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References

Aktuell

Darvill 2023

Timothy Darvill, *Times they are a-changin', A response to Magli and Belmonte*. Antiquity **97** (2023), 752–754.

Magli 2023

Giulio Magli & Juan Antonio Belmonte, *Archaeoastronomy and the alleged 'Stonehenge calendar'*. Antiquity **97** (2023), 745–751.

In a recent Antiquity article, Darvill (2022) proposed that the mid third-millennium BC Stage 2 sarsen settings of Stonehenge (comprising the Trilithon Horseshoe, Sarsen Circle and the Station Stone Rectangle) were conceived in order to represent a calendar year of 365.25 days—that is, a calendar identical in duration to the Julian calendar. In the present article, the authors argue that this proposal is unsubstantiated, being based as it is on a combination of numerology, astronomical error and unsupported analogy.

Keywords: Prehistoric Britain | Stonehenge | archaeoastronomy | Egyptian calendar | numerology | analogy

Schmeling 2023

Max Schmeling, Vibeke Manniche & Peter Riis Hansen, *Batch-dependent safety of the BNT162b2 mRNA COVID-19 vaccine*. European Journal of Clinical Investigation **53** (2023), e13998. DOI:10.1111/eci.13998.

The observed variation in SAE rates and seriousness between BTN162b2 vaccine batches in this nationwide study was contrary to the expected homogenous rate and distribution of SAEs between batches. In Denmark and other EU/EEA countries, vaccine quality is monitored according to Official Control Authority Batch Release (OCABR) guidelines and to our knowledge, potential differences in BNT162b2 vaccine batch clinical safety or effectiveness have not been reported previously, for example in pre-authorization trials and subsequent population-based studies. Such effects may be easier to detect in small countries like Denmark where BNT162b2 vaccines during the study period were generally provided in several smaller batches.

Amerika

Pino 2023

Mario Pino & Tom D. Dillehay, *Monte Verde II, An assessment of new radiocarbon dates and their sedimentological context*. Antiquity **97** (2023), 524–540.

Monte Verde II in southern Chile is one of the most important, and debated, sites for understanding of the early peopling of the Americas. The authors present 43 radiocarbon measurements based on cores of sediments that overlie the archaeological deposits adjacent to the site. Statistical analysis of these dates narrows the

deposition of the earliest sediments sealing the occupational layer to c. 14 550 cal BP. The consistency between the dates of the site's archaeological strata and its adjacent deposits allows not only consolidation of the site's chronology, but also illustration of how a multi-pronged approach can inform debates surrounding the peopling of new lands—in the Americas or elsewhere.

Keywords: Patagonia | Monte Verde | Late Pleistocene | humanmigration | AMS radiocarbon dating | sedimentology

Anthropologie

Akimova 2023

Evelina T. Akimova, Tobias Wolfram, Xuejie Ding, Felix C. Tropf & Melinda C. Mills, *Polygenic predictions of occupational status GWAS elucidate genetic and environmental interplay for intergenerational status transmission, careers, and health.* bioRxiv **2023**, June 19, 1–37. DOI:10.1101/2023.03.31.534944.

bioRxiv2023-06.19-Supplement1.pdf, bioRxiv2023-06.19-Supplement2.xlsx

Socioeconomic status (SES) impacts health and the life course. This GWAS on sociologically informed occupational status measures (ISEI, SIOPS, and CAMSIS) using the UKBiobank (N=273,157) identified 106 genetic variants of which 8 are novel to the study of SES. Genetic correlation analyses point to a common genetic factor for SES. Within-family prediction and its reduction was attributable in equal parts to genetic nurture and assortative mating. Using polygenic scores from population predictions of 5-8 %, we, firstly, showed that cognitive and non-cognitive traits – including scholastic and occupational motivation and aspiration – link genetic scores to occupational status. Second, 62 % of the intergenerational transmission of occupational status can be ascribed to non-genetic inheritance (e.g., family environment). Third, the link between genetics, occupation, and health are interrelated with parental occupational status confounding the genetic prediction of general health. Finally, across careers, genetic prediction compresses during midcareer with divergence in status at later stages.

