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Chronolog

2024

Archaeology, Assyriology, & Egyptology

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Chronolog Journal

Chronolog is hosted at the University of Copenhagen, Department of Cross-Cultural and Regional Studies (Near Eastern Archaeology, Egyptology and Assyriology) with the aim of providing students and recent graduates from the institute with possibilities of publishing their first article(s).

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Mahmoud Alsayed Ahmed, MA-student, University of Copenhagen

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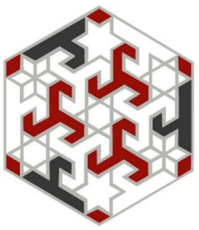


DET DANSKE INSTITUT I DAMASKUS

UNIVERSITY OF COPENHAGEN

Contents

CHRONOLOG

Letter from the editor-in-chief

Welcome to the second volume of Chronolog, a student driven journal produced by students and young candidates from Ancient Near Eastern Studies at University of Copenhagen. This volume brings three fine case studies supplemented with relevant information for young candidates or candidates in spe such as sharing experience from the job market.

That we now have a second volume of Chronolog shows that the first volume wassuccessful. Chronolog has established itself as an important part of the transition from being a student to becoming a professional and paving the road for a future career.

It is impressive to experience both the enthusiasm and energy our junior colleagues have devoted in order to create this journal. Many thanks to the editorial board.

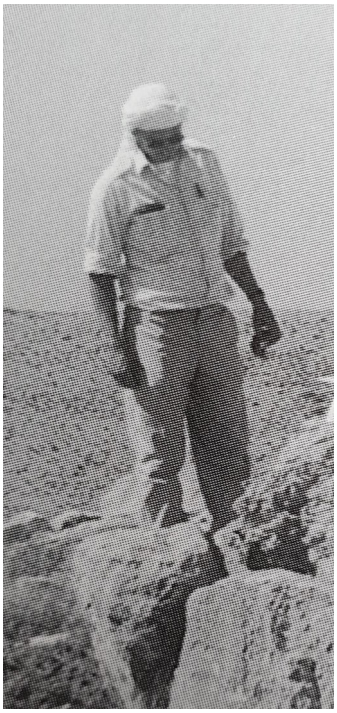
We are very grateful to the Department of Cross-Cultural and Regional Studies at University of Copenhagen for supporting Chronolog. It certainly strengthens the educational programs of the Ancient Near East within an international context.

The formal address of the journal is in Copenhagen, but the real address is the past cultures and civilizations of the Middle East and North Africa. In these months we very sadly again experience a dark period with armed conflicts and unbearable and unacceptable large-scale suffering of civilians. Sharing our fascination for the past across political or religious borders may, however, give hope for the future and for new generations. The past lies embedded in the future.

I therefor kindly encourage everybody in the up-coming generation of scholars of the Ancient Near East from all over the world to support and contribute to Chronolog.

Copenhagen April 25, 2024

Ingolf Thuesen



Ingolf Thuesen
Associate Professor, CCRS, University of Copenhagen
Chairman, the Danish Institute in Damascus

From the editors

We are delighted to present our second issue of Chronolog!

As with the first issue of Chronolog, it contains a wealth of information for students and newly graduates: three peer reviewed papers, an essay about field archaeology, tips for grant writing, as well as the editors' conference recommendations, and spotlights - this time not on students and graduates but our professors!

The editors
From left:
Maria Diget Sletterød,
Anna S. Poulsen,
Anne Drewsen
Photo © Anna S. Poulsen

The three peer reviewed papers cover vastly different topics, geographical regions and periods, it encompasses the different regions and kinds of studies carried out at CCRS (ToRS), from the large picture using cutting edge scientific techniques, to material studies, to the textual historical research. All of them providing us with a deeper understanding of the human past in Southwest Asia and Egypt.

The three authors are all connected to the University of Copenhagen through different means, two studied here, and one came to present at EACC (Egyptological-Assyriological Conference in Copenhagen). David L. G. Miedzianogora who covers the current use of Paleogenomics in the Levant studied at CCRS. Jacob Glenister presented his research on predynastic frog vessels at the EACC in 2023, and Magnus Arvid Boes Lorenzen has studied at UCPH and worked as a volunteer at ICAANE.

During the process of finding peer reviewers for the articles, we stand in awe of the many highly respected and busy professors and experts who have willingly donated their time to peer review the articles or to suggest other experts. We thank you from the bottom of our hearts for your kindness and time!

During the past year, we have seen some changes: we have become one less member in the editorial board due to joyous circumstances, we wish the little new family all the best. Due to the changing number of members in the editorial board, we have taken the possibility to interact more closely with our student board, and we wanted to take a moment to extend our gratitude to them. Thank you to: Maria Mayland Nielsen, Nicoline Søndergaard Andersen, Mathilde Sehested Thormann and Sofie Vingborg Andersen for always stepping up and helping out when we need it.

In May 2023, the 12th ICAANE conference was hosted at UCPH and Chronolog collaborated with them by creating an informal space that students could retire to from the hustle and bustle of a big conference. A place to relax and connect – The Chronolog Student Lounge. We organised a poster workshop and had great success with a quiz night, and enjoyed the impromptu joint dinner the last night. Thank you to all who came by, we hope to meet you again soon!

Many exciting opportunities are on the horizon for Chronolog, from international collaborations to workshops—watch this space!!

The editors of Chronolog

Anna Silberg Poulsen, Maria Diget Sletterød, and Anne Drewsen

Palaeogenomics and the Palaeolithic of Southwest Asia: Trends, Issues, and Future Directions

David L. G. Miedzianogora

Abstract

Palaeogenomics is the study of ancient subfossilised remains on a genome-wide level, and it has revolutionised the study and understanding of the deep past. This is also the case in Southwest Asia, where especially the Bronze and Iron Ages have seen substantial research. However, due to the poor preservation of DNA in the region, the Palaeolithic remains largely understudied despite the possibility of novel interpretations of this key period. Here, I review several ways that palaeogenomics has begun changing our understanding of the Palaeolithic of the region in three key areas: the dispersal of modern humans out of Africa, the interactions between Neanderthals and modern humans, and the formation of Southwest Asian population structures. Most of these interpretations are based on data from outside of Southwest Asia, and I argue that a closer integration between palaeogenomics, archaeology, and local stakeholders are necessary to begin solving the issues surrounding the poor preservation of DNA in the region. If this can be done, palaeogenomics holds many possibilities for future Palaeolithic research.

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Research interests: Hominin hybridisation (cultural and biological), hominin cognitive evolution, Middle - Later Stone Age lithic technology in Africa, 3D methods in Pleistocene archaeology

علم الجينوم القديم هو دراسة بقايا المحفوظات القديمة جزئًيا المتحجرة على مستوى الجينوم، وقد غير هذا العلم دراسة وفهم الماضي العميق. وهذا ألمر ينطبق أيًضا على جنوب غرب آسيا، حيث شهدت العصور البرونزية والحديدية بحًثا مكثًفا كبيًرا. ومع ذلك، نظًرا لسوء حفظ الحمض النووي في المنطقة، فإن بقايا العصر الحجري القديم لم تدرس بشكل كبير على الرغم من إمكانية تفسيرات جديدة لهذه الفترة الحاسمة. في هذه المقالة، سأستعرض عدة طرق بدأ فيها علم الجينوم القديم في تغيير فهمنا للعصر الحجري القديم في المنطقة في ثالثة مجاالت رئيسية: انتشار البشر الحديثين من أفريقيا، والتفاعالت بين النياندرتال والبشر الحديثين، وتشكل هياكل السكان في جنوب غرب آسيا. معظم هذه التفسيرات مبنية على بيانات من خارج جنوب غرب آسيا، وأقدم حجة بأن التكامل األلكثر قرًبا بين علم الجينوم القديم واآلثار والجهات المعنية محلًيا ضروري لبدء حل لمشكالت المتعلقة بسوء حفظ الحمض النووي في المنطقة. إذا تم ذلك، فإن علم الجينوم القديم يحمل العديد من اإلمكانيات لبحوث العصر .الحجري المستقبلية

Translation by Mahmoud Alsayed Ahmed, MA-student, University of Copenhagen

Introduction

The ability to extract and sequence ancient DNA (aDNA) from archaeological organic remains on a genome-wide level has opened up novel ways of interrogating the deep past (Orlando et al. 2021). It has led to the burgeoning of a new field, palaeogenomics, which has begun untangling the evolutionary history of past human populations at the broad and local scale, and it has been depicted as an integral part of "The Third Science Revolution" in archaeology (Kristiansen 2014). Its importance has been particularly felt in Europe, where most studies have been conducted so far (e.g., Haak et al. 2010; Brandt et al. 2013), but it is prone to revolutionise the study of prehistory everywhere (e.g., Narasimhan et al. 2019). This is also the case of Southwest Asia, where the application of palaeogenomics can help develop our understanding of several key questions in human prehistory.

Nevertheless, several issues persist for the field in Southwest Asia: First, palaeogenomic studies from the region itself are rare, and those that have been conducted tend to focus on the region as a means of understanding the prehistory of Europe rather than the demographic processes within the region itself (Gokcumen and Frachetti 2020). Second, researchers have highlighted the lack of equal research collaborations with key stakeholders outside the Global North (e.g., Wagner *et al.* 2020; Alpaslan-Roodenberg et al. 2021; Somel et al. 2021; Ávila-Arcos *et al.* 2022), which applies to Southwest Asia as well. Finally, the lack of proper engagement with archaeological and anthropological data and methods in most palaeogenomic studies has been criticised (Horsburgh 2015; Heyd 2017). These issues can be solved by initating ethically founded frameworks aimed at ensuring closer collaboration between palaeogenomics and other fields of human prehistory to ensure that data are produced and interpreted ethically and collaboratively (Gokcumen and Frachetti 2020; Veeramah 2018; Furholt 2018). To accomplish this task in Southwest Asian archaeology, researchers first need a better understanding of the way that palaeogenomics can be applied constructively to archaeological research in the region.

This article seeks to review some of the key ways in which palaeogenomic data can be used to answer archaeological questions and transform current interpretations of the Palaeolithic of Southwest Asia. Due to its central location as the landbridge between Africa, Asia, and Europe, the region is key for understanding major questions in human prehistory beginning with the first dispersal of hominins out of Africa more than 2 million years (Ma) ago (Ronen 1991; Gabunia *et al. 2000;* Ferring *et al.* 2011; Zhu *et al.* 2018*;* Scardia *et al.* 2019; 2021). Nevertheless, the bulk of studies from the region have sequenced genomes belonging to individuals postdating the Neolithic (Fig. 1), with the oldest sequenced genome dating to 26 thousand years (ka) old (it remains in preprint; Lazaridis *et al.* 2018), whilst the oldest published genome dates to 15 ka (Feldman et al. 2019), highlighting the dearth of Palaeolithic genomes from the region. Consequently, most reviews have focused on the impact

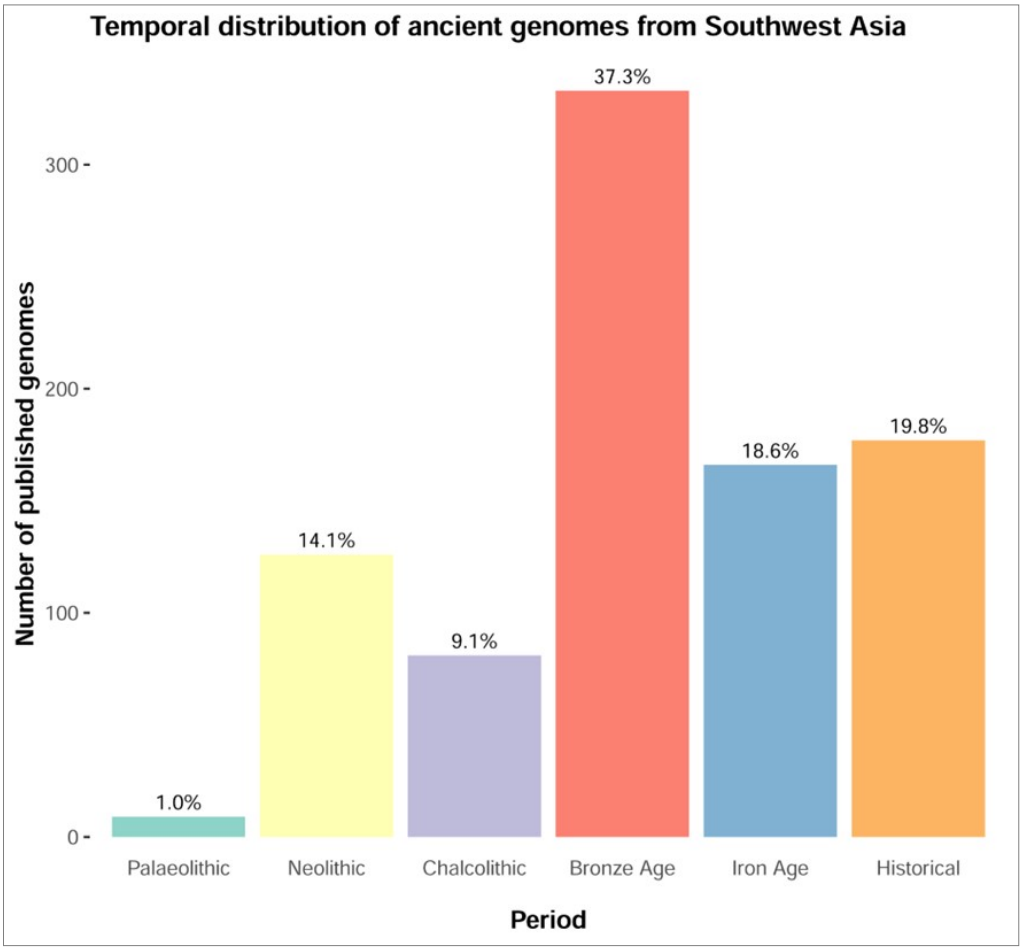

Figure 1: Temporal distribution of published genomes (n = 1042) from Southwest Asia as of September 2023, based on data from Mallick and Reich (2023) and Mallick *et al.* (2023). From the left: Palaeolithic, teal (>11,500 cal. BP), Neolithic, yellow (11,499-6,950 cal. BP), Chalcolithic, purple (6,949-5,250 cal. BP), Bronze Age, red (5,249-3,150 cal. BP), Iron Age, blue (3,149-2,500 cal. BP), and Historical, orange, (<2,499 cal. BP). All dates are mean dates. Modern and duplicate genomes have been removed from the dataset. Produced by author in R version 4.3.2 (2023) using the Tidyverse package (Wickham *et al.* 2019). Dataset available as Suppl. Dataset 1 at tidsskrift.dk/chronolog, R code available upon request.

of palaeogenomics for the Neolithic and historical periods (Broushaki *et al.* 2016; Omrak *et al.* 2016; Olalde and Posth 2020; Skourtanioti *et al.* 2020). The focus of this article is instead on the impact that palaeogenomic data has had on three key areas in the Palaeolithic of Southwest Asia: the dispersal of modern humans (*Homo sapiens*) out of Africa, the interactions between Neanderthals (*Homo neanderthalensis*) and modern humans in the Levant, and the formation of Palaeolithic population structures throughout Southwest Asia. These issues are not only relevant for Southwest Asian prehistory but also for understanding broader issues in palaeoanthropology and palaeolithic archaeology. Interpretations remain tentative, however, and more genetic data is needed directly from the region to test current hypotheses. How best to achieve this remains an open question, however, and some possible paths forward are suggested here. The methods and theories of palaeogenomic analysis have been reviewed thoroughly elsewhere (e.g., Jobling *et al.* 2004; Pedersen *et al.* 2015; Orlando *et al.* 2021; see also Jones and Bösl 2021), hence they are not discussed in this article.

Out of Africa and into Eurasia

Although the exact timing and mode of appearance of anatomically modern humans in Africa is contested, it is generally agreed that our species evolved ~300,000 ka based on a combination of fossil, archaeological, and genetic evidence

(reviewed in Bergström *et al.* 2021). Dating the dispersal of modern humans out of Africa has proven more difficult. Genetics from modern populations suggest that all non-Africans derive from a migration 60-70 ka ago (Underhill and Kivisild 2007; Soares *et al.* 2012; *Malaspinas et al.* 2016; Mallick *et al.* 2016; Nielsen *et al.* 2017; Bergström *et al.* 2020; but see Pagani *et al.* 2016), yet the earliest fossil evidence of modern humans outside Africa is 210 ka old from Greece (Harvati *et al.* 2019). Some researchers contest this fossil, which consists solely of fragmented parts of a posterior cranium, which, depending on how it is reconstructed, might also cluster with Neanderthal features (see de Lumley *et al.* 2020; Rosas and Bastir 2020). Less contested is a slightly younger maxilla from Misliya Cave in the Levant, dated to 180 ka (Hershkovitz *et al.* 2018; but see also Sharp and Paces 2018). Palaeoenvironmental reconstructions show that both the Nile-Sinai Valley and the Bab el-Mandeb Strait were crossable during several windows throughout the past 400 ka, highlighting the possibility of continuous dispersals into Southwest Asia beginning soon after the appearance of modern humans in Africa (Tierney *et al.* 2017; Beyer *et al.* 2021;

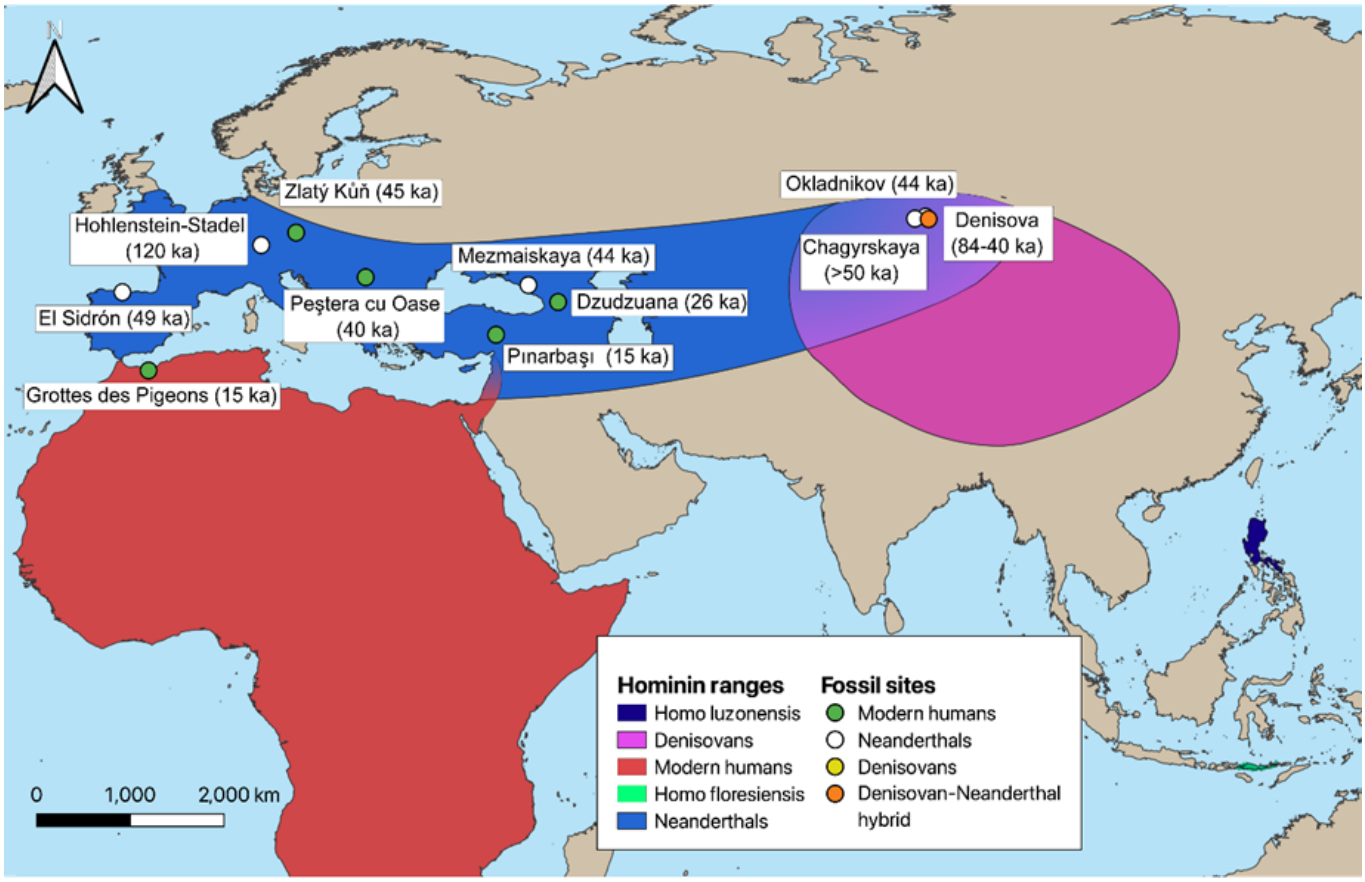

Figure 2: Global distribution of hominin species in the Late Pleistocene with key aDNA fossils mentioned in the article. Note that Denisova Cave contains both Neanderthals, Denisovans, and Neanderthal-Denisovan hybrid genomes. Note also the regions of overlap between Denisovans and Neanderthals in Siberia and modern humans and Neanderthals in the Levant. These regions likely served as areas of hybridisation due to gene exchange. Map by author in QGIS 3.30.2 and Inkscape 1.3. See Shea 2008; Higham *et al.* 2014; Fu *et al.* 2015; Kuhlwilm *et al.* 2016; Sutikna *et al.* 2016; Posth *et al.* 2017; Lazaridis *et al.* 2018; van de Loosdrecht *et al.* 2018; Détroit *et al.* 2019; Feldman *et al.* 2019; Dennell 2020; Petr *et al.* 2020; Hershkovitz *et al.* 2021; Skov *et al.* 2022; Slimak *et al.* 2022; 2023; Stringer and Créte 2022; Quilodrán *et al.* 2023; Peyrégne *et al.* 2024.

