

References

Afrika

JUDD 2009

Margaret Judd & Joel Irish, *Dying to serve, The mass burials at Kerma*. *Antiquity* **83** (2009), 709–722.

High ranking burial mounds in Bronze Age Sudan featured burials in a corridor leading to the central burial – supposedly of a king. Were the ‘corridor people’ prisoners captured during periodic raids on Egypt, or local retainers who followed their king in death? The authors use the skeletal material to argue the second hypothesis – coincidentally that advanced by George Reisner, the original excavator.

Keywords: Sudan | Nubia | Kerma | sacrifice | ethnicity

KYRIACOU 2015

K. Kyriacou, J. E. Parkington, M. Will, A. W. Kandel & N. J. Conard, *Middle and Later Stone Age shellfish exploitation strategies and coastal foraging at Hoedjiespunt and Lynch Point, Saldanha Bay, South Africa*. *Journal of Archaeological Science* **57** (2015), 197–206.

Hoedjiespunt 1 has long been recognized as one of the earliest Middle Stone Age (MSA) shell-bearing sites on the southwestern Cape coast. Together with the closely adjacent and roughly contemporary site at Sea Harvest, and the extensively documented site of Ysterfontein, Hoedjiespunt provides a record of MSA people’s adaptations to coastal environments and systematic exploitation of marine resources at a crucial time in human evolution. The site was re-opened for excavation in 2011, and the combined shellfish assemblage from the original 1994–1996 excavations and the more recent field season was analysed. This augmented assemblage displays a number of commonalities with those from other MSA sites along the Atlantic west coast. The abundance of granite limpets (*Cymbula granatina*) and black mussels (*Choromytilus meridionalis*), and large size of limpets recovered from Hoedjiespunt is consistent with the small-scale and selective exploitation of a limited range of accessible species during short, episodic visits to the coast by highly mobile huntergatherers. The nature of the stone artefact assemblages that are associated with the shellfish remains, characterized by low lithic densities, expedient use of predominantly local raw materials, little retouch on-site but import of non-local silcrete tools, supports this interpretation. As a regional comparison, the shellfish assemblages from three Later Stone Age (LSA) middens at Lynch Point in Saldanha Bay were also analysed. The diversity of the shellfish remains from Lynch Point, in combination with much smaller limpet sizes, are indicative of broader and more flexible coastal foraging strategies and more intensive shellfish collection during the LSA in this region.

Keywords: Middle Stone Age | Later Stone Age | Coastal adaptations | Intertidal shellfish | Anatomically modern humans | Limpet and mussel size

Aktuell

DEE 2019

Michael W. Dee & Margot Kuitems, *Duration of activity inestimable due to imprecision of the data*. [PNAS 116 \(2019\), 22907](#).

Even if all of the dates are simulated to come from the same calendar year, the Span function tends to produce a 2s range that extends for more than a century.

KRAUS 2019

Michael W. Kraus, Brittany Torrez, Jun Won Park & Fariba Ghayebi, *Evidence for the reproduction of social class in brief speech*. [PNAS 116 \(2019\), 22998–23003](#).

[pnas116-22998-Supplement.pdf](#)

Economic inequality is at its highest point on record and is linked to poorer health and well-being across countries. The forces that perpetuate inequality continue to be studied, and here we examine how a person's position within the economic hierarchy, their social class, is accurately perceived and reproduced by mundane patterns embedded in brief speech. Studies 1 through 4 examined the extent that people accurately perceive social class based on brief speech patterns. We find that brief speech spoken out of context is sufficient to allow respondents to discern the social class of speakers at levels above chance accuracy, that adherence to both digital and subjective standards for English is associated with higher perceived and actual social class of speakers, and that pronunciation cues in speech communicate social class over and above speech content. In study 5, we find that people with prior hiring experience use speech patterns in preinterview conversations to judge the fit, competence, starting salary, and signing bonus of prospective job candidates in ways that bias the process in favor of applicants of higher social class. Overall, this research provides evidence for the stratification of common speech and its role in both shaping perceiver judgments and perpetuating inequality during the briefest interactions.

Keywords: socioeconomic status | economic inequality | social psychology | group processes | person perception

Significance: Social class mobility narratives pervade public consciousness in the United States, and yet patterns of actual mobility remain relatively constrained. This work examines how the tendency to accurately perceive the social class position of targets, by virtue of listening to their brief speech, can constrain economic mobility and perpetuate inequality. We find that Americans can perceive the social class of targets based on exposure to brief speech patterns, that word pronunciation facilitates this perceptual process, and that these cues bias hiring decisions in favor of those higher versus lower in social class. The findings suggest that social interaction patterns related to the perception of brief speech are potentially causal in the maintenance of economic inequality.