Keywords: Occupational Status | Intergenerational Transmission | GWAS | Socioeconomic Status | Stratification

We have extensively shown that the prediction attrition within families is in part due to indirect genetic effects or genetic nurture respectively, which also consistently contribute to the latent factor for constructed SES measures. Moreover, a mounting body of evidence suggests that strong assortative mating on this latent factor that has been present for multiple generations. Notably, a higher spousal correlation has been observed for the genetic predictor of educational attainment than for the actual phenotype. This phenomenon may partially account for why causal genetic variants display a stronger predictive power for occupational status between families, as opposed to within families where the variation in these variants is more limited.

Lee 2023

James J. Lee, *The heritability and persistence of social class in England.* PNAS **120** (2023), e2309250120.

This work is a nice illustration of the statistician David Freedman's argument that ingenuity and hard work in the collection of informative data—wearing out the shoe leather—can prove more scientifically rewarding than the sophisticated technical treatment of data that are easier to find.

But the factor of intermarriage is so important in its social and biological consequences that it will be best to use the term "social class" solely in this sense and to lay down that the social class of an individual or his family shall be defined by the aggregate of persons or families, intermarriage with whom will encounter no social obstacles.

If Clark is correct, then social class can be defined more conventionally so as to render Fisher's condition regarding marriage an empirical fact rather than a tautology.

Bibel

Römer 2023

Thomas Römer, *Das Verschwinden der Bundeslade und das Aufkommen des Bilderverbots*. In: Dagmar Kühn, Oliver Dyma & Susanne Maier (Hrsg.), *Über das Alte Testament hinaus, Exegetische, religionsgeschichtliche und archäologische Beiträge – Festschrift für Herbert Niehr*. Kasion 12 (Münster 2023), 445–459.

Für das Reich Judah hat H. Niehr, dem dieser Artikel freundschaftlich und in Anerkennung seiner wissenschaftlichen Verdienste gewidmet ist, viele und wichtige Indizien zusammengetragen, die belegen, dass mit einer Statue Jhwhs im ersten Tempel von Jerusalem zu rechnen ist.

Zusammenfassend ist festzustellen, dass die Ladeerzählung ein weiterer Beleg dafür ist, dass in der Königszeit Abbildungen des Gottes Israels existierten. Wenn die Lade israelitischen Ursprungs ist, ist wohl davon auszugehen, dass sie eine Statue Jhwhs in Stiergestalt beherbergte.

Falls wirklich eine Lade im Zweiten Tempel stand, wurde diese von jüdischen Schriften aus der hellenistischen und römischen Zeit verschwiegen. Es scheint aber plausibler, das auf dem Titusbogen abgebildete Gerät als Schaubrotaltar zu verstehen.

Biologie

Ballester 2023

Joan Ballester et al., *Heat-related mortality in Europe during the summer of 2022*. Nature Medicine (2023), preprint, 1–23. DOI:10.1038/s41591-023-02419-z.

NatMed2023.07-Ballester-Supplement.pdf

Over 70,000 excess deaths occurred in Europe during the summer of 2003. The resulting societal awareness led to the design and implementation of adaptation strategies to protect at-risk populations. We aimed to quantify heat-related mortality burden during the summer of 2022, the hottest season on record in Europe. We analyzed the Eurostat mortality database, which includes 45,184,044 counts of death from 823 contiguous regions in 35 European countries, representing the whole population of over 543 million people. We estimated 61,672 (95 % confidence interval (CI) = 37,643–86,807) heat-related deaths in Europe between 30 May and 4 September 2022. Italy (18,010 deaths; 95 % CI = 13,793–22,225), Spain (11,324; 95 % CI = 7,908–14,880) and Germany (8,173; 95 % CI = 5,374–11,018) had the highest summer heat-related mortality numbers, while Italy (295 deaths per million, 95 % CI = 226–364), Greece (280, 95 % CI = 201–355), Spain (237, 95 % CI = 166–312) and Portugal (211, 95 % CI = 162–255) had the highest heat-related mortality rates. Relative to population, we estimated 56 % more heat-related deaths in

women than men, with higher rates in men aged 0–64 (+41 %) and 65–79 (+14 %) years, and in women aged 80+ years (+27 %). Our Results call for a reevaluation and strengthening of existing heat surveillance platforms, prevention plans and long-term adaptation strategies.

