

References

Aktuell

BARDOSH 2022

Kevin Bardosh & Allison Krug et al., *COVID-19 Vaccine Boosters for Young Adults, A Risk-Benefit Assessment and Five Ethical Arguments against Mandates at Universities*. [unknown \(2022\)](#), preprint, 1–50. DOI:10.2139/ssrn.4206070.

Students at North American universities risk disenrollment due to third dose COVID-19 vaccine mandates. We present a risk-benefit assessment of boosters in this age group and provide five ethical arguments against mandates. We estimate that 22,000 – 30,000 previously uninfected adults aged 18-29 must be boosted with an mRNA vaccine to prevent one COVID-19 hospitalisation. Using CDC and sponsor-reported adverse event data, we find that booster mandates may cause a net expected harm: per COVID-19 hospitalisation prevented in previously uninfected young adults, we anticipate 18 to 98 serious adverse events, including 1.7 to 3.0 booster-associated myocarditis cases in males, and 1,373 to 3,234 cases of grade =3 reactogenicity which interferes with daily activities. Given the high prevalence of post-infection immunity, this risk-benefit profile is even less favourable. University booster mandates are unethical because:

- 1) no formal risk-benefit assessment exists for this age group;
- 2) vaccine mandates may result in a net expected harm to individual young people;
- 3) mandates are not proportionate: expected harms are not outweighed by public health benefits given the modest and transient effectiveness of vaccines against transmission;
- 4) US mandates violate the reciprocity principle because rare serious vaccine-related harms will not be reliably compensated due to gaps in current vaccine injury schemes; and
- 5) mandates create wider social harms.

We consider counter-arguments such as a desire for socialisation and safety and show that such arguments lack scientific and/or ethical support. Finally, we discuss the relevance of our analysis for current 2-dose COVID-19 vaccine mandates in North America.

Kevin Bardosh, Allison Krug, Euzebiusz Jamrozik, Trudo Lemmens, Salmaan Keshavjee, Vinay Prasad, Martin A. Makary, Stefan Baral & Tracy Beth Høeg

MONGLE 2022

Carrie S. Mongle, Kelsey D. Pugh, David S. Strait & Frederick E. Grine, *Modelling hominin evolution requires accurate hominin data*. [Nature Ecology & Evolution 6 \(2022\)](#), 1090–1091.

While there is nothing inherently wrong with analysing a compilation of characters drawn from multiple studies, the uncritical assemblage of such data may allow poorly conceived and/or redundant characters to influence study outcomes. Such is the case for the hominin ‘supermatrix’ compiled by Dembo et al. and used by Püschel et al. As many as 40 % of the characters comprising that matrix^{2,3} are redundant (Supplementary Table 1), while many others are of questionable phylo-

genetic value. For example, Dembo et al. used six different characters to describe the articular tubercle of the zygomatic whereas one character would have sufficed.

PÜSCHEL 2022

Hans P. Püschel, Ornella C. Bertrand, Joseph E. O’ Reilly, René Bobe & Thomas A. Püschel, *Modelling hominin evolution requires accurate hominin data, Reply to C. S. Mongle et al.* [Nature Ecology & Evolution 6 \(2022\), 1092–1094.](#)

More important than what Mongle et al. criticize about our paper is what they choose to omit. None of our divergence-time estimates are contrary to the current palaeoanthropological evidence. The Conclusions reached by Mongle et al. are not supported, as their Results are almost identical to ours (Fig. 1 and Supplementary Table 2), thus showing the robustness of our analyses to minor date differences (which are bound to emerge as the fossil record improves). Furthermore, we also show that some of their criticisms are based on either incorrect information and/or flawed interpretations of the available evidence.

WEISS 2022

Harvey Weiss, *Pyramid building and collapse.* [PNAS 119 \(2022\), e2212483119.](#)

Paleoclimate proxy data, including those from lake, speleothem, and marine cores, provide the dynamic environmental stage for the archaeological space–time theater. In great detail, they define the changing environments within which some ancient societies deployed irrigation agriculture surpluses and then reacted adaptively to their abrupt and inalterable diminution. At the construction of the High Aswan Dam 50 y ago, Nile flow seasonal inundation ceased forever, but, as Sheisha et al. (3) document, its dynamic Holocene history remains preserved within its riparian sediments.

Anthropologie

MENEGANZIN 2022

Andra Meneganzin, Telmo Pievani & Giorgio Manzi, *Pan-Africanism vs. single-origin of Homo sapiens, Putting the debate in the light of evolutionary biology.* [Evolutionary Anthropology 31 \(2022\), 199–212.](#)

The scenario of Homo sapiens origin/s within Africa has become increasingly complex, with a pan-African perspective currently challenging the long-established single-origin hypothesis. In this paper, we review the lines of evidence employed in support of each model, highlighting inferential limitations and possible terminological misunderstandings. We argue that the metapopulation scenario envisaged by panAfrican proponents well describes a mosaic diversification among late Middle Pleistocene groups. However, this does not rule out a major contribution that emerged from a single population where crucial derived features—notably, a globular braincase—appeared as the result of a punctuated, cladogenetic event. Thus, we suggest that a synthesis is possible and propose a scenario that, in our view, better reconciles with consolidated expectations in evolutionary theory. These indicate cladogenesis in allopatry as an ordinary pattern for the origin of a new species, particularly during phases of marked climatic and environmental instability.

Keywords: Anagenesis versus cladogenesis | Mosaic evolution | pan-African hypothesis | punctuationism | single-origin hypothesis | speciation of Homo sapiens

Judentum

HEZSER 2022

Catherine Hezser, *Between Scholasticism and Populism, Rabbinic and Christian Networks in the Roman Empire*. [Annali di Storia dell'Esegesi](#) **39** (2022), 27–46.

From the fourth century onwards, when the Roman Empire had become Christian, bishops' tone seems to have become more entitled and assertive as far as a claimed Christian superiority over Jews and pagans was concerned. The bishops' authority and influence had increased.

Throughout the first five centuries C.E., rabbis never obtained the official authority that bishops held. They were neither official leaders of local communities nor were they backed by the emperor. Their networks were much more limited in geographical and ethnic scope. The main function of the rabbinic collegial networks was to discuss and develop halakhah. The function of the wider rabbinic networks, including disciples and lay people, was the expansion of the pool of Torah scholars, Torah instruction and halakhic advice.

Nevertheless, certain similarities between rabbis' and Christian leaders' networks existed. Both rabbis and some church fathers such as Origen and Clement of Alexandria had circles of students. Rabbis and bishops established and maintained ties to more or less small groups of colleague-friends they considered allies. They were both keen on instructing, advising, and controlling the views and practices of their lay co-religionists. Just as Christian leaders wanted lay-Christians to follow their theological and moral advice, rabbis wanted Jewish lay-people to adhere to their halakhic instructions. The difference is that rabbis lacked the authority of bishops with regard to enforcing their rules. They depended on lay people's veneration and respect rather than on official control mechanisms. Whereas Christian leaders used letters to communicate with local and regional Christian collectives, rabbis focused on oral debate and discussion with fellow-scholars and disciples. We can therefore conclude that the rabbinic network leaned more to the scholastic side, whereas the Christian network was more populist in nature. These distinctions must be considered relative rather than categorical, though.

Jungpaläolithikum

FRENCH 2022

Jennifer C. French & April Nowell, *Growing up Gravettian, Bioarchaeological perspectives on adolescence in the European Mid-Upper Paleolithic*. [Journal of Anthropological Archaeology](#) **67** (2022), 101430, 1–26.

JAnthArch67-a101430-Supplement.pdf

Adolescence is a stage of development unique to the human life course, during which key social, physical, and cognitive milestones are reached. Nonetheless, both the experience of adolescence and the role(s) of adolescents in the past have received little scholarly attention. Here we combine a broad interpretative framework for adolescence among prehistoric hunter-gatherers with direct bioarchaeological (burial) data to examine the lives of teenagers in the European Mid-Upper Paleolithic or Gravettian (≈ 35 –25,000 years ago). Comparisons of the burial practices of individuals of different age classes (infant, child, adolescent, adult), as well as between adolescents who died at different ages, reveal some patterns related to adolescence in these communities, including 1) fewer distinctions based on sex among adolescents compared to adults; 2) differences between the sexes in age-at-death

within our ‘adolescent’ age class—with females disproportionately dying later—potentially indicating high risks associated with first pregnancy; 3) distinctions in grave goods and diet among adolescents of different ages-at-death which we tentatively interpret as providing an emic perspective on the beginning of adolescence as defined by Pleistocene hunter-gatherers. Nonetheless, our analysis supports long-standing models of a distinct, continent-wide European Mid-Upper Paleolithic funerary tradition, with the burial data expressing social cohesion, rather than social distinctions, between age classes.

