

References

Aktuell

CALLAWAY 2020

Ewen Callaway, *Oxford Covid Vaccine Results Puzzle Scientists*. [nature](#) **588** (2020), 16–18.

Preliminary data suggest that the immunization was more effective when given in a lower dose.

ROLDAN 2020

Bec Roldan, *Coming out*. [science](#) **370** (2020), 1242.

My hands shook as I sat down to write the email. “I wanted to let y’all know that I use they/ them/theirs pronouns,” I typed. “I know that gender-neutral/non-binary pronouns are not a common staple in our language, but I ask that you please do your best to respect them.” Proclaiming my identity—one I had still not quite figured out yet—to a group of co-workers made me feel incredibly vulnerable. But I knew that if I wanted to survive graduate school, I needed to be open with my labmates, no matter how scared I was. After a few anxious moments, I clicked “send.”

Bibel

BURKE 2020

Aaron A. Burke, *Left Behind, New Kingdom Specialists at the End of Egyptian Empire and the Emergence of Israelite Scribalism*. In: RICHARD E. AVERBECK & K. LAWSON YOUNGER JR. (Hrsg.), “An Excellent Fortress for His Armies, a Refuge for the People”, *Egyptological, Archaeological, and Biblical Studies in Honor of James K. Hoffmeier*. (University Park 2020), 50–66.

Two broad areas of culture transfer, ritual practice and scribalism, have been the primary focus of studies of the biblical text that have sought to identify strands of Egyptian influence among early Israelite traditions. However, as I have suggested in this work, greater consideration needs to be given to the context for cultural exchanges and the enduring influences of the protracted presence of Egyptian Empire in Canaan during the New Kingdom. Although largely neglected, increasing evidence of cultural continuity among a range of practices during the end of the Late Bronze Age and the early Iron Age suggests that the decoupling of specialists from both Egyptian and Canaanite contexts opened avenues for the transmission of cultural traditions among a range of arts, from scribalism and ritual practice, to warfare, ceramic production, and metallurgy. While our tendencies are to assume that Egyptian Empire contracted, taking all of its personnel with it, studies of analogous imperial contexts, such as the Roman periphery (Elton 1996), reveal the degrees to which such social boundaries were highly fluid and easily traversed during periods of political uncertainty.

Datierung

BÁNFFY 2018

Eszter Bánffy et al., *Seeking the Holy Grail, Robust chronologies from archaeology and radiocarbon dating combined*. [Documenta Praehistorica 45 \(2018\), 120–136](#).

The strengths of formal Bayesian chronological modelling are restated, combining as it does knowledge of the archaeology with the radiocarbon dating of carefully chosen samples of known taphonomy in association with diagnostic material culture. The risks of dating bone samples are reviewed, along with a brief history of the development of approaches to the radiocarbon dating of bone. In reply to Strien (2017), selected topics concerned with the emergence and aftermath of the LBK are discussed, as well as the early Vinča, Ražiče and Hinkelstein sequences. The need for rigour in an approach which combines archaeology and radiocarbon dating is underlined.

Keywords: radiocarbon dating; bone samples; laboratory methods; Bayesian chronological modelling; earliest LBK; Vinča; Ražiče; Hinkelstein

Eszter Bánffy, Alex Bayliss, Anthony Denaire, Bisserka Gaydarska, Daniela Hofmann, Philippe Lefranc, János Jakuc, Miroslav Marić, Krisztian Oross, Nenad Tasić & Alasdair Whittle

STRIEN 2017

Hans-Christoph Strien, *Discrepancies between archaeological and ¹⁴C-based chronologies, Problems and possible solutions*. [Documenta Praehistorica 44 \(2017\), 272–280](#).

¹⁴C dating of bone collagen is believed to produce the most reliable absolute dates for the Central European Early Neolithic, as the selection of bones in anatomical context minimises taphonomic problems. In contrast, a comparison of three newly published local or regional chronological models as well as a comparison of several series of dates from bone collagen, charcoal and cereals Highlights problems probably caused by diagenetic influences, especially on collagen. Therefore, at least the checking of bone collagen ¹⁴C dates against charcoal or cereal dates from the same contexts seems to be indispensable.

