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References

Afrika

Lombard 2020

Marlize Lombard, Matthew V. Caruana, Jaco van der Walt & Anders Högberg, *The Keimoes 3 desert kite site, South Africa, An aerial lidar and micro-topographic exploration*. Antiquity **94** (2020), 197–211.

So-called desert kites have been found widely in the Middle East and Central Asia. The newly discovered Keimoes 3 site in the Nama Karoo, however, represents one of only three known desert kite sites in southern Africa. The complex comprises 14 funnels arranged in three groups around a small hill. Radiocarbon dates for structures in the region suggest a relative age for the kites of less than 2000 years. The authors demonstrate how strategic use of the site's micro-topography optimised game harvesting, and argue that Keimoes 3 offers robust evidence of Holocene Stone Age hunters engaging in long-term landscape modification as part of their subsistence strategies.

Keywords: southern Africa | Nama Karoo | Holocene | hunting strategies | desert kites | lidar

Aktuell

Anderson 2020

Roy M. Anderson, Hans Heesterbeek, Don Klinkenberg & T. Déirdre Hollingsworth, *How will country-based mitigation measures influence the course of the COVID-19 epidemic?* The Lancet (2020), preprint, 1–4. DOI:10.1016/S0140-6736(20)30567-5.

Lancet2020.03-Supplement1.pdf, Lancet2020.03-Supplement2.pdf, Lancet2020.03-Supplement3.pdf

There are diicult decisions ahead for governments. How individuals respond to advice on how best to prevent transmission will be as important as government actions, if not more important. Government communication strategies to keep the public informed of how best to avoid infection are vital, as is extra support to manage the economic downturn.

Dalenberg 2020

Jelle R. Dalenberg et al., *Short-Term Consumption of Sucralose with, but Not without, Carbohydrate Impairs Neural and Metabolic Sensitivity to Sugar in Humans*. Cell Metabolism **31** (2020), 493–502.

In Brief: Dalenberg et al. show that consuming the low-calorie sweetener sucralose with, but not without, a carbohydrate impairs insulin sensitivity in healthy humans. This effect is associated with a decreased brain response to sweet taste but no change in sweet taste perception. The Results suggest that consumption of sucralose in the presence of a carbohydrate dysregulates gut-brain regulation of glucose metabolism.

Highlights:

- Consumption of sucralose combined with carbohydrates impairs insulin sensitivity
- This metabolic impairment is associated with decreases in neural responses to sugar
- However, sweet taste perception is unaltered
- Insulin sensitivity is not altered by sucralose or carbohydrate consumption alone

Jelle R. Dalenberg, Barkha P. Patel, Raphael Denis, Maria G. Veldhuizen, Yuko Nakamura, Petra C. Vinke, Serge Luquet & Dana M. Small

There is a general consensus that overconsumption of sugar-sweetened beverages contributes to the prevalence of obesity and related comorbidities such as type 2 diabetes (T2D). Whether a similar relationship exists for no- or low-calorie "diet" drinks is a subject of intensive debate and controversy. Here, we demonstrate that consuming seven sucralosesweetened beverages with, but not without, a carbohydrate over 10 days decreases insulin sensitivity in healthy human participants, an effect that correlates with reductions in midbrain, insular, and cingulate responses to sweet, but not sour, salty, or savory, taste as assessed with fMRI. Taste perception was unaltered and consuming the carbohydrate alone had no effect. These findings indicate that consumption of sucralose in the presence of a carbohydrate rapidly impairs glucose metabolism and results in longer-term decreases in brain, but not perceptual sensitivity to sweet taste, suggesting dysregulation of gut-brain control of glucose metabolism.

Context and Significance Low-calorie sweeteners (LCSs) were developed to provide sweet taste without the calories. LCSs are present in thousands of food products despite a lack of consensus from the scientific community on their potential for causing negative effects on health. Here, investigators at Yale and their collaborators assessed brain activity, taste perception, and metabolic function before and after healthy volunteers consumed seven 355 mL beverages containing an LCS, a sugar, or the combination of LCS plus a sugar over a series of days. They discovered that consuming the LCS in combination with, but not without, the sugar decreased metabolic and neural responses to sugar, suggesting that consuming LCSs with foods or drinks containing real sugar (or carbohydrate) may negatively impact metabolic health.

