

References

Aktuell

GOUVEIA 2018

Sidney F. Gouveia, *The detour that became a shortcut*. [science](#) **361** (2018), 942.

Like many science students, I had always envisioned a pretty straightforward career path: a graduate degree, postdoctoral research, and—if all went well—a faculty position. But I was thrown off this track before I even completed my bachelor's degree in biology. A university strike delayed my graduation, and as a result I missed the graduate school application deadline. Suddenly I had no idea what my future might hold, and I needed to make a living. I was relieved to be offered a job managing a newly established conservation area in my home state of Sergipe in Brazil, and I was excited about working to support biodiversity. But in the back of my mind, I worried that the job would take me in the wrong direction, away from the academic career I still desired.

HELLIN 2018

Jon Hellin, *Inspiration from the outdoors*. [science](#) **361** (2018), 818.

It was an extraordinarily busy time of year, with deadlines fast approaching for reporting my progress to donors and a journal article requiring major revisions. I felt some pressure to head straight home after the conference I had attended at the last-minute request of my major research funder. But I had traveled halfway around the world to be there, in Morocco. I did not want to miss the opportunity to explore. So I headed to the mountains for 2 days of therapeutic hiking. As I marveled at the sunrise and the view from the icy summit of Mount Toubkal, the highest peak in North Africa, my addled mind calmed. Re-energized, I knew that I could cope with the work that waited for me upon my return. When I arrived back in the office a few days later, I was rejuvenated, and—yes—I successfully submitted the revised journal article and met the donor reporting requirements.

NIE 2018

Ming Nie, Junyu Zou, Xