

References

Bibel

CZACHESZ 2003

István Czachesz, *The Gospels and Cognitive Science*. In: ALAISDAIR A. MACDONALD, MICHAEL W. TWOMEY & GERRIT J. REININK (Hrsg.), *Learned Antiquity, Scholarship and Society in the Near-East, the Greco-Roman world, and the Early Medieval West*. (Leuven 2003), 25–36.

Narrative and semantic knowledge structures often appear embedded in each other. For example, whereas a healing performed by Jesus relies on the ‘healing script’ as far as its narrative organisation is concerned, it also evokes semantic knowledge about God, demons, illnesses, healing powers and techniques, geographical locations, and customs. Paul’s summary of the gospel that we quoted above contains a list of the persons to whom Jesus appeared. Both scripts and semantic knowledge structures refer to a number of other scripts and frames. The deeper one understands a given text the more scripts and frames in one’s mind are activated.

USSISHKIN 2003

David Ussishkin, *Solomon’s Jerusalem, The Text and the Facts on the Ground*. In: ANDREW G. VAUGHN & ANN E. KILLEBREW (Hrsg.), *Jerusalem in Bible and Archaeology, The First Temple Period*. SBL Symposium Series 18 (Atlanta 2003), 103–115.

The conclusion that Jerusalem of Solomon’s time was a settlement limited in size, located in the City of David above the Gihon Spring, brings to the fore the question of the royal acropolis on the Temple Mount, which according to the biblical text was built by Solomon. The royal compound included the king’s magnificent palace (1 Kgs 7:1–12) and the adjacent temple. The palace complex included a ceremonial wing probably built as a bit-hilani in north-Syrian style,³⁰ a residence for Solomon’s wife, the Egyptian princess, and a royal treasury labeled “The house of the forest of Lebanon.” Both palace and temple were situated in the middle of enclosed courtyards. This royal compound was in continuous use until the end of the Judahite kingdom, when it was destroyed by the Babylonian army.

We can recall many other capitals in the ancient Near East where the royal acropolis was situated in a similar position, such as Tell Halaf, the site of Aramean Gozan, Nimrud, the site of Assyrian Kalah, Ras Shamra, the site of Canaanite Ugarit, and Canaanite Megiddo. However, the situation in Jerusalem in the tenth century B.C.E. was quite different. If indeed the settlement was small and located above the Gihon Spring, as indicated by the archaeological data, the addition of a large royal compound, much larger than the settlement itself and at a distance from it, would be rather anomalous.

USSISHKIN 2014

David Ussishkin, *Biblical Lachish, A tale of construction, destruction, excavation and restoration*. (Jerusalem 2014).

Biblical Lachish was one of the most important cities in the Land of Israel for more than three thousand years. In the second millennium B.C.E. Lachish was a large Canaanite city-state, and during the period of the Judean kingdom, a mighty fortress city. Sennacherib, king of Assyria, conquered it in the course of a fierce battle in 701 B.C.E. That conquest was immortalized in a series of reliefs erected in Sennacherib's palace at Nineveh in Assyria.

The special importance of Lachish, the large scale of the excavations and the unique discoveries make it a key site for the study of the history and archaeology of the Biblical period. This book, published by the Israel Exploration Society and the Biblical Archaeology Society, summarizes in clear and simple language for the general public the history of Lachish and its archaeological findings.

Three archaeological campaigns have been completed at Lachish. The first, from 1932 to 1938, was carried out by the British archaeologist James L. Starkey and came to an end when Starkey was murdered by Arab militants. The second, limited in scope and scale, was conducted by Yohanan Aharoni in 1966 and 1968. The third, from 1973 to 1994, was directed by this book's author, David Ussishkin, on behalf of Tel Aviv University.

USSISHKIN 2016

David Ussishkin, *Gath, Lachish and Jerusalem in the 9th Cent. B.C.E. An Archaeological Reassessment*. [Zeitschrift des Deutschen Palästina-Vereins](#) **131** (2015), 129–149.

In summary, all the above studies and excavations did not change my view regarding the character and size of 9th cent. B.C.E. Jerusalem – an unfortified settlement extending on the central parts of the City of David. The main dramatic change in the history of Jerusalem occurred in the 8th cent. B.C.E., when Jerusalem became a metropolis, heavily fortified, and had a magnificent royal acropolis.

One way or another, during the 9th cent. B.C.E. Jerusalem was not a large city, and was not fortified. The kings of Judah preferred to fortify Lachish and turn the settlement to a strong fortress-city, such a strong fortress-city that even Sennacherib King of Assyria considered its conquest a great military achievement.