Groucutt *et al*. 2021). Meanwhile, Neanderthals (~440-40 ka), Denisovans (no official taxon; ~440-50 ka), *Homo floresiensis* (~700-50 ka), and *Homo luzonensis* (at least 60-50 ka) lived across Eurasia until 40-50 ka ago, see fig. 2 (Higham *et al.* 2014; Sutikna *et al.* 2016; Détroit *et al.* 2019; Slimak *et al.* 2022; 2023; Quilodrán *et al.* 2023; Peyrégne *et al.* 2024). At some point during the dispersals out of Africa , modern humans met and interacted with at least some of these hominins, evidenced by the ~2 % of Neanderthal DNA in modern non-African genomes (Green *et al.* 2010; Prüfer *et al.* 2014; Bergström *et al.* 2020; but see also Lohse and Frantz 2014) and ~2-4 % Denisovan DNA in genomes from East Asian and Australasian populations (Green *et al.* 2010; Bergström *et al.* 2020; Peyrégne *et al.* 2024). The most likely explanation for the genetic fingerprint of these ancient hominins in modern human populations is admixture, although the number, timing, and precise location of events is unclear (Sankararaman *et al.* 2012). Since all non-African populations share Neanderthal DNA, the admixture event is likely to have happened first in Southwest Asia, the necessary staging point for any migration out of Africa (Green *et al.* 2010).

The early dispersals out of Africa have often been interpreted as "failed" attempts since they left no lasting genetic signature in contemporary human populations and were outcompeted by other hominin species (Rabett 2018). However, mounting evidence of early genetic admixture between Neanderthals and modern humans suggests that these dispersals were more dynamic. One study by Petr *et al.* (2020) sequenced parts of the Neanderthal Y chromosome, which is inherited solely through the paternal lineage. Their results showed that the Neanderthal Y chromosome was more closely related to modern humans than to Denisovans (Petr *et al.* 2020), despite modern humans splitting from Neanderthals and Denisovans ~550 ka ago, whereas Neanderthals only split from Denisovans ~400 ka, based on genetic estimates (Liu *et al.* 2021). It is worth noting that genetic estimates do not always overlap with the fossil evidence and might therefore not fully reflect the timing of speciation events (see Gómez-Robles 2019), but the degree of relative relatedness between lineages estimated genetically still stands. The close affinity between Neanderthal and modern human Y chromosomes can be explained by an admixture event of modern human DNA into Neanderthals around 370-100 ka ago (Petr *et al.* 2020). An earlier study showed that the lower boundary for modern human mitochondrial (mt) gene flow into Neanderthals was 270 ka ago, based on the mt genome of the Hohlenstein-Stadel Neanderthal femur from Germany (Posth *et al.* 2017). The nuclear genome of a Neanderthal from Denisova Cave in the Altai Mountains, Siberia moreover showed introgression from modern humans dated to ~100 ka ago (Kuhlwilm *et al.* 2016). However, this is not the case for all Neanderthals, which suggests that several biologically distinct populations existed throughout Eurasia. Some of these populations derived their genetic ancestry from admixture with modern humans moving into Southwest Asia from Africa during the past

300 ka. As soon as modern humans left Africa, then, they began interacting with other hominins and exchanging parts of their genomes.

In line with this evidence, Garcea (2012) has proposed two dispersals into Southwest Asia, one at 100 ka ago (OoA 2a) and a later dispersal at 50 ka ago (OoA 2b). Based on the genetic evidence cited above, but in contrast to Garcea (2012), OoA 2a does not reflect a single dispersal, but rather several earlier migrations that began as early as 300 ka ago. These dispersals left some genetic signatures in Neanderthal populations, but not in modern human populations. Determining whether the extinctions of these early human populations were the product of Neanderthal replacement, climate change, or something else requires further study. However, during OoA 2b, the opposite happened: every hominin species except our own ultimately went extinct. A key question in palaeoanthropology is determining why this happened (Rabett 2018).

Coexistence or conflict? Insights into social organisation and the interactions between Neanderthals and modern humans

The comprehensive fossil record of modern humans and Neanderthals in Southwest Asia, beginning with the Misliya and Tabun cave sites, situates the region as a key region for understanding the interactions between these hominins (Tab. 1; Fig.

Site	Specimen	Date	Taxon
Misliya	Misliya 1, maxilla	194-177 ka	Modern human
Tabun			
	Tabun C1, fragments	165±16 ka	Neanderthal
	Tabun C2, fragments	140±21/120±16 ka	Modern human or indeterminate
Nesher Ramla	Partial cranium and mandible	140-120 ka	Indeterminate
Skhul B	7 adults, 3 juveniles	119±18 ka	Modern human
Qafzeh L	4 adults, 2 juveniles	92±5 ka	Modern human
Qafzeh XV-XXII	2 adults, 5 juveniles, several isolated teeth	96±13 ka or 115±15 ka	Modern human
Ein Qashish	Skull fragments, right upper M3, leg bones, and vertebra	60-70 ka	Neanderthal
Amud B	2 adults, 4 juveniles, several fragmentary remains	57.6±3.7-68.5±3.4 ka	Neanderthal
Manot	Partial cranium	54.6-65.5 ka	Modern human
Kebara F	1 juvenile skeleton	NA	Neanderthal
Kebara VII-XII	1 partial adult skeleton, several isolated teeth and bones	51.9±3.5-59.9±3.5 ka	Neanderthal
Dederiyeh	Dederiyeh 1 and 2	53.6±1.8-48.1±1.2 cal. BP	Neanderthal
Shukbah D	Shukbah D1 and D2	Lithic assemblage	Neanderthal
Shovakh	Shovakh 1	Lithic assemblage	Indeterminate
Ksar Akil	"Egbert", skull and some postcranial elements	Several dates between 47±9 ka and 40.8-39.2 cal. BP	Modern human
	"Ethelruda", partial jawbone	42.4-41.7 cal. BP	Modern human
Geula B	Geulah 1-3	42±1.7 cal. BP	Neanderthal

Table 1: Hominin fossils from the Levant contemporary with OoA 2. Based on data from Shea (2008), Dennell (2020), Hershkovitz *et al.* (2021), and Stringer and Crété (2022).

3). Earlier studies based solely on archaeological and fossil evidence suggested that competition for limited resources led to continuous replacement of hominin groups in the Levant (Shea 2001; 2003; 2008) and across Eurasia (Stringer 2002; Scarre 2009). The palaeogenomic evidence shows that these hominins interbred, and an alternative view would be peaceful coexistence, at least occasionally. Lithic evidence from the Levant has also been interpreted in a similar manner with the appearance of “symbiotic industries” with both modern human and Neanderthal

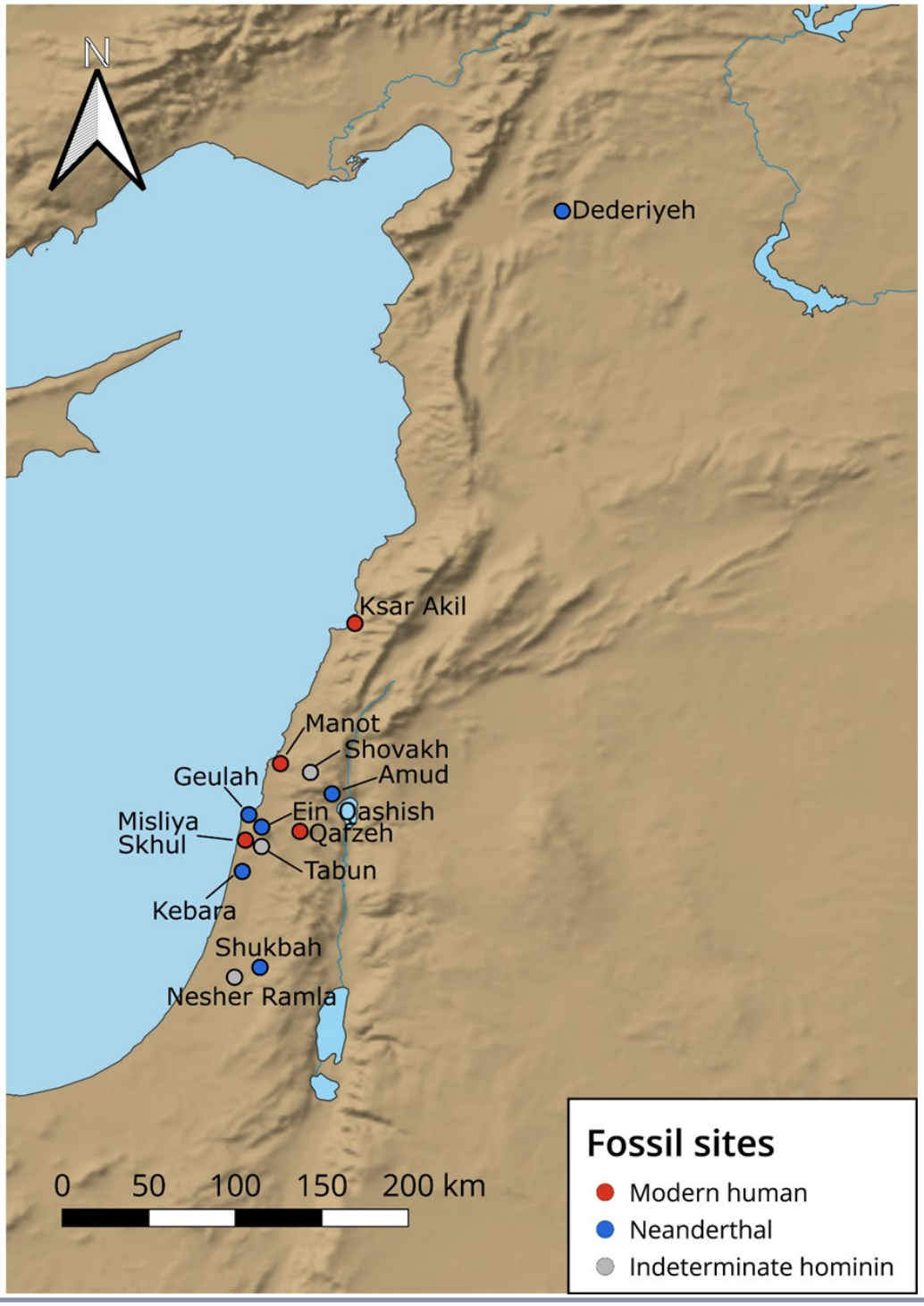

Figure 3: Map of key Levantine fossil sites. Note the overlap between Neanderthals and modern humans. Most of the sites are high-altitude caves, making them higher-potential sites for Pleistocene aDNA recovery in the Levant, although the adverse effects that temperature plays on DNA preservation remains an issue. Map by author in QGIS 3.30.2 and Inkscape 1.3.

features (Bar-Yosef 2013). The continuous cohabitation of these hominins in the Levant means that the region is central to determine why OoA 2b eventually led to Neanderthal extinction and, by inference, the extinction of other hominins in other regions. Stewart and Stringer (2012) have proposed that an expanding modern human population concurrently with a contracting Neanderthal one (due to climatic stress) during OoA 2b would serve as an explanation, but this is difficult to identify indisputably in the archaeological record.

Palaeogenomics does provide evidence of modern human population expansion, however, specifically through negative selection against Neanderthal genes. The genome of a modern human from Peştera cu Oase in Romania, dated to 42-37 ka old, had 6-9 % Neanderthal DNA in his genome due to admixture 4-6 generations back (Fu *et al.* 2015). This is higher than what is found in modern humans today, and other genomes closer to admixture also show greater amounts of Neanderthal DNA in larger regions of the genome (Fu *et al.* 2014; 2016; Prüfer *et al.* 2021). In modern populations, inherited Neanderthal DNA is found in certain genes (e.g., BNC2 and OCA2) which have been linked to freckling and lighter skin, hair, and eye pigmentation in Eurasian populations, possibly providing adaptive benefits to novel environments (Gittelman *et al.* 2016; Dannemann and Racimo 2018; Williams 2019; McArthur *et al.* 2021; Koller *et al.* 2022; Reilly *et al.* 2022). There is moreover an overlap in those parts of the genome that have no trace of an admixture event with Neanderthals in both modern and prehistoric populations close to admixture (Hajdinjak *et al.* 2021), which suggests that selection worked rapidly against most Neanderthal genes inherited by immediate offspring. This might have only left those genes which provided beneficial adaptations for modern human populations.

There are two mechanisms that could have produced the distinct genomic signature of Neanderthal DNA seen in modern populations: first, larger modern human than Neanderthal populations could have led to pruning selection of introgressed genes, leaving only those which led to increased fitness, or, second, semi-sterile offspring resulting from hybridisation (Dannemann and Racimo 2018). Although the latter has been favoured by some researchers (e.g., Dannemann and Racimo 2018; Williams 2019), the genetic evidence in conjunction with fossil and archaeological data suggests a process whereby Neanderthal females were incorporated into modern human groups, which would have depleted the Neanderthal gene pool (Stringer and Crété 2022). This is based genetically on the size of modern human compared to Neanderthal forager bands as evidenced by runs of homozygosity (ROH), and genetic evidence of patrilocality amongst Neanderthals. ROH are contiguous segments of the genome that are present in individuals due to parents transmitting identical haplotypes in their offspring. Long ROHs in an individual imply that their parents shared a recent common ancestor, which can provide insights into social organisation and population size, as this could be due to either a small available gene pool or cultural preferences (Ceballos *et al.* 2018). Neanderthal genomes consistently

show longer ROH than those of ancient modern humans (Prüfer *et al.* 2014; 2017; Skov *et al.* 2022; Slimak *et al.* 2023), indicating that they probably had smaller populations. Genetically inferred population estimates based on ROH suggest groups of up to 20 individuals (Skov *et al.* 2022), consistent with archaeological estimates of Neanderthal population sizes around 12-24 individuals (Hayden 2012). This is supported by ethnographic evidence with a mean size of forager bands of 28-30 individuals in modern groups across the world (Bird *et al.* 2019, table 1). The palaeogenomic evidence thus suggests larger modern human forager bands than Neanderthal ones.

The second point is inferred through studies of mtDNA (inherited solely through the maternal line). A study by Lalueza-Fox *et al.* (2011) of Neanderthals from El Sidrón Cave in Spain showed that females carried different mt haplotypes, suggesting patrilocal mating behaviour. A more recent study published genome-wide nuclear data, as well as Y-chromosomal and mtDNA, of a group of closely related Neanderthals from southern Siberia (Skov *et al.* 2022). It showed significantly lower Y-chromosomal than mtDNA diversity in the group, which was best explained by patrilocal mating behaviour since Y chromosomes are solely inherited through the paternal line (Skov *et al.* 2022). Although the data is still sparse, it does suggest that Neanderthals practised patrilocality across their range of habitation. If future studies corroborate this data, explanations of Neanderthal extinction would need to factor in processes through which Neanderthal females either voluntarily or coercively chose modern human mating companions rather than Neanderthal ones. This would create a process by which females were absorbed into modern human groups, depleting the gene pool of Neanderthals.

Although admixture would have been common, as evidenced by admixture in several independent modern human genetic lineages, including some that went extinct (Fu *et al.* 2014; 2015; Prüfer *et al.* 2021), as well as the discovery of a hominin hybrid in the fossil record (Slon *et al.* 2018), it was not always the rule (Hajdinjak *et al.* 2018). A Southwest Asian Palaeolithic population of modern humans, which is yet to be sampled directly but evident from Neolithic genomes from across Eurasia, had little to no Neanderthal DNA (Lazaridis *et al.* 2014; 2016; 2018). Although conclusions about the genetic history of this unsampled population should await direct sequencing of individuals belonging to it, their higher affinity with ancient Southwest Asian populations suggests that it likely lived somewhere in the region. This would have made it geographically close to concurrent Neanderthal populations, highlighting the fact that while some populations of modern humans and Neanderthals interbred, others did not. Interestingly, recent modelling work has shown that Neanderthal ancestry was diluted in European populations following the spread of Neolithic farmers from Southwest Asia (Quilodrán *et al.* 2023), with the presence of a basal Eurasian population without Neanderthal introgression in Southwest Asia admixing with other Southwest Asian populations a possible explanation for the

relative lower levels of Neanderthal ancestry in the region. Nevertheless, fully understanding the causes behind this variability requires further work, but Southwest Asia, with its long occupational history of both modern humans and Neanderthals, is ideally suited to test these hypotheses.