Joan Ballester, Marcos Quijal-Zamorano, Raúl Fernando Méndez Turrubiates, Ferran Pegenaute, François R. Herrmann, Jean Marie Robine, Xavier Basagaña, Cathryn Tonne, Josep M. Antó & Hicham Achebak

Klima

Christ 2023

Andrew J. Christ et al., *Deglaciation of northwestern Greenland during Marine Isotope Stage 11.* science **381** (2023), 330–335.

s381-0330-Supplement1.pdf, s381-0330-Supplement2.zip

Past interglacial climates with smaller ice sheets offer analogs for ice sheet response to future warming and contributions to sea level rise; however, well-dated geologic records from formerly ice-free areas are rare. Here we report that subglacial sediment from the Camp Century ice core preserves direct evidence that northwestern Greenland was ice free during the Marine Isotope Stage (MIS) 11 interglacial. Luminescence dating shows that sediment just beneath the ice sheet was deposited by flowing water in an ice-free environment 416 ± 38 thousand years ago. Provenance analyses and cosmogenic nuclide data and calculations suggest the sediment was reworked from local materials and exposed at the surface <16 thousand years before deposition. Ice sheet modeling indicates that ice-free conditions at Camp Century require at least 1.4 meters of sea level equivalent contribution from the Greenland Ice Sheet.

Andrew J. Christ, Tammy M. Rittenour, Paul R. Bierman, Benjamin A. Keisling, Paul C. Knutz, Tonny B. Thomsen, Nynke Keulen, Julie C. Fosdick, Sidney R. Hemming, Jean-Louis Tison, Pierre-Henri Blard, Jørgen P. Steffensen, Marc W. Caffee, Lee B. Corbett, Dorthe Dahl-Jensen, David P. Dethier, Alan J. Hidy, Nicolas Perdrial, Dorothy M. Peteet, Eric J. Steig & Elizabeth K. Thomas

Ghausi 2023

Sarosh Alam Ghausi, Yinglin Tian, Erwin Zehe & Axel Kleidon, *Radiative controls by clouds and thermodynamics shape surface temperatures and turbulent fluxes over land.* PNAS **120** (2023), e2220400120.

pnas120-e2220400120-Supplement.pdf

Land surface temperatures (LSTs) are strongly shaped by radiation but are modulated by turbulent luxes and hydrologic cycling as the presence of water vapor in the atmosphere (clouds) and at the surface (evaporation) afects temperatures across regions. Here, we used a thermodynamic systems framework forced with independent observations to show that the climatological variations in LSTs across dry and humid regions are mainly mediated through radiative efects. We irst show that the turbulent luxes of sensible and latent heat are constrained by thermodynamics and the local radiative conditions. This constraint arises from the ability of radiative heating at the surface to perform work to maintain turbulent luxes and sustain vertical mixing within the convective boundary layer. This implies that reduced evaporative cooling in dry regions is then compensated for by an increased sensible heat lux and buoyancy, which is consistent with observations. We show that the mean temperature variation across dry and humid regions is mainly controlled by clouds that reduce surface heating by solar radiation. Using satellite observations for cloudy and clear- sky conditions, we show that clouds cool the

land surface over humid regions by up to 7 K, while in arid regions, this efect is absent due to the lack of clouds. We conclude that radiation and thermodynamic limits are the primary controls on LSTs and turbulent lux exchange which leads to an emergent simplicity in the observed climatological patterns within the complex climate system.

Keywords: land–atmosphere interactions | radiation | thermodynamics | clouds

Significance: Land surface temperatures are a key characteristic of climate. Yet, understanding the main factors that shape them remains challenging because of the apparent dependence on many factors, such as radiation, turbulence, water availability, and vegetation. We use a fundamental, physical approach starting with radiation as the main forcing and constraining turbulent luxes by their ability to perform maximum work to generate convective motion. This approach works very well in predicting observed climatological variations in surface temperatures, showing that arid regions are typically warmer due to the stronger solar heating in the absence of clouds. The implication is that the climatological variations of surface temperatures are predominantly shaped by radiation, clouds, and thermodynamic limits.