Klima

COOK 2016

Benjamin I. Cook, Kevin J. Anchukaitis, Ramzi Touchan, David M. Meko & Edward R. Cook, *Spatiotemporal drought variability in the Mediterranean over the last 900 years*. [Journal of Geophysical Research](#) (2016), preprint, 1–15. DOI:10.1002/2015JD023929.

Recent Mediterranean droughts have highlighted concerns that climate change may be contributing to observed drying trends, but natural climate variability in the region is still poorly understood. We analyze 900 years (1100–2012) of Mediterranean drought variability in the Old World Drought Atlas (OWDA), a spatiotemporal tree ring reconstruction of the June-July-August self-calibrating Palmer Drought Severity Index. In the Mediterranean, the OWDA is highly correlated with spring precipitation (April–June), the North Atlantic Oscillation (January–April), the Scandinavian Pattern (January–March), and the East Atlantic Pattern (April–June). Drought variability displays significant east-west coherence across the basin on multidecadal to centennial timescales and north-south antiphasing in the eastern Mediterranean, with a tendency for wet anomalies in the Black Sea region (e.g., Greece, Anatolia, and the Balkans) when coastal Libya, the southern

Levant, and the Middle East are dry, possibly related to the North Atlantic Oscillation. Recent droughts are centered in the western Mediterranean, Greece, and the Levant. Events of similar magnitude in the western Mediterranean and Greece occur in the OWDA, but the recent 15 year drought in the Levant (1998–2012) is the driest in the record. Estimating uncertainties using a resampling approach, we conclude that there is an 89 % likelihood that this drought is drier than any comparable period of the last 900 years and a 98 % likelihood that it is drier than the last 500 years. These results confirm the exceptional nature of this drought relative to natural variability in recent centuries, consistent with studies that have found evidence for anthropogenically forced drying in the region.

Key Points:

- There is large multidecadal drought variability across the Mediterranean over the last 900 years
- Droughts tend to be zonally symmetric, but there is strong north-south antiphasing in eastern basin
- There is an 89%/98% likelihood that the recent Levant drought is the worst of the last 900/500 years

RUDDIMAN 2016

W.F. Ruddiman et al., *Late Holocene climate, Natural or anthropogenic?* [Reviews of Geophysics \(2016\), preprint, 1–26.](#)
[DOI:10.1002/2015RG000503.](#)

W. F. Ruddiman, D. Q. Fuller, J. E. Kutzbach, P. C. Tzedakis, J. O. Kaplan, E. C. Ellis, S. J. Vavrus, C. N. Roberts, R. Fyfe, F. He, C. Lemmen & J. Woodbridge

For more than a decade, scientists have argued about the warmth of the current interglaciation. Was the warmth of the preindustrial late Holocene natural in origin, the result of orbital changes that had not yet driven the system into a new glacial state? Or was it in considerable degree the result of humans intervening in the climate system through greenhouse gas emissions from early agriculture? Here we summarize new evidence that moves this debate forward by testing both hypotheses. By comparing late Holocene responses to those that occurred during previous interglaciations (in section 2), we assess whether the late Holocene responses look different (and thus anthropogenic) or similar (and thus natural). This comparison reveals anomalous (anthropogenic) signals. In section 3, we review paleoecological and archaeological syntheses that provide ground truth evidence on early anthropogenic releases of greenhouse gases. The available data document large early anthropogenic emissions consistent with the anthropogenic ice core anomalies, but more information is needed to constrain their size. A final section compares natural and anthropogenic interpretations of the $\delta^{13}\text{C}$ trend in ice core CO_2 .

Key Points:

- Holocene ice core and ocean sediment trends are anomalous compared to previous interglaciations.
- Paleoecology and archaeology show that early farmers emitted large amounts of CO_2 and CH_4 .
- Large early agricultural emissions are consistent with geochemical constraints.

WENINGER 2007

Abrupt Climate Forcing observed at Early Neolithic sites in South-East Europe and the Near East. In: HENRIETA TODOROVA, MARK STEFANOVICH & GEORGI IVANOV (Hrsg.), *The Struma/Strymon River Valley in Prehistory, International Symposium*

Strymon Praehistoricus Kjustendil–Blagoevgrad & Serres–Amphipolis, 27.09–01.10.2004. In *The Steps of James Harvey Gaul 2* (Sofia 2007), 7–28. Bernhard Weninger et al..