The most significant shortcoming of the palaeogenomic evidence is the low geographic coverage. It has been suggested that Neanderthals exhibited high variation in social organisation analogous to modern humans (Zilhão 2014), and genomic data from a wider geographic area is therefore needed to better understand Neanderthal social organisation and their genetic relation to modern humans. Southwest Asia is particularly well suited to produce such data, as it can be interpreted in conjunction with the otherwise rich archaeological and fossil record.

The formation of Southwest Asian ancestries

The oldest sequenced genomes directly from Southwest Asia are 26 ka old and belong to two individuals from Dzudzuana Cave, Georgia (Lazaridis *et al.* 2018), although the publication remains in preprint. Nevertheless, the genomes highlight the current dearth of genetic understanding of the Southwest Asian Palaeolithic until rather late in the Upper Palaeolithic. Based on evidence from Late Upper Palaeolithic and Neolithic genomes derived from Georgia, Iran, and Anatolia, it was proposed that the population structure of the region formed shortly after OoA 2b (the second migration of modern humans out of Africa 50 ka ago, see above) and continued throughout the Upper Palaeolithic (Jones *et al.* 2015; Gallego-Llorente *et al.* 2016; Feldman *et al.* 2019). However, the Dzudzuana individuals were closer related to early Neolithic farmers from Anatolia than Late Upper Palaeolithic foragers from the Caucasus, suggesting that the population structure of the Caucasus formed within the last 20 ka, after the Last Glacial Maximum (LGM) (Lazaridis *et al.* 2018). This is also the case in North Africa, where Later Stone Age individuals dated to 15 ka ago from Morocco have up to 63.5 % Natufian ancestry (~15-11 ka), providing good evidence of Epipalaeolithic migrations from the Levant into North Africa (van de Loosdrecht *et al.* 2018). These migrations had already been supported earlier on the evidence that a particular mitochondrial haplogroup, U6, is most commonly found in modern populations in Northwestern Africa despite forming in Southeastern Europe 35 ka ago (Hervella *et al.* 2016). In addition, autochthonous North African ancestry decreases gradually in populations closer to the Levant while Southwest Asian ancestry increases, likely owing to migrations more than 12 ka ago (Henn *et al.* 2012). These migrations were continuous, evidenced by the fact that early Neolithic farmers from Morocco traced part of their ancestry to Natufian introgression 11 ka ago and Pre-Pottery Neolithic (~12-8.5 ka) farmers from the Levant 8.5 ka ago (Fregel *et al.* 2018). These migrations are not only attested genetically but are also evident from lithic evidence (Garcea 2016).

The mounting evidence of consistent migrations between Africa and the Levant have forced researchers to change previous assumptions about Neanderthal intro-

gression in modern humans. Earlier models showed clear traces of hominin admixture in African populations (Sánchez-Quinto *et al.* 2012; Hsieh *et al.* 2016; Lorente-Galdos *et al.* 2019) and this was recently partly quantified as low amounts of Neanderthal introgression in African populations deriving from Eurasian return migrations during the Upper Palaeolithic and later (Chen *et al.* 2020). Significantly, this has influenced previous models used to quantify Neanderthal introgression in non-Africans, showing that East Asians do not possess 20 % more Neanderthal DNA than West Europeans, as previously proposed (Nielsen *et al.* 2017), but only 8 % (Chen *et al.* 2020). Thus, previous models showing that admixture needed to happen continuously to produce modern population structure need to be revised (Villanea and Schraiber 2019).

This should not lead to the conclusion that Upper Palaeolithic migration and biological exchange were on par with those seen in the later agricultural societies of the region (Orlando 2020). Indeed, the bulk of studies continuously support a scenario wherein Upper Palaeolithic population structures were largely continuous due to isolation or lack of interaction between distinct groups, and thus that Neolithic populations derived locally rather than due to external migrations (Jones *et al.* 2015; Broushaki *et al.* 2016; Gallego-Llorente *et al.* 2016; Lazaridis *et al.* 2016; Feldman *et al.* 2019). Nevertheless, Europe, which is much better studied, is beginning to showcase a more dynamic and varied history of genetic interaction between forager groups even predating the LGM (see Posth *et al.* 2023), and it is likely that future publication of genomes from varied places within Southwest Asia will significantly inform our understanding of this period in the region. For example, the palaeogenomic resolution in Southwest Asia is still far too low to quantify the degree to which Upper Palaeolithic and Epipalaeolithic foragers exchanged genes compared to materials and ideas in local and regional interaction spheres (Hill *et al.* 2011; Richter *et al.* 2011; Bird *et al.* 2019; Singh and Glowacki 2022). More, and especially older, genomes from the region would significantly help to shed light on the biological history of foragers in Southwest Asia, from the appearance of the earliest modern humans to the advent of agriculture.

Filling out the DNA dearth

Despite the importance of Southwest Asia for understanding the pre-agricultural history of our species, there is a significant lack of genomes from this region compared to Europe (Mallick and Reich 2023; Mallick *et al.* 2023). Although this is partly due to research bias (Gokcumen and Frachetti 2020; Tsosie *et al.* 2021), a major limitation for the sampling of Southwest Asian genomes is poorly preserved aDNA. The high temperatures of the region impact preservation adversely compared to regions farther away from the equator (Smith *et al.* 2003; Allentoft *et al.* 2012; Hagelberg *et al.* 2015). In addition, the increasing scarcity of fossils when moving further back in time complicates the sequencing of Palaeolithic genomes, not least in Southwest Asia, as the fossils themselves become increasingly more valuable

(Olalde and Posth 2020). Consequently, Palaeolithic genetic data from the region is currently very sparse and it is necessary to draw significantly on external genomes and extrapolate the findings to Southwest Asia.

One possible alternative to direct DNA sequencing from fossils is the growing field of environmental DNA (eDNA). This allows for extraction of DNA preserved in sediments, ice, or water (Pedersen *et al* 2015), with several studies having now managed to identify DNA from rare taxa such as hominins at sites (Gelabert *et al.* 2021; Massilani *et al.* 2021; Vernot *et al.* 2021; Slon *et al.* 2017; Zavala *et al.* 2021; Zhang *et al.* 2020). Despite past arguments about possible movement of DNA through lay-

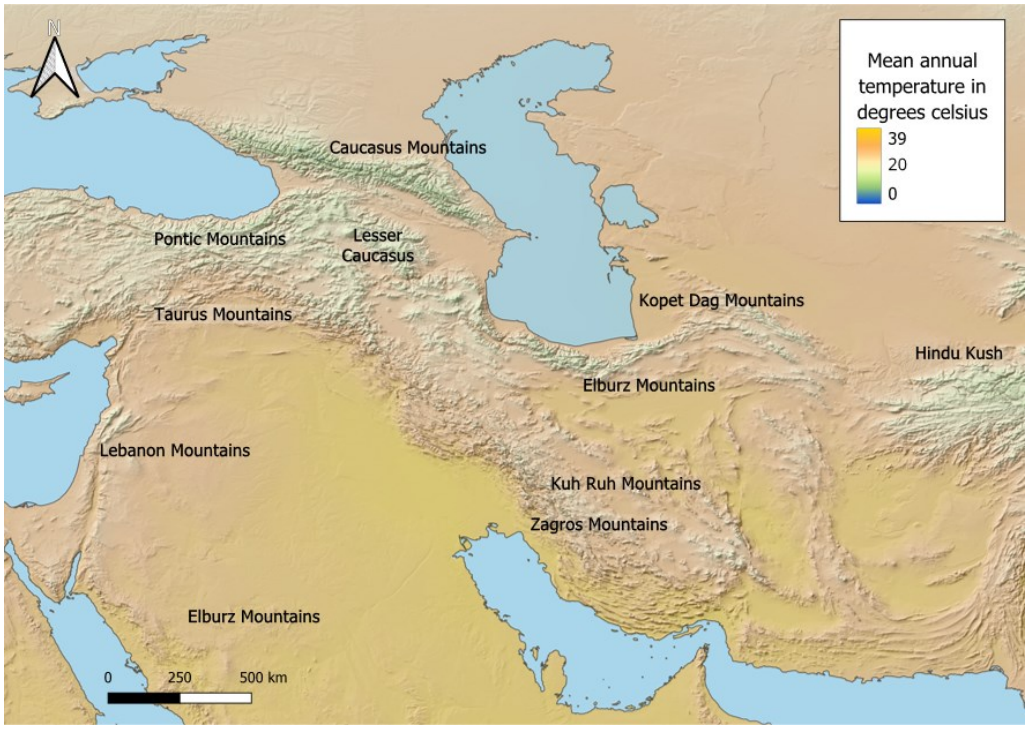

Figure 4: Mean annual August temperatures across Southwest Asia from 1979-2013. Note the lower temperatures in especially the Caucasus and Pontic Mountains, indicating they might be high potential regions for aDNA recovery in the region. Data from Karger *et al.* (2017; 2018)- Map by author in QGIS 3.30.2.

ers (*e.g.*, Haile *et al.* 2007), the combination of microstratigraphy with eDNA sequencing has shown that the DNA can remain highly localised in fragments of bones and coprolites in sediments, allowing for a precise linking of the sequenced eDNA to the stratigraphic record of a site (Massilani *et al.* 2021). Although Pleistocene eDNA has been recovered from El Sidrón Cave in Spain and Satsurblia Cave in Georgia (Vernot *et al.* 2021; Slon *et al.* 2017), attempts to recover eDNA dating to this period from warmer regions, including Kebara Cave in Israel, have been unsuccessful (Massilani *et al.* 2021). The adverse effects of high temperatures on DNA preservation thus remains a major issue, and can likely only be solved by novel techniques capable of sequencing even more miniscule amounts of DNA than is currently possible. Until this is achieved, the focus should be on retrieving DNA from colder parts of the region (whether sequenced from sediments or fossils), with higher-altitude sites in the Pontic and Caucasus Mountains providing the most promising candidates due to their comparably lower mean temperatures (Fig. 4).

To further ensure finer genetic resolution for the Southwest Asian Palaeolithic, it is moreover imperative that research groups report negative research findings systematically to create an environment of equal collaboration and novel datasets that can be used to better understand DNA preservation and degradation in the region and beyond (Alpaslan-Roodenberg *et al.* 2021). If combined with a focus on local capacity building and greater integration of stakeholder communities and individuals throughout the research process (see Ávila-Arcos *et al.* 2023), it might be possible to move beyond the younger genomes that currently predominate the field in Southwest Asia (see Fig. 1) and instead focus on providing a better resolution of the currently sparse Palaeolithic record. This importantly requires greater involvement of archaeological viewpoints throughout the design and application of studies to counter issues leveraged by the archaeological community against palaeogenomic studies, e.g., an oversimplification of complex phenomena such as migrations (Roberts and Vander Linden 2011; Heyd 2017; Furholt 2018). This extends to the Palaeolithic, where debates such as whether the Initial Upper Palaeolithic derived from migrations or local developments (see Kuhn 2003; Meignen 2012; Olszewski 2017; Greenbaum *et al.* 2019; Goring-Morris and Belfer-Cohen 2020; Boaretto *et al.* 2021) could be helpfully illuminated by genetic data, if theoretical insights from archaeology are used to interpret the palaeogenomic results. This would provide a starting point for the formulation of common theoretical and analytical frameworks, which are necessary for the findings of palaeogenomics to remain important to archaeologists and anthropologists. It would also ensure that the tendency for genetic data to take unsubstantiated precedence over archaeological, morphological, and ethnographic evidence (Horsburgh 2015; Jones and Bösl 2021) would be less prevalent. If these issues are resolved, palaeogenomics is likely to revolutionise our understanding of the Palaeolithic in Southwest Asia just as it has in Europe.

Conclusions

Palaeogenomics has significantly impacted our interpretations of human prehistory by adding a novel set of data, and in this review, it has been highlighted how the field has begun to transform our interpretations of the Southwest Asian Palaeolithic. It has shown that admixture in the region during Out of Africa 2b led to novel adaptations which likely made modern humans more fit in non-African environments, and that the depletion of the Neanderthal gene pool was facilitated by the interactions between modern humans and Neanderthals. However, the nature of these interactions was highly complex and, although admixture occurred continuously, it was not always the rule. Moreover, movement between the Levant and North Africa throughout the Upper Palaeolithic now make it evident that the population structures of these regions formed after the Last Glacial Maximum. But poor DNA preservation and the lack of a sustained research focus has resulted in a relatively poor resolution of this key period in the prehistory of Southwest Asia. Stronger integration between archaeology and palaeogenomics, along with attempts to

better sequence the poorly preserved DNA of the region through strategic targeting of high potential sites for DNA preservation, can help solve this issue and move genetic research of extinct hominins and early forager groups into a new era. If this can be done, aDNA has the potential to provide many new insights into the deep prehistory of Southwest Asia.

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Dataset

Dataset available as Suppl. Dataset 1 at tidsskrift.dk/chronolog.

Predynastic Egyptian Frog Vessels in (Inter)regional Context

Jacob Glenister

Abstract

Tiny vessels in the shape of frogs are one of the many theriomorphic stone objects produced by the artisans of Late Predynastic Egypt. This paper identifies 15 such vessels ranging widely across Egypt, from Naqada and Naga ed-Dêr in the south to a recent find at Tell el-Farkha in the Delta. Detailed investigation of their forms reveal two distinct types regardless of point of origin: most belong to the "sitting" type which rests upon its legs, but two examples follow another set of conventions best described as "prone" with the legs splayed out and the animal resting on its stomach. Of the latter category, the frog from tomb N7304 at Naga ed-Dêr is particularly significant, for its lapis inlays and archaeological context point towards connections with the greater Mesopotamian world. Comparisons with material from Susa and Uruk from the same period permit a better understanding of this object and confirm and augment prior conclusions about the tomb's occupant.

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Research Interests: Late Predynastic Egypt, animal symbolism, interregional connections in the Early Bronze Age

This paper is an adaptation and expansion of a talk originally given at EACC 2023 entitled "Predynastic Stone Frog Vessels: A Catalog and Analysis"

تعتبر ألواني الصغيرة بشكل الضفادع من بين العديد من ألشكال الحجرية الحيوانية التي أنتجها الحرفيون في مصر خالل الفترة ألخيرة لألسرات المصرية. يحدد هذا البحث وجود 15 وعاًء من هذا النوع يمتد توزيعها على نطاق واسع في مصر، من نقادة ونجع الدير في الجنوب إلى اكتشاف حديث في تل الفرخة في الدلتا. يتضح من التحقيق المفصل في أشكالها عن وجود نوعين متميزين بغض النظر عن موقع االكتشاف: فمعظمها ينتمي إلى النوع "الجالس" الذي يستند على أرجله، ولكن هناك نموذجين يتبعان مجموعة مختلفة من القواعد ويصفان بشكل أفضل .بأنهما "مضطجع" حيث تكون ألرجل متباعدة والحيوان مستلق على بطنه ومن بين ألمثلة في الفئة ألخيرة، يعتبر الضفدع الموجود في مقبرة7304 في نجع الدير ذو أهمية خاصة، حيث تشير البيانات ألثرية والتشكيالت الزرقاء نحو االرتباطات مع العالم المسيحي ألكبر. تسمح المقارنات مع المواد من .سوسة وأوروك من نفس الفترة بفهم أفضل لهذا الكائن وتؤكد وتعزز االستنتاجات السابقة حول محتوى المقبرة

Translation by Mahmoud Alsayed Ahmed, MA-student, University of Copenhagen

Introduction

The Late Predynastic period, Naqada IIC-D, approximately 3650-3350 BCE (Savage 2001, 1266), was an early flourishing of the mastery of stoneworking that would come to define the material culture of the northern Nile Valley for millennia to come. Artisans produced vessels, amulets, and game pieces of fine finish and intricate detail. One of the most striking expressions of this artistic skill was theriomorphy, the making of objects into animal shapes. While animal-shaped objects of many types are known throughout Egyptian history, the Late Predynastic in particular is marked by the diversity of artifacts bearing zoomorphic forms (Wengrow 2006, 99). Among vessels in particular, Egyptian stonemasons and potters produced forms shaped like animals found in their physical and cultural landscapes: birds (Petrie and Quibell 1896, 24), hippopotami (Adams 1996, 10-11), fish (Petrie and Quibell 1896, plate 27), and turtles (Fischer 1968, pl. 11) among others. The focus of this article will be on vessels in the shape of frogs, a vessel category with clearly definable and consistent characteristics and, in one case, important implications for a particular Predynastic Egyptian and their connections with the wider world.

Predynastic Frog Vessels

Frogs are known from all phases of Egyptian history as amulets, figurines, and wall art of various forms (Kremler 2008, 98), but provenanced examples of frog-shaped vessels restricts them to the Late Predynastic. In the Early Dynastic period and later, figurines in the shape of frogs are generally associated with the childbirth goddess Heqet (see Faltings 2014 and Cooney 1976 for several examples); she and other divine amphibians such as those of the Ogdoad are prominently attested in text and art throughout Egyptian history (Gregersen 2019). However, as yet we cannot say if this association was true in the Late Predynastic, and indeed Kremler argues that it is unlikely to be accurate even in the Early Dynastic period (2008, 98-99). Uniquely in the Late Predynastic, it is not only figurines but also vessels that frequently exhibit frog-like features. To date, sixteen of these vessels are known, including one dubious case. (See Table 1).

The frogs depicted in early Egyptian art are, generally speaking, true toads of the genus Bufo. In particular, the tendency towards a “spotted” decorative style, either by stone type (as in the British Museum example) or by inlaying (as in Fig. 3) mirrors closely the warts and poison glands of toads of this genus, which are known to have existed in Egypt (Faltings 2014, 125-130). That being said, several different species within the genus may nonetheless be represented (Cooney 1976, 204; Wyatt 2020, 505). This assessment holds true for the substantial corpus of figurines found from the Predynastic and Early Dynastic periods and the Old Kingdom, as well as the vessels here (Faltings 2014). However, this paper will continue to use the term “frog” to refer to the objects in question, following the precedent set by Kremler (2016, 127). The Egyptians do not seem to have clearly distinguished the two types of animals in their own language with any degree of consistency; terms like ḥqt, pggt, and qrr

Number	Collection Number	Material	Size (cm)	Category	Findsite	Museum	Other Notes
1	E9665	Marble	3 x 6.1 x 4.1	sitting	el-Mahasna	Penn Museum	
2	AN 1895.216	Pink lime-stone	4.8 x 9.3 x 8.1	sitting	Naqada, tomb 695	Ashmolean Museum	
3	Not in museum	Serpentine		sitting	Tell el-Farkha	Not in museum	
4	14403	Dark green stone	3.5 x 7.5 x ?	sitting	Unknown	Berlin Museum	No head nor foreleg
5	EA65240	Breccia	3.6 x 5.9 x 4.9	sitting	Unknown	British Museum	
6	70.91.4	Serpentine	4.5 x 8.2 x 5.7	sitting	Unknown	Brooklyn Museum	
7	37.648E	Serpentine	2.1 x ? x 3.8	sitting	Unknown	Brooklyn Museum	
8	FGA-ARCH-EG-0346	Serpentine	2.8 x 7.75 x 6.4	sitting	Unknown	Fondation Gandur pour l'Art	
9	E 27200	Chlorite	3.4 x 7.3 x 4.9	sitting	Unknown	Louvre	
10	LDUCE-UC15212	Limestone	? x 8 x ?	sitting	Unknown	Petrie Museum	Badly broken
11	E.03022	Gneiss	3 x 8 x 6.5	sitting	Unknown	RMAH, Belgium	
12	E.03023	Dark stone	3.4 x 6 x 4.5	sitting	Unknown	RMAH, Belgium	
13	910.100.3	Serpentine	3.5 x 7.6 x 5	sitting	Unknown	Royal Ontar-io Museum	
14	6-17171	Limestone		prone	Naga ed-Der, tomb N7304	Hearst Museum	Lapis inlays
15	E1382	Limestone		prone	Naqada	Penn Museum	
16	LDUCE-UC15213	Steatite	5 x 8.5 x 7.2	figurine	Unknown	Petrie Museum	No rim nor lug handles

Table 1: List of known Predynastic frog vessels. Sizes only given when exactly indicated by museum records. Compiled by Jacob Glenister.

seem to have referred to any tailless amphibian without differentiation, or at least none that modern researchers of the language can determine (see for example Iversen 1947, 48). This is not to say that the Egyptians would not have recognized different animals as different, of course. We might analogize the situation with wꜣḏ as a single category covering both English "blue" and "green"; Egyptian eyes would have recognized different shades, but they chose to place them into a single category. Using the word "frog" also keeps this paper in line with general museum collection practices, which universally use "frog" to refer to the objects under study.