Kultur

Burmeister 2020

Stefan Burmeister, *Krieger, Warlords, Räuber.* Archäologie in Deutschland **2020**, v, 24–27.

Die germanischen Krieger hielten Römer und Romanen über Jahrhunderte in Atem. Sie waren Bedrohung und Verbündete zugleich. Ihre Mentalität blieb den römischen und mittelalterlichen Beobachtern jedoch immer fremd.

Der germanische Krieger ist ein uns fremdes Wesen und nicht nach unseren heutigen Maßstäben zu verstehen. Viele Beispiele zeigen, dass seine politische und militärische Logik nicht den rationalen Prinzipien folgen, die wir heute gewohnt sind.

Sie sind Fremde, unizivilisiert und stehen außerhalb des römischen Rechts. In dieser Form ist der Barbarenbegriff immer auch eine Herabsetzung der so Identifizierten. Das müssen wir uns heute nicht zu eigen machen. Dennoch stellt man fest, dass wir mit einer gänzlich anderen Mentalität konfrontiert sind. Auch die Christianisierung der Germanen konnte dies nur mit einem dünnen Firnis überdecken.

Der germanische Krieger war wie viele seiner Zeitgenossen anders und ist in seinem Handeln nur aus seiner eigenen Welt heraus zu verstehen.

Metallzeiten

Svizzero 2015

Serge Svizzero, *The collapse of the Úníice culture, Economic explanation based on the "Dutch disease".* Czech Journal of Social Sciences, Business and Economics **4** (2015), iii, 6–18.

Most explanations of social collapse highlight the ecological strain or the role of economic stratification but they hardly try to establish a link between the origins of prosperity and the causes of collapse. Our purpose is to establish such link, i.e. to provide an ex planation of collapse based on the origin of prosperity. For cultures of the Bronze Age, the prosperity came from metalworking, i.e. initially from a mining boom and then to the subsequent activities (bronze production) it allowed. In such context, the collapse can be the result of an economic crisis known

in modern economic analysis as the "Dutch Disease", a term that broadly refers to the harmful consequences of large increases in a country's income. Such explanation is particularly well suited to spell out the collapse of a Central European Early Bronze Age culture, the Únìtice culture (2300-1600 B.C.).

Keywords: Bronze Age | Dutch Disease | Central Europe | Social collapse | Únìtice culture | metalworking

Bronze production on a significant scale first appeared in about 2300 B.C. in the Early Bronze Age central European Únìtice culture, including evidence of the use of the cast-on technique. According to Kienlin (2013: 420-421), in central Europe (Únìtice), the move to tin bronze was a gradual process that only came to an end well into the second millennium B.C. (around 1800/1700 B.C.). So, from 2300 to 1800/1700 B.C., it is likely that Únìtice people have casted various alloys of copper with metals other than tin (arsenical copper, then fahlore copper). After 1800/1700 they produced tin bronze and then they collapsed around 1600 B.C.

Therefore, the bronze producers of the Únìtice culture were probably acting as a monopoly (an oligopoly in fact) in Central Europe, especially because the sole source of tin in Central Europe was the Erzgebirge (Ore Mountains) in Bohemia. They were thus characterized by a lack of economic competition, a lack of viable substitute goods, and the existence of a high monopoly price well above the firm's marginal cost that leads to a high monopoly profit. These profits contributed to the stratification of the Únìtice culture and the emergence of an elite associated with bronze metallurgy. The social ranking and behavioral manifestation of differences between members of EBA Únìticean communities lead to the creation of the princely graves phenomenon, richly furnished tombs, where the hierarchical status distinctions of the deceased were paired with their envisioned affiliation to tribal elites. Two famous burial mounds are located in Saxo-Thuringia in central Germany. At Leubingen, a barrow about 35 meters in diameter and 8–9 meters high; the other famous barrow near Helmsdorf had a similar size. Furthermore, a number of different settlement types – which emerged in the later phase of the EBA – also gives evidence of an increase in social complexity. Indeed, besides hamlets and villages, a special class – the elite – was located on hill-top sites and along important trade routes, with larger settlements and impressive fortifications (Szeverény, 2004).

