic pavement in front of the Bey-006 shops, which also helps identify specific shops by their assigned letter; allowing prospective shoppers to find their destination more efficiently.

While the shops of Bey-006 have become successful and could have been possibly involved in textile and linen trade, the ones in Bey-109 appear to have operated on a lower budget and likely provided different types of services and/or goods. Although we have no evidence regarding the traded material in these shops, their location along small streets, away from the main arteries of the city, meant that they relied heavily on selling their goods/services to individuals who knew their location; this would lead us to think that these shops likely held specialized artisans or possibly small shops that provided daily amenities for their residential neighborhoods.

47 Saliou 1999, 165.
48 Saliou 1999, 171.
49 Hartnett 2017, 124.
50 Hartnett 2017, 125.

Conclusion

In the above, I compared the similarities, and more importantly the differences between two rows of shops. The first in Bey-006, is hidden in the shade of a portico along the northern edge of a *decumanus*, while the other is tucked away in a rather crowded area of the city, surrounded by a small street on one side and a very narrow alleyway on the other. The nature of the remains in both sites do not provide clear clues to the nature of the commercial activities that took place within their walls; however, the analysis of their location and architecture sheds some light on the type of interaction that could have taken place. In the end, it is difficult to neatly separate the function of these shops, especially that knowing that there was no real incentive to segment the city's quarters beyond the fact that the main shops lined the big streets, and horticulture was relegated to the outskirts.[51] On a different level, this article highlights the large amount of information still to be uncovered in the documentation of the numerous Beirut excavations, and the potential they hold in expanding our knowledge about the architectural, economic, and social aspects of the 'Jewel of Phoenicia'.

Abbreviations: Ancient authors and their works

Lib, *Or.* = Libanius, Orations, see Gowney (ed.) 1959.

Procop. = Procopius, see Downey and Dewing (eds) 1971.

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[51] Wallace-Hadrill 1994, 135-136.

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Viticulture in the Roman Colony of Berytus: Economic Considerations

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Abstract

In this paper, the author utilises the Roman port of Berytus as a case study in applying a holistic, inductive approach to characterise maritime commercial networks in the ancient world. Specifically, the city began producing its own unique type of amphora and developed new wine presses following Roman colonisation. As there exist texts that detail how and when the city was colonised and settled, publications regarding the excavation of the port city, and detailed ceramic analyses of the Beirut amphora, there is an opportunity to shed light on the production and distribution of wine in and from Berytus and what these patterns can tell us about the political organisation of the region. These questions are presented here and tackled based on archaeological data from Beirut, and then contextualised within local and empire-wide developments to shed light on variables potentially correlated with economic growth or decline.

Keywords

Roman Capital Ports, Beirut, Historical Economics, Roman Trade, Network Analysis

Introduction

Port cities have long been a central theme in the examination of ancient distribution networks and commercial developments, particularly in the Roman Republic and Empire.[1] Their presence is reflective of a number of intertwined ecological and socio-political processes involving an interconnected hinterland and maritime landscape. In this way, they provide a glimpse into economic webs by allowing a critical assessment of every link in the supply chain of a good or product from its processing site to the final point of consumption.[2] This analysis involves a wide array of topics, ranging from legal, administrative and financial infrastructure, to harbour construction and accessibility by merchant ships, to social relations.[3] When contextualised within wider patterns in the *longue durée*, port cities can provide crucial insight into the multi-faceted complexion of a society.

In this paper, I propose an approach in furthering our understanding of these topics with a particular focus on economic trends, using the wine industry in the Roman port city of Berytus (modern-day Beirut) as a case study. It is argued that an inductive approach that prioritises archaeological evidence is more effective in shedding light on correlative and potentially causative variables associated with fluctuations in the ebb and flow of ancient economic patterns. While the individual methodologies discussed in this paper for investigating several important components of the wine industry in Roman Beirut are not unique in themselves, their combination allows for a new way to characterise a Roman port city not singularly as a distribution hub, marketplace, or strategic transit point, but as the sum of all these identities.

1 Rostovtzeff 1926.

2 Keay 2016, 291.

3 Boetto 2010; Broekaert and Zuiderhoek 2020; Marriner *et al.* 2008; Rathbone 2003; Rickman 1988; Rogers 2013; Verboven 2020.

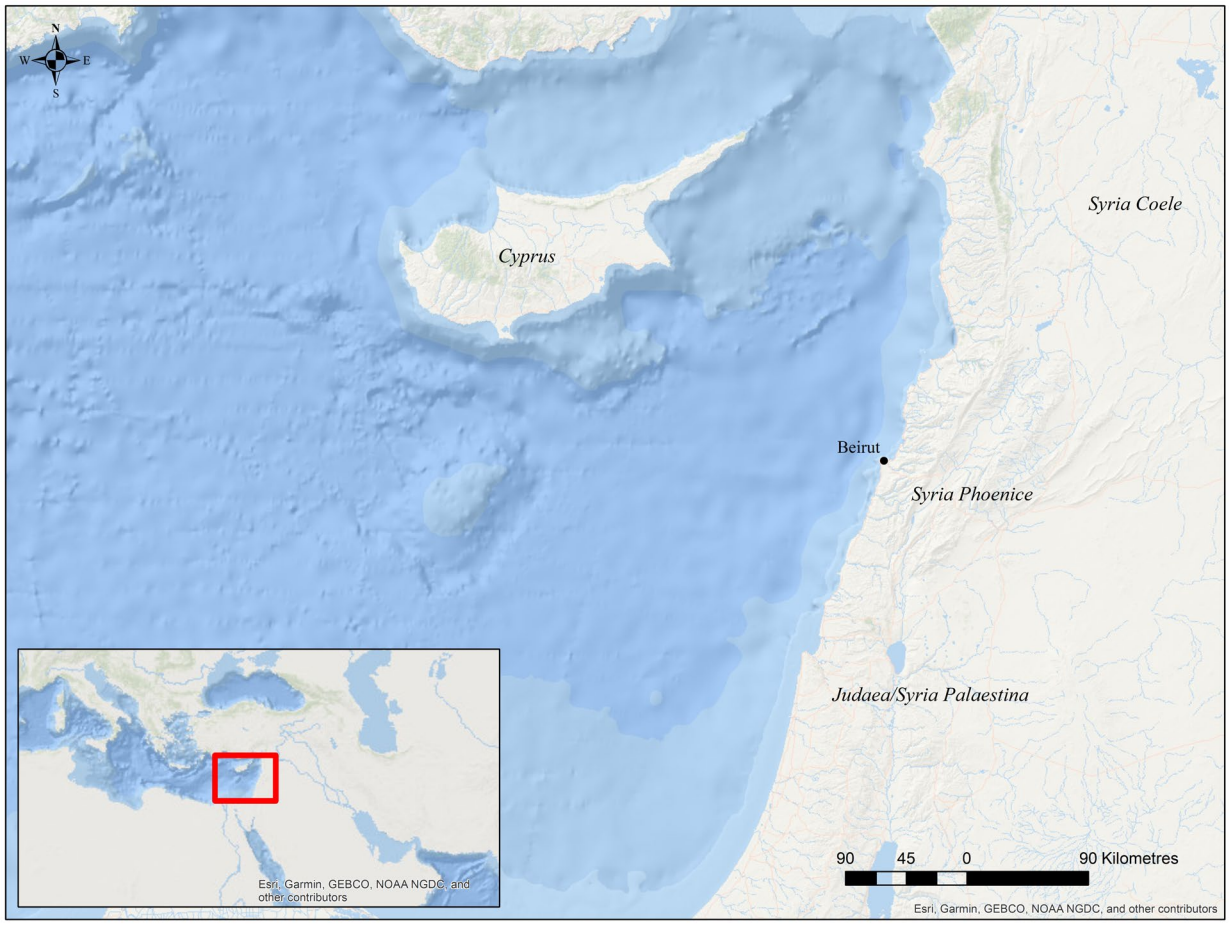

Figure 1: *General map depicting the location of Beirut (Berytus) with a rough demarcation of the nearby Roman provinces.*

The roman port of Berytus

Beirut is situated on a wide coastal plain along the central portion of the Levantine coast (**Figure 1**). The northern coastline is well-protected from the dominant south-westerly winds by a rocky promontory and is characterised by several natural reefs and bays. The Beirut River cuts through the coastal plain and has served as a consistent source of fresh water for the city throughout history. All these factors made the region well-suited for settlement and for facilitating maritime transportation. This has been corroborated by recent excavations that confirmed the continuous occupation of the city for thousands of years, as well as the presence of an active and well-maintained harbour.[4]

Beirut was incorporated into Roman Syria (*Syria Coele*) in 64-63 BC with Pompey's deposing of Antiochus IV and the reorganisation of the political structure of the region. After the defeat of Mark Antony at the hands of Augustus at the Battle of Actium, the city was made a *colonia* sometime around 15 or 14 BC, and quickly rose in status.[5] This is visible in the archaeological record, specifically in the increase in private

[4] Perring *et al.* 2003

[5] There is some debate as to the true date of the Roman colonisation of Beirut, with 32-31 BC proposed as another possibility, immediately after the Battle of Actium. However, it seems more likely that there was some delay in the colonisation based on the literary evidence in Jerome's *Chronicle*, which states 'the colonies of Beirut and Patras were founded' and 'Agrippa captured Bosforus' between 16 and 13 BC; Hall 2001-2002, 143.

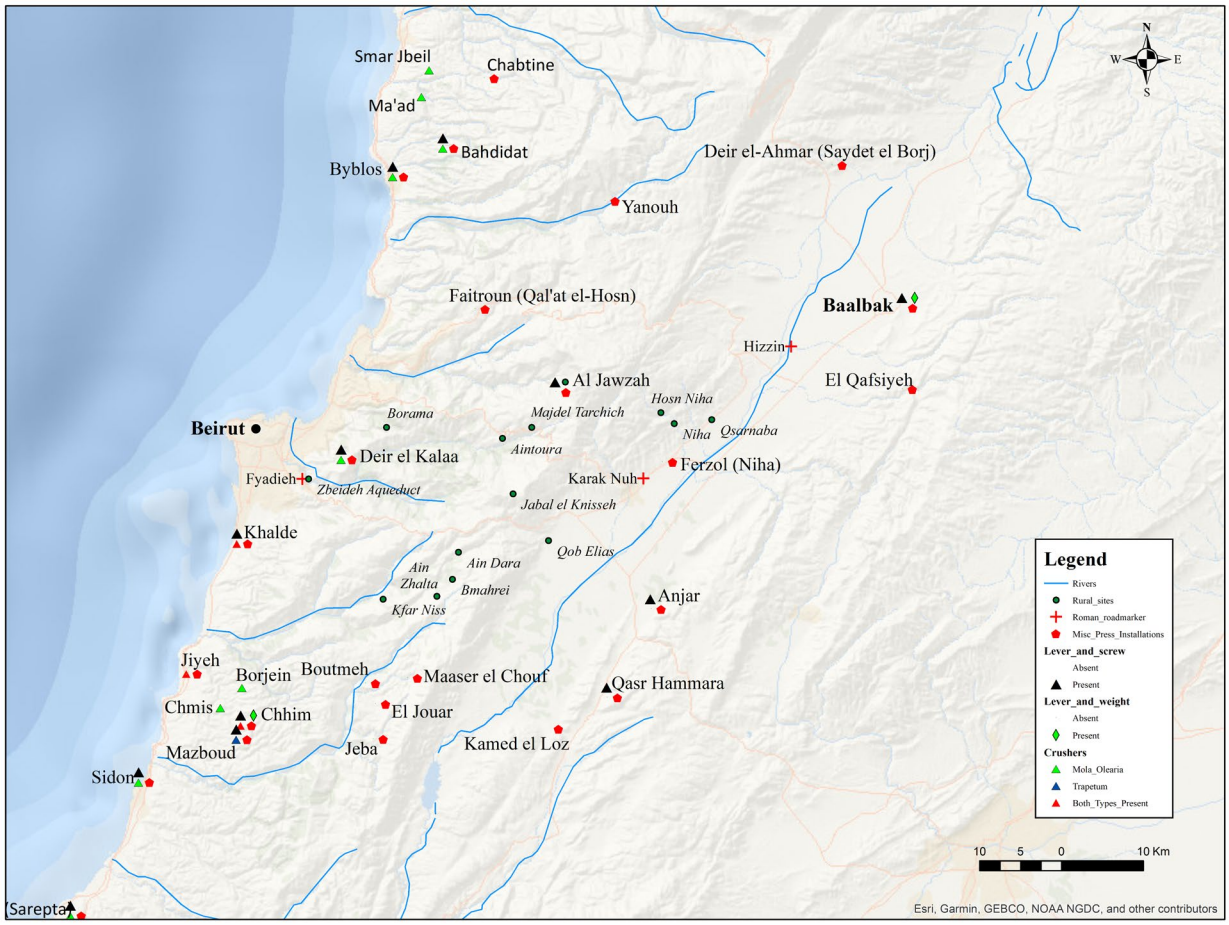

Figure 2: *Roman settlements, road markers, and evidence of pressing installations in the hinterland of Berytus.*

and public construction, the refurbishing of port installations and an expansion in territory in the Bekaa region extending just north of Baalbek (**Figure 2**).[6] Ancient texts and inscriptions suggest that the colony adopted some form of the *ordo decurionum* or *curia* (the administrative council), with members of this order practicing some kind of *munera* (duties) in the form of administrational management and, in certain cases, a monetary contribution or commissioning of public structures.[7] Various other local governmental positions are attested at Berytus, such as *quaestor*, *aedile*, *duumvir*, and *pontifex,* indicating that the establishment of the new colony resulted in the formal creation of typical Roman provincial administration.[8]

[6] This expansion likely extended to the 'sources of the Orontes River...near Mt. Libanus and Paradeisus'; in this paper, the territory of Berytus has been delineated to the east by the Anti-Lebanon Mountains, south by the wetlands in the Bekaa and north by the region of Laboueh near Nahr el Aassi (origins of the Orontes River, roughly 20 km northeast of Deir el Ahmar); along the coast, the northern limit is not well-understood, but the southern limit likely followed Nahr ed-Damour; these demarcations are based on the distribution of Latin inscriptions in the Bekaa, probably associated with the newly-established colony, ancient texts discussing the territories of cities along the Levantine coast, and least-cost route analysis based on the topography of the region; Polybius 5.68.9, see Walbank (trans.) 1972; Strabo 16.2.19, see Jones (trans.) 2001.; Abou Diwan and Doumit 2017; Gwiazda 2013, 61; Hall 2004, 95; Marriner 2009, 210; Millar 1993, 36; Rey-Coquais 2005, 85.

[7] Hall 2001-2002, 148.

[8] Hall 2001-2002, 148-149.

The founding of Berytus also involved the settlement of two legions who had served Augustus in the Battle of Actium.[9] In addition to the administrational and geo-political developments discussed above, the arrival of roughly 10,000-12,000 veterans and their families would have substantially altered the cultural landscape and demographic composition of the region.[10] Settlers were granted lands in the new colony, which fell under the jurisdiction of the *ius italicum*, making them exempt from the *tributum soli*, or land tax, typically administered on Roman provinces.[11] This injection of people also resulted in changes in the manifestation of religious and funerary practices, involving the dedication of new temples to both local and Roman deities.[12]

In the reign of Septimius Severus (193-211 AD), Berytus was grouped into the newly organised province of *Syria Phoenice*, which was a further subdivision of the Syrian province *Syria Coele*.[13] This period marks a decline in public and private construction, as well as a loss of fertile lands in the Bekaa with the establishment of Baalbek as an independent colony.[14]

Economic considerations

The creation of Berytus coincides with significant economic development in the urban centre and its environs, as attested by the rise in the frequency of wine and oil pressing installations in the colony's territory, and the production of a new type of amphora utilised primarily to package wine.[15] These indices are reflective of commercial production and distribution to be differentiated from mercantile activities involving luxury goods or selective trade.[16] Similarly, the independence of Baalbek, which was formerly included within the territorial extent of Berytus, seems to have catalysed some degree of economic stagnation. This section explores and clarifies these propositions through the use of archaeological data that shed light on the production of wine in the colony, and its subsequent distribution to other port sites.

Viticulture in the hinterland of the colony

As a start, it is necessary to shed light on the production centres of wine in the territory of Berytus. These sites are recorded in the archaeological record based on the presence of various parts of a pressing installation, a contraption used to extract the juice of various fruits, primarily olives and grapes. The entire mechanism consists of: a wooden beam fastened on one side, a counterweight, some form of a press bed or treading floor, and a basin for collection. It must be clarified that though this paper focuses on viticulture, both oil and wine presses are presented in Fig. 2 for two reasons. Firstly, it is often quite difficult to differentiate between wine and oil presses in the archaeological record. This problem is further exacerbated by the lack of consistency across publications in the use of terminology to describe press beds and treading floors.[17] Secondly, pressing installations that were originally used for pressing olives were sometimes reutilised in later periods for wine production and vice versa. Thus, any evidence of pressing installations in the hinterland of Berytus is noted to account for all potential viticultural activities, though more detailed differentiations at each site are needed.

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[9] Legio V *Gallica* and Legio VIII *Augusta*; Millar 1990, 12.

[10] Estimates of the legion sizes are based on Keppie 2015, 64 and Roth 1994, 346.

[11] *Ius italicum* is a term used to describe the status of a colony's lands as being equal to that of Italian lands, specifically regarding taxation; Butcher 2003, 190, 230.

[12] This sometimes involved variations of local and Roman deities, as observed at Deir el Kalaa, where a temple was dedicated to 'Jupiter Balmarcod'; Aliquot 2009; Newson 2019.

[13] Hall 2001-2002, 149-151.

[14] Perring *et al.* 2003, 211.

[15] Fischer-Genz 2016; Reynolds 2000; Waliszewski 2014; Woodworth 2011.

[16] Keay and Williams 2014; Peacock and Williams 1986, 1; Peña 2007, 35.

[17] Fischer-Genz 2016, 62.

Within the territorial extent of Berytus in the Mount Lebanon Range, two rural settlements have revealed evidence of pressing installations, specifically at Al Jawzah and Deir el Kalaa (**Figure 2**). The site of Al Jawzah, where numerous quarries, burial sites, and an urban settlement dated to the Roman and Byzantine periods were uncovered, lies at roughly 1400 m in elevation. It receives snowfall generally from December to March, making it a sub-optimal location for viticulture and oleiculture compared to the coastal plain of Beirut or the Bekaa Valley.[18] This settlement and agricultural activity in a previously uninhabited and peripheral location in the hinterland is indicative of a population increase within the territory.

Evidence of both oil and wine pressing installations have been uncovered at Deir el Kalaa, where at least two temples were erected in the Imperial period dedicated to *Jupiter Balmarcod*, a variation of local and Roman deities, and Juno, as attested by inscriptions found on-site.[19] One dedication to Balmarcod was inscribed for the health of *Quintus Eutychès* by *Marcus Octavius Hilaros*. This dedication proves to be quite crucial in the understanding of the relationship between Berytus and Balmarcod, as the Octavii are well-represented in Berytus on other inscriptions.[20] Deir el Kalaa's close proximity to Beirut, its ease of access through the mountains, its involvement in wine and olive oil production and the apparent connection of its citizens with those of Berytus all indicate that there must have been some sort of commercial link between the two.

In the Bekaa, apart from a winepress identified in Deir el-Ahmar dated to the Late Roman Period, the most substantial data comes from Baalbek. In Baalbek itself, two presses have been identified, one of which is associated with suburban Roman *villae*.[21] Carved into the bedrock near Ras el 'Ain, it is partly constructed with limestone blocks, a common technique for mid-sized pressing installations, and consists of two pressing beds and four rounded basins. In the surrounding region (roughly within 4 km of the main Roman city of *Heliopolis*/Baalbek), a number of installations were identified. 13 of these were not associated directly with any settlement, which could suggest a differentiation between habitation areas and production areas. This dense cluster of pressing installations is indicative of specialised production of most probably wine based on the lack of filtration systems and crushing basins.[22]

As discussed earlier, Baalbek is one of the primary areas of settlement of Augustus's veterans and included within Berytus's newly acquired territory. Therefore, the expansion of viticulture in Baalbek in the Roman Period must have been correlated in some way with this settlement. Moreover, as seen in Fig. 2, Roman road markers suggest a direct route from Beirut to Baalbek in the same location as the old Ottoman road, the former railroad, and the modern highway.[23] This further corroborates the close tie between the sites in the Roman period.

Processing and export

While much of these agricultural products might have been consumed by the producers or sold in the immediate locale, a significant portion was packaged in the port city of Berytus, almost exclusively in the Beirut Type amphora.[24] The Beirut Type was produced roughly from the late-2nd century BC to the

[18] Fischer-Genz 2016, 59; Waliszewski 2014, 75.
[19] Nordiguian 1993-1994, 368.
[20] Aliquot 2015, 549.
[21] Chéhab 1957.
[22] Fischer-Genz 2016, 62.
[23] Abou Diwan and Doumit 2017, 228
[24] Reynolds 2000, 387.

Form	Date of Production	Production Sites
Type 1	late-2nd century BC to early-1st century AD	Beirut
Type 2	first half of 1st century AD to beginning of 2nd century AD	Beirut, Jiyeh, Khalde
Type 3	end of 1st century AD to mid-2nd century AD	Beirut
Type 4	end of 2nd century AD to mid-3rd century AD	Beirut
Type 5	second half of 4th century AD	Beirut
Type 6	mid-4th century AD to 5th century AD	Beirut
Type 7	mid-5th century AD to mid-6th century AD	Beirut, Khalde
Type 8	second half of 5th century AD to mid-7th century AD	Beirut, Bekaa Valley?

Table 1: *The various forms, phases of production, and production sites of the Beirut Type amphora (after Reynolds 2000).*

mid-7th century AD primarily in Beirut, but also at several regional production centres.[25] It has been organised into eight subtypes, with Types 1-4 spanning the late Hellenistic and Early to Late Roman periods, and Types 5-8 being produced in the Byzantine period (**Table 1**).[26] This paper focuses on the maritime distribution of Types 2, 3 and 4, as their production period coincides with the independence of Baalbek (early-1st AD to mid-3rd AD). Thus, tracing their distribution outside the port of Berytus sheds light on the scope and scale of exports of wine from the colony before and after this significant political development.

Based on a review of ceramic assemblages from Roman port sites throughout the eastern Mediterranean, wine produced in Berytus seems to have been exported in its widest range and highest capacity from the early-1st to mid-2nd centuries AD, coinciding with the production of Types 2 and 3 (**Figure 3-5**). While the range of distributions was fairly extensive, this capacity remained relatively small, generally never exceeding five percent of any amphora assemblage observed throughout the eastern Mediterranean.[27] Conversely, the amphora is observed quite regularly in the city of Beirut, suggesting that it was mostly consumed locally.[28] This far-reaching but infrequent distribution indicates that wine from Berytus might have been one of many products that were part of a higher value cargo. This may have included textiles and garments, which were commonly produced in Beirut and at a number of other Syrian cities, as well as the famous purple dye of the Levantine coast.[29]

These exports drastically decrease after the end of production of the Type 3 amphora. During the hiatus of export from the late-2nd to the late-5th centuries AD, it appears that wine produced within the territorial extent of Berytus was only consumed in the immediate locale. This minimal distribution continues until at least the second half of the 5th century AD, when the Beirut Type 8 comes into production and is observed at a similar rate to that of Imperial forms (**Figure 5**). This late antique revival

[25] The implications of the existence of multiple regional production centres of the same amphora form are outside the scope of this paper and are discussed elsewhere. It is currently unclear whether this was associated with some form of centralised control of the production of the amphora, or if this was the result of new ceramic traditions manifesting across several sites; Wicenciak 2016.

[26] Reynolds 1999; 2000.

[27] The Type 3 amphora is observed in North Africa, Turkey, Crete, the Red Sea, and as far as Britain; Hayes 1976, 66, Pl. 39.360; Hayes 1996; Hayes 2000, 290, 296; Reynolds 2013, 103.

[28] Reynolds 1999, 50.

[29] Butcher 2003, 174, 211-212; Hall 2001-2002, 153-154; Millar 1993, 266.