Unfortunately, only five of the vessels have certain archaeological contexts. Vessel number 1 comes from Mahasna, having been removed from its original context and left on the surface prior to excavation (Garstang and Sethe 1903, 6). Vessel 15 comes from Naqada, as does 2, but only 2 has a known specific context, coming from grave 695 (Payne 1993, 144; Petrie and Quibell 1896, pl. XII); Petrie and Quibell provide no notes on this grave in their list of notable tombs, so we can draw no conclusions about vessel 2 in particular from context (1896, 26). Vessel 14 comes from Naga ed-Dêr grave N7304 (Kantor 1952, 242). Vessel 3 is a recent find from Tell el-Farkha, located in a foundation deposit for a chapel of Naqada IIIB date (Chłodnicki et al. 2012, 305). Among the unprovenanced vessels, vessel 8 has already been the subject of a dedicated publication (Wright 1971). Vessel 4 was manufactured without a head or forearms, though without context we cannot understand why this may have taken place; an earlier publication's dating of the artifact can be amended to Naqada IID based on provenanced examples (Scharff 1931, 220). A frog statuette in the Petrie Museum (LDUCE-UC15206) is almost certainly modern and in any case not in this class of vessel ("LDUCE-UC15206," 2015).

All of the frog vessels show considerable similarities beyond the shape of the animals they depict. They can be considered as variants of the design of the squat lug-handled jar (Fig. 1). The frog vessels share with these jars the characteristic lug handles placed on their sides, a flat bottom, a short height, and a clearly-defined rim narrower than the body of the vessel itself (Aston 1994, 91). Such stone vessels are known particularly from the late Naqada II period, precisely the time when the frog vessels were produced (Aston 1994, 91). All the frog vessels also show the legs and eyes of the animal, but omit any other details. The eyes were originally inlaid, though in almost all cases the inlays have been lost; the positioning of the legs varied in a way that will be discussed in the following sections.

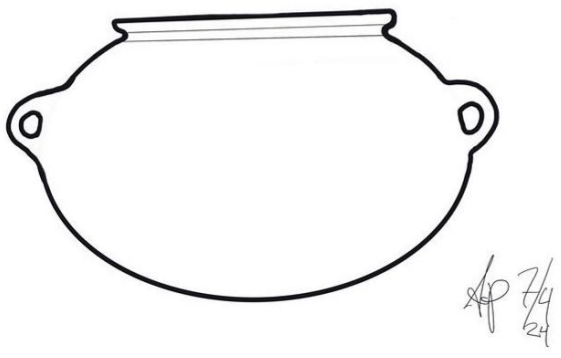

Figure 1: A line drawing of a lug-handled stone vessel. Reproduced from Petrie and Quibell 1896, drawn by Anna Silberg Poulsen.

Nonetheless, there exists a great deal of individual variation in detail among these vessels. The head shapes and rim types represented show considerable diversity among all examples. The largest examples are nearly double the length and width of the smallest. Vessel 1 is quite slender; vessel 6 has a wide, squat body (see Table 1). This differentiation of wider and more slender forms might be reflective of the varied species of frogs that exist along the Nile (Cooney 1976, 204). The rim of the former is of the deeply incised variety; the latter is a simple flat top rim flush with the body. Vessel 2 is rotund almost to the point of circularity; the back legs are barely represented.

The materials of the vessels show a similar variability; breccia, chlorite, gneiss, steatite, and several varieties each of limestone and serpentine are represented. The use of many types of colorful stone is a part of the flourishing of stoneworking during the Late Predynastic. Excavations at Nekhen confirm Naqada II as a period of diverse stone use (Hikade 2004). Looking through any major museum's collection of Naqada II stone vessels will display a similar range of stones, especially multicolored stones like serpentine and breccia (Needler 1984, 238, for example). The range of materials in the frog vessels is a part of this wider tradition. In certain cases, such as the breccia of vessel 4, the choice of stone may be reflective of the toad's warts (Faltings 2014, 129-130).

Unlike all other vessels in the catalog, vessel 16, LDUCE-UC15213, the Petrie Museum example, is not a lug-handled jar in its basic design. It bears no rim on its back nor lug handles anywhere on its sides. Moreover, the basic shape of the frog is quite different from all other examples: it is the tallest of the vessels, as opposed to the other frog vessels that bear a lower profile, and it has a sharply sloping back rather than a flat outline as is more common. These features are easily explained by this not being a frog-shaped vessel of the same category as the others. Instead, it is a frog-shaped figurine with a hole drilled in the back. If we were to simply plug the hole, it would fit in well with the "quadrant"-style slope-backed frog figurines found at Elephantine and other sites (see Krammler 2016, 127). Unfortunately, a lack of provenience prevents us from fully investigating the possible reasons, timing, and origin for this particular innovation, but it is of a different type of artifact than all those now under consideration.

Sitting Frogs

A group of closely shared traits marks all but vessels 14 and 15 as belonging to a single stylistic category, exemplified by vessel 1 (Fig. 2). In these vessels, the jar handles rest on the flanks of the animal, generally about level with the eyes. The legs are folded underneath the animal; in all but one case, they are incised flush against the body; in some cases, including vessels 7 and 12, toes have been carved into the feet. The position differs slightly for vessel 5, which has legs that stick out straight down a

Figure 2: Vessel 1, the sitting frog vessel from el-Mahasna, front and side views. E9665 - Courtesy of the Penn Museum.

short distance upon which it sits. From this posture, we might call this category "sitting frogs", in that the frog sits neatly upon its legs.

The 13 of the 15 frog-shaped stone vessels found so far fall into this category. While there are a few differences in exact proportions, nonetheless the sitting vessels form a distinct type. The remarkable regularity of feature placement speaks to a clear, culturally-informed idea of what a frog vessel should look like and how it should be produced. This similarity of form is quite like the standardized "quadrant" shape of the faience frog figurines known from the Early Dynastic Period and Old Kingdom (Kremler 2016, 127). It is also quite unlike the case of stone frog figurines from that same period, where great variability seems to have been the norm (Kremler 2016, 134). This seems to have held true across all of Egypt, as our known Lower Egyptian example does not contrast with any of those from Upper Egypt, though more examples could change this assessment in the future.

Prone Frogs

There are a few vessels in the corpus, however, that follow a slightly different pattern; we might term these the "prone" frogs. Vessels 14 (Fig. 3) and 15 have strong similarities to one another, as noted by Kantor (1952, 242), and two significant differences from the rest of our corpus. Rather than resting under the body, the legs protrude some distance; the forelegs of vessel 14 have detailed toes. The jar handles sit not on the flanks, but at the rear of the animal and the nape of the neck. These are sharp deviations that affect both the appearance and practical use of the object in how it sits and how the lug handles can be used.

While the low number of known examples hinders deeper analysis, the existence of two similar and well-provenanced examples of a distinct type points to an underlying phenomenon. One possible explanation is hybridization between multiple animal types, which is known from many other artifacts of the time (examples include Petrie 1896, pl. XLVII, no. 2 and the knife handle of Huyge 2004). If these vessels are hybrids, then the animal with which they are mixed is the turtle. Turtles, which when represented in art in this period are generally the African softshell turtle Tri-

onyx triguinis (Fischer 1968, 5), share their habitat with Nile-bound amphibians such as frogs and toads and therefore may have been associated with them. Turtle vessels from this period are known; several examples are described by Fischer (1968, p. 9, pl. 11 and 12). The short legs sticking out from the body and lug handles (if any) at the neck and tail are diagnostic of turtle vessels of the period, such as Fischer's plate 11 (1968). It is therefore plausible that these features were grafted onto the frog. This is at present highly speculative as other diagnostic features, such as a shell, are missing, but in an artistic world that could produce a hybrid fish-ibex (Huyge 2004) a turtle-frog is conceivable. Perhaps with more examples of this type, it would be clearer whether or not such a hybridization has taken place.

Vessel 14 In Local Context

Frog vessel 14 shares the general features of a prone frog with 15, but with a unique addition: small holes have been carved along the body into which have been inserted fine chips of lapis lazuli, some of which have survived. This is a rarity in the period; lapis does not appear among the turtle corpus cited by Fischer, nor among the comparable vessels cataloged by Petrie, nor any other of the Naga ed-Dêr theriomorphic vessels (Fischer 1968; Petrie and Quibell 1896; Savage 1995). Indeed, only one other vessel from the whole of the Naqada II period is known to have lapis inlay, a single tubular vessel from el-Amrah with a disk in its base (Aston 1994, 72-3). A few examples are known of small artifacts, such as palettes, with lapis inlays (Kantor 1952, 242), but these artifacts are neither numerous nor particularly similar to 14. Rather, Predynastic lapis artifacts are chiefly beads made wholly of lapis; it is worth noting that this is often in connection with imported goods or Mesopotamianizing artifacts such as cylinder seals (Payne 1968). In order to understand why this vessel might bear this unique decoration, it is worth investigating its original context in more detail.

Naga ed-Dêr's cemetery N7000 represents the burials of a community of Upper Egyptians spanning from the Middle Predynastic II (ca. 3800 BCE, early in the Naqada II period) to just before the First Dynasty (Savage 2001, 1266). Through an analysis of the spatial arrangement of the graves in the cemetery, it is possible to create a picture of six distinct social groups present at the site (Savage 1995, 81-

Figure 3: Vessel 14, The lapis-inlaid prone frog vessel found at Naga ed-Dêr. Courtesy of the Phoebe A. Hearst Museum of Anthropology and the Regents of the University of California — 6-17171.

86). Each of these groups pursued different strategies in pursuit of social and economic gains. Cluster 1, for example, was highly connected with Nubian trade, with ivory objects found frequently among their grave goods, while Cluster 6 seems to have used a mixture of control of pottery manufacturing and ritual activity (Savage 1995, 288-294).

N7304, where vessel 14 was found, belongs to Savage's Cluster 3. This group rose in fortune slowly throughout the cemetery's lifetime, with its influence (as measured by tomb content, size, and design) peaking in Phase 3 of the cemetery before declining slightly (Savage 1995, 284). Savage's Phase 3 corresponds neatly to the Late Predynastic II, i.e. roughly Naqada IID (Savage 2001, 1265). Several groups in Naga ed-Dêr used trade as a tool towards advancement, with Cluster 3 seemingly focused on the north and east, drawing goods from Sinai, the Levant, and the broader Mesopotamian trade networks (stretching ultimately into Central Asia). The presence of substantial copper and lapis goods in particular point to a successful and long-term profit from thetrade of with the region (Savage 1995, 293). While one author has suggested that some lapis may have been procured natively within Egypt, the balance of other evidence nonetheless guarantees Mesopotamian connections with cluster 3 (Hoffman 1986). The more likely scenario is lapis mined in Afghanistan, imported to Uruk and neighboring sites, then traded through Levantine merchants into the Nile Valley through intermediaries like those of Savage's group 3 (Wengrow 2006, 33).

Grave N7304 is a particularly striking example of how deep the Mesopotamian connections ran at Naga ed-Dêr. It contains a cylinder seal, an object common in Mesopotamia during the period and one important for both practical and symbolic reasons to its owner (Kantor 1952, 246; Hill 3004, 8). This seal, likely of limestone, bore a design of four fish with herring-bone cross-hatching, a style broadly like that of contemporaneous Uruk seals but with details suggesting an Egyptian manufacture imitating Mesopotamian designs (Kantor 1952, 246). The making, ownership, and use of such a seal would have been a strong indicator of the owner's links to regions outside the Nile Valley. In a similar vein, the tomb contained many small pieces of worked copper and beads of lapis lazuli, among other grave goods (Kantor 1952, 245). Both of these materials also have origins in West or even Central Asia (Wengrow 2006, 33, 39). This further supports the idea of a tomb owner with substantial trade links to the regions through which these raw materials were imported, i.e. the Sinai and the wider Uruk world. Not only does this assemblage paint a picture of a wealthy individual, it also tells us directly where this wealth came from.

Mesopotamian Influences on Vessel 14

If we examine other material at contemporary Mesopotamian sites, we can find an explanation for the lapis inlays and other unique features of frog vessel 14. The Late Predynastic of Egypt corresponds most closely to the Late Middle and Late

Uruk periods in Mesopotamia (and their equivalents at other sites with differing chronological traditions) (Joffe 2000, figure 1). At Uruk during the Late Uruk period, we find a substantial corpus of animal figurines, mostly of white stone and largely of comparable size to the Egyptian frogs (Becker 1993). The best parallels to the frog from tomb N7304 can be found among cattle figurines. Looking at Becker's figurines numbers 1059 and 1060 in particular, we can see patterns of lapis lazuli inlays pressed into the sides of seated cattle (Becker 1993, pl 97). A similar pattern is presented by no. 1117, from the same time and place, which again features lapis (this time on a standing cow) (Becker 1993, pl 103).). While these are not vessels, they use the same technique of decorating animal representations as vessel 14, inlaying shaped lapis in white stone to produce a colorful effect.

At Uruk, frog-shaped artifacts are also attested during this period, but they are of a distinctly different form than their Egyptian contemporaries. Only two and a half frogs are preserved, and only one is clear enough to allow obvious anatomical comparison (1188 on Becker 1993, pl. 114). It is quite triangular viewed from the top down and has a pointed nose. The forelegs are under the animal, but the back legs are carved on top, so that from the top view they are prominently visible down to the feet. It has none of the roundness of its Egyptian counterparts and the oversized back legs contrast sharply with the balanced size of the limbs of Egyptian frog vessels. While the Egyptians borrowed certain motifs and ideas from Mesopotamia, the dissimilarities between the Uruk frog vessels and the amphibians in the Egyptian corpus demonstrate that the way of representing frogs was not among them.

More good comparisons to vessel 14 can be found at another major Mesopotamian city of the period, Susa. There, during the Susa II period, skilled artisans produced a wide variety of theriomorphic stone vessels; these vessels are chiefly in alabaster, which contrasts with the wide diversity of stone used in Egypt (Álvarez-Mon 2020, 48). These range from the realistic and detailed, such as several birds with carved feathers, to the fantastical, such as a bird with two heads, to the charming (a bear drinking from a pot) (Le Breton 1957, 111). Most relevant to our discussion here is a frog-shaped vessel currently on display in the Louvre (numbered SB 2919 ; AS 6587) from the site (Fig. 4). The frog has little in common with its Egyptian contemporaries; its legs are ill-defined, the eyes fully sideways, no lug handles, the body long and perhaps salamander-like; only the basic form of a tailless amphibian betrays its common animal origin. As with the Uruk frog, whatever the Egyptian artists may have been drawing from their counterparts at Susa, it was not the precise means of representing frogs in stone. Better parallels can be found among other theriomorphic vessels of the time. Some of the Susa II vessels have decorations of various sorts in the stone of the vessel. There is, for example, a bird-shaped vessel that has been beautified by chiseled lines along the sides and back of the animal, matching exactly the location of the wings and tail of the animal in life (Harper et al. 1992, 65). And it is not alone; the three-necked vessel on the same page displays a

"characteristic zigzag pattern" carved all over the body (Harper et al. 1992, 65). Other vessels are painted or have a multisegmented and multimaterial form (Harper et al. 1992 61-62). This diversity of decorative techniques differs sharply from the Egyptian frog vessels, where the body is mostly smooth and undecorated, with only small carvings of the legs and inlays for the eyes. Several frog figurines with decorative inlays on the body are known (Faltings 2014, 126-127), but among vessels only number 14 has inlays of this type. The use of lapis inlays in vessel 14 fit well with the diversity of decorative techniques used by Susian artisans in their theriomorphic vessels.

There is a more direct analog for vessel 14 at Susa. Louvre vase SB 3016 (Fig. 5) has several dozen tiny holes drilled carefully and shallowly into its sides. These holes seem to have been filled with bitumen (Álvarez-Mon 2020, 48). This was the same material used to affix the lapis lazuli to the frog from Naga ed-Dêr tomb N7304 (Kantor 1952, 242). While the ambiguities of cross-regional dating make it difficult to say if this particular vessel came before or after tomb N7304 frog, it demonstrates that the same technologies in use in Egypt for vessel 14 existed in Susa around the same time. While this is not quite as exact a comparison as that of the Uruk lapis-inlaid cattle, it is further proof for technological and stylistic parallels between the two regions.

Vessel 14 in Interregional Context

These similarities between decorative methods fit into a wider picture of large-scale, long-term exchange across the Ancient Near East during the fourth millennium. Egypt was connected to these networks of exchange chiefly by trade with the Levant, especially sea trade with Syria (Wengrow 2006, 140). The Late Predynastic saw a massive expansion in these trade routes, driven by social shifts and the needs

Figure 4: A frog vessel from Susa. © 2007 Musée du Louvre / Thierry Ollivier. https://collections.louvre.fr/en/ark:/53355/cl010122979

of elites (Guyot 2008, 720). Trade carried not only goods like copper and lapis but also symbols and the ideas they represented (Wengrow 2006, 142; Guyot 2008, 725). There are many examples, such as the famous niched architecture symbolized in the serekh (Silverstein 2008) and the iconography of the Gebel el-Arak knife (Pittman 1996). In general, what was shared was not exact meaning, but rather the "form and function" of artistic motifs (Pittman 1996, 13-14). The end result was a "shared system of pictorial symbolic expression" between Egypt and Mesopotamia (Pittman 1996, 18). This, in turn, was part of a pattern of growing and shifting networks both within Egypt and with the outside world (Stevenson 2016, 438-443).

This theory of a loose exchange of ideas mediated by long networks, rather than exact replication of foreign ideas, fits neatly with vessel 14 and its similarities and differences with Mesopotamian art. On the one hand, the basic object is clearly Egyptian; it shares much more in common with the other known Egyptian frog vessels than than to those found in Susa or Uruk. On the other hand, its lapis inlays stand out among local works but fit nicely the patterns of Mesopotamian art. The pattern of lapis inlays differs between similar pieces from Uruk (whose inlays are stylized triangles, rather than circles), but the technology and motif of lapis inlay is nonetheless shared. That lapis itself comes to Egypt through Levantine trade networks and adds to the foreignizing nature of the vessel. Moreover, the use of white stone, while known in Egypt from the period, fits neatly with the Mesopotamian sculptors' strong preference for similarly-colored stones. The overall impression of vessel 14 is of a Mesopotamian finish on an Egyptian artifact.