The mining boom has had two main negative consequences on the people of the Únìtice culture. First, their purchasing power has decreased. For the elite, this was not a major problem because their income had increased with the mining boom. For the other people, especially those who were working in the agriculture sector, their life became more difficult, in particular for the poorest ones. In addition, and this is the second consequence, the output of the agricultural sector has declined. Both consequences have therefore negatively affected the agricultural sector which has finally almost disappeared, triggering the collapse of the whole Únìtice culture.

Methoden

Callaway 2023

Ewen Callaway, *Ancient Teeth Contain Oldest Genetic Data from a Human Relative*. nature **619** (2023), 446.

Two-million-year-old protein sequences identify the sex of fossils and hint at evolutionary relationships.

Other scientists say that the jury is still out on whether ancient proteins will help bring consensus to the picture of hominin evolution, which is built largely from the shapes of bones. There is limited variability in enamel proteins, so the 425 amino acids Cappellini's team used to construct the family tree seem less

informative than the first Neanderthal sequences researchers obtained in 1997; those included around 360 base pairs of mitochondrial DNA, which carries lots of variation, notes Pontus Skoglund, a palaeogeneticist at the Francis Crick Institute in London.

Politik

Reardon 2023

David C. Reardon & Tessa Longbons, *Effects of Pressure to Abort on Women's Emotional Responses and Mental Health*. Cureus **15** (2023), e34456. DOI:10.7759/cureus.34456.

Background: Women who feel pressured to agree to abortion are more likely to experience negative emotional and mental health reactions. But relatively little research has been conducted to explore the types and degree of pressures women face and their associated effects. Our study aims to investigate five types of pressure women may face and a sample of effects that may be associated with unwanted abortions.

Methods: A retrospective survey was distributed through a marketing research firm and completed by 1000 females aged 41 to 45, inclusive, living in the United States. The survey instrument included demographic questions and analog scales for respondents to rate the pressure to abort arising from male partners, family members, other persons, financial concerns, and other circumstances and 10 variables related to both positive and negative outcomes.

Results: Among 226 respondents who reported a history of abortion, perceived pressure to abort was significantly associated with more negative emotions; more disruption of daily life, work, or relationships; more frequent thoughts, dreams, or flashbacks to the abortion; more frequent feelings of loss, grief or sadness about the abortion; more moral and maternal conflict over the abortion decision; a decline in overall mental health that they attribute to their abortions; more desire or need for help to cope with negative feelings about the abortion. Overall, 61 % reported high levels of pressure on at least one scale. Women with a history of abortion were four times more likely to quit the survey than women who did not have abortions, and those with a history of feeling pressured to abort also reported higher levels of stress related to completing the survey.

Discussion Perceived pressures to choose abortion should be assessed before an abortion to better guide risk assessments, decision-making, and analyses of post-abortion adjustments in light of these risk factors. A history of abortion, especially when there was pressure to abort, is associated with more stress completing questionnaires touching on abortion experiences and with a higher dropout rate, a finding that is consistent with the view that abortion surveys are likely to underrepresent the experiences of the women who experience the most stress and negative reactions to their abortions. Abortion providers should screen for perceived pressures to abort and be prepared to offer counseling and services that will help women to avoid unwanted abortions.

Keywords: post-abortion mental health | post-abortion adjustments | health policy | pregnancy loss | unsafe abortions | reproductive rights | mental health | abortion

Reardon 2023

David C. Reardon, Katherine A. Rafferty & Tessa Longbons, *The Effects of Abortion Decision Rightness and Decision Type on Wo-*

men's Satisfaction and Mental Health. Cureus **15** (2023), e38882. DOI:10.7759/cureus.38882.

Background: A case series report based on the Turnaway Study has previously concluded that 99 % of women with a history of abortion will continue to affirm satisfaction with their decisions to abort. Those findings have been called into question due to a low participation rate (31 %) and reliance on a single yes/no assessment of decision satisfaction.

Aim: To utilize more sensitive scales in assessing decision satisfaction and the associated mental health outcomes women attribute to their abortions.

Method A retrospective survey was completed by 1,000 females, aged 41-45, living in the United States. The survey instrument included 11 visual analog scales for respondents to rate their personal preferences and outcomes they attributed to their abortion decisions. A categorical question allowed women to identify if their abortions were wanted and consistent with their own values and preferences, inconsistent with their values and preferences, unwanted, or coerced. Linear regression models were tested to identify which of three decision scales best predicted positive or negative emotions, effects on mental health, emotional attachment, personal preferences, moral conflict, and other factors relevant to an assessment of satisfaction with a decision to abort.