Keywords: ¹⁴C | taphonomy | diagenesis | Central Europe | Early Neolithic

WENINGER 2020

Bernhard Weninger & Kevan Edinborough, *Bayesian ¹⁴C-rationality, Heisenberg uncertainty, and Fourier transform, The beauty of radiocarbon calibration*. [Documenta Praehistorica 47 \(2020\), 536–559](#).

Following some 30 years of radiocarbon research during which the mathematical principles of ¹⁴C-calibration have been on loan to Bayesian statistics, here they are returned to quantum physics. The return is based on recognition that ¹⁴C-calibration can be described as a Fourier transform. Following its introduction as such, there is need to reconceptualize the probabilistic ¹⁴C-analysis. The main change will be to replace the traditional (one-dimensional) concept of ¹⁴C-dating probability by a two-dimensional probability. This is entirely analogous to the definition of probability in quantum physics, where the squared amplitude of a wave function defined in Hilbert space provides a measurable probability of finding the corresponding particle at a certain point in time/space, the so-called Born rule. When adapted to the characteristics of ¹⁴C-calibration, as it turns out, the Fourier transform immediately accounts for practically all known so-called quantization properties of archaeological ¹⁴C-ages, such as clustering, age-shifting, and

amplitude-distortion. This also applies to the frequently observed chronological lock-in properties of larger data sets, when analysed by Gaussian wiggle matching (on the 14C-scale) just as by Bayesian sequencing (on the calendar time-scale). Such domain-switching effects are typical for a Fourier transform. They can now be understood, and taken into account, by the application of concepts and interpretations that are central to quantum physics (e.g. wave diffraction, wave-particle duality, Heisenberg uncertainty, and the correspondence principle). What may sound complicated, at first glance, simplifies the construction of 14C-based chronologies. The new Fourier-based 14C-analysis supports chronological studies on previously unachievable geographic (continental) and temporal (Glacial-Holocene) scales; for example, by temporal sequencing of hundreds of archaeological sites, simultaneously, with minimal need for development of archaeological prior hypotheses, other than those based on the geo-archaeological law of stratigraphic superposition. As demonstrated in a variety of archaeological case studies, just one number, defined as a gauge-probability on a scale 0–100 %, can be used to replace a stacked set of subjective Bayesian priors.

Keywords: radiocarbon calibration | Fourier transform | Born probability | Santorini

Islam

GUILLAUME 1955

Alfred Guillaume, *The Life of Muhammad, A translation of Ibn Ishāq's Sīrat Rasūl Allāh*. (Karachi 2020).

Klima

BUSH 2020

Emma R. Bush, Robin C. Whytock & Katharine Abernethy et al., *Long-term collapse in fruit availability threatens Central African forest megafauna*. [science](#) **370** (2020), 1219–1222.

[s370-1219-Supplement.pdf](#)

Afrotropical forests host much of the world's remaining megafauna, although these animals are confined to areas where direct human influences are low. We used a rare long-term dataset of tree reproduction and a photographic database of forest elephants to assess food availability and body condition of an emblematic megafauna species at Lopé National Park, Gabon. Our analysis reveals an 81 % decline in fruiting over a 32-year period (1986–2018) and an 11 % decline in body condition of fruit-dependent forest elephants from 2008 to 2018. Fruit famine in one of the last strongholds for African forest elephants should raise concern about the ability of this species and other fruit-dependent megafauna to persist in the long term, with potential consequences for broader ecosystem and biosphere functioning.

Emma R. Bush, Robin C. Whytock, Laila Bahaa-el-din, Stéphanie Bourgeois, Nils Bunnefeld, Anabelle W. Cardoso, Jean Thoussaint Dikangadissi, Pacôme Dimbonda, Edmond Dimoto, Josué Edzang Ndong, Kathryn J. Jeffery, David Lehmann, Loïc Makaga, Brice Momboua, Ludovic R. W. Momont, Caroline E. G. Tutin, Lee J. T. White, Alden Whittaker & Katharine Abernethy

Methoden

SCHMIDT 2020

Isabell Schmidt et al., *Approaching prehistoric demography, Proxies, scales and scope of the Cologne Protocol in European contexts*. [Phil. Trans. Royal Society B 376 \(2020\), 20190714](#).