Social Implications

The intricate detailing of these vessels allows us to paint at least a partial picture of their social role. We do not know most of their use life, as detailed chemical and

Figure 5: A stone theriomorphic vessel from Susa with holes for inlays. © 2008 Musée du Louvre / Thierry Ollivier. https://collections.louvre.fr/en/ark:/53355/cl010122980

wear analysis has yet to be performed, but we know that they most probably played a role in funeral rites, as four of five provenanced examples come from tombs. The fine work would have taken many hours of labor to complete, meaning the final product would come at considerable expense. Displaying such a valuable vessel during funerary rites (and perhaps earlier in its object history) would have signaled one's wealth and access to highly-skilled stoneworkers. This, in turn, would have increased its owner's social capital, aiding their advance to still-greater wealth and authority (Plourde 2009, 265-6). As a knock-on effect, those who could control such production therefore wielded significant power in their communities (Bard 2017, 12-3). Beautiful, detailed theriomorphic vessels represent one of the many expressions of this phenomenon, what Wengrow calls "a prestige-goods economy" that was critical in the development of the early Egyptian elite (Wengrow 2006, 75-76).

As much as this is true of frog vessels in general, it is even more clear for Vessel 14. Much of the value of a prestige good comes from its ability to signal one's access to a wider network of wealth and exchange (Wengrow 2006, 75-76). Its materials draw upon both local and foreign stones, demonstrating its owner's access to the wealth of the Nile and the world beyond. Its deliberate combination of Egyptian and Mesopotamian styles would have drawn further attention to this fact, making its owner's connections obvious to anyone who saw it. In the context of other finds from Naga ed-Dêr tomb N7304 like copper and the cylinder seal, it seems that the tomb's occupant embarked on a deliberate program to signal their participation in the trade routes from Egypt to Afghanistan. This complements the general picture painted by Wengrow, Stevenson, Pittman, and others of a Late Predynastic shaped heavily by interregional trade and the exchange of ideas and forms that went along with it (Wengrow 2006, 75-76; Stevenson 2016, 438-443; Pittman 1996).

Conclusion

Frog-shaped vessels represent a distinct and well-defined category of Late Predynastic stone vessels. These small vessels, based on squat lug-handled jars, are one example of the larger phenomenon of theriomorphy characteristic of Late Predynastic stonework. They fall into two categories; most are seated, resting upon their legs, while two are prone, lying on their bellies with their legs extended. A lack of provenience hampers fuller understanding of most of the vessels, but the vessel found in grave N7304 at Naga ed-Dêr (called Vessel 14 in this paper) is of particular note. Both its unique composition (particularly its lapis lazuli inlays) and its context point to the Mesopotamian ties of its owner. This agrees with and expands upon earlier findings of interregional connections in the Late Predynastic both at Naga ed-Dêr in particular and in Egypt in general.

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Divine & Conquer

Ancestors, Gods, and the Right to Rule

Magnus Arvid Boes Lorenzen

Abstract

This article explores the use of legendary, ancestral, and divine figures in consolidation and legitimization of power, drawing on a theoretical framework provided by David Graeber and Marshall Sahlins in their book On Kings (2017). It takes its offset in literary narratives and their use in legitimizing kingship: First, the Sargon Birth Legend is investigated, and it is shown how this text might be understood as a part of a larger-scale legitimization of Sargon II and his dynasty's claim to the Assyrian throne. Then, Saxo Grammaticus' Gesta Danorum is examined in relation to its role in Danish king Valdemar and his dynasty's claim to the throne, and to sovereignty from the Holy Roman empire. It is analyzed and compared to the Assyrian case, to show the manners in which history-making and self-association to powerful ancestors and divine agents are used to legitimize and consolidate power in both cases. Finally, it is argued how the uses of these texts, and their characters, can help elucidate our understanding of the appropriation and transmission of narratives within intercultural frameworks, and the divinities and legendary figures in them, as potential universal tendencies in the legitimization and consolidation of power.

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The article is based on my BA-thesis in Assyriology

تستكشف هذه المقالة استخدام الشخصيات ألسطورية واألجدادية واإللهية في توطيد السلطة وتشريعها، مستندة إلى اإلطار لنظري الذي قدمه ديفيد جريبر ومارشال سالينس في كتابهما "عن الملوك")2017(. تستند المقالة إلى السرد ألدبي ودوره في تشريع الحكم الملكي. في المقام ألول ، يتم إلستقصاء حول أسطورة والدة سرجون حيث ُيظهر كيف يمكن فهم هذا النص ا لسرجون الثاني ومطالبته هو وساللته بالعرش آلشوري. ثم بعد ذلك، يتم فحص جيستا ًق كجزء من عملية تشريع أوسع نطا دانوروم لساكسو غراماتيكوس فيما يتعلق بدوره في مطالبة الملك الدنماركي فالديمار وساللته بالعرش، وسيادتهم على إلمبراطورية الرومانية المقدسة. يتم تحليله ومقارنته مع الحالة آلشورية، إلظهار الطرق التي يتم استخدامها لصنع التاريخ والترابط الذاتي مع ألجداد ألقوياء والوكالء اإللهيين لتشريع السلطة وتوطيدها في كلتا الحالتين. وأخيًرا، ُيَرجَّح كيف يمكن أن يساهم استخدام هذه النصوص ووخصائصها في توضيح فهمنا الستصالح ونقل السرد في إلطارات الثقافية المتقاطعة، وآللهة .والشخصيات ألسطورية فيها، كسمات عالمية محتملة في توحيد السلطة وتشريعها

Translation by Mahmoud Alsayed Ahmed, MA-student, University of Copenhagen

Introduction

This article explores the use of literary sources in the legitimization of power, exemplified by cases from ancient Mesopotamia and Medieval Denmark. Critically approaching and comparing the *Sargon Birth Legend* and *Gesta Danorum*, with theoretical considerations from David Graeber and Marshall Sahlins' *On Kings* (2017), I examine whether these texts could yield comparative insights on the use of the divine, and of legendary heritage and genealogy in the legitimization of power. This article as such explores aspects of the development of religion, or legendary and religious literature, by showing similarities in the ways narrative-production, and the modeling on, or self-association with ancient, culturally important characters in narratives can legitimize power, and argues that this is a feature of power across time and space.

Approach to the Sources

The aim of this article is not to provide a "historical kernel" in any of the works dealt with. The historicity of the sources is less relevant to the present study. Methodologically, it follows Mario Liverani's guidelines for historiographic text-interpretation, which moves from having the literal subject matter of a given source as its focus, to investigating the political motivations of the author (Liverani 1993: 47). For Sargon of Akkad (23rd century BCE) or king Dan, this means leaving behind the apparent protagonists of the literary narratives and instead looking at them as allegories, mirrors, allusions, or stand-ins for groups or personages who were alive and/or politically and socially relevant at the time of composition (Liverani 1993: 47).

Because of this methodology, we can investigate texts as reflections of conflicts and politics, or of certain events that were relevant at the time of composition, and further on the strategic use of rulers, legendary figures, and (claimed) ancestors as legitimizing agents and role-models for dynasties and kings following them (Liverani 1993: 47). Attention is given to the author, the audience, the apologetical (or other) aims, the political context, and the media of communication. This brings us to the sources in question.

The Sargon Birth Legend

The Sargon Birth Legend is a literary narrative known only in fragments, written in the Akkadian language (Westenholz 1999: 36). The dating of the text is disputed, and ascertaining with certainty a date of composition is difficult. Lewis believes it can only be established that it was composed between the 21st and the 7th centuries BCE. However, he leans towards a later composition (Lewis 1980: 96-101), and the observations presented in the next chapter corroborate this view.

The narrative relates how a high priestess becomes pregnant with an unknown man, despite being forbidden from having children. She manages to hide her pregnancy, and after giving birth to Sargon of Akkad in the city of Azupirānu on the

banks of the Euphrates, she secrets him away on the river in a pitched reed basket. After floating down the river, a gardener, Aqqi, picks up the basket with the boy and adopts him, raising him as a gardener. At some point in his life the goddess Ishtar grows fond of Sargon, which ultimately leads to his coronation. The rest of the column relates to heroic deeds done by Sargon and ends with a challenge to any future king to do what he has done (Westenholz 1999: 38-45, Lewis 1980: 92-94). Other texts exist that elaborate on the latter part of Sargon of Akkad's life, and while there is a good chance they have a relationship, the authorships do not appear directly related to that of the current text (Westenholz 1999: 51-52, 57-78). While the reader may have already made the connection, Lewis mentions that there are clear parallels to the Moses narrative in Exodus 2 here (Lewis 1980: 263-267). This parallel is not the direct object of this study, but it will be addressed in future studies .

A Lineage for the Millennia

The idea of Sargon and the kingship he instated would live on in- and outside Mesopotamia in comparable manner to that of Alexander the Great (d. 323 BCE) around the Mediterranean, expanding the conceptual expectations of what a conqueror could accomplish for kings as far down in time as the time of Alexander himself (Foster 2015: xv, 3-4). Even further, as Pongratz-Leisten notes in her work on Assyrian religion and ideology, the Kings of Akkad had profound influence on the understanding of kingship itself both in- and outside Mesopotamia for millennia to come (Pongratz-Leisten 2015: 87). By the Old Babylonian period, Akkad had already become a paradigm for kingship that would hold sway well into the first millennium BCE, concerning its understanding of a proper ruler, the idea of Babylonia as the center of power and the control over this and marginal areas, plus the expansion of imperial bureaucracy (Pongratz-Leisten 2015: 88). Pongratz-Leisten remarks how royal inscriptions from the time of Sargon II (d. 705 BCE) onwards became increasingly literary, with specific intertextual references between narratives such as Enuma Eliš and the Erra Epic (Pongratz-Leisten 2015: 319-320).

Neo-Assyrian regents built on the Old Babylonian use of Sargon and his grandson Naram-Sin as prototypes for future kings, in the discourse of an ideology of kingship, blending it with, and even founding it in myth, thus giving greater sanction to actions of kings (Pongratz-Leisten 2015: 322). Further, the use of ancestors and divine agents to source, legitimate and consolidate power is one of the hypotheses put forth by Graeber and Sahlins in their publication *On Kings* (2017) as being a ubiquitous tendency amongst rulers across time and space, which they call *Galactic Mimesis* (Graeber & Sahlins 2017: 3, 13-14). Following this line of thought, we shall turn our attention to Sargon II and his dynasty, to understand if, why, and how he would have been interested in modeling himself on this ancient king of Akkad.

A Lineage of the Millennia

The Neo-Assyrian state emerged from the proverbial dark of the centuries following the Bronze Age Collapse (ca. 1200 BCE), having lost many former territories. During the 9th-8th centuries BCE great political turmoil and fragmentation plagued the land of Aššur, magnates and kings all vying for power over the kingdom (Frahm 2017: 161). This phase ended with the ascension of Tiglath-Pileser III (d. 727 BCE) who is attributed with starting the imperial phase of the Assyrian kingdom, a time when power once again centralized around the king, and the Assyrian territories expanded drastically, holding power beyond Mesopotamia at its height, until its swift downfall at the hands of Babylonians and Medes between 615 and 609 BCE (Frahm 2017: 161).

By the end of the reign of Aššurbanipal (d. 631 BCE), the Assyrian state stretched from the Nile to the Zagros, from Cappadocia to Elam, and according to Elayi, one of the main driving forces behind this development was Sargon II (Elayi 2017: 3). Ruling from 722 to 705 BCE, not much is known about Sargon II's life before his ascension (Elayi 2017: 4, 7-8). The name of Sargon II has been heavily discussed, and Elayi notes that it is certainly an important discussion as names of Mesopotamian rulers are rarely coincidental (Elayi 2017: 12). In the following, I explore the circumstances of Sargon's ascent to the Assyrian throne to contextualize the potential relevance of the *Sargon Birth Legend* to Sargon II's reign.

Much debate has surrounded Sargon II's ascent to the throne of Assyria, but Elayi finds usurpation unlikely (Elayi 2017: 25-30, 214-215). While the debate cannot be elaborated upon here, the present article disagrees with Elayi on this point, following, amongst others, Frahm and Fales in suggesting a usurpation seems highly likely (Frahm 2017: 180, Fales 2014: 220-222). After Sargon II's father Tiglath-Pileser III, his brother Shalmaneser V (d. 722) ascended to the throne. His reign was short-lived, however, as he died five years later, after which Sargon II becomes king. In the Assur-charter, this is framed as the gods having chosen the path for Sargon II due to his brother's ineptitude (Elayi 2017: 25-26).

A Game of Thrones

The possibility of Sargons II's usurpation is reflected in texts such as Sargon II's grandson Esarhaddon's (d. 669 BCE) inscription *The Sin of Sargon*. Here, it is made abundantly clear by the diviners that Aššur, head deity of the Assyrian pantheon at the time, and Marduk, head deity of the Babylonian pantheon at the time, must be honored equally to maintain equilibrium in the empire. However, Assyrian scribes allegedly stop Sargon II's son Sennacherib (d. 681 BCE) from doing so (Elayi 2017: 215; Frahm 2017: 186-187; Tadmor, Landsberger & Parpola 1989: 9-10, 31-32). *The Sin of Sargon* seems to date to the time of Sennacherib's son Esarhaddon, a king who had a much milder inclination towards Babylon than his father had, and less of an inclination than his grandfather (Frahm 2017: 186-187). Esarhaddon seems to have been painfully aware of the divide in the empire and felt that appeasing Baby-

lon was the best way forward in consolidating his reign and maintaining the empire (Frahm 2017: 187). *The Sin of Sargon* is probably an expression of Esarhaddon's grappling with contentious pro-Babylonian and pro-Assyrian scribes and elites during his own reign (Tadmor, Lansdberger & Parpola 1989: 45-46). The following passage investigates how several factors points to such a need for appeasement of powerful factions in the imperial administration already during Sargon II's time, due to a potential violent usurpation instigated by him.

During Sargon II's reign we begin to see in the spelling of Aššur's name a conflation with Anšar, the "Father of the Gods" in Enuma Eliš, who chooses Marduk as leader of the Gods (Tadmor, Landsberger & Parpola 1989: 29-30). To Tadmor, this hints at Sargon II's drive towards mixing Babylonian and Assyrian pantheons to appease the rivalling factions of the empire. The mixture of the pantheons is further highlighted with the Assyrian version of Enuma Eliš, most likely composed during the reign of Sennacherib (Tadmor, Landsberger & Parpola 1989: 29-30). This version replaces Marduk with Anšar, possibly to appease the Assyrian nationals after Sargon II's very Babylon-oriented reign (Tadmor, Landsberger & Parpola 1989: 30). Sargon II's usurpation may further be reflected in what the Babylonians, judging from *Babylonian King List A*, considered a dynastic fracture upon the ascension of Sargon II (Fales 2014: 228-229). While the state of source material means defining a positively certain time of composition is out of reach, I suggest that it is within this context, of usurpation and balancing of the scales of power, that we shall find the composition of the *Sargon Birth Legend*. The adoption of the Sargon-model very likely would have proven useful in both Assyria and Babylonia, to calm the hectic relationship of the two great powers and their scribal factions. There is great power in modeling oneself on such ancient and well-known figures as Sargon, both in terms of descendancy, ambition and power. I will elucidate this point, following some theoretical considerations pertaining to the use of ancestors in legitimation of power from Graeber and Sahlins' *On Kings* (2019).

Kings of Cosmic Order

Using case examples from many different parts of the world, across different times and modes of societies, Graeber and Sahlins argue that something akin to a state, a *cosmic polity*, is a universal human condition, but that the highest authorities in these states, whether tangible or intangible in a contemporary, legal sense, are often divine or meta-human (Graeber & Sahlins 2017: 2-3). Considering this ontological order of human and non-human actors in a political sense, kings can be understood to be modeled on gods and ancestors, rather than the other way around (Graeber & Sahlins 2017: 3). As seen with the struggle of Assyrian kings to create balance between Aššur and Marduk, the cities of Aššur and Babylon, and between their followers in scribal circles, the king tries assuming the role of representative of the god. In the same vein, Graeber & Sahlins argue that there is no pure secular power (Graeber & Sahlins 2017: 3). Authority to rule over others, though it may be

taken, given, and lost, is ultimately the authority of the ancestors, the divines, or the meta-humans. The past is not just prologue, it is paradigm. Embedding the present in terms of the past is fundamental to making history (Graeber & Sahlins 2017: 17).

I argue that the modeling on Sargon of Akkad by Sargon II or his associated scribes, and his divine mandate, must be understood as twofold: It is at once a very politically effective move, and an expression of Sargon II's aspirations for his reign. Sargon II was not necessarily playing the part of imposter when he became "Sargon" or adopted Babylonian theological practices. We can consider it an expression of aspiration to achieve the kinds of accomplishments of an ancient hero, as well as a strategic political move. While this is far from a definitive conclusion, such is what can be achieved in the current paper and will be researched further. Other weaknesses, such as the existence of a third king, conventionally named Sargon I, who lived approximately between 1920 and 1881 BCE, but whom we know practically nothing about, also add to our problems. In short, the point here it that the use of ancestors and gods in legitimizing and consolidating a reign seems an effective strategy for a king, and the duality between appeasements of the gods and scribes, should not be considered contradictory, if we wish to explore the dynamics of cases such as this one. As a further example of these tendencies, the next part will deal with Saxo Grammaticus' *Gesta Danorum.*

A Layered Heritage

From almost two millennia later, in the faraway budding Danish kingdom, Saxo Grammaticus' *Gesta Danorum*, or *Deeds of the Danes*, is a work which *claims* to describe the history of Danish kings from well before the birth of Jesus to the time of Saxo and the Valdemar-dynasty of Denmark in the late 12th-early 13th century (Friis-Jensen 2015: xxix-xxxvi, 1-9 [Chapter/"verse" 1.1-1.6]; Skovgaard-Petersen 1987: 11-20, 56-60). It was commissioned by the bishop of Roskilde and archbishop of Lund, Absalon (d. 1201), and it was likely composed between 1190 and 1208 (Friis-Jensen 2015 I: xxix-xxx, xl; Zeeberg & Friis-Jensen 2005 I: 32-33, 73).

Gesta Danorum consists of 16 books covering (alleged) pre-history to the time of Valdemar I's Son Cnut VI (1163-1202). It contains an extraordinary amount of intertextual references and parallels to a wide array of literary and poetic traditions exist within, such as Frode Fredegod and his reign of peace being a mirror to Roman emperor Augustus in book 5 (Friis-Jensen 2015 I: xxxviii-xxxix), parallels between Svend Estridsen and Theodosius in book 11-13 (Skovgaard-Petersen 1987: 252-253), or the marriage strife of Danish mythological king Hadingus and his wife Regnild mirroring the marriage strife of Norse sea-god Njorð and the goddess of the hunt and skiing Skaði (Zeeberg & Friis-Jensen 2005 I: 125-127; Dumézil 1973: 19-23). In the following, the contexts surrounding the compositions of these texts will be analysed, and their place within the ideologies of their states investigated.