Bernhard Weninger, Eva Alram-Stern, Eva Bauer, Lee Clare, Uwe Danzeglocke, Olaf Jöris, Claudia Kubatzki, Gary Rollefson, Henrieta Todorova, Tjeerd van Andel

In this paper we explore the hypothesis that the abrupt drainage of Laurentide lakes and the associated rapid switch of the Thermohaline Circulation c. 8200 years ago (BARBER et al. 1999) may have had a catastrophic influence on Neolithic civilisation in large parts of South-East Europe, Anatolia, Cyprus, and the Near East. The cold event at 8200 calBP is attested in a number of high-resolution climate proxies in the Northern Hemisphere, and in many cases corresponds to markedly cold and arid conditions. We expect that extended arid conditions would have an unfavourable and maybe even devastating influence on the agricultural communities in the Eastern Mediterranean. To evaluate this hypothesis, we have identified the relevant archaeological levels of major Neolithic settlements in Central Anatolia, Cyprus, Greece and Bulgaria, first by constructing a substantial archaeological radiocarbon database and then by stratigraphic, architectural, cultural and geomorphological studies for these sites utilizing published data. The specific archaeological events and processes we observe at a number of these sites during the study interval 8400–8000 cal.BP lead us to extend and refine some previously established Neolithisation models.

WENINGER PREPRINT

Bernhard Weninger & Lee Clare, *Holocene Rapid Climate Change in the Eastern Mediterranean, An Emerging Archaeological Climate Research Programm*. In: RAIKO KRAUSS (Hrsg.), *Beginnings – New Research in the Appearance of the Neolithic between Northwest Anatolia and the Carpathian Basin, Papers of the International Workshop 8th–9th April 2009, Istanbul*. Menschen – Kulturen – Traditionen 1 (Berlin 2016), 11–22.

In this paper we review the impact of Holocene Rapid Climate Change (RCC), as defined by Mayewski et al.¹ and Rohling et al.², on prehistoric communities in the eastern Mediterranean. Following an introduction to the RCC mechanism, we assemble an up-to-date selection of recently published palaeoclimate records (terrestrial, marine, and stalagmite) from the region. These records together provide significant evidence for the occurrence of a series of quasicyclic Holocene RCC conditions. In combination with high-resolution Greenland GISP2 ice-core glaciochemical records, the available set of marine and environmental data allow an accurate (decadal scale) forecasting of expected dates for the most extreme Holocene RCC conditions in the eastern Mediterranean basin. Based on a set of delimited ages for RCC, we propose a climatic background for the following archaeological processes and events: (1) the end of the Aegean Bronze Age at 3.0 ka cal BP, (2) the collapse of the SE-European Copper Age at 6.2 ka cal BP, and (3) the abandonment of Catalhöyük at 8.2 ka cal BP. Finally, we show that the Early Chalcolithic site of Ulucak on the western Turkish coast³ was first inhabited at the onset of the 8.6 – 8.0 ka cal BP RCC cold period. This supports previous proposals⁴ that the processes associated with the spread of early farming from central Anatolia to the Balkan Peninsula may also have had a significant climate component.

Kultur

CLASSEN 2007

Erich Claßen, *Social Network Analysis of Neolithic Societies*. In: HENRIETA TODOROVA, MARK STEFANOVICH & GEORGI IVANOV (Hrsg.), *The Struma/Strymon River Valley in Prehistory, International Symposium Strymon Praehistoricus Kjustendil–Blagoevgrad & Serres–Amphipolis, 27.09–01.10.2004*. In *The Steps of James Harvey Gaul 2 (Sofia 2007)*, 29–42.

This paper deals with the use of network analytical methods in archaeology. These methods are well known in the social sciences but have not yet been applied to archaeological data. The aim is to discover and display the social structure of a given network for which relational data is available. The explanation of the determined structure of relationships is therefore the next step in our research.

In cultural anthropology, for example, the communication between members of a group, the exchange of raw material and the diffusion of inventions are all subjects of interest. These are also aspects of human behavior that can be observed in archaeological data. Therefore, the application of these methods is also very promising to our own studies and their inclusion opens new horizons in our research.

First applications of this analytical approach in archaeology are currently being conducted at the Institute for Prehistoric Archaeology at the University of Cologne. We are particularly concentrating on the exchange mechanisms involved in the distribution of raw materials for flint artifact production. Similarities in pottery decoration serve as a further indication of communication networks between settlements of the Early Neolithic “Bandkeramik” in the Rhineland.

The paper will give an introduction into the archaeological background; will then deal with the principles of social network analysis and preliminary results from the network analyses thus far carried out will be presented.

HOLST 2013

Mads Kähler Holst, Marianne Rasmussen, Kristian Kristiansen & Jens-Henrik Bech, *Bronze Age ‘Herostrats’, Ritual, Political, and Domestic Economies in Early Bronze Age Denmark*. *Proceedings of the Prehistoric Society* **79** (2013), 265–296.