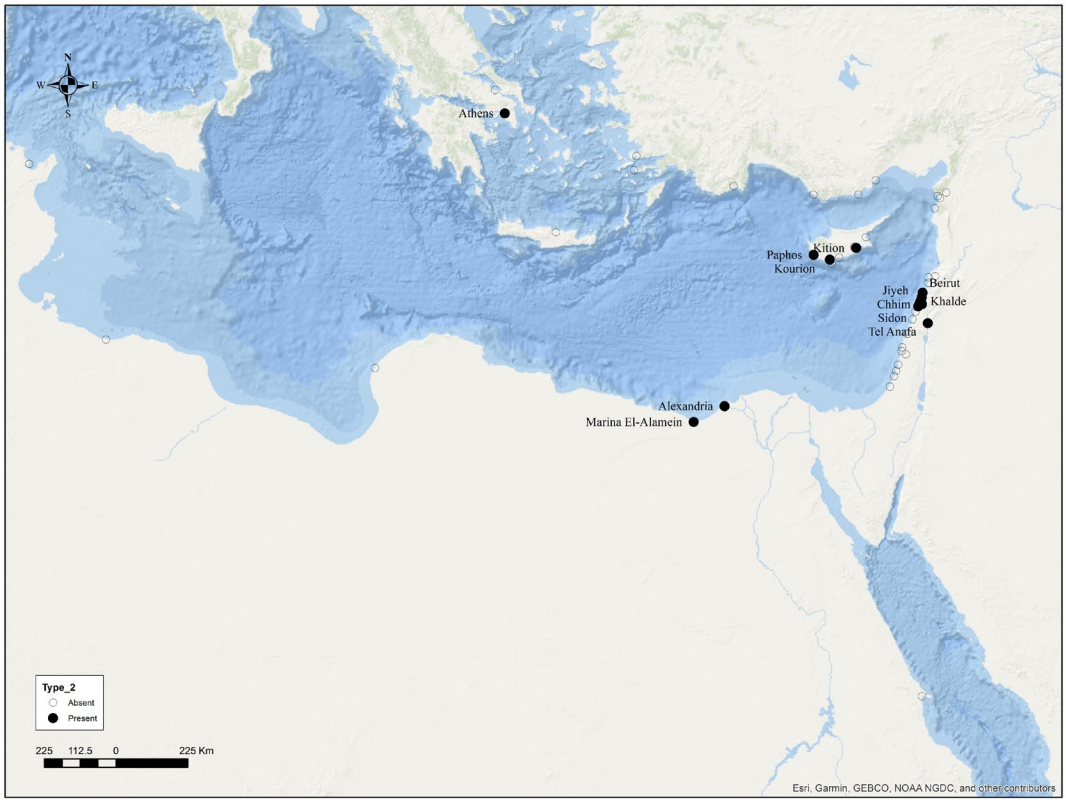

Figure 3: *All instances of the Beirut Type 2 amphora in the eastern Mediterranean (Presence/Absence).*

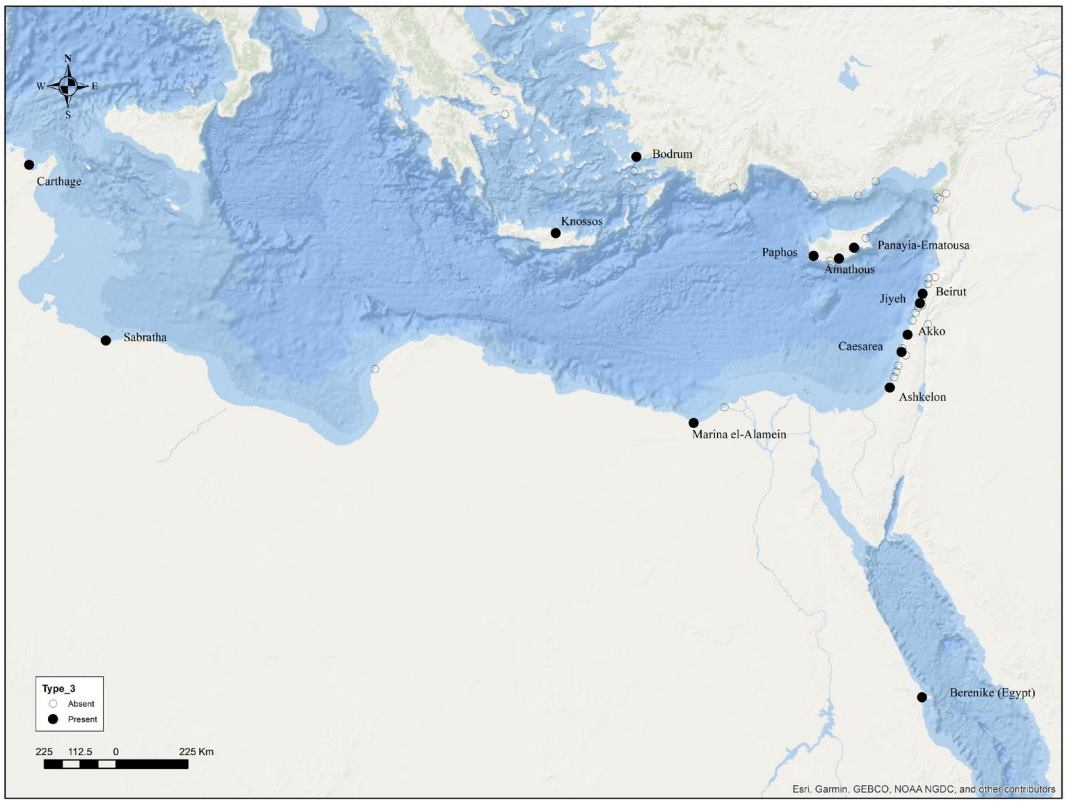

Figure 4: *All instances of the Beirut Type 3 amphora in the eastern Mediterranean (Presence/Absence).*