Anthropologie

Albouy 2020

Philippe Albouy, Lucas Benjamin, Benjamin Morillon & Robert J. Zatorre, *Distinct sensitivity to spectrotemporal modulation supports brain asymmetry for speech and melody*. science **367** (2020), 1043–1047.

s367-1043-Supplement.pdf

Does brain asymmetry for speech and music emerge from acoustical cues or from domain-specific neural networks? We selectively filtered temporal or spectral modulations in sung speech stimuli for which verbal and melodic content was crossed and balanced. Perception of speech decreased only with degradation of temporal information, whereas perception of melodies decreased only with spectral degradation. Functional magnetic resonance imaging data showed that the neural decoding of speech and melodies depends on activity patterns in left and right auditory regions, respectively. This asymmetry is supported by specific sensitivity to spectrotemporal modulation rates within each region. Finally, the effects of degradation on perception were paralleled by their effects on neural classification. Our

results suggest a match between acoustical properties of communicative signals and neural specializations adapted to that purpose.

Sammler 2020

Daniela Sammler, *Splitting speech and music*. science **367** (2020), 974–976.

Brain asymmetries for words and melodies of songs depend on opposite acoustic cues.

Biophysical laws constrain the simultaneous extraction of both fast temporal and fine spectral information. The relative specialization of the left and right auditory cortices to better process one or the other cue appears to be an efficient solution to this dilemma. What may be a plausible computational explanation for auditory asymmetries of speech and music has, however, been vigorously contested.

Bibel

Benckhuysen 2020

Amanda W. Benckhuysen, *The Gospel According to Eve*. Biblical Archaeology Review **46** (2020), ii, 67–69.

Thus, when the woman is described as an 'ezer ("helper"), this label was not taken to imply inferiority. Instead, as God comes alongside the people of Israel as their helper in times of need (Genesis 49:25; Psalm 37:40), so too the woman was created to be a helper for the man because he was in need. In other words, it is the man's incompleteness and not the woman's inferiority that makes her a helper—like God himself.

For instance, they noted that the man was with the woman while she was talking to the serpent. This detail gave them pause as they wondered why the man never spoke up to intervene—why he remained passive while the woman and the serpent were actively engaged in conversation. They concluded from this that the woman must have been the spiritual leader of the two.

Falk 2020

David A. Falk, *Brick by Brick, What Did the Israelites Build in Egypt?* Biblical Archaeology Review **46** (2020), ii, 54–57.

"And they built for Pharaoh storage cities, Pithom and Raamses." These storage cities are not simply coterminous with Pithom and Rameses since these two cities had a variety of buildings that included stone temples. In other words, Pithom and Rameses cannot properly be described as "storage" cities, and thus the verse likely refers to structures within these cities—probably a series of mudbrick depots attached to the temples used to store vast quantities of food.

Joosten 2020

Jan Joosten, *Language, Exegesis, and Creative Writing in Chronicles*. Vetus Testamentum **70** (2020), 55–66.

The verb hṯḥpś is well-known in the meaning "to disguise oneself," but this meaning does not seem to fit its context in 2 Chron 35:22. Why would Josiah disguise himself when going to battle with Necho? In this paper it will be argued that the verb was borrowed from the story on Micah ben Yimlah (1 Kgs 22:30) in the course of the Chronicler's reshaping of Josiah in the image of Ahab, but that its semantics reflect a later interpretation of some elements in that story. The later interpretation is attested independently in the Peshitta and the Vulgate where hṯḥpś is rendered as "to arm oneself."

Although this study has somewhat single-mindedly focused on one word in 2 Chron 35:22, it has shed light on various aspects of Hebrew writing in the Persian period.