Keywords: Adolescence | Upper Paleolithic | Gravettian | Hunter-gatherer | Burial | Grave goods | Social organization | Personal Adornment | Ochre | Social complexity

MALONEY 2022

Tim Ryan Maloney, India Ella Dilkes-Hall & Andika Arief Drajat Priyatno et al., *Surgical amputation of a limb 31,000 years ago in Borneo*. *nature* **609** (2022), 547–551.

n609-0547-Supplement.pdf

The prevailing view regarding the evolution of medicine is that the emergence of settled agricultural societies around 10,000 years ago (the Neolithic Revolution) gave rise to a host of health problems that had previously been unknown among non-sedentary foraging populations, stimulating the first major innovations in prehistoric medical practices^{1,2}. Such changes included the development of more advanced surgical procedures, with the oldest known indication of an ‘operation’ formerly thought to have consisted of the skeletal remains of a European Neolithic farmer (found in Buthiers-Boulancourt, France) whose left forearm had been surgically removed and then partially healed³. Dating to around 7,000 years ago, this accepted case of amputation would have required comprehensive knowledge of human anatomy and considerable technical skill, and has thus been viewed as the earliest evidence of a complex medical act³. Here, however, we report the discovery of skeletal remains of a young individual from Borneo who had the distal third of their left lower leg surgically amputated, probably as a child, at least 31,000 years ago. The individual survived the procedure and lived for another 6–9 years, before their remains were intentionally buried in Liang Tebo cave, which is located in East Kalimantan, Indonesian Borneo, in a limestone karst area that contains some of the world’s earliest dated rock art⁴. This unexpectedly early evidence of a successful limb amputation suggests that at least some modern human foraging groups in tropical Asia had developed sophisticated medical knowledge and skills long before the Neolithic farming transition.

Tim Ryan Maloney, India Ella Dilkes-Hall, Melandri Vlok, Adhi Agus Oktaviana, Pindi Setiawan, Andika Arief Drajat Priyatno, Marlon Ririmasse, I. Made Geria, Muslimin A. R. Effendy, Budi Istiawan, Falentinus Triwijaya Atmoko, Shinatria Adhityatama, Ian Moffat, Renaud Joannes-Boyau, Adam Brumm & Maxime Aubert

ROBERTS 2022

Charlotte Ann Roberts, *A surgical dawn 31,000 years ago in Borneo*. *nature* **609** (2022), 472–473.

Evidence that a child in a hunter-gatherer society survived amputation offers a remarkable insight into the origins of surgery. It challenges the current view that such procedures emerged alongside farming some 10,000 years ago.

Klima

SHEISHA 2022

Hader Sheisha, David Kaniewski, Nick Marriner, Morteza Djamali & Christophe Morhange et al., *Nile waterscapes facilitated the construction of the Giza pyramids during the 3rd millennium BCE*. [PNAS 119 \(2022\), e2202530119](#).

[pnas119-e2202530119-Supplement1.pdf](#), [pnas119-e2202530119-Supplement2.xlsx](#), [pnas119-e2202530119-Comment1.pdf](#)

The pyramids of Giza originally overlooked a now defunct arm of the Nile. This fluvial channel, the Khufu branch, enabled navigation to the Pyramid Harbor complex but its precise environmental history is unclear. To fill this knowledge gap, we use pollen-derived vegetation patterns to reconstruct 8,000 y of fluvial variations on the Giza floodplain. After a high-stand level concomitant with the African Humid Period, our Results show that Giza's waterscapes responded to a gradual insolation-driven aridification of East Africa, with the lowest Nile levels recorded at the end of the Dynastic Period. The Khufu branch remained at a high-water level ($\approx 40\%$ of its Holocene maximum) during the reigns of Khufu, Khafre, and Menkaure, facilitating the transportation of construction materials to the Giza Pyramid Complex.

Keywords: Great pyramid | Nile | Giza Harbour

Hader Sheisha, David Kaniewski, Nick Marriner, Morteza Djamali, Gamal Younes, Zhongyuan Chen, Gad El-Qady, Amr Saleem, Alain Véron & Christophe Morhange

Significance: The pyramids of Giza constitute one of the world's most iconic cultural landscapes and have fascinated humanity for thousands of years. Indeed, the Great Pyramid of Giza (Khufu Pyramid) was one of the Seven Wonders of the Ancient World. It is now accepted that ancient Egyptian engineers exploited a former channel of the Nile to transport building materials and provisions to the Giza plateau. However, there is a paucity of environmental evidence regarding when, where, and how these ancient landscapes evolved. New palaeoecological analyses have helped to reconstruct an 8,000-year fluvial history of the Nile in this area, showing that the former waterscapes and higher river levels around 4,500 years ago facilitated the construction of the Giza Pyramid Complex.