In this article we argue that within the Danish Bronze Age there was a short-lived period (roughly 1500–1150 BC) that witnessed a dramatic investment of resources into the construction of monumental architecture in the form of barrows and long houses. These investments had far-reaching long-term effects on the local landscape with negative consequences for agricultural productivity. We use two extraordinary well-documented excavations of a barrow (Skelhøj) and a long house (Legaørd) as a model for labour organisation and resource allocation, which is calculated against the number of barrows and long houses recorded in the Danish Sites and Monuments database for the period. An astonishing minimum of 50,000 barrows were constructed, devastating an estimated 120,000–150,000 hectares of grassland. During the same time period an estimated 200,000 long houses were constructed and renewed every 30–60 years. In densely settled regions the effects are easily recognisable in pollen diagrams as a near-complete deforestation. Thereby, the productive potential of the economy was, in effect, reduced. The situation was unsustainable in a long-term perspective and, at least on a local scale, it implied the risk of collapse. On the other hand, the exploitation of resources also appears to have entailed a new way of operating in the landscape, which led

to a new organisation of the landscape itself and a restructuring of society in the Late Bronze Age. The intense character of these investments in monumental architecture is assumed to rely primarily on ritual and competitive rationales, and it exemplifies how the overall economy may be considered an unstable or contradictory interplay between ritual, political, and domestic rationales.

Keywords: Early Bronze Age | Denmark | barrow | long house | economy | deforestation | labour organisation

Throughout history, from megalithic constructions to medieval churches, runs a red thread of apparently irrational, æherostraticÆ investments to achieve eternal fame and thus convert everyday matters of human exploitation and economic deprivation to eternal matters of salvation and fame. In this article we have outlined an economic model for the Early Bronze Age in Denmark, in which different rationales collided. The ritual and political goals obtained a dominating position which, on a local scale, was strong enough to undermine some of the domestic economical foundations upon which it rested. A new lasting landscape of monumental barrows and a more fleeting landscape of monumental long houses emerged. However, in the process, it led to local ecological collapse. The development involved both the development of cooperative relations as well as a competitive race for power and fame of a new, barrow building segment of the population. The competitive aspect entailed a self-reinforcing effect and the process was therefore unstoppable until it had fulfilled its purpose around 1150 BC. Through the construction of barrows and houses social relations were redefined and affirmed on a regular basis within ritualised and strongly organised frameworks. This consolidated the relations and thereby enabled extension and institutionalisation of the power of a select segment of the population. The specific historical processes behind the economy of Early Bronze Age Denmark that we have described thus contribute to our general understanding of the conditions pertaining for the rise of ruling elites, which Timothy Pauketat (2000), with reference to Hardin (1968), appropriately termed æthe tragedy of the commonersÆ. This apparent irrationality in investment relies on an imbalance between different economic rationales, and explains why such massive investments were often short-lived.

MELLER 2015

HARALD MELLER & MICHAEL SCHEFZIK (Hrsg.), *Krieg – Eine Archäologische Spurensuche, Begleitband zur Sonderausstellung im Landesmuseum für Vorgeschichte Halle (Saale), 6. November 2015 bis 22. Mai 2016.* ([Halle 2015](#)).

MELLER 2015

Harald Meller, *Was ist “Der Krieg”? Einführung.* In: HARALD MELLER & MICHAEL SCHEFZIK (Hrsg.), *Krieg – Eine Archäologische Spurensuche, Begleitband zur Sonderausstellung im Landesmuseum für Vorgeschichte Halle (Saale), 6. November 2015 bis 22. Mai 2016.* ([Halle 2015](#)), 19–24.

Wählt man, wie wir gezeigt haben, eine Definition, die Staatlichkeit voraussetzt, so wird automatisch jegliche vorangehende Entwicklung ausgeschlossen. Da uns jedoch das Phänomen Krieg bereits in der Frühzeit der Staatenbildung voll ausgeprägt entgegentritt und wir darüber hinaus aus der ethnologischen Forschung und Ethnografie zahlreiche größere Konflikte zwischen verschiedenen Gruppen ohne Staatlichkeit kennen, nutzen wir die in der Ethnologie vorherrschende Definition, wonach es sich um geplante und organisierte bewaffnete Auseinandersetzungen zwischen autonomen Gruppen handelt. Durch die Einbeziehung von Waffen als

Definitionskriterium schließen wir automatisch die bei Schimpansen beobachteten wohl geplanten, möglicherweise sogar organisierten gewaltsamen Konflikte zwischen verschiedenen Gruppen aus der Betrachtung aus. Dennoch sollte uns bewusst sein, dass es womöglich lediglich des Waffengebrauches und einer höheren Zahl an Beteiligten bedürfte, um solche Konflikte als Krieg bezeichnen zu können (siehe Beitrag “Führen Schimpansen Krieg?”, S. 61). Dies bedeutet auch nicht automatisch, dass wir dann den Krieg nicht mehr als kulturelles Phänomen sehen könnten, da Schimpansen durchaus zu kulturellen Leistungen fähig sind.