LEDGER 2019

Paul M. Ledger, Linus Girdland-Flink & Véronique Forbes, *Our model is an expression of the uncertainties inherent in the radiocarbon data, Reply to Dee and Kuitems*. [PNAS 116 \(2019\), 22908](#).

Anthropologie

WILL 2016

Manuel Will, Andrew W. Kandel, Katharine Kyriacou & Nicholas J. Conard, *An evolutionary perspective on coastal adaptations by modern humans during the Middle Stone Age of Africa*. [Quaternary International 404 \(2016\), 68–86](#).

The Middle Stone Age (MSA) of Africa documents the earliest and longest record of marine resource use and coastal settlements by modern humans. Here, we provide a long-term and evolutionary perspective of these behaviors. We propose a definition of “coastal adaptations” rooted in the principles of evolutionary biology as a workable analytical device and review the MSA archaeological record from Africa to characterize the specific nature of coastal adaptations by *Homo sapiens*. On this basis we evaluate current models addressing the importance of coastal adaptations for human evolution and formulate new hypotheses within the larger framework of evolutionary causality by linking these behaviors directly to reproductive success. While the current archaeological record suggests that modern humans occasionally consumed marine resources during the late Middle Pleistocene, systematic and optimized gathering of a variety of marine food items dates to MIS 5 and 4. Archaeozoological studies show that people exploited marine resources in a methodical manner on the Atlantic, Indian, and Mediterranean coasts of Africa during this time frame. Despite the similarities in coastlines, mobile huntergatherers also integrated these variable coastal landscapes into their settlement strategies for more than 100 ka, as shown by evidence for stable, repeated and planned occupations. Additionally, elements of complex material culture, such as bone tools and shell beads, occur particularly often in (near-) coastal MSA sites. The specific nature of coastal adaptations by modern humans can thus be characterized by their systematic nature, long duration and verifiable impact on the overall adaptive suite. By combining archaeological data with ethnographic, nutritional and medical studies we propose several evolutionary scenarios for how modern humans could have increased survival and fecundity rates by their specific adaptations to coastal environments. In order to test these hypothetical scenarios for the selective advantages of coastal adaptations for *Homo sapiens*, we need more data deriving from an expanded spatiotemporal archaeological record, just as much as more formal evolutionary models and research strategies.

Keywords: Coastal adaptations | Shellfish exploitation | Reproductive fitness | Marine resources | Middle Stone Age | Modern humans

Archäologie

ZEUSKE 2018

Michael Zeuske, *Sklaverei, Eine Menschheitsgeschichte von der Steinzeit bis heute*. (Ditzingen 2018).

„Sklaverei“ – das Wort lässt an afrikanische Arbeiter auf amerikanischen Plantagen denken. Doch Verschleppungen und Zwangsarbeit gab es schon, als die Menschen gerade erst sesshaft geworden waren, und es gab sie so gut wie überall.

Michael Zeuske führt in dieser umfassenden Darstellung durch die gesamte Geschichte der Versklavten und der Sklaverei in allen Weltgegenden. Er macht seine Leser mit chinesischen Kindersklaven genauso bekannt wie mit osmanischen Elitesklaven oder den „Hofmohren“ in preußischen Residenzstädten – und er blickt

in die Gegenwart. Denn auch heute werden Menschen noch wie Waren behandelt – von der Zwangsprostituierten bis hin zum Kindersoldaten.

Klima

GRAVES 2019

Alisha Graves, Lorenzo Rosa, Abdoul Moumouni Nouhou, Fadji Maina, Djimé Adoum & 5 co-signatories, *Avert catastrophe now in Africa's Sahel*. [nature](#) **375** (2019), 282–286.

Governments worldwide must invest in girls' education, family planning, agriculture and security in this vulnerable region.

JENNY 2019

Jean-Philippe Jenny et al., *Human and climate global-scale imprint on sediment transfer during the Holocene*. [PNAS](#) **116** (2019), 22972–22976.