First, creative writing. The Chronicler based his account of Josiah's anomalous death on the much shorter version in Kings. However, he added much material to address a theological question: why did Josiah, who was such a good king, die young?

Second, exegesis. It is important to realize that the use the Chronicler made of the story of Ahab's death had been prepared in the interpretive tradition of the earlier text. Notably the verb hṯpś, to disguise oneself, had been reinterpreted as "to dress up in armour" thus enhancing the picture of the Israelite King. Ahab and Jehoshapat were still disobedient kings, but at least they were kingly.

Finally, language. The re-use of the verb in the new meaning in 2 Chron 35:22 is surprising, but it finds many analogues in Chronicles and other Hebrew writings of the same period. For a word to fall into disuse, its meaning to be forgotten, and a new meaning to be attributed to it, a lot of time needed to pass. The view that Chronicles is a post-exilic rewriting of a much earlier work—for the most part composed in the monarchic period but redacted in its final form during the exile—fits the linguistic facts much better.

Müller-Kessler 2019

Christa Müller-Kessler, *Proverbs 11:1b-15 as Transmitted in an Unpublished Christian Palestinian Aramaic Palimpsest from St Catherine's Monastery (Sinai, Greek NF MG 14)*. Journal of Septuagint and Cognate Studies **52** (2019), 157–165.

This unique and unpublished palimpsest fragment in Christian Palestinian Aramaic containing Proverbs 11:1b-15 from St Catherine's Monastery, Sinai (AD 6th-7th centuries) comes up with some significant verses and text variants, which have not been attested for the LXX, and can be only traced so far in the Greek Byzantine Prophetologion and some variant readings. This fragment of Proverbs surfaced among other Old Testament text witnesses under MS Sinai, Greek NF MG 14 and belongs to the New Finds at St Catherine's Monastery of 1975. The rather small text corpus in Christian Palestinian Aramaic from Late Antique Palestine has been always considered for Bible text criticism and this particular specimen demonstrates again its relevance by its variant readings.

Richelle 2016

Matthieu Richelle, *Elusive Scrolls, Could Any Hebrew Literature Have Been Written Prior to the Eighth Century BCE?* Vetus Testamentum **66** (2016), 556–594.

Two reasons lead many scholars today to think that the Israelites were not able to produce long, literary works during the 10th and 9th centuries BCE. First, there is a dearth of Hebrew inscriptions from that time; second, the Israelites did not have the necessary socio-economic resources until the 8th century BCE. This article critically assesses these two lines of reasoning in light of current research in the epigraphy and archaeology of the Southern Levant. In addition, it provides several elements which indicate that the necessary conditions for the production of long texts were present in Judah/Israel in the early royal period.

Keywords: Literature | literacy | epigraphy | inscriptions | scribes | Iron Age IIA | Hebrew

Richelle 2020

Matthieu Richelle, *When Did Literacy Emerge in Judah?* Biblical Archaeology Review **46** (2020), ii, 58–61.

Moreover, Israelite scribes developed a "national" script, the Paleo-Hebrew alphabet, around the first half of the ninth century, which would be quite unexpected if they were content to scribble short inscriptions. This rather points to an organized scribal apparatus producing long texts. Furthermore, epigraphist Benjamin Sass has recently noted that the script of some early ninth-century inscriptions found at Tel Rehov in the Jordan Valley and at Megiddo bear cursive features. Such features in the shape of letters develop when scribes write quickly on mediums like papyrus and leather.

Energie

Kushida 2013

Kenji E. Kushida, *Japan's Fukushima Nuclear Disaster, Narrative, Analysis, and Recommendations.* Shorenstein APARC Working Paper **2013**, Jan. 11. DOI:10.2139/ssrn.2118876.