VALLICROSA 2022

Helena Vallicrosa, *Beyond nitrogen and phosphorus*. [Nature Ecology & Evolution 6 \(2022\), 1056–1057](#).

An experiment in secondary forests in the Democratic Republic of the Congo finds that calcium, an overlooked soil nutrient, is scarcer than phosphorus, and represents a potentially greater limitation on tropical forest growth.

Kultur

BOYD 2022

Robert Boyd & Peter J. Richerson, *Large-scale cooperation in small-scale foraging societies*. [Evolutionary Anthropology 31 \(2022\), 175–198](#).

We present evidence that people in small-scale mobile hunter-gatherer societies cooperated in large numbers to produce collective goods. Foragers engaged in large-scale communal hunts and constructed shared capital facilities; they made shared investments in improving the local environment; and they participated

in warfare, formed enduring alliances, and established trading networks. Large-scale collective action often played a crucial role in subsistence. The provision of public goods involved the cooperation of many individuals, so each person made only a small contribution. This evidence suggests that large-scale cooperation occurred in the Pleistocene societies that encompass most of human evolutionary history, and therefore it is unlikely that large-scale cooperation in Holocene food producing societies results from an evolved psychology shaped only in small-group interactions. Instead, large-scale human cooperation needs to be explained as an adaptation, likely rooted in distinctive features of human biology, grammatical language, increased cognitive ability, and cumulative cultural adaptation.

Keywords: collective action | communal foraging | cooperation | foragers | hunter-gatherers | mismatch hypothesis | public goods

MAARANEN 2022

Nina Maaranen, Jessica Walker & Arkadiusz Sołtysiak, *Societal segmentation and early urbanism in Mesopotamia, Biological distance analysis from Tell Brak using dental morphology*. *Journal of Anthropological Archaeology* **67** (2022), 101421, 1–10.

JAnthArch67-a101421-Supplement.zip

The urbanization of Mesopotamia in the 4th millennium BCE led to unprecedented social, economic, and political changes. Tell Brak, located in the Syrian Khabur basin, is one of the best-known early urban sites from this period. Surveys suggest that urban growth at Tell Brak resulted from peripheral expansion driven by the migration of several distinct groups; however, it is not known whether these groups remained recognizably distinct within the newly formed urban center.

In the current study, the impact of early urbanization on social organization was explored using non-metric dental data from skeletons excavated from the main site at Tell Brak (n = 111) and its satellite mound Tell Majnuna (n = 179). The Arizona State University Dental Anthropology System (ASUDAS) was employed to examine biodistance between population subsets from the period of early urbanization in the Late Chalcolithic (LC) and the Early Bronze Age (EBA).

The results demonstrate differences in dental morphology among the LC groups indicating segmentation within the early urban population at Tell Brak. Patterns of social organization associated with urbanization have thus framed the socio-cultural landscape of even the earliest cities, and bioarchaeological data can be a useful tool for understanding both ancient and modern urbanization.

Keywords: ASUDAS | Biodistance analysis | Mean measure of divergence | Gower distance | Late Chalcolithic | Near East | Urbanization | Community identity | Dental anthropology

Politik

MEINHOF 1972

Ulrike Meinhof, *Die Aktion des Schwarzen September in München, Zur Strategie des antiimperialistischen Kampfes*. *RAF* **1972**, Nov. 15. <<http://socialhistoryportal.org/raf/text/307209>>.

Daß es noch besser gewesen wäre, Genscher als Geisel zu nehmen, weiß der Schwarze September selbst. Auf dem ungeheuer hohen Niveau von marxistischer Theorie und revolutionärer Praxis, das der Schwarze September hat, braucht man ihm das nicht zu sagen. Die Erkenntnis, daß ein Austausch der israelischen Geiseln gegen die Charaktermasken der sozialliberalen Koalition noch besser gewesen wäre, insofern er die Komplizenschaft Israels/westdeutscher Imperialismus zerstört hätte,

Israel isoliert, den Widerspruch zwischen dem Faschismus des entfalteten Imperialismus und Israels Nazi-Faschismus (siehe Kap. Nationalsozialismus) auch noch auf die Spitze getrieben hätte, Widersprüche im System ausgenutzt im Sinne von: Die Kräfte des Imperialismus zersplittern! – Diese Erkenntnis kann nicht als Kritik an der Aktion vorgebracht werden, insofern wir sie der Aktion selbst verdanken. Diese Erkenntnis ist ein Paradebeispiel dafür, wie die Praxis die Theorie vorantreibt, die Theorie die Praxis – für die Dialektik von Theorie und Praxis.