[PhilTransRSocB376-20190714-Supplement.pdf](#)

In many theories on the social and cultural evolution of human societies, the number and density of people living together in a given time and region is a crucial factor. Because direct data on past demographic developments are lacking, and reliability and validity of demographic proxies require careful evaluation, the topic has been approached from several different directions. This paper provides an introduction to a geostatistical approach for estimating prehistoric population size and density, the so-called Cologne Protocol and discusses underlying theoretical assumptions and upscaling transferfunctions between different spatial scale levels. We describe and compare the specifics for farming and for foraging societies and, using examples, discuss a diachronic series of estimates, covering the population dynamics of roughly 40 kyr of European prehistory. Ethnohistoric accounts, results from other approaches—including absolute (ethno-environmental models) and relative estimates (site-numbers, dates as data, etc.) allow a first positioning of the estimates within this field of research. Future enhancements, applications and testing of the Cologne Protocol are outlined and positioned within the general theoretical and methodological avenues of palaeodemographic research. In addition, we provide manuals for modelling Core Areas in MAPINFO, ARCGIS, QGIS/SAGA and R.

This article is part of the theme issue ‘Cross-disciplinary approaches to prehistoric demography’.

Isabell Schmidt, Johanna Hilpert, Inga Kretschmer, Robin Peters, Manuel Broich, Sara Schiesberg, Oliver Vogels, Karl Peter Wendt, Andreas Zimmermann & Andreas Maier

Neolithikum

WOLLENWEBER 2019

René Wollenweber, *Bandkeramische “Opferbrunnen”, Überinterpretation oder wegweisende Deutung?* In: ANNELI O’NEILL & JOANNA PYZEL (Hrsg.), *Siedlungsstrukturen im Neolithikum, Zwischen Regel und Ausnahme*. Fokus Jungsteinzeit 7 ([Kerpen-Loogh 2019](#)), 53–71.

Do we find in wells of the Linear Pottery Culture traces of ritual structures and do they follow the concept of cultic buildings? Are they the rule or the exception? In this view this article tries to clear a path in the thicket of ‘sacrifice’, ‘ritual’ and ‘cult’. At first it becomes apparent that wells in the Early Neolithic and Linear Pottery are the rule and not the exception. Gaps of evidence are the result of research and varied conservation parameters. Based on current excavation Results and the reflection of research history it will be demonstrated that the evidence for a real ‘cult of the wells’ only exists in the modern interpretation of this category of features. It is more likely that the so called structured depositions found in the wells are only in some exceptional cases perhaps motivated by ritual-cultish reasons and mostly based on everyday practices.

Keywords: wells | cult | religion | sacrifice | Linear Pottery Culture | prestige | structured deposition

Finden wir in bandkeramischen Brunnen rituelle Strukturen und stellen sie Kultbauten dar? Sind sie Regelbefund oder Ausnahme? Hierauf versucht der vorliegende Beitrag eine Schneise in das Dickicht von “Opfern”, “Ritualen” und “Kult” zu schlagen. Zunächst wird deutlich, dass Brunnen auch in der Bandkeramik eher die Regel als eine Ausnahme darstellen. Die Fundlücken sind forschungsgeschichtlich bedingt und von variierenden Erhaltungsparametern bestimmt. Ausgehend von aktuellen Grabungsergebnissen und in Reflektion der Forschungsgeschichte wird gezeigt, dass die Belege für einen echten “Brunnenkult” nicht ausreichen und es sie nur in der aktuellen Auslegung dieser Befundgattung zu geben scheint. Die Ursachen für die Niederlegungen in Brunnen stehen eher mit weiteren Aktivitäten in der Siedlung im Zusammenhang. Nur in Ausnahmefällen sind rituell-kultische Gründe in Betracht zu ziehen.

Keywords: Brunnen | Kult | Religion | Opfer | Bandkeramik | Prestige | strukturierte Niederlegungen

Religion

PURZYCKI 2020

Benjamin Grant Purzycki & Richard Sosis, *Resistance, Subversion, and the Absence of Religion in Traditional Societies*. [unknown \(2020\), preprint, 1–20](#). .

How prevalent is religious doubt among the traditional, small-scale populations typically studied by anthropologists? Do traditional peoples resist religious mores? If so, how? Our chapter aims to answer these questions. We first consider the claim that some small-scale populations lack religion, or certain forms of religion, by examining several ethnographic case studies from around the world. We then discuss cases where populations incorporate subversion into religious traditions. We conclude by looking forward and recommending directions for future research on nonbelief and doubt among traditional populations.