[pnas116-22972-Supplement.pdf](#)

Accelerated soil erosion has become a pervasive feature on landscapes around the world and is recognized to have substantial implications for land productivity, downstream water quality, and biogeochemical cycles. However, the scarcity of global syntheses that consider long-term processes has limited our understanding of the timing, the amplitude, and the extent of soil erosion over millennial time scales. As such, we lack the ability to make predictions about the responses of soil erosion to long-term climate and land cover changes. Here, we reconstruct sedimentation rates for 632 lakes based on chronologies constrained by 3,980 calibrated ¹⁴C ages to assess the relative changes in lake-watershed erosion rates over the last 12,000 y. Estimated soil erosion dynamics were then complemented with land cover reconstructions inferred from 43,669 pollen samples and with climate time series from the Max Planck Institute Earth System Model. Our results show that a significant portion of the Earth surface shifted to human-driven soil erosion rate already 4,000 y ago. In particular, inferred soil erosion rates increased in 35 % of the watersheds, and most of these sites showed a decrease in the proportion of arboreal pollen, which would be expected with land clearance. Further analysis revealed that land cover change was the main driver of inferred soil erosion in 70 % of all studied watersheds. This study suggests that soil erosion has been altering terrestrial and aquatic ecosystems for millennia, leading to carbon (C) losses that could have ultimately induced feedbacks on the climate system.

Keywords: global soil erosion | lake records | ¹⁴C ages | pollens | varved sediments

Jean-Philippe Jenny, Sujan Koirala, Irene Gregory-Eaves, Pierre Francus, Christoph Niemann, Bernhard Ahrens, Victor Brovkin, Alexandre Baud, Antti E. K. Ojala, Alexandre Normandeau, Bernd Zolitschka & Nuno Carvalhais

Significance: Using a compilation of ¹⁴C and pollen data of lake sediment records from over 632 sites globally, we identified the timings of first increase in lake sedimentation. Changes in lake sediment rates at this time are closely linked to increased sediment supply from hillslope erosion. The analysis on the relative roles of the driving factors indicated that a significant portion of the Earth's surface shifted to human-driven soil erosion already 4,000 y ago following land deforestation. The long-term perspective afforded by this synthesis provides evidence that human beings are a geological force that have altered lateral soil and sediment transfers globally well before the great acceleration in human activity post-World War II and before the start of the Industrial Revolution.

Physik

CAROSI 2019

Gianpaolo Carosi, *Link between antimatter and dark matter probed. nature* **375** (2019), 293–294.

Ultrasensitive experiments on trapped antiprotons provide a window onto possible differences between matter and antimatter. Now they could also shed light on the identity of dark matter — the ‘missing’ mass in the Universe.

CASTELVECCHI 2019

Davide Castelvecchi, *Proton-Size Puzzle Leaps Closer to Resolution, Precise measurement affirms that the particle’s radius is smaller than physicists once thought. nature* **375** (2019), 269–270.

SMORRA 2019

C. Smorra, Y. V. Stadnik, D. Budker & S. Ulmer et al., *Direct limits on the interaction of antiprotons with axion-like dark matter. nature* **375** (2019), 310–314.

n375-0310-Supplement.pdf

Astrophysical observations indicate that there is roughly five times more dark matter in the Universe than ordinary baryonic matter¹, and an even larger amount of the Universe’s energy content is attributed to dark energy². However, the microscopic properties of these dark components remain unknown. Moreover, even ordinary matter—which accounts for five per cent of the energy density of the Universe—has yet to be understood, given that the standard model of particle physics lacks any consistent explanation for the predominance of matter over antimatter³. Here we present a direct search for interactions of antimatter with dark matter and place direct constraints on the interaction of ultralight axion-like particles (dark-matter candidates) with antiprotons. If antiprotons have a stronger coupling to these particles than protons do, such a matter–antimatter asymmetric coupling could provide a link between dark matter and the baryon asymmetry in the Universe. We analyse spin-flip resonance data in the frequency domain acquired with a single antiproton in a Penning trap⁴ to search for spin-precession effects from ultralight axions, which have a characteristic frequency governed by the mass of the underlying particle. Our analysis constrains the axion–antiproton interaction parameter to values greater than 0.1 to 0.6 gigaelectronvolts in the mass range from 2×10^{-23} to 4×10^{-17} electronvolts, improving the sensitivity by up to five orders of magnitude compared with astrophysical antiproton bounds. In addition, we derive limits on six combinations of previously unconstrained Lorentz- and CPT-violating terms of the non-minimal standard model extension⁵.

C. Smorra, Y. V. Stadnik, P. E. Blessing, M. Bohman, M. J. Borchert, J. A. Devlin, S. Erlewein, J. A. Harrington, T. Higuchi, A. Mooser, G. Schneider, M. Wiesinger, E. Wursten, K. Blaum, Y. Matsuda, C. Ospelkaus, W. Quint, J. Walz, Y. Yamazaki, D. Budker & S. Ulmer

Sprachlehre

TEMPLER 1889

Boris Manasevič & Bernhard Templer, *Grammatik der hebräischen Sprache, B. Manassewitsch’s Grammatik der Hebräischen Sprache für den Selbstunterricht völlig umgearbeitet von Dr. Bernhard Templer. Die Kunst der Polyglottie* 17 (Wien ³1909).