This report provides one of the first coherent, readable narratives of the Fukushima nuclear disaster — what happened in the first few days. It is based on new sources available in Japanese and National Diet testimonies, and is an objective overview of events as they unfolded, rather than an ideologically positioned effort of advocacy. The report goes on to analyze the institutional and governance aspects of Japan's nuclear oversight, highlighting the fundamental problems that surfaced during the disaster that stem from deeper structural issues. The report also draws upon expertise from a conference held at Stanford University in February 2012 to analyze the politics and industry structure of Japan's electric power sector, making concrete recommendations for reorganizing the power industry and government oversight structure.

Keywords: Fukushima nuclear disaster | Japan | readable narrative | energy industry restructuring

Judentum

Crawford 2020

Sidnie White Crawford, *Were There Women at Qumran?* Biblical Archaeology Review **46** (2020), ii, 48–53.

Were the Essenes a group that embraced celibacy as a way of life? Their own documents tell us that the answer is no. However, they did observe strict rules for sexual purity for both men and women, which may have led to lower rates of marriage than was common among ancient Jews. This tendency and the function of Qumran as an Essene scribal center jointly account for the almost entire absence of women at Qumran. I believe that this scenario can reconcile the evidence of the sectarian scrolls, the archaeological record at Qumran, and the testimony of Josephus, Philo, and Pliny.

Klima

Han 2020

Yongming Han, Zhisheng An, Jennifer R. Marlon, Raymond S. Bradley, Changlin Zhan, Richard Arimoto & George S. Burr et al., *Asian inland wildfires driven by glacial–interglacial climate change*. PNAS **117** (2020), 5184–5189.

pnas117-05184-Supplement.pdf

Wildfire can influence climate directly and indirectly, but little is known about the relationships between wildfire and climate during the Quaternary, especially howwildfire patterns varied over glacial–interglacial cycles. Here, we present a high-resolution soot record from the Chinese Loess Plateau; this is a record of large-scale, high-intensity fires over the past 2.6 My. We observed a unique and distinct glacial–interglacial cyclicity of soot over the entire Quaternary Period synchronous with marine d18O and dust records, which suggests that ice-volume-modulated aridity controlled wildfire occurrences, soot production, and dust fluxes in central Asia. The highintensity fires were also found to be anticorrelated with global atmospheric CO2 records over the past eight glacial–interglacial cycles, implying a possible connection between the fires, dust, and climate mediated through the iron cycle. The significance of this hypothetical connection remains to be determined, but the relationships revealed in this study hint at the potential importance of wildfire for the global climate system.

Keywords: biomass burning | Quaternary climate | carbon cycle | high-intensity fires | soluble iron

Yongming Han, Zhisheng An, Jennifer R. Marlon, Raymond S. Bradley, Changlin Zhan, Richard Arimoto, Youbin Sun, Weijian Zhou, Feng Wu, Qiyuan Wang, George S. Burr & Junji Cao

Significance: We reconstructed a unique record of soot variations from a classic Chinese loess section that reflects regional-to-continental scale high-intensity fires in central Asia over the entire Quaternary. This study shows cyclicity of wildfire over glacial–interglacial intervals. High-intensity wildfires were more common and dust loads were high during dry and cold glacial periods, implying a synchronous response to climate change. Our study suggests potential linkages among wildfire, mineral dust, marine biogeochemical cycles, atmospheric CO2, and glacial–interglacial climate change. Understanding these connections among earth systems provides insights into climate dynamics during the geological past and may improve predictions for the future.

IMBIE 2020

IMBIE Team, *Mass balance of the Greenland Ice Sheet from 1992 to 2018*. nature **579** (2020), 233–239.

n579-0233-Supplement.xlsx

The Greenland Ice Sheet has been a major contributor to global sea-level rise in recent decades1,2, and it is expected to continue to be so3. Although increases in glacier flow4–6 and surface melting7–9 have been driven by oceanic10–12 and atmospheric13,14 warming, the magnitude and trajectory of the ice sheet's mass imbalance remain uncertain. Here we compare and combine 26 individual satellite measurements of changes in the ice sheet's volume, flow and gravitational potential to produce a reconciled estimate of its mass balance. The ice sheet was close to a state of balance in the 1990s, but annual losses have risen since then, peaking at 345 ± 66 billion tonnes per year in 2011. In all, Greenland lost $3{,}902 \pm 342$ billion tonnes of ice between 1992 and 2018, causing the mean sea level to rise by