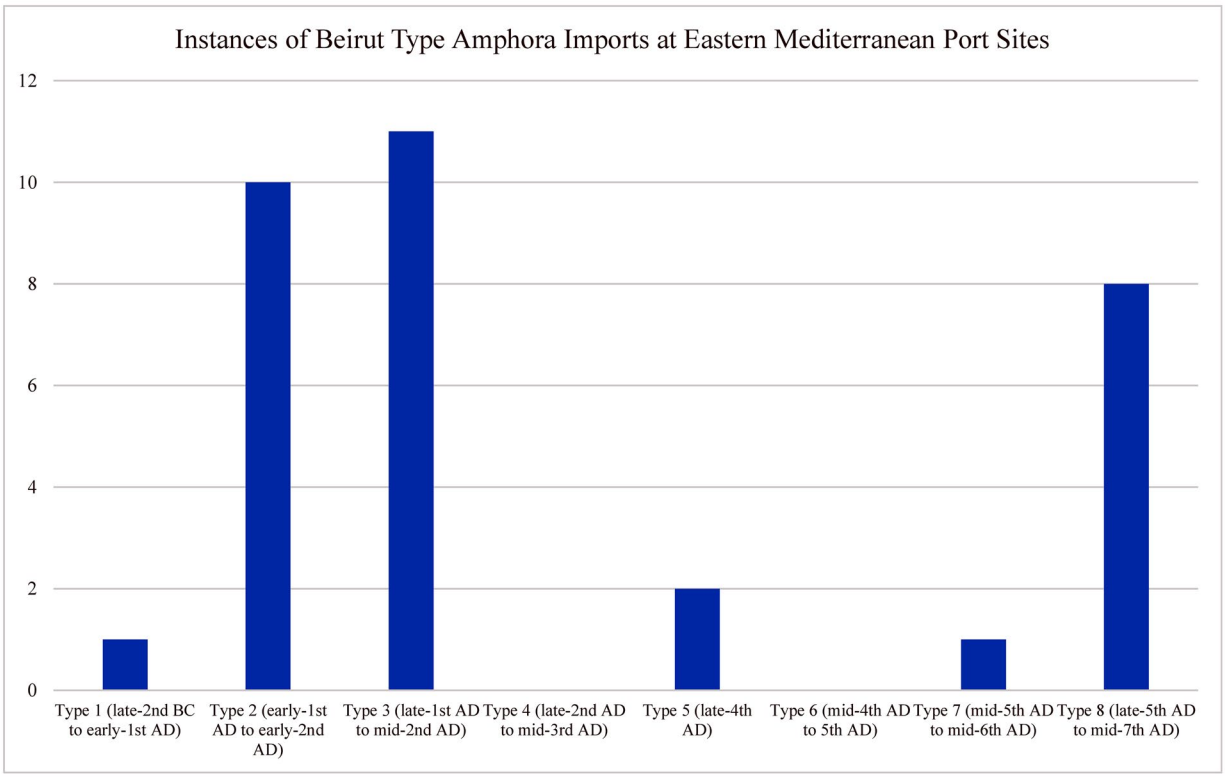

Figure 5: *The total number of port sites where Beirut Type amphorae were observed organised by type.*

in maritime commercial distributions from Berytus is consistent with a wider trend in the Levant, as attested in the emergence of the dominant Late Roman Amphora 5 and 6 forms observed in high frequencies throughout port sites and shipwrecks in the eastern Mediterranean.[30]

Analysis

The drop in exports in the late-2nd century AD supports the proposition that Baalbek was a major provider of exported wine in the colony, and it transported its products to Beirut for packaging, which might have stopped after Baalbek's independence.[31] This is also corroborated by ceramic trends from Baalbek; in the Hellenistic Period, it was involved in regional supply networks with no evidence of the penetration of ceramics from the coast inland. In the Early Imperial Period, this changed with the appearance of Koan amphorae, ESA, as well as various non-local ceramics also uncovered at Caesarea and Beirut.[32] These parallels suggest that there was some penetration of imported ceramics inland, possibly associated with the newly settled veterans of Augustus. Finally, after its independence, the city began producing its own distinct form of amphora.[33] At this time, regional networks became dominant again, even in the case of fine wares, which appear to have been locally supplied.[34] Thus, it seems reasonable to attribute the divergent phase during the Imperial Period to the city's incorporation into the territory of Berytus. After Baalbek's independence, it developed different distribution networks

30 Keay and Williams 2014.
31 Millar 1993, 218.
32 Hamel 2014, 67-69.
33 Wicenciak 2016, 673-675.
34 Hamel 2014, 70.

which essentially decreased movement to and from the urban centre of Berytus and allowed for the new colony to distribute its product locally.

Given that a large portion of veterans and their families were settled in Baalbek, and there was a particular specialisation in the region in viticulture, it is quite possible that Roman settlers were responsible for a significant portion of the wine reaching the urban centre of Berytus.[35] This is further supported by the fact that chemical analysis of the Beirut Type amphora suggests that it was used primarily to transport wine.[36] The vessels used to package this wine would then represent a privately-produced product independent of taxation, since veteran land would have fallen under the jurisdiction of the *ius italicum*.[37]

Some portion of this wine might also be attributed to production from agricultural tracts owned by the municipality of Berytus.[38] This is definitely possible, as municipalities commonly owned land throughout the Roman Empire, which they either managed themselves or leased for profit.[39] In this case, the wine collected and sold would represent either rent paid by the lessee, or specialised production managed by the ruling elite with the intention of maximising profit to fill the coffers of the colony.[40]

Additionally, there is the consideration of private land ownership by non-veterans, which is attested in the coastal region of Berytus in the Imperial Period and the Late Roman Period.[41] It is impossible to specify what proportion of the packaged amphorae uncovered at Beirut and surrounding port sites originated from private non-veteran producers. However, if any of them were able to produce a surplus of wine and intended to sell this product beyond the immediate vicinity, this also would have been conducted primarily through the urban centre of Berytus.[42]