The author of *Gesta* Danorum, Saxo Grammaticus, while his exact clerical station is debated, had high praises for archbishop Absalon of Lund, and likely came from a family that had long-standing ties with Danish royalty, and as the latter was part of the clan of Valdemar I, the Hvide-clan. While Saxo seems to have been intimate with royal power in late 12th-early 13th century, nothing points to him necessarily being Hvide himself (Friis-Jensen 2015 I: xxix-xxxiii, xlv; Hybel 2018: 10). Through his work, Saxo hoped to instill some sense of a Danish nation, but importantly also to write a national history of the Danes as a befitting addition to universal (ecclesiastic) history, in the eyes of his at the time relatively small, aristocratic readership (Skovgaard-Petersen 1987: 91-94, 252-253). This dual-purpose is seen in Saxo's espousing of an ethical code which, as was quite popular in the 12th century, synthesized moral virtues of the Graeco-Roman traditions with medieval Christian ones (Friis-Jensen 2015: xxli-xlii; Skovgaard-Petersen 1987: 91-94, 247-253; Mundal 2010: 233-239; Hybel 2018: 7).

Saxo claims that his primary sources for *Gesta Danorum* are highly reliable ancient, Danish, runic inscriptions on stone. While the specifics are not necessarily relevant to us here, this claim has been rather thoroughly scrutinized on several fronts (Skovgaard-Petersen 1987: 63-64; Bagge 2010: 167-171; Friis-Jensen 2010: 95-103). He also directly mentions having drawn inspiration from Absalon and from "the Icelanders" (Zeeberg & Friis-Jensen 2005 I: 75-77, Skovgaard-Petersen 1987: 62-63). Inspiration, both linguistically and in terms of content, has seemingly come to Saxo from many places. For example, we find stylistic and linguistic inspiration in such authors as Valerius Maximus and Justin (Zeeberg & Friis-Jensen 2005 I: 11), as well as Virgil (Zeeberg & Friis-Jensen 2005 I: 31), but also in medieval writers like Bede, Dudo, Adam of Bremen, and Svend Aggesøn (Friis-Jensen 2015 I: xl-xlii; Zeeberg & Friis-Jensen 2005 I: 28). Saxo departs from Medieval Latin, purposefully using a more classical Latin. He uses pre-Christian Roman terminology for even positions in the church, includes pagan elements and stories from vernacular traditions, and bases some authority in his work through their age, but writing within 13th century church ideology, he simultaneously embeds an expectation for canonical law and the rule of Valdemar within the history of Denmark. This functions as a legitimization on several fronts both at home and internationally (Skovgaard-Petersen 1987: 233-238, 240-242; Friis-Jensen 2015 I: xlvii-l; Friis-Jensen 2010: 102-105).

A Dream of the Sovereign

Though many Danish historians tended to consider the Danish vassalage to both the Franks before 1000 CE and the Holy Roman empire in the late Middle Ages a mere formality, historians such as Ole Fenger and Esben Albrechtsen consider Denmark's vassalages as much more impactful (Hybel 2018: 139-140). During the succession conflict between Svend, Knud, and Valdemar I (1157 CE), national autonomy was severely threatened as infighting between the great magnates of the Jelling-dynasty

weakened central Danish power (Hybel 2018: 139-140). Further, there was a clerical power struggle going on with the Nordic Bishops of Lund, who wished for independence from Bremen-Hamburg (Hybel 2018: 127). As such, upon ascension in 1157, the challenges of Valdemar I were manifold: Strengthening, centralizing, consolidating, and legitimizing his own power on several fronts. The dynasty of Valdemar focused increasingly on national legislation, the expansion of the legislative and jurisdictional power of the king, as well as castle-building, centralizing power even further while maintaining the delicate balance of power with the church (Skovgaard-Petersen 1987: 239-245, 247-253; Hybel 2018: 184-185, 291-292).

The idea that some of the difficulties in Saxo's work could at times potentially be ascribed to it being more aspirational in nature, describing an ideal situation, rather than representing reality, is a factor which was brought into question already last century (Skovgaard-Petersen 1987: 247). Saxo argued, and traditional Danish historiography largely followed, that since *Marca* can mean "borderland", the name must have referred to the borderland of Dan, or the Danes (Hybel 2018: 118-119). As such, Saxo's account provides for the reader a neat, alternate explanation to the rather unflattering origin that may, according to Hybel, lie behind the name Denmark, as a mere province (*marca*) of the long-dead Frankish empire, although this is still an unsettled question (Hybel 2018: 342-343). Saxo's attitude to the Holy Roman emperors is glimpsed for example in his downplaying of the oath of fealty sworn by Valdemar I to emperor Frederick Barbarossa in Dôle (Hybel 2018: 129). Seen as such, the idea of vassalage was in contradiction with Saxo's views on sovereign monarchy, and he opposed this subordination and envisioned (through his national narrative) a sovereign Danish kingdom (Hybel 2018: 305, 348). Under Valdemar II's conquests and crusades in the Baltic region, this vision may have been more tangible than ever (Friis-Jensen 2015: xlii-xliv).

Crusader Kings of the North

At the climax of Danish expansion in 1219, the realm stretched across the Baltic from Estonia to Schleswig and Holstein, and from Scania and Jutland to Pomerania, Prussia, and Mecklenburg (Hybel 2018: 344). This points to the efforts of the Valdemar-dynasty to solidify their reign, both internally trying to unite warring factions of Danish nobility and the church, as well as externally, trying to gain legitimacy and some degree of sovereignty in the eyes of the empire and the papacy. Such efforts are reflected in *Gesta Danorum*. Presented as a history of Danish kings, the reader is shown the yet-to-be fulfilled potential of Denmark, with kings acting as law-bringers and moral exemplars, and sometimes evils, for all Danish households. It idealizes the relation between king, church, and country, given direction, structure, and meaning with a place in the universal history, and the developing world views, as well as political, legal, and economic institutions of the 13th century (Skovgaard-Petersen 1987: 248-253; Hybel 2018: 304; Friis-Jensen 2010: 104-110; Zeeberg & Friis-Jensen 2005 I: 77, 87). In the coming section, I will discuss the sources as-

sessed in this paper as reflections of a process of legitimization of power that transcends time and place, and points to something deeper about human understandings of authority (and challenges to it), and the legitimacy to hold power.

Narratives and the Right to Rule

The dynamics behind the creations of the *Sargon Birth Legend* and *Gesta Danorum* are undoubtedly varied and impossible to ascribe to any single thing. Likewise, as already mentioned, parallels between *Gesta Danorum* and other Biblical and European literature, from Roman history to the Prose Edda to Genesis to the Aeneid, are many. But while the specifics of the local cases are important to study more closely, whether the *Sargon Birth Story* was borrowed into the Hebrew tradition or the other way around, whether king Dan, Frothi, or Hadingus were historic figures or not, or whether Saxo relied on rune stones or not, matters little here: As Graeber and Sahlins note, based on core-periphery relations, or *cosmic polities*, lesser chiefs or rulers often assume the power-forms of their proximate superiors in competition with local adversaries for domination, a process they term *galactic mimesis* (Graeber & Sahlins 2017: 13-14). The concept of sacral kingship is in no way new (Brisch 2013: 37-44), and I could have included several different theoretical works on the topic for this project (insert ref here), but elected not to as this is not a theoretical discussion of the concept of sacral kingship, but rather how it is expressed through literature. For the limited purposes of this paper, however, the sacralization of the king is but one aspect of a larger tendency. Here we have attempted a cross-domain approach the topic, considering several levels at once: Personal, symbolic, political, cultural, and, importantly: Religious, but without distinguishing too sternly “pre-Biblical” from “Biblical”, to more clearly see what continues after Christianity takes over European state cults (or any other Abrahamic religion does something similar). This angle has proven fruitful due to the approach of Graeber and Sahlins, which relies heavily on world-system thinking, but which also abandons “shopworn” and taken-for-granted concepts such as egalitarian pre-state societies, “things” in the Cartesian sense (as actor-less objects inherently opposed to acting subjects), and the structural disproportion between kings and divines (Graeber & Sahlins 2017: 18-21).

They specifically outline two types of galactic mimesis: *Complementary schismogenesis*, in which individuals/communities, contending for leadership in a community/or larger galactic field, attempt to affiliate with a superior chief to trump their local rivals. Opposite *Complementary schismogenesis* is *antagonistic acculturation*. Here, a lesser group resists the dominant power by adopting their political apparatus, making the claim to power a direct stand-off. In other words, they "scale up" their authority to a higher register of the regional hierarchy (Graeber & Sahlins 2017: 13-14). I argue that Sargon II modeling himself on, or being modeled on, Sargon of Akkad, for example via issuing the *Sargon Birth Legend*, and the adoption of Babylonian theology, to strengthen his claim over both Assyria and Babylonia, can be considered *complementary schismogenesis*. In the case of *Gesta Danorum*, I argue *complemen-*

tary schismogenesis is applicable to the way the Saxo attempts to claim ancient, Danish heritage for Valdemar and the Danish kingdom, with old Norse and Roman backgrounds placed in a medieval, 13th century European church ideology. Simultaneously, the mix of these traditional Nordic tropes with Christian modes of narration, language, and ideology, could be considered *antagonistic acculturation*, challenging the authority of the empire, and the German church, to gain a higher degree of sovereignty, thus striking a balance in the historiography of Danish sovereignty. To Graeber and Sahlins, most societies, wherever we search, are hybrid societies, whose political and cosmological forms are not entirely of any society "originally" (Graeber & Sahlins 2017: 14). As it has been pointed out and shown earlier, all these hybrid societies are embedded in a cosmic hierarchy, and draw upon history-making, ancestors, and divine agents to source this power. This article has, so to speak, tested this hypothesis, but to perform a more fully-fledged test, as well as a more convincing parallel, more research is certainly needed.

Conclusions

This article has explored the relationships between history-making, legendary and divine figures, and their uses as paradigmatic tools for consolidating and legitimizing power in literary narratives. From Ancient Southwestern Eurasia to medieval Western Eurasia, rulers seem to have drawn on perceived or alleged ancestors, even modeling themselves directly on them, to appease their human as well as divine power bases. I have argued that Sargon II of Assyria, upon his usurpation of the crown at the cost of his brother's life, in a display of great ambition, and in his attempt to maintain balance between the great, ancient power bases of Assur and Babylon under one rule, likely took the name of, and even modeled himself on the famous, ancient king Sargon of Akkad. By fighting wars, but also by commissioning great works of literature, art, and architecture, he steeped himself in millennia-deep history, and managed to maintain his rule even with troubles of succession and revolt that seemed ever-present in his time. Though he met a tragic end, he came to be the namesake of the Sargonids, one of the most famous dynasties of Mesopotamian history.

King Valdemar the Great and his sons successfully wrestled themselves free of the grip of their Holy Roman overlords, both spiritually and politically, by nestling themselves both in the ancient, pagan, past of their perceived Roman and Danish ancestors, and in the flourishing, medieval, Christian-European tradition of kingship and church ideology. Despite centuries of domination from the south and a short-lived reign altogether, Valdemar I the Great and his successors themselves became one of the most famous dynasties of Danish history (Danmarkshistorien.dk, Aarhus University). The main point/hypothesis of the article has been to explore the use of ancestral legends and kingmaking. It has presented the argument that embedding oneself and one's rule in the deep, meaningful past, as well as in one's ancestors and gods, while not a direct borrowing of an ancient political strategy, appears to

be a tendency across different societies at different times. This project is far from finished yet, and research is currently being done conducted more deeply into several questions raised in this article, particularly concerning the Mesopotamian-Biblical parallels briefly discussed. As stated, Lewis has noted the similarity between the Sargon-narrative and that of Moses' childhood in Exodus (Lewis 1980: 263-267). According to Lewis, it is impossible to know the origin of the child-exposure narrative itself, but even if it does not exemplify a direct relation from the Sargon- to the Moses-narrative, the narrative-form may well have been quite powerful in ancient Mesopotamia and beyond (Lewis 1980: 266-267). Neither of these are unthinkable, given current consensus around the compilation of the Hebrew Bible being some point after the Exile (Collins 2004: 53-54). I lean towards a more complex explanation, as parallels between Hebrew and Mesopotamian literature are quite plentiful (see for example the Epic of Gilgamesh and Genesis 5-9), but this relationship is one that I will research further in a thesis currently being worked on.

Whether part of the greatest polities of our times, contenders to that very spot, or far-removed peripheral participants, humans are ourselves subjects or deputies in a cosmic order that spans beyond borders both in time and space, co-producers of culture and literature that goes far beyond conventionally conceived realms of politics and power. The right to rule is an opaque one, and one on which much more research is needed. Apart from deeper investigations of the cases provided here, further research could explore the dynamics between rulers, magnates, and scribal- and priestly classes, and their roles in securing and toppling rulers and law, also described by Graeber and Sahlins as a constant negotiation (Graeber & Sahlins 2017: 7-8).

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From Desk to Field
- early career observations from contract archaeology in Denmark

Anna Silberg Poulsen and Maria Diget Sletterød

We have invited our two editors, Maria and Anna, who currently work in contract archaeology to elaborate on their experiences of how it is to transition from studying to working, and what it is like to work in Denmark as an archaeologist who has graduated from TORS. It is a product of our experiences, and neither of us have many years of field experience, but we do know what it is like to be new in the field of contract archaeology. The essay is structured like a Q & A session as we felt that was the best way to address the concerns, we had ourselves when we started, as well as a few submitted questions.

Who are we, and how did we get into Danish field archaeology?

Maria (She/her)

I have known since my first field school that I want to work in field archaeology. I enjoy being outside almost every single day and be part of a team that are dedicated to uncover our past in the dirt. The feeling of seeing and touching an artefact that no one has viewed for thousands of years is really hard to beat. The fact that I studied Near Eastern archaeology and the fact that all my experience before entering the job market was based on research excavations and field schools focused on human remains, made it a bit difficult in the beginning. There was a lot I needed to learn. For example, I had never cut a posthole before, and had no idea what that actually meant.

I started out in the contract-archaeology world in February 2022 and began my career in Germany. My background at that point consisted of several field schools, an internship in Jerusalem and a BA in Near Eastern Archaeology. I was writing my master's dissertation and after a period of stress, I decided to pause it for some time and was lucky to get a job in field archaeology in Germany. Network is very important and I landed the job because my ex-boyfriend's roommates' friend told the roommate that there were some positions available which the roommate told my ex who told me.

I worked there for four months, came back home, but after some months with no luck of getting a job in Denmark, I returned to Germany for eight months. I got back

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home to Denmark in May 2023, and after some vacation and short-term job as the field- and lab osteologist at the Neo-Assyrian site Yasin Tepe in the Autonomous Kurdish region in Iraq, I started back on my master's and was offered a job Museum Vestsjælland where I work part-time as a field archaeologist.

Anna (they/them)

I graduated from the University of Copenhagen with an MA in Near Eastern archaeology, with my thesis on Polychrome studies and digital archaeology in 2022. I always knew I wanted to continue my studies further down the line, but I also needed a bit of a break after almost 20 years in school, and figured contract archaeology was a good way to change it up. I love history and archaeology, and I was lucky to work a summer at Elsinore castle as a castle host, before being jobless for half a year, until I landed a short-term contact with Museum Lolland Falster as a field archaeologist to help finish up a pipeline project, and thus, my journey in Danish archaeology began. My contract with them was not extended, as project-based contracts sometimes are, for a host of reasons one of them was my lack of a driver's license, but another was that the museum was running low on upcoming projects. I was once again unemployed for about half a year, or most of the winter season, until I got my current job as a field archaeologist at the Museum of Copenhagen.

In the beginning of my job search I was naïve and thought applying to the posted job offers would land me a position at a Danish Museum, because I had good grades and a decent chunk of fieldwork experience, but notably no driver's licence. I might have gotten close once or twice, but that doesn't mean much when you are unemployed and get the autogenerated rejection letter in your inbox. I landed my first archaeology job, by replying to one of those letters, which got me an in at a museum because they desperately need archaeologist to help complete the last few months of excavation of a big project. It is more or less the same story with my cur-

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Contract archaeology takes place outside, regardless of weather conditions.

Photo: Maria Diget Sletterød

rent job, which I got in part by contacting the leader of the field archaeologists and manager of the archaeological projects. I have since learnt that that is the way to get a job in Danish archaeology, i.e. through the grapevine, by networking, and emailing people directly.

What is contract archaeology and how does it differ from university digs?

Contract archaeology or field archaeology in Denmark is state-run and governed by 27 museums as defined by The Agency for Culture and Palaces. The museums are responsible for all archaeological activity in Denmark. Every time someone wants to expand their basement, or construct a new building, they need to reach out to the museum which is responsible for that area. The museum will then investigate the archaeological possibilities, and send a small team out to do test trenches, and depending on the results and the decision by the Danish movement the area might be excavated in a short excavation, spanning from a few days to months depending on the size of it.

All the finds from the given excavation are placed at the responsible museum's storerooms for further processing, and future exhibitions.

There is also a difference between working in the field, with excavations and finds processing, and in the office, where the excavation reports and finds registration takes place. In the first instance you are most likely outside in all kinds of weather, and in the other you are usually behind your laptop all day.

As you can imagine working under these conditions are slightly different to being on a university dig which operates under different time constraints.

What did you expect going into contract archaeology?

Maria:
In the beginning, I was probably of the idea that field archaeology was like what I had experienced at field schools: A "slow" process (slow compared to commercial/ contract archaeology) with a lot of time to dig and process finds. I found about how field archaeology works when I was on the Prehistoric rescue excavation of the Pre-Pottery Neolithic B "mega-site" Motza outside of Jerusalem as part of an internship. Instead of digging 10 cm in three weeks, the goal was to dig at least 10 cm in each trench every day. Later the same year, I started looking into commercial archaeology in the UK, and I especially learned a lot about the industry from the archaeologists I follow and have befriended on Instagram in the UK. Even though the process of field archaeology in a commercial archaeology is quite different from a field school/research dig, it did not change my mind in regards to working in the field.

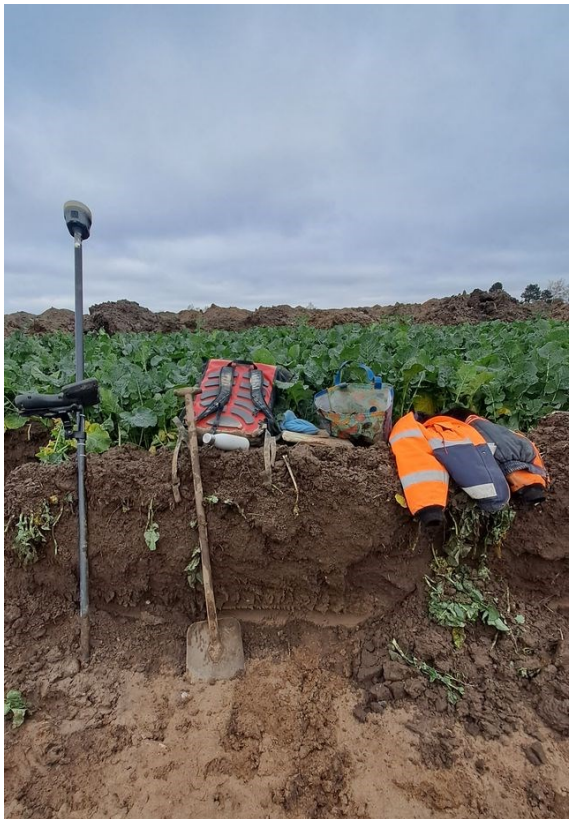
Anna:

I am not sure what I expected from doing field archaeology – something like an episode of Time Team, perhaps. - Time Team, a British TV show about archaeology from Channel 4, it originally aired from 1994-2014, with an online revival in 2022 on YouTube. It has a simple principle and presents excavating under time pressure, 3 days, with all the available tools from excavators to shovels and trowels. It is clear that there's some tv magic involved, as 3 days seems a very short time to plan, excavate, and present the findings to the public, and make an entertaining tv show. But it was my only frame of reference, and it proved to be not too far off, at least as far as time dedicated to the excavation goes, now normally there's usually dedicated more than three days to a project, but that is not always the case.