10.8 ± 0.9 millimetres. Using three regional climate models, we show that the reduced surface mass balance has driven 1,964 ± 565 billion tonnes (50.3 per cent) of the ice loss owing to increased meltwater runoff. The remaining 1,938 ± 541 billion tonnes (49.7 per cent) of ice loss was due to increased glacier dynamical imbalance, which rose from 46 ± 37 billion tonnes per year in the 1990s to 87 ±

25 billion tonnes per year since then. The total rate of ice loss slowed to 222 ± 30 billion tonnes per year between 2013 and 2017, on average, as atmospheric circulation favoured cooler conditions15 and ocean temperatures fell at the terminus of Jakobshavn Isbræ16. Cumulative ice losses from Greenland as a whole have been close to the rates predicted by the Intergovernmental Panel on Climate Change for their high-end climate warming scenario17, which forecast an additional 70 to 130 millimetres of global sea-level rise by 2100 compared with their central estimate.

Andrew Shepherd, Erik Ivins, Eric Rignot, Ben Smith, Michiel van den Broeke, Isabella Velicogna, Pippa Whitehouse, Kate Briggs, Ian Joughin, Gerhard Krinner, Sophie Nowicki, Tony Payne, Ted Scambos, Nicole Schlegel, Geruo A, Cécile Agosta, Andreas Ahlstrøm, Greg Babonis, Valentina R. Barletta, Anders A. Bjørk, Alejandro Blazquez, Jennifer Bonin, William Colgan, Beata Csatho, Richard Cullather, Marcus E. Engdahl, Denis Felikson, Xavier Fettweis, Rene Forsberg, Anna E. Hogg, Hubert Gallee, Alex Gardner, Lin Gilbert, Noel Gourmelen, Andreas Groh, Brian Gunter, Edward Hanna, Christopher Harig, Veit Helm, Alexander Horvath, Martin Horwath, Shfaqat Khan, Kristian K. Kjeldsen, Hannes Konrad, Peter L. Langen, Benoit Lecavalier, Bryant Loomis, Scott Luthcke, Malcolm McMillan, Daniele Melini, Sebastian Mernild, Yara Mohajerani, Philip Moore, Ruth Mottram, Jeremie Mouginot, Gorka Moyano, Alan Muir, Thomas Nagler, Grace Nield, Johan Nilsson, Brice Noël, Ines Otosaka, Mark E. Pattle, W. Richard Peltier, Nadège Pie, Roelof Rietbroek, Helmut Rott, Louise Sandberg Sørensen, Ingo Sasgen, Himanshu Save, Bernd Scheuchl, Ernst Schrama, Ludwig Schröder, Ki-Weon Seo, Sebastian B. Simonsen, Thomas Slater, Giorgio Spada, Tyler Sutterley, Matthieu Talpe, Lev Tarasov, Willem Jan van de Berg, Wouter van der Wal, Melchior van Wessem, Bramha Dutt Vishwakarma, David Wiese, David Wilton, Thomas Wagner, Bert Wouters & Jan Wuite

Kultur

Rahmstorf 2020

Lorenz Rahmstorf, *Weight Metrology in the Harappan Civilization*. In: Eva Myrdal (Hrsg.), *South Asian Archaeology and Art 2014, 22. Int. Conf. European Association for South Asian Archaeology and Art, Stockholm, 30th of June to 4th of July 2014*. (New Delhi 2020), 77–96.