Religion

FOSTER 2009

Kevin R. Foster & Hanna Kokko, *The evolution of superstitious and superstition-like behaviour*. [Proc. Royal Society B 276 \(2009\), 31–37.](#)

[ProcRSocB276-0031-Supplement.pdf](#)

Superstitious behaviours, which arise through the incorrect assignment of cause and effect, receive considerable attention in psychology and popular culture. Perhaps owing to their seeming irrationality, however, they receive little attention in evolutionary biology. Here we develop a simple model to define the condition under which natural selection will favour assigning causality between two events. This leads to an intuitive inequality—akin to an amalgam of Hamilton’s rule and Pascal’s wager—that shows that natural selection can favour strategies that lead to frequent errors in assessment as long as the occasional correct response carries a large fitness benefit. It follows that incorrect responses are the most common when the probability that two events are really associated is low to moderate: very strong associations are rarely incorrect, while natural selection will rarely favour making very weak associations. Extending the model to include multiple events identifies conditions under which natural selection can favour associating events that are never causally related. Specifically, limitations on assigning causal probabilities to pairs of events can favour strategies that lump non-causal associations with causal ones. We conclude that behaviours which are, or appear, superstitious are an inevitable feature of adaptive behaviour in all organisms, including ourselves.

Keywords: optimality theory | behavioural ecology | animal behaviour

ONO 1987

Koichi Ono, *Superstitious Behavior in Humans*. [Journal of the Experimental Analysis of Behavior 47 \(1987\), 261–271.](#)

Twenty undergraduate students were exposed to single response-independent schedules of reinforcer presentation, fixed-time or variable-time, each with values of 30 and 60 s. The reinforcer was a point on a counter accompanied by a red lamp and a brief buzzer. Three color signals were presented, without consistent relation to reinforcer or to the subjects’ behavior. Three large levers were available, but the subjects were not asked to perform any particular behavior. Three of the 20 subjects developed persistent superstitious behavior. One engaged in a pattern of lever-pulling responses that consisted of long pulls after a few short pulls; the second touched many things in the experimental booth; the third showed biased responding called sensory superstition. However, most subjects did not show consistent superstitious behavior. Reinforcers can operate effectively on human behavior even in the absence of a response-reinforcer contingency and can, in some cases, shape stable superstitious patterns. However, superstitious behavior is not a consistent outcome of exposure of human subjects to response-independent reinforcer deliveries.

Keywords: superstitious behavior | response-independent reinforcers | fixed-time schedules | variable-time schedules | lever pulling | humans

PRONIN 2006

Emily Pronin, Daniel M. Wegner, Kimberly McCarthy & Sylvia Rodriguez, *Everyday Magical Powers, The Role of Apparent Mental Causation in the Overestimation of Personal Influence*. [Journal of Personality and Social Psychology](#) **91** (2006), 218–231.

These studies examined whether having thoughts related to an event before it occurs leads people to infer that they caused the event—even when such causation might otherwise seem magical. In Study 1, people perceived that they had harmed another person via a voodoo hex. These perceptions were more likely among those who had first been induced to harbor evil thoughts about their victim. In Study 2, spectators of a peer’s basketball-shooting performance were more likely to perceive that they had influenced his success if they had first generated positive visualizations consistent with that success. Observers privy to those spectators’ visualizations made similar attributions about the spectators’ influence. Finally, additional studies suggested that these results occur even when the thought-about outcome is viewed as unwanted by the thinker and even in field settings where the relevant outcome is occurring as part of a live athletic competition.

Keywords: magical beliefs | causal inference | self-perception | apparent mental causation | conscious will

WAGNER 1987

Gregory A. Wagner & Edward K. Morris, “*Superstitious*” *Behavior in Children*. [The Psychological Record](#) **37** (1987), 471–488.

The behavior of 12 preschool children was examined for the emergence of superstitious behavior under response-independent, fixed-time (FT) schedules of reinforcement. Three experimental phases were conducted: (a) two 8-min baseline sessions, (b) six 10-min experimental sessions of FT 15- or 30-sec marble delivery, and (c) two final 8-min baseline sessions. Sessions were videotaped and scored; mean interobserver agreement ranged from 80.0 to 98.6%. Results showed that responding emerged on the FT schedules for seven of the children, increasing in probability towards the end of the intervals; five children either displayed responses having no discernible temporal pattern or they had no specifiable dominant response. A test of the reinforcing function of the marbles showed that they generally functioned as reinforcers. Discussion focused on the fixed-time length, the behavioral processes involved, methodological qualifications, and the nature of the responding engendered.