Results: Of 226 women reporting a history of abortion, 33 % identified it as wanted, 43 % as accepted but inconsistent with their values and preferences, and 24 % as unwanted or coerced. Only wanted abortions were associated with positive emotions or mental health gains. All other groups attributed more negative emotions and mental health outcomes to their abortions. Sixty percent reported they would have preferred to give birth if they had received more support from others or had more financial security.

Conclusions: Perceived pressure to abort is strongly associated with women attributing more negative mental health outcomes to their abortions. The one-third of women for whom abortion is wanted and consistent with their values and preferences are most likely over-represented in studies initiated at abortion clinics. More research is needed to understand better the experience of the two-thirds of women for whom abortion is unwanted, coerced, or otherwise inconsistent with their own values and preferences. Categories: Obstetrics/Gynecology, Psychology, Public Health

Keywords: coerced abortion | unwanted abortion | abortion | mental health | reproductive rights | unsafe abortions | pregnancy loss | health policy | post-abortion adjustments | post-abortion mental health

Story or Book

Lemos 2023

Rennan Lemos, *Nubia.* Antiquity **97** (2023), 767–769.

Sarah M. Schellinger. 2022. Nubia: lost civilizations. London: Reaktion Books; 978-17891-465-92 hardback £15.

Nubia: lost civilizations presents the history of Nubia using clear language, free of jargon, and this is a strength. The book also helps to raise awareness of Nubia as a 'civilisation' in its own right—a praiseworthy attribute. In its overall subscription to traditional evolutionist narratives, however, the book disappoints, missing the opportunity to present the full extent of Nubia's diversity and alternative complexities that arose from millennia of interactions between different cultural entities and social formations.

Michaelson 2023

Greg Michaelson, *Stone Age*. Antiquity **97** (2023), 761–762.

Sidra Ansari & Chris Fenton Thomas, illustrated by Rosie Haine 2022. A Ladybird book: the Stone Age. London: Penguin Random House; 978-0-241-54419-8 hardback £5.99.

Sidra Ansari's and Chris Fenton-Thomas's The Stone Age is also suitable for upper primary and lower secondary students. Here, the approach is topic driven. Thus, after brief accounts of the first peoples and how they spread from Africa, we learn about shelter, painting, hunting, fire, extreme climate, farming and clothing, along the transition to the Neolithic. Both books offer hopeful signs that popularisations of prehistory can reflect a more thoughtful, cautious and research-led archaeology, pushing back against long-lived processual certainties.

Michaelson 2023

Greg Michaelson, *Human journey*. Antiquity **97** (2023), 760–761.

Alice Roberts, illustrated by James Weston Lewis. 2020. Human journey. London: Red Shed; 978-1-4052-9145-3 paperback £12.99.

Alice Roberts' Human journey offers a highly accessible introduction to prehistory for upper primary and lower secondary school children. Overall, this book is a good read in its own right and should prove a valuable starting point for further classroom or personal investigation.

Robin 2023

Guillaume Robin, *Préhistoire du futur*. Antiquity **97** (2023), 758–760.

Pierre Gouletquer. 2022. Préhistoire du futur: archéologies intempestives du territoire. Toulouse: Anacharsis; 979-10-279-0448-8 paperback E9.

Pierre Gouletquer is now a retired archaeologist fromwestern Brittany. Trained as a geologist, he worked as a CNRS researcher (Centre national de la recherche scientifique) from 1964 to 2004. His main research focused on the Mesolithic period of Brittany, using large-scale fieldwalking surveys over multiple years in the Département du Finistère.

Préhistoire du futur presents the author's personal reflections on the discipline. Do not expect references to philosophers or theoretical archaeologists: the style is non-academic (with no references), deliberately provocative, and often humorous, supported by several comic-style drawings by the author. The book originated as a reaction against the institutional archaeology of the time and its focus on excavation and artefact studies, and against the claim that archaeology is a science (rather, for Gouletquer, archaeology is an art of storytelling).