Once transported to the urban centre, this wine seems to have been consumed primarily locally, but, as discussed above, it was also exported to some extent. This step in the supply chain must be taken as distinct from the production process, as the sale and subsequent maritime transportation represents a new transaction.[43] In other words, there is currently no way or reason to directly connect a producer of wine in the Bekaa region with the sale and consumption of Berytus wine at another port in the eastern Mediterranean. Rather, ancient texts have shown that, though it was possible for landowners to also participate in maritime commerce, each was seen as a distinct economic action.[44] Furthermore, maritime commerce sometimes involved multi-level hierarchies of interaction among a number of economic agents, including ship owners, merchants, captains, financial agents, producers, packagers, tax agents, etc. These relationships are mentioned frequently in ancient texts, indicating that they were quite familiar and normal.[45]

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35 Sawaya 2009, 186-197.

36 This is also supported by dark stains observed on the inner sides of some rims and necks uncovered from excavations in Beirut; Reynolds 2000, 387; Woodworth 2011.

37 Butcher 2003, 190, 230.

38 Reynolds 1999, 50-51.

39 Keay 1984, 417; Kehoe 2007, 85.

40 The Beirut Type 2 amphora was sometimes stamped with 'COL BER', or some variation, which has been interpreted by some scholars as evidence of the centralised control of both the production and distribution of wine in Berytus. However, it has also been suggested that the stamping of an amphora with the name of a colony is not always indicative of centralised control, but could serve to simply source a product or signify that a merchant has paid all required taxes for transportation; Keay 1984, 108, 124, 408-410, 431; Reynolds 1999.

41 Lib. *Ep*. 877; Lib. *Or.* 1.265; Hall 2004, 105-109.

42 Reynolds 1999, 51; Wicenciak 2016, 648.

43 Broekaert and Zuiderhoek 2020, 107-108, 127; Rathbone 2003, 210.

44 Rathbone 2003, 210-211.

45 Broekaert 2012.

This clarification is made here to highlight the nuances involved in all kinds of commercial and public transactions in Roman Beirut. Furthermore, different economic incentives of various groups must be clarified distinctly. However, on a larger scale, it is undeniable that the socio-political changes that were exogenously imposed upon the colony did effect serious economic change. As has been argued in this paper, these changes are the sum of various kinds of mercantile exchanges that represent a complex industry in Berytus, and cannot be summarised as either centrally-controlled developments or market-centred trade.

Conclusion

The Roman port city of Berytus provides an effective case study in examining the full scope of the supply chain of a product from its point of manufacture to its subsequent distribution and consumption. More specifically, this paper has highlighted the promise in assessing regional markets using multiple lines of data before assuming conformation to contemporaneous macro patterns. The commonly discussed economic crisis of 33 AD is not attested in the archaeological record in Berytus and its hinterland.[46] At this time, the city was undergoing significant urban and rural expansion, most prevalently in the Bekaa. Port installations at the urban centre were renovated and the basin was dredged, possibly indicating an increase in maritime traffic.[47] These factors point to a significant degree of intensive and extensive economic growth rather than crisis and decline.

Similarly, the stagnation in the wine industry of Berytus in the late-2nd century AD appears to be directly correlated with the independence of Baalbek. The separation of Baalbek from Berytus, and potentially also the elevation of status at Arca, Tyre and Sidon, where groups of veterans were settled, clearly disrupted the production and distribution networks of Roman Beirut, as attested by the sudden drop in exports after the Beirut Type 3 went out of production.

However, the economic decline witnessed in Berytus at this time is also contemporaneous with a Mediterranean-wide crisis attributed to the Antonine plague. It is reasonable to assume that the plague would have had an impact on the urban populations of Roman Syria. This would explain the lack of activity in private and public construction, as well as the decrease in the export of wine from Berytus. [48] In this way, Baalbek's prioritisation of local exchange networks and its commercial separation from Berytus after its independence might also be interpreted as a response to the port city's economic stagnancy, or its own adaptation to a larger economic depression of sorts.

Thus, the approach embodied in this paper does not strive to refute the merits of a deductive approach that examines the Roman economy in the long run. However, it must be recalled that such macro-economic patterns emerge from the sum of regional trends. The application of a deductive methodology regarding the Roman Empire as a unified economic system cannot hope to capture the nuances of a single port city. Rather, by building a regional understanding of local markets based on multiple lines of data, it is subsequently possible to contextualise individual sites within the bigger picture. Berytus provides a useful case study in this regard, as here seen in the discrepancy between the colony's economic development in the early-1st century AD and that observed in the late-2nd century AD.

[46] Tac. *Ann.* 6.16-17; Dio Cocc. 58.21.4-5; Koops 2016.
[47] Marriner *et al.* 2008.
[48] Perring *et al.* 2003, 212-214.

Abbreviations: Ancient authors and their works

Lib. *Ep.* = Libanius, *Letters*, see Norman (ed.) 1992.

Lib. *Or.*= Libanius, *Orations*, see Norman (ed.) 1969.

Tac. *Ann.* = Tacitus, *Annales*, see Jackson (trans.) 1937.

Dio Cocc. = Cassius Dio Cocceianus, see Cary and Foster (trans.) 1982.

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