What is a day at work like?

Maria:

My everyday job consists of getting to the site around 8 AM and change into the fabulous bright orange work clothes and safety boots that are mandatory when you work in commercial archaeology (some places use bright yellow...). We gear up before entering the field: Trowels, shovels, buckets for moving soil and to take soil samples, kneepads/pillows, writing and drawing equipment, GPS, camera etc. We work until 16:00 with a few breaks in-between. It is quite well-known between Danish archaeologists that cake is a stable in the field-work-diet. Coffee is being drunk by the buckets, and ryebread is a classic and easy lunch.



Gear up!

Photo: Maria Diget Sletterød

Field archaeology can be challenging in many aspects: First of all, it is physically demanding. It is really important to be careful during work, as we lift and carry heavy things, and put ourselves in odd positions to be able to excavate. Another factor is the weather. Working in Northern Europe is quite different than working in the Middle East and Southern Europe where all my field work experience has been from. Rain, snow, sludge, hail, storms... Archaeologists works through it all, unless it is dangerous or if we are at risk of damaging the heritage. Thus, you should be prepared for anything. Bring extra clothes, an extra pair of gloves, have a thermos with something hot for the winter, and something cold for the summer. Suncream should be available in the trailer, but I always bring my own, just in case. As mentioned earlier, cake is a big deal. If you want to make your colleagues happy, bring cake or candy!

When the weather is too difficult to work in or when we are in between projects, we

A German posthole or a Danish one? The difference is not that big.

Photo: Maria Diget Sletterød

work at the office. The work in the office consists of many different tasks: washing finds, water-flotation of samples, photographing finds, packing finds, enter data into MUD (Museernes Udgravningsdata = The Museums Excavation Data system) which includes drawings, finds, photographs... Basically, all documentation that we have recorded in the field.

Anna:

When I worked for Museum Lolland Falster my days were similar to those Maria described, get up before the sun is out and come home at what seems like sun-down in summer time, with little energy for anything outside work. The work was good and had a lot of variation, I got to experience the broad pallet of what it is to be a field archaeologist, I guided the excavator, used the GPS, cut post holes, drew profiles, ran a dig for a small week, organised finds, deposited soil samples, washed finds, wet sieved, and got intrusted to sort, record, and interpret some animal bones and write up a report on my findings. So, all the travel was worth it, because I got to be an archaeologist, which at times when I was unemployed and kept getting rejection letters, felt impossible, and while in employment it felt nice, but a little unstable due to the length of the contract, and the time spent on public transport.

I now work for the Museum of Copenhagen, which is responsible for all excavations in the greater Copenhagen area. As you can imagine, working in the city is quite different from standing in a field in Lolland. Urban archaeology is a different beast, not just because it comes with a different set of challenges, like trying not to bump your head into a drain pipe in a basement, but also the sheer quantities of finds which needs to be processed from the excavations. Much of Copenhagen is constructed on top of 15-16th century trash piles which means that there is a high den-

sity of finds taken out from any given excavation big or small. I currently work in a team of 20+ people off-site (meaning not on the actual excavation/construction site) with the cleaning (dry sieving, wet sieving and washing), recording, and packing the finds from the excavation.

An average work day begins at 7 o'clock and ends at 15. I wear bright yellow trousers, and usually a bright yellow rain jacket, as both the dirt and the water are toxic in the wet siew – which is where I usually work.

Working for the museum of Copenhagen means I save on travel time, but sometimes I find myself missing the sunrise and the early morning train to Nykøbing F.

Maria, you have worked in Germany as a contract archaeologist, can you elaborate on the differences between Denmark and Germany?

Maria:
The work conditions in Denmark and Germany are different in several ways. Firstly, in Germany, most commercial archaeology is undertaken by private companies and not museums and universities. This creates a competitive environment between companies which also affects the archaeologists who works for the companies. For me, that meant I was working over-time every single day for the year I was working in Germany. The work week is 40 hours, and I worked around 45 hours per week because otherwise we would not be able to finish the work on time. The pay is also considerably lower, even when adjusted to cost of living.

The documentation process in Germany is in some ways more thorough and extensive. When drawing, you use colour to interpret the colours you see in real life, and when photographing, you take more pictures. Some of the equipment is different and I in particular miss the "krätze". Another difference is that the company I worked with had specific people who came and did measurements with the GPS. In Denmark, we do this on our own, and I am very happy that I have acquired this skill. I worked in a private company in Niedersachsen (Lower Saxony), and I am sure that there are differences between the regions and companies.

Equipment in Germany includes a Krätze, the tool to the left of the spade.

Photo: Maria Diget Sletterød

Does the lack of job security make it difficult to plan for a future, and do you think it might scare people away from field archaeology?

Maria:
Contract archaeology offers a lot of unpredictable circumstances, and it is certainly something you have to be aware of before entering the field, and you have to be able to adapt to it. Luckily, more and more museums are considering the stress that short-term contracts inflict on the short-term employed archaeologists, and more museums are starting to employ their project-archaeologists in permanent contracts. Museum Sydøstsjælland did this in the beginning of 2024. Project contracts are also longer than before. My first contract in Denmark was 9 months, and has been extended. This definitely provides more stability, and I am sure it makes it easier to apply and get a loan in a bank.

I am not super concerned about the instability in the field. Of course, stability is nice, but I do not mind moving and I have, and would like to, live abroad, and I am lucky that I have some contacts in Germany still. Additionally, I never wanted to have children, so I am a bit more of a free bird to do what I please in that sense.

The past 8 months, different outlets have written about the struggles of field archaeology and our conditions. They are linked in the end of this essay (in Danish).

Anna:
I'm a little stressed about the job prospects, and expectancy to move across the country at short notice for a 6-month contract. Not so much because I'm planning to start a family, but because I find it difficult to put down roots when I know I am out the door again in 6-months' time. I find it difficult to picture a future in contract archaeology when the conditions remain so uncertain - not that they are much better if you go for employment at the universities. I do not believe the short contracts is solely the problem of the individual museum or university, although they could all do better in ensuring better conditions for their employees, but rather a reflection of our current pollical climate where culture and archaeological heritage is not allocated enough funds to allow for more stable carries. That said they made it work at Museum Sydøstdanmark, and hopefully more of the museums will follow suit.

Do you feel a difference between the work allocated to short term contracted archaeologists and the ones in permanent positions? Are the short-term positions mostly brawn, and the permanently hired the brain?

Maria:
First of all, it is important to me to point out that a permanent position does not equal a research position.

This perception of short-term field archaeologists is fortunately not one I have encountered so far. It is important to point out that a permanent position does not equal a research position. But the perception about short-term contract archaeologists is a very unfortunate one. Field archaeologists have a great responsibility for further research. When you're on an excavation, it takes more than just muscle - because while yes, anyone can learn to cut a profile, not everyone has the know-how when it comes to interpreting the profile, interpreting finds, the context, or the right way to document it etc. The first interpretation of a site, its use, time period, constructions, finds etc. comes from the field archaeologist who excavated it. The field archaeologist's interpretation and documentation are a baseline for further research to occur. Part of a field archaeologist's job is to carry out preliminary investigations of areas to be built on and determine whether an actual excavation should take place. If this is the case, then a recommendation must be sent to the government, which must include an academically based argument as to why they should grant permission and money for the project. To put it bluntly: Research could never exist without the work and interpretations of field archaeologists.

Anna:
I clearly feel that the practical experience I've gained from the field schools and projects I've been on is appreciated. My background shapes the way I approach archaeological material, and it has given me an understanding of working with complex stratigraphies. I also have an understanding of the common types of finds. It is important to be a trained archaeologist when working with the soil and finds washing, as you are asked to assess what to keep or discard, and not all sites have a collection strategy, and even if they do, it is constantly evolving as the finds catalogue grows. As a wise man once said, interpretation of finds and features begin at the trowel's edge. The work you are typically assigned to as a field assistant might seem mostly like manual labour: excavate that pit, survey this stretch of land, take these points

A posthole is a posthole is a posthole regardless of country and language.

Photo: Maria Diget Sletterød

for the GPS, wash these finds. In doing these things you take in the land, and the amalgamation of your archaeological knowledge of practise and theory processes interpretations of features, and it helps you determine when something is a post hole or a natural feature. In other words, you are constantly assessing and evaluating the features and finds you come in to contact with – and you are sharing your observations with your colleagues, and in sharing you learn more. So, while you might not be writing the excavation report, you still help shape it through your observations and the work you do which will be noted and processed by the field leader. That said, job titles are not fixed, and if you work somewhere, you might be, based on your experience, assigned more traditional research assignments – if you are an expert in zooarchaeology it is likely that some of your knowledge will be put to use, and if you express interest in report writing etc., you might get the offer of writing the reports, despite being a short-term employee.

The museums with the excavating archaeologists also regularly produce and publish research from their finished excavations. This is often something that the field leaders and PhDs produce, but that does not mean that you as a project-based field archaeologist does not have the opportunity to present some results at the ODM (Organisationen Danske Museer) conference, or pitch a project to the excavation directors. So, I don't know if I think there is that much difference in reality between the two besides the stability of a job, which of course is massive, in the sense of feeling secure and comfortable, but in terms of what kind of work you do, it depends on what position you hold, rather than the duration of your contract.

Do you feel included in the social life at the workplace, as a short-term hire?

Maria:
I feel part of the community where I work. Of course, permanent employees have different conditions, but I don't think it's something I notice as such. I feel that if I come up with an idea or suggestion, it's listened to and accepted. Most archaeologists in the field are contract employees, and if they're not, they used to be, so I don't think they look at you differently. Perhaps the hardest thing is that you (and this applies to everyone, permanent and project staff) are sent around to different projects and constantly have to adapt to new communities. Because I work where I do, we don't have the same community outside of working hours as I can imagine at other museums where you work closer to home (I'm thinking of going out after work for a beer or something similar). This also means that there are often people I haven't met until I meet them on a project, even though we may have both been working at the museum for several months.

Anna:
Where I've been so far, I haven't noticed much difference between permanent and non-permanent employees, especially because very few were permanent employ-

ees.... What I noticed was the difference in experience, and willingness to teach/ learn, and titles people had, as they depend on what kind of responsibilities they had, field director vs. field assistant. Most people start as field assistants, which is where you learn what it's like to work as a field archaeologist, and they have less "responsibility" than the field leader, who is also responsible for planning and compiling the documentation for the field report. This does not mean that as a field assistant you do not have responsibilities, or do not write context sheets, or document in the field, but you're rarely the one who writes the report and makes the final interpretations. But if you want to learn and have a good field director, you often get to be part of the whole processes. I think you definitely build a sense of community with the colleagues you work closely with, if only because you share a trailer for breaks and changing clothes, and sometimes also transport to and from excavations.

Can you recognise the story of lack of network and connections to the Danish museums for recent graduates of Near Eastern archaeology, and do you think it has something to do with the way possibilities to gain practical experience differ between the students of Danish prehistory and Near Easten archaeology, and to a lesser degree classical archaeology?

Maria:
Yes, it's definitely a familiar picture for me. Newly qualified prehistoric archaeologists definitely have an advantage, but it may also be a very "fair" one, as they are after all trained in Danish archaeology and even without much digging experience have more knowledge of archaeology in Denmark and Danish excavation techniques. I would like to encourage students of Near Eastern Archaeology to look for student jobs that might sound more suited to prehistorians. Even if you don't get a job, you have shown an interest and can make contacts that way. And I will definitely recommend that you invest in field schools and try to branch out, and not just stick to one specific area. I am very interested in human remains, so I focused on field schools where I could learn more, but the field schools I attended were in different countries, the periods were different (from the Upper Palaeolithic to Roman times), and I think this gave me a broader understanding of archaeology.

Anna:
Sure, which degree you choose makes a difference, mostly because of the networks they create and gain access to, and not so much because of the practical skills. Archaeology as a subject is still a on which requires you to spend summer holidays etc. on building up a portfolio of excavation experience, no matter what branch of archaeology you have chosen to pursue. My impression is actually that we, as Near Eastern archaeologists, have been reasonably well prepared for the practical and theoretical skills field archaeology requires - as at our field school we get to survey,

excavate, and document in the field (photography, context sheets, GPS) the field, not to mention experience with the post excavation duties, of washing, sorting, labelling, and photographing, as well as registration. It's not every field school where you get to do it all. I think the advantage that prehistoric archaeologists may have, is that their field school is affiliated with one of the museums responsible for excavations, and they therefore have more experience of how to work in Denmark, and not least how to work for the Danish museums, which is useful if you want to get a job in Danish archaeology.

Advice for students

We have gathered our collective tips and things we wish we had done more off before going in. Not to say that our list is the end all be all, or a check list which will ensure you a position with a Danish Museum (or any other museum), but we hope it helps you, especially if you are interested in pursuing contract archaeology.

Networking

Connecting with other archaeologists from the different branches is key to success in our line of work both in academia and commercial archaeology. So, use every opportunity you get to meet people from all branches of archaeology, you never know when a chat over a coffee, or being recognised from a lecture attendance might land you with a job, or some new friends. We have provided you with a short list of places to start:

Check out Saxo's Friday lecture series, and the various organisation lectures, FAF, KAF, as well as the Danish Society of Near Eastern Society (NÆROS) and the Danish Egyptological society (DAES) – all of these places can provide you connections with your fellow student and graduates.

Maybe you can also intern at a museum which conducts field archaeology, or join the Danish prehistory Saxo students on their field school, to gain an insight into Danish Museum practises in the field.

Practical skills

Try to lean a practical specialisation, whether it is bones, stones, or digital skills like QGIS, you do not need to be an expert, but it is really helpful in the field to be able to recognise a pig from a sheep, and be clear on whether a stone is natural or shaped by human intervention. Knowing how QGIS and programs like TRIMBLE operate is really helpful when you are told to make points in the field by your supervisor. Yes, you will be given a short introduction to most of these things and learn as you go, but it is useful to know a little before going in. Something which Practical archaeology 1 and 2, should help you with.

Driver's Licence

Knowing how to drive a car is unfortunately a skill most archaeologist need, whether they are in the field, or in the office, it is useful to be able to drive the museum cars from site to site, and from the museum to the storage unit, or to other nearby museum or conservation units, and most job listings ask you to have a driver's licence before starting the job.

Checklist for field-work

Here are our recommendations for which items are the most important to bring in the field. The list is created by us with the help of our followers on Instagram.

Tools:

The company/museum you work for will provide tools, from trowels, to rulers and shovels. But it can be nice to bring some of your own gear, especially if you have trowel preferences.

- Personal trowel (set) - different trowels for different needs, see Maria's explanation below:

I prefer to have my own personal trowel with me. I also have two other trowels than the classic one; a rounded and a squared one. The round is good for cleaning up profiles since it does not create marks, and the square one is good when you dig profiles that can be difficult with a shovel.

- Foldable rulers – you can never have enough of them, and they are vital for the documentation process.
- Compass – the one I have on our phone is great, but when the weather is bad, it nice to be able to leave it in a pocket and use a compass instead.

Bonus: A pro-tip for bad weather and phones: Put it in a finds bag that fits in size. You can still touch-screen when it is in the bag.

For detailed work – cleaning or excavating delicate objects – like human or animal bones. Most of these tools will be available to you, but it might be nice to bring your own, if you have them.

- Brush kit
- Bamboo skewers (the small ones used for BBQ)
- A dental tool set (metal tools)
- Set of clay modelling tools (wood or plastic)

Clothes:
The museum/company provides the basic safety gear, or outerwear and shoes, so you are set with rain clothes should it rain, but besides the outerwear you might need to bring the following.

The museum should also provide kneepads and mats, but it might be nice to bring your own.

- Insoles for your shoes - are a good idea as the boots can be a little different from what you are used to and you are on your feet all day, and in the winter, the steel toe cap can make your feet feel very cold.
- Winter clothes tips – layers are your friend. It is better to remove clothes than not having enough clothes.
  Thermal underwear, wool jumper, and something warm for your head and neck, e.g., a balaclava, or a hat and scarf. Thick socks.
- Summer tips:
  A hat, or a cap that offers shade to your face. A spare T-shirt in in your locker, and a thin shirt. A scarf to protect you from the sun. Some places allow you to wear shorts – but we do not recommend it, you risk cuts and scrapes to your legs and your knees will be thankful for the fabric between them and the knee-pillow/soil

Equipment – in the field and in your locker:

- Sunglasses, if they allow it at the site, if not you can use them during the breaks!
- A sling bag/fanny pack - to have your water, and other good things with you
- Earplugs – archaeology is quite noisy, take care of your ears
- Ear phones – if allowed on site, can be good on long days of wet sieving and in the field. Even though you work with other people, you might sometimes be far from each other.
- Water bottle, and remember to have enough for a whole day!
- Thermos for cold or hot drinks
- Pencils and markers – weather/ waterproof

An archaeologists' work gear.

Photo: Maria Diget Sletterød

- A small notebook – for observations
- Snacks – for your pocket and your locker
- A pocket knife/Swiss knife

In your locker:
Most museums provide, sun cream and coffee and tea – but it is always nice to bring your own.

- A mug – for the breaks
- Moisturiser – your hands will thank you!
- Sun cream – both for winter and summer
- A box with a stash of emergency things and food– personal meds, pads, snacks, cup noodles etc.
- Instant coffee/tea bags

Recommended reading about working conditions in Danish archaeology

Beiter, E. L. & Sauer, N. 2023: Indiana Jones-Komplekset. *Weekendavisen*. https://www.weekendavisen.dk/2023-43/ideer/indiana-jones-komplekset

Sauer, N. 2023: Kvindefald i den danske arkæologiske forskningsværden. *Arkæologisk forum*, vol. 49
https://www.academia.edu/112863041/Kvindefald_i_den_danske_ark%C3%A6ologiske_forskningsverden_Gone_Girl_Women_Leave_Danish_Academic_Archaeology_2023_

Both papers are about women in archaeology and why there seems to be a difference in who chooses to pursue a career in archaeology after graduating.

Thomsen, S. T. 2023: Arkæologer er nutidens daglejere. *Akademikerbladet*. https://dm.dk/akademikerbladet/aktuelt/2023/august/arkaeologer-er-nutidens-daglejere/

A paper about Thomsen's experiences working in Danish field archaeology, including the pressure of short-term contracts, and the difference between studying and working.