Besonders wichtig erscheint mir der Hinweis, dass auch bei zahlreichen ethnologisch untersuchten Gruppen Kriege zum ersten Mal dann auftraten, als die Wildbeuter sesshaft wurden und sich komplexere Gesellschaften mit Besitz, vor allem in Abhängigkeit von lokalen Ressourcen, entwickelten (Helbling 2006, 112–114). Diese Möglichkeit halte ich für das mitteleuropäische Mesolithikum, insbesondere an den Küsten, für durchaus gegeben. Im europäischen Mesolithikum scheint sich jedenfalls mit der neuen Fernwaffe Pfeil und Bogen, aber auch mit den ersten Nachweisen für Skalpierung (siehe Beitrag “Der skalpierte Mann von Skateholm”, S. 105) das Gewaltpotenzial möglicherweise zu erhöhen, auch wenn wir noch keinen archäologischen Nachweis von Krieg nach unserer Definition vorweisen können (Terberger 2006, 144–149).

MELLER 2015

Harald Meller, *Krieg im europäischen Neolithikum*. In: HARALD MELLER & MICHAEL SCHEFZIK (Hrsg.), *Krieg – Eine Archäologische Spurensuche, Begleitband zur Sonderausstellung im Landesmuseum für Vorgeschichte Halle (Saale), 6. November 2015 bis 22. Mai 2016*. (Halle 2015), 109–116.

Die kulturelle “Erfindung” des Krieges und einige seiner wesentlichen Entwicklungen fanden während des Neolithikums statt. Zum Verständnis des Beginns der Geschichte von Krieg und Frieden ist deshalb eine Analyse der neolithischen Daten sowohl im Vorderen Orient als auch in Europa unabdingbar. Hier können wir noch wesentliche Erkenntnisse zu diesen Grundfragen der Menschheit erwarten.

MELLER 2015

Harald Meller, Nicole Nicklisch, Jörg Orschiedt & Kurt W. Alt, *Rituelle Zweikämpfe schnurkeramischer Krieger?* In: HARALD MELLER & MICHAEL SCHEFZIK (Hrsg.), *Krieg – Eine Archäologische Spurensuche, Begleitband zur Sonderausstellung im Landesmuseum für Vorgeschichte Halle (Saale), 6. November 2015 bis 22. Mai 2016*. (Halle 2015), 185–189.

In zahlreichen Epochen der Menschheitsgeschichte ist es möglich, bereits an der Art der Bewaffnung einen verabredeten rituellen Zweikampf zumeist vor dem Hintergrund sozialer Stratifizierung zu erkennen. Hier können die mykenischen Rapiere genauso wie die Degen oder Samuraischwerter des 17. und 18. Jhs. genannt werden. Auch in ethnografischen Berichten treten wiederholt rituelle Zweikämpfe auf, beispielsweise bei den Yanomami im Amazonas-Regenwald, die vor Zuschauern stark geregelte Duelle austragen, in denen sie sich abwechselnd kraftvoll mit der Faust auf die Brust oder mit der flachen Hand auf die Seite des Bauches schlagen (Chagnon 2013, 183–188). Eine genauere Betrachtung der schnurkeramischen Skelette zeigt, dass bei der Interpretation von mit Gewalt assoziierten Verletzungen sehr sorgfältig mit dem Etikett “Krieg” umgegangen werden sollte.

MELLER 2015

Harald Meller, *Armeen in der Frühbronzezeit?* In: HARALD MELLER & MICHAEL SCHEFZIK (Hrsg.), *Krieg – Eine Archäologische Spurensuche, Begleitband zur Sonderausstellung im Landesmuseum für Vorgeschichte Halle (Saale), 6. November 2015 bis 22. Mai 2016.* (Halle 2015), 243–252.