This short survey of Harappan weight metrology and a closer look at various issues has demonstrated that, while the general knowledge of it seems quite good, further research is needed for many aspects. Different potential weight types have not been tested systematically, for example conical and pebble weights. The Mesopotamian-like sphendonoid weights require a detailed investigation into the material, preservation and the metrology. They have a special importance in relation to the complex of Mesopotamian-Harappan trade relations. Outside Sindh (Mohenjo-daro, Chanhu-daro) and Punjab (Harappa) few and much smaller series of weights have so far been published (Lothal, Bhirrana). Regional peculiarities in metrological issues do not seem likely in the moment, but this together with the potential use of multivalent weights ("conversion weights") needs further study, not only within the Harappan system but also within the Mesopotamian and other

western systems. It is in my understanding misleading to use the apparent homogeneity of the Indus weight system in its immense geographical extent as an indicator for the political organisation during this period: as a sign of a single overarching Harappan state (compare now Ratnagar 2016). We also know of rather uniform weighing systems in the East Mediterranean in the Bronze Age, where no single political power was in place. Moreover, there is also apparently a multitude of different weighing systems used contemporaneously in highly structured political states like in Old and Middle Kingdom Egypt. Hence, it seems difficult to deduce any specific political organisation or the existence of a central authority only through the existence of a unified system of weight over a large geographical sphere.

Mittelpaläolithikum

Pomeroy 2020

Emma Pomeroy et al., *New Neanderthal remains associated with the 'flower burial' at Shanidar Cave*. Antiquity **94** (2020), 11–26.

Shanidar Cave in Iraqi Kurdistan became an iconic Palaeolithic site following Ralph Solecki's mid twentiethcentury discovery of Neanderthal remains. Solecki argued that some of these individuals had died in rockfalls and—controversially—that others were interred with formal burial rites, including one with flowers. Recent excavations have revealed the articulated upper body of an adult Neanderthal located close to the 'flower burial' location—the first articulated Neanderthal discovered in over 25 years. Stratigraphic evidence suggests that the individual was intentionally buried. This new find offers the rare opportunity to investigate Neanderthal mortuary practices utilising modern archaeological techniques.

Keywords: Iraqi Kurdistan | Shanidar | Palaeolithic | Neanderthal | mortuary practice

Emma Pomeroy„ Paul Bennett, Chris O. Hunt, Tim Reynolds, Lucy Farr, Marine Frouin, James Holman, Ross Lane, Charles French & Graeme Barker

Story or Book

Davidson 2020

Iain Davidson, *The smart Neanderthal*. Antiquity **94** (2020), 257–258.

Clive Finlayson. 2019. The smart Neanderthal: bird catching, cave art and the cognitive revolution. Oxford: Oxford University Press; hardback 978-0-19-879752-4 £ 20.

The book presents a clever, evidence-based argument for the cognitive intelligence of Neanderthals. It takes aim at several key aspects of the traditional archaeological position on Neanderthals, notably that held by Paul Mellars, Richard Klein and Mary Stiner, which contends that Neanderthals were not cognitively equivalent to modern humans, and that this cognitive differencewas a substantial part of the reason why Modern Humans eclipsed Neanderthals (leaving aside the exchange of a few genes).

[...] how to identify the mindedness (cognition) of people from archaeological evidence. Such theoretical issues are still important, but this book does not engage with them at all. [...] There are a few too many under-theorised assertions in The smart Neanderthal that suppose particular behaviours must indicate the cognitive competence of Neanderthals.

THORPE 2020

Nick Thorpe, *Warfare in Bronze Age society*. Antiquity **94** (2020), 261–262.

Christian Horn & Kristian Kristiansen (ed.). 2018. Warfare in Bronze Age society. Cambridge: Cambridge University Press; hardback 978-1-10718-556-2 £75.

Standing out by virtue of its subject matter is the paper by Lidke et al. (Chapter 10) on the crucial ongoing research project on the Tollense Valley battlefield site in north-east Germany; this is a useful Summary of work that shows warfare on a vastly larger scale than almost any of the other sites mentioned in the volume. The direct evidence of violence is generally limited to a handful of cases in most chapters.

The case presented in this volume, for the Bronze Age as an age of warriors (primarily male), is cogently and convincingly argued, although its origins remain somewhat obscure. One might, however, also see the Bronze Age as an age of victims of those warriors.