Savin, S. 2024: Pludselig sagde ledelsen ja til at fastansætte alle arkæologer: decideret banebrydene. *Akademikerbladet*

https://dm.dk/akademikerbladet/aktuelt/2024/februar/pludselig-sagde-ledelsen-ja-til-at-fastansaette-alle-arkaeologer-decideret-banebrydende/

This is a paper about the recent change in hiring practises at Museum Sydøstdanmark, who decided to permanently employ their short term hired archaeologists, all 13 of them, at the museum. The paper goes on to detail how the change came about at the museum.

Savin, S. 2024. 4 gode råd: sådan fik vi fastansat alle arkæologer. *Akademikerbladet* https://dm.dk/akademikerbladet/aktuelt/2024/februar/4-gode-raad-saadan-fik-vi-fastansat-alle-arkaeologerne/
This is an interview with the employee representative at the archaeological department at Museum Syøstdanmark, and it goes into detail on how they managed to secure the permanent contracts for the archaeologists, and tips on how to approach doing the same elsewhere.

First the mechanical diggers move the top layer, then the human diggers start.

Photo: Maria Diget Sletterød

Spotlight

In this section, you will find relevant information if you are a student or recent graduate:

In the first issue of Chronolog, we presented some of the graduates from CCRS who had submitted their theses within the last year. We asked them to give a short description of the topic of the thesis (as an inspiration for you) as well as words of advice for current students. If you have recently graduated from a program offered by CCRS or written a thesis on a subject which covers Ancient Southwest Asia and Northen Africa, and want to share your good advice and research, get in touch.

In this issue, we present some of the professors and lecturers at CCRS which you may meet when you study here. These presentations are focused on the research interests and areas of each professor and lecturer which will hopefully be a good guide for you to decide whom to approach.

We also list information on conferences, in this issue to of the editors pick their favorite conferences, and also how to find funding to go to one yourself.

We also introduce you to some of the relevant networks and other ways you can create relationships with students in other countries.

We hope you enjoy this section! If you have suggestions, perhaps something you would like to know, please contact us at **chronologjournal@gmail.com.**

Best,
Chronolog Editorial board

Spotlight

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University of Copenhagen

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I am Professor of Egyptology here at the Department of Cross-cultural and Regional Studies in Copenhagen, where I have been teaching Egyptology, particularly language classes and socio-economic history, for the last 15 years. You will have to trust me when I say it sounds much longer than it feels.

In contrast to many colleagues, I was never particularly interested in ancient Egypt growing up, although history and archaeology has always been appealing, and so it was probably not a complete surprise to my parents when I started studying Egyptology. The subject does not exist in Norway, and I knew I would have to go abroad to pursue it, which led to me going to Liverpool for the BA. This was a fortunate choice on both an academic and personal level: it had (and still has) one of the best undergraduate degrees in Egyptology, and I also happened to met my wife there.

I then went to Cambridge as a graduate student, which was quite a change: from the grey and industrialized UK north-west to the leafy green towers of a medieval university city, complete with Harry Potter-style gowns and ritualistic dinners in gothic halls. I completed my PhD, on the role of wisdom literature in ancient Egypt, in 2006 at Christ's College, and was very lucky to then be appointed as the Lady Wallis Budge Junior Research Fellow at Christmas, which meant that I could stay for another four years and develop my research further.

It was during this time that I started specialising in texts written in the cursive script called hieratic, which remains something of a focus to this day, even if my interests have broadened a bit: having begun with Egyptian literature and scribal culture, I now also dabble in various aspects of socio-economic history (mainly of the second millennium BC), as well as the history of Egyptology (notably the trade in Egyptian antiquities). I am currently preparing a temple archive from c. 1300 BC for publication, which will shed new light on how these important institutions operated in practice, and their social and economic role in Egyptian society.

Copenhagen has been known as an international centre for the study of ancient Egyptian texts, particularly on papyrus, for over a hundred years, and it is a pleasure to be able to carry the tradition forward. We may be a small subject, but as the track records of our students show, what we lack in quantity we more than make up for in quality.

Troels Pank Arbøll

Troels Pank Arbøll
Assistant Professor of Assyriology

Contact: tpa@hum.ku.dk

I am Assistant Professor of Assyriology at the Department of Cross-Cultural and Regional Studies, University of Copenhagen. Prior to taking up this position, I received my BA, MA, and PhD degrees in Assyriology from the University of Copenhagen, before taking up a postdoctoral position at that university followed by a Junior Research Fellowship at Linacre College, University of Oxford from 2021-2022.

As an Assyriologist working with the history of ancient medicine, I primarily publish and study cuneiform texts to gain a deeper understanding of ancient medical practices and the intellectual history of the ancient Near East. In my first monograph from 2021 entitled *Medicine in Ancient Assur* (available with open access online) I provided the first detailed analysis and synthesis of a Mesopotamian healer's education and practice on the basis of scholarly texts primarily in the Akkadian language from his family library. My second monograph, published by the Royal Danish Academy of Sciences and Letters in 2023, contains text editions of early first millennium BCE Akkadian and Sumerian scholarly, political, and administrative cuneiform texts from the Syrian city Hama. The texts are among the only surviving scholarly cuneiform manuscripts from the Levant in this period.

Moreover, I have produced a range of articles examining ancient conceptions of disease, anatomy and physiology, the reality behind medical ingredients, epidemics, zoonotic diseases, the development of medical terminology, as well as the iconography of demons and animals, and I have published a cuneiform tablet with the first known illustration of a demon of epilepsy. I have also co-authored text editions and discussions of Old Akkadian, Sumerian Ur III, and Neo-Assyrian cuneiform tablets with political and economic content. Finally, my research combines traditional and new approaches to the study of ancient Mesopotamian medicine, and I have co-authored interdisciplinary articles on ancient DNA as well as a perspective in *Science* on the world's earliest attested kiss.

Conferences, Editor's Picks

Conferences are beneficial for both updating yourself on a subject and for builiding networks. Especially material from excavations can be delayed by up to 10 years before final publication, while you will hear situation reports from the excavation presented at a conference as the excavation is ongoing. Publications will take up to 3 years in pulling all articles etc. together.

As for network, anyone working within a specialised field needs a network of like-minded people - even if you only meet at conferences. These are also the people you can reach out to regarding excavations, experiences etc.

The editors of Chronolog have following favorite conferences (apart from EACC of course):

Egypt at it's Origins

My heart beats for the period of Egypt where development took off and the basis of the Pharaonic Egypt was laid. Egypt is traditionally seen as starting at c. 3000 BCE but Egypt as a culture started several millenia before that with cattle cults, hypostyle halls, clean sands under temples and much more. There really only is one conference for prehistoric Egyptologists: Egypt at its Origins which is held every two years, next time in September 2024 in Krakow.

Anne Drewsen, Co-editor of Chronolog

CAA international – Annual conference

The CAA (Computer Applications and Quantitative Methods in Archaeology) is an international organisation which brings archaeologists, mathematicians and computer scientist together to think about archaeology, computers and tech used in fieldwork, now and in the future. There is also national chapters of CAA, which hold smaller conferences. Keep an eye out of for them, they may be less daunting.
The CAA international holds an annual themed conference, and the next is "*Digital Horizons: Embracing Heritage in an Evolving world".* It is held in Athens on 5-9th May 2025. If you find the use of technology in archaeology exciting, I cannot recommend attending CAA enough, whether you are into network analysis, recording practices, archaeogaming, photogrammetry, or machine learning, there is bound to be something on the program for you.

International Round Table On Polychromy in Ancient Sculpture And Architecture "Polychromy Round Table"

A biannual conference where the growing network of scholars researching polychromy meet and present their research and discuss multidisciplinary approaches. The next round table is themed "Art & Science Unite! Interdisciplinary Polychromy Research", it is hosted by The J. Paul Getty Museum, and runs from the 18-21st of November, 2024. This is a smaller conference, but very stimulating if you take an interest in polychrome studies, from the newest results from excavations and lab work, to digital reconstructions and exhibition techniques.

Anna Silberg Poulsen, co-editor of Chronolog

Want to go to a conference or do museum research?

Then apply for funding! There are several possibilities for funding for both students and graduates, allowing you to amp up your research profile.

You will find some of the possibilities on your UCPH Absalon page, but we suggest that you also check out other possibilities, such as Legatbogen.com, or follow one of the many Facebook and Linkedin-pages for foundations and organisations focusing on your area of interest. Always check carefully if your project matches the areas they support and contact them if you are in doubt.

Application tips

Most foundations use digital application forms, but remember to think through before you apply, do a checklist, and make sure that you cover:

- What you need funding for: participating in a conference, doing museum research etc. Specify where and when!
- Who you are – stage of education, research focus etc. This is often where you will need a CV (see next page).
- What you will gain from getting the grant, in other words what will the grant help you accomplish. This can e.g. be update on the latest knowledge while building a network within your field (conferences).
    - If you already have an abstract accepted for a conference, remember to mention this.
    - If you are going to a museum to do research material for e.g. your thesis, and you have received an acceptance letter from the museum regarding access to the storerooms, remember to add this to your application.
- A specified and realistic budget (travel, hotel, conference fee, museum entrance etc.). You will almost never have a grant cover your salary, as salaries are taxable, and travel grants are not.

Your CV

If you need to add a CV, remember all your competences and accomplishments – work on a voluntary basis such as being an assistant for the ICAANE conference, is still work.

It is equally important that you present yourself as *wanting* to do research, so make sure your CV list all your accomplishments in the area realistically even if they seem insignificant. Those reading it knows that a career in research is built of baby steps, and they want to support you if you show that research is what you really want.

Depending on how far you are in your studies, consider following information in your CV:

- Name, address, contact information – add links to your Academia.edu-page and your ORCID-page. If you don't have these, you can quickly make them, they are free of charge.
- Education: State your BA and MA and add any information that covers the field of interest that match the funding application.
    - If you are interested in coffin texts and have written papers on these, or articles or done podcasts, expand on it. This will give the funding body an idea of how serious you are in your research focus.
- Work experience: Add the work experience you have – such as organizing a seminar, voluntary at a conference, being teaching assistant, working at a museum etc. It does not matter whether it is paid or not.
- Publications, presentations, and posters: If you have any of these, also articles in a popular science magazine, remember to add these to your CV.
- Other experiences: Participation in excavations and field schools, being in advisory boards (e.g. for Chronolog or DAES), member of research networks etc.
- List of funding received previously, showing that other funding bodies also appreciate your line of research.
- List of the conferences and seminars you have attended. This again will prove that you are serious about your research even if you are not far enough to have presented your research.

DAES—Danish-Egyptological Society

The Danish Egyptological Society was established in 1978 and we currently have about 400 members in Denmark and abroad. Our members have diverse backgrounds, but they have one thing in common: a passion for ancient Egypt!

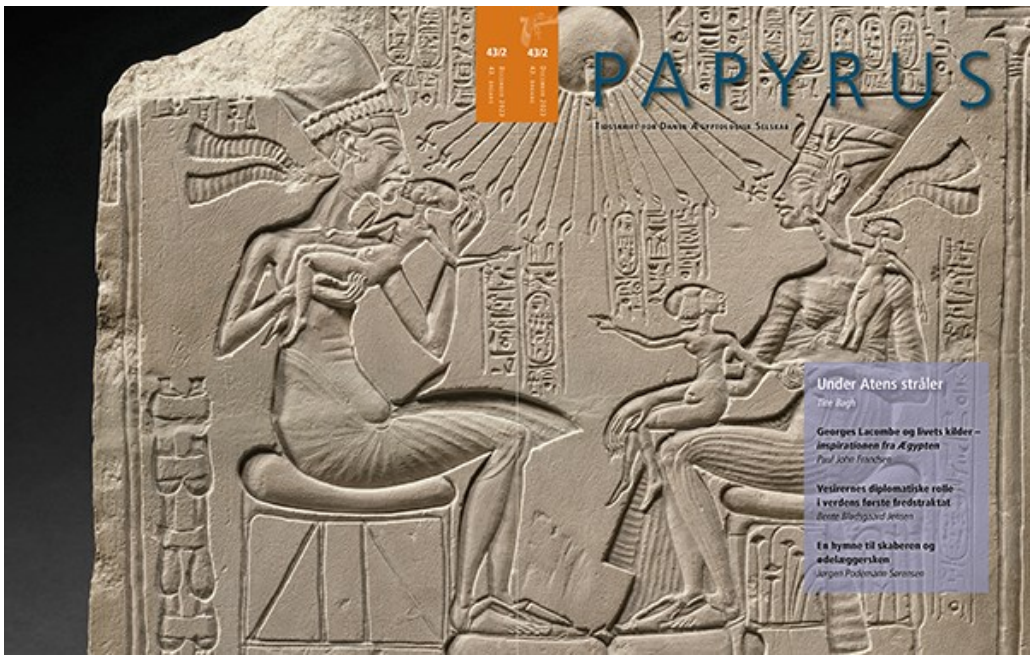
Join the Danish Egyptological Society if you are interested in:

- The latest research
- Pyramids
- Mummies
- Art
- Civilization
- Gods
- Hieroglyphs
- Tutankamum
- Tours with experts
- And much, much more

We have several talks and lectures each year, and some of the are delivered in English by international scholars. Our biannual journal Papyrus is written by experts, it is in Danish, but English abstracts of articles are included.

Contact us if you want to learn more or become a member of the Society at mail@daes.dk—membership for students at reduced prices (lectures and more), or attend just the lectures for free.

Follow us on Facebook and daes.dk



Front page of Papyrus No. 2, 2024.

NÆROS—The Danish Near Eastern Society

Nærorientalsk Selskab (NÆROS, or in English: The Danish Near Eastern Society) is a public information society which aims to communicate widely and popularly.

Our aim is to promote knowledge of West Asia's language, history, archeology and culture from ancient times to the present through lectures and other public information activities.

The society was founded in 2018 by former students at West Asia's ancient studies at the Institute for Cross-cultural and Regional Studies (CCRS or ToRS), who felt that there was a lack of a unified forum for Assyriologists, Egyptologists and archaeologists specialized in West Asia's antiquity. The Near Eastern Society is for everyone with an interest in archeology in West Asia, but we would also like to be a meeting point for students and former students at West Asia's ancient studies. At present, the board consists of five members: Chairperson Ann Andersson (MA, Near Eastern Archaeology), Deputy Chairperson Aisha Mellah (MA, Near Eastern Archaeology), treasurer Rune Rattenborg (Ph.D., Near Eastern Archaeology), and board members Guenever Bjerre Thaarup (MA, Near Eastern Archaeology) and Anna Silbjerg Poulsen (MA, Near Eastern Archaeology).

As a public information society, we are based on voluntary work and on having members. We offer an annual membership, which gives access to the lectures organized by the association. In addition, non-members can buy access to our lectures. In the five years the company has existed, we have arranged lectures with a large number of Assyriologists, Egyptologists and archaeologists, who have told about their excavation projects and latest research. We organize eight lectures per year, divided between a spring and an autumn season. We are based in Copenhagen and the company holds its events in premises at UCPH, Southern Campus.

Become a member of NÆROS

Why should you be a member of NÆROS? As a member of the association, you get access to eight lectures a year for DKK 200. In addition to gaining new professional insight into your subject and hearing about the work of other researchers, you also get the opportunity to meet former students from CCRS and others with an interest in Western Asia language, history, archeology and culture. You can also influence the association's work by participating in the association's general meeting.

What do we want in the future?

Over the next few years, it is our ambition to expand the company's activities. In addition to our regular lecture events, we would like to hold special events for our members. Over time, it is our ambition to spread our activities and reach the whole country with lectures, teaching courses and special events. It is also our ambition to reach different target and age groups through our activities. At present, we are in the process of producing a podcast, called "Under the desert sand", based on

previous lectures held at the Near Eastern Society, which we hope to be able to publish in the near future.

Do you want to be a part of it?

We would very much like to hear from anyone who would like to contribute to the Near Eastern Society. It can be in several different ways:

- Would you like to hold a lecture with us? Or do you have an obvious topic for our podcast? Contact us if you would like to present your thesis or other research projects you are involved in, either as a lecture or in our podcast.
- Do you want to help make the association work? Contact us if you are interested in participating in voluntary association and board work and helping to further develop the Near Eastern Society.
- Do you have ideas for something completely different? Contact us if you have a good idea for what Nærorientalsk selskab should work for in the future. Do you have e.g. an idea for a special event or a suggestion for a speaker? Or something completely different?

Write to us at: naerorientalsk.selskab@google.com

Read more about us: nearorientalskselskab.dk

Follow us - we are on social media: Facebook, Instagram and Linked-In.

On behalf of the Near Eastern Company's board of directors

Ann Andersson

Chair person

General Information

For Chronolog Journal Issue 2, 2024

Guidelines to Authors

1. Chronolog aims to provide a peer reviewed journal in which students with relations to UCPH can publish their research on the ancient Near East.
2. Contributions are accepted in English.
3. Contributions may include scientific articles, essays or book reports.
4. List of finalised MA's and PhDs only relate to UCPH
5. List of conferences and fonds/grants relate primarily to UCPH
6. All submissions are to be made via https://tidsskrift.dk/Chronolog
7. The author's guidelines can be found at https://tidsskrift.dk/Chronolog. Please check the current guidelines as they are updated regularly.
8. Guidelines for images and illustrations can be found on https://tidsskrift.dk/Chronolog. Illustrations should be sent as separate files. Colour images are welcome.
9. Only illustrations with cleared copyrights, permission for internet publication, and full credit information as required by copyright holders can be used. Any complaint of use of uncredited or copy righted images should be directed to the author of the article/essay.
10. All contributions are double-blind peer-reviewed by invited specialists, the editors may use a single peer reviewer for articles by BA-students.
11. The editors reserve the right to suggest and make appropriate alterations in the wording of manuscripts sent for publication.

Disclaimer

The views expressed by authors in articles printed in Chronolog are not necessarily those of the editors and are the responsibility solely of the individual contributors.

Until next time...

Call for papers for issue 3

Are you a student of archaeology, languages or history of the ancient cultures in Southwest Asia or Egypt? Are you interested in seeing your research project published in a peer-reviewed academic journal?

Then continue reading!

If you are

- A BA or MA student from University of Copenhagen or
- Alumni from University of Copenhagen (preferably no more than 5 years after graduation) or
- Have presented a paper at EACC, Berlin-Copenhagen Seminar or 13th ICAANE (held at UCPH)

Then we would love to see your research project in Chronolog Journal.

Your article should be on a topic within archaeology, anthropology, philology, art history, museum studies, and history of ancient Southwest Asia or Egypt.

Chronolog is peer reviewed and open access, giving you all the best possibilities for making a splash with your research!

Submit your article to us by email before **1 October 2024 for Chronolog Journal Issue 3, 2025.**

You can follow us on social media:
Facebook – Chronolog – Student Journal
Instagram: chronology_journal

Contact us at chronologjournal@gmail.com

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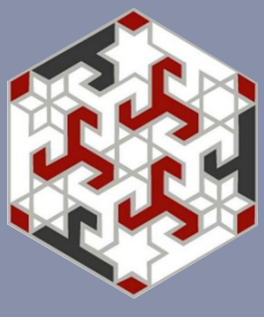

المعهد الدنماركي بدمشق
DET DANSKE INSTITUT I DAMASKUS