Träfen die obigen Überlegungen zu, könnten wir im Gegensatz zu den “heroischen” Kämpfern des Spätneolithikums für die hier behandelte Region in der Frühbronzezeit bereits von professionellen Soldaten sprechen, die in systematische Armeen eingebunden waren. Ob es sich hierbei um stehende, dauerhaft aus wirtschaftlichem Überschuss versorgte oder nur zeitweise mobilisierte Truppen handelte, lässt sich natürlich nicht mehr feststellen. Aufgrund allgemeiner Überlegungen ist jedoch eher von stehenden Truppen auszugehen, da die “Fürsten” zur Sicherung und Friedenswahrung in einem solch großen Gebiet über einen permanenten militärischen “Erzwingungsstab” im Sinne Max Webers verfügt haben müssen (Weber 1922 [2005], 24 f.). Der Preis für das friedliche unbefestigte Siedeln entlang der Flüsse und die dauerhafte Sicherung der einzelnen Haushalte waren sicherlich erhebliche Abgaben an die herrschende Schicht, die daraus nicht nur die Mittel für die eigene Repräsentation, sondern auch für ihre militärische Machtbasis abschöpfte.

Um diese unvergleichliche Machtposition abzusichern, benötigten die Herrscher der Aunjetitzer Kultur vor allem eines: loyale und ausgebildete Soldaten, die als organisierte professionelle Armeen den Frieden durch ihre organisatorische Überlegenheit und damit Abschreckung sicherten. Dabei dürfte die Bilanz für den einzelnen Bauern durchaus gemischt gewesen sein. Unter dem Aunjetitzer System lebte er vermutlich sicher, aber unter hohen Abgaben, während sein Leben im darauf folgenden lokalen Herrschaftssystem möglicherweise freier, selbstbestimmter und wohlhabender, aber gleichzeitig deutlich unsicherer war.

PAUKETAT 2000

Timothy R. Pauketat, *The tragedy of the commoners.* In: MARCIA-ANNE DOBRES & JOHN E. ROBB (Hrsg.), *Agency in Archaeology.* (London 2000), 113–129.

To the extent that Trigger’s global observations of formative florescences are valid, there may be only one way to understand how the multitude united: those who would be dominated gave shape to the domination, this shape recapitulating “tradition” or at least those elements of tradition imperfectly reproduced through surface phenomena. How could a social movement, one that co-opted the traditions of a regional population, resist itself? We should not expect that it would, the result being subjective co-optation, a consensual mode of domination, and the multitude uniting as a commonwealth. The monuments were built but the common people did not necessarily defy, in an overt or objective sense, the large-scale social changes of formative developments. Yet neither did people passively acquiesce. They did not accept or did not understand domination for what we see it to be in the aggregate. Domination, as an historical process, could hardly have been fully anticipated by anyone, including high status movers-and-shakers who were moving and shaking in traditional ways (but with possibly unanticipated results).

We need not rationalize centralization as adaptive in the long-terra development of a population in order to explain why the multitudes so united as commonwealths. Practice theory provides here not a proximate solution to some historical particular but an ultimate solution to a problem of social science. Common people actively created monumental changes, perhaps beneficial (within their his-

torical frames of reference) in the short-run, but deleterious to their own ability to coordinate action in the long run. For in the long run, monumental practices objectified the coordination as a place if not, ultimately, as a class of aristocrats associated with that place.

Kupfer

WANG 2016

Quanyu Wang, Stanislav Strekopytov, Benjamin W. Roberts & Neil Wilkin, *Tin ingots from a probable Bronze Age shipwreck off the coast of Salcombe, Devon, Composition and microstructure*. [Journal of Archaeological Science](#) **67** (2016), 80–92.

The seabed site of a probable Bronze Age shipwreck off the coast of Salcombe in south-west England was explored between 1977 and 2013. Nearly 400 objects including copper and tin ingots, bronze artefacts/ fragments and gold ornaments were found. The Salcombe tin ingots provided a wonderful opportunity for the technical study of prehistoric tin, which has been scarce. The chemical compositions of all the tin ingots were analysed using inductively coupled plasma mass spectrometry (ICP-MS) and inductively coupled plasma atomic emission spectroscopy (ICP-AES). Following the compositional analysis, microstructural study was carried out on eight Salcombe ingots selected to cover those with different sizes, shapes and variable impurity levels and also on the two Erme Estuary ingots using metallography and scanning electron microscopy coupled with energy dispersive X-ray spectrometry (SEM-EDS). An extensive overview of archaeological tin in Europe is also provided.

All the Salcombe tin ingots analysed appeared to be quite pure with little variation in composition between them. Only two samples were found to contain over 0.1 % iron and one contains over 0.1 % copper. The compositions of the Salcombe tin ingots have been compared to the very few compositional analyses of tin objects found elsewhere such as the Late Bronze Age shipwreck of Uluburun but do not seem to have any connection between them. Further studies including lead and tin isotope analysis are needed to answer the question of provenance of the tin ingots, so as to contribute to the study of metal trading.

Keywords: Tin ingots | Bronze Age | Salcombe | ICP-MS | Trace elements

Mesolithikum

BOETHIUS 2016

Adam Boethius, *Something rotten in Scandinavia, The world's earliest evidence of fermentation*. [Journal of Archaeological Science](#) **66** (2016), 169–180.

Large-scale food storage has been identified at an Early Mesolithic settlement on the east coast of Sweden, implying a delayed-return subsistence strategy. The excavation and analysis of the contents of a 9200-year-old construction, combined with ethnographic analogies and modern knowledge of microbial activity, suggest that fish was fermented at the site. The identification of a foraging economy fermenting substantial amounts of fish, and conserving it for later use, thousands of years prior to farming and urbanized communities and without the use of salt, has implications for how we perceive the Early Mesolithic, suggesting semi-sedentism, technological skill and the ability to adapt rapidly to changing environmental conditions. Evidence of a delayed-return practice in Early Mesolithic foraging contexts

raises questions regarding the current models used to estimate demographic parameters, such as population density and birth rate, for that time period, as well as indicating the existence of a more complex society than previously realized.

Keywords: Mesolithic | Sedentism | Fermentation | Fish | Delayed-return | Storage | Foraging

Methoden

SIEGMUND 2010

Frank Siegmund, *Die Körpergröße der Menschen in der Ur- und Frühgeschichte Mitteleuropas und ein Vergleich ihrer anthropologischen Schätzmethode*. (Norderstedt 2010).

Neolithikum

CLASSEN 2014

Erich Claßen, *Überlegungen zum Ende der bandkeramischen Besiedlung im Rheinland*. In: THOMAS LINK & DIRK SCHIMMELPFENIG (Hrsg.), *No future? Brüche und Ende kultureller Erscheinungen, Fallbeispiele aus dem 6.–2. Jahrtausend v. Chr.* Fokus Jungsteinzeit 4 (Kerpen-Loogh 2014), 113–122.

When examining the end of the Linearbandkeramik (LBK) in the Rhineland, it is important to consider that in addition to possible alterations in climatic conditions of the period, changes also occurred affecting the social structure of LBK society. Methods used to reconstruct social networks of LBK communities, including diachronic analyses of the exchange of stone tool raw materials and the comparison of similarities in pottery decoration, demonstrate a shift to smaller network structures one hundred years before the last LBK settlements were abandoned. This pattern led to the emergence of smaller identity groups within the LBK and ultimately became one of the main factors responsible for the disappearance of the typical settlement structure and material remains of the LBK culture in the Rhineland.

Keywords: Bandkeramik | “first Neolithic crisis” | networks | social change.

Im Zusammenhang mit dem Ende der bandkeramischen Besiedlung des Rheinlandes ist zu betonen, dass neben möglichen klimatischen Auslösern für eine “erste neolithische Krise” insbesondere Veränderungen in der bandkeramischen Gesellschaft wichtig sind: Bei diachroner Betrachtung der regionalen Austauschnetzwerke für bestimmte Feuersteinrohmaterialien und der Ähnlichkeiten im Verzierungsspektrum – die als Spiegel gesellschaftlicher Beziehungen zwischen den bandkeramischen Gruppen des Rheinlandes gewertet werden – machen sich bereits rund 100 Jahre vor dem eigentlichen Ende der Bandkeramik Veränderungen bemerkbar. Innerhalb der bandkeramischen Gesellschaft scheinen sich kleinere Identitätsgruppen herauszubilden. Dieser soziale Wandel ist schließlich mit dafür verantwortlich, dass das typische Siedlungsbild mit den entsprechenden materiellen Hinterlassenschaften und somit die archäologische Kultur der Bandkeramik im Rheinland verschwindet.

Keywords: Bandkeramik | “erste neolithische Krise” | Netzwerke | sozialer Wandel.

KRAUSS PREPRINT

RAIKO KRAUSS (Hrsg.), *Beginnings – New Research in the Appearance of the Neolithic between Northwest Anatolia and the Carpathian Basin, Papers of the International Workshop 8th–9th April 2009, Istanbul*. Menschen – Kulturen – Traditionen 1 ([Berlin 2016](#)).

ÖZDOĞAN PREPRINT

Mehmet Özdoğan, *An Anatolian Perspective on the Neolithization Process in the Balkans, New Questions, New Prospects*. In: RAIKO KRAUSS (Hrsg.), *Beginnings – New Research in the Appearance of the Neolithic between Northwest Anatolia and the Carpathian Basin, Papers of the International Workshop 8th–9th April 2009, Istanbul*. Menschen – Kulturen – Traditionen 1 ([Berlin 2016](#)), 23–33.

Even though the number of excavated sites of the Neolithic period in Anatolia is still too few compared to southeastern Europe, it nevertheless is enough to reveal that the previous trajectories of thinking were not correct. As connoted above, the new evidence from Anatolian sites clearly revealed that the neolithization process was not an instantaneous event, but that it developed through different trajectories and modes over millennia. Previous models on how Neolithic culture expanded to cover other regions were mostly unilateral; however now it became clear that the neolithization process was a complex phenomenon, so multifarious that no single model would suffice on a supra-regional basis. As has been noted above, the expansion did not take place as a single group or band migrating from point A to B; segregated groups leaving the core area were forming new clusters either on the way or in the newly settled areas, occasionally merging with local communities.

In considering the expansion of the Neolithic model, the process of adaptation that migrant communities had to go through is mostly overlooked. The core area of primary neolithisation, in this case central Anatolia, is a closed basin predominantly steppe-like in character, at least compared to the areas to be settled by the migrant groups. The interim zone between central Anatolia and the coastal areas, either the Aegean or the Marmara region, consists of diverse habitats that are notably different from the core area. Accordingly the migrant groups had to move into and get adapted to totally different habitats from those they were accustomed to. At present we only see the shift from mudbrick to wooden or wattle constructions as the markers of this process; however, we can only surmise that the process of adapting to the new environmental conditions must have been a much more complicated phenomenon than that. In fact, the process of adaptation to the marine, humid and densely forested habitats in the western parts of Turkey, must have provided an experience like that of encountering temperate Europe.

TODOROVA 2007

HENRIETA TODOROVA, MARK STEFANOVICH & GEORGI IVANOV (Hrsg.), *The Struma/Strymon River Valley in Prehistory, International Symposium Strymon Praehistoricus Kjustendil–Blagoevgrad & Serres–Amphipolis, 27.09–01.10.2004*. In *The Steps of James Harvey Gaul* 2 ([Sofia 2007](#)).

Religion

ARTEMOV 2014

Nikita Artemov, *Belief in Family Reunion in the Afterlife in the Ancient Near East and Mediterranean*. In: LIONEL MARTI (Hrsg.), *La famille dans le Proche-Orient ancien: réalités, symbolismes, et images, Proceedings of the 55th Rencontre Assyriologique Internationale at Paris 6–9 July 2009*. (Winona Lake 2014), 27–41.

“died [...] and was gathered to his people” To summarize, both the usage and the wording of the biblical idiom point to the fact that it originated in the idea of reunion with one’s ancestors or kinsmen in the afterlife. It should be noted that this formula was reserved for the patriarchs venerated by the Israelites as their progenitors and for cultural heroes such as Moses and that it is associated with peaceful dying at an old age in all of the passages.

There are two texts in the Old Testament which seem to express the expectation of a meeting with one’s dead child in the underworld. At the end of the 37th chapter of Genesis we are told Jacob mourned many days for his son Josef whom he believed to be killed by a wild animal. His sons and daughters tried to comfort him, but he told them: Gen 37:35: I will go down to my son into Sheol mourning.

In a similar way, King David tells his servants who are wondering why he stopped fasting when he learned about the death of his child born by Bathsheba: 2 Sam 12:23: Can I bring him back again? I shall go to him, but he will not return to me. Of course, both passages are quite vaguely formulated. Jacob’s words could just mean he will mourn until he dies and goes down to Sheol where his son Josef already is. King David may be just stating the fact he is going to share his child’s lot one day. This is the way both phrases are usually interpreted by modern commentators who stress the absence of a positive belief in the afterlife in the Old Testament.

BILL 2016

Jan Bill, *Protecting Against the Dead? On the Possible Use of Apotropaic Magic in the Oseberg Burial*. *Cambridge Archaeological Journal* **26** (2016), 141–155.

The use of apotropaic practices, that is, of magic to protect against evil, is sometimes included in archaeological interpretations on the basis of similarities between archaeological objects and objects used in historically documented or present-day apotropaic practices. The present article attempts to develop the archaeological study of apotropaism by focussing on apotropaic ritual, in addition to apotropaic devices. The case study is a burial in ad 834 of a high-ranking Viking Age woman in the Norwegian Oseberg ship grave. Drawing on cognitive magic ritual theory, the study focuses on identifying both a repeated ritual core and a counter-intuitive, magic element in the series of actions that led to the deposition of five elaborately carved wooden animal heads in the burial, each combined with a rattling device probably related to horse driving. The study demonstrates that apotropaism provides a viable explanation for this rather puzzling aspect of the burial. In a wider perspective it emphasizes the importance of the contextual, in addition to the functional, interpretation of objects in graves. It also suggests that the use of animal figures and animal style in Viking Age artwork may have been more intimately connected with apotropaic beliefs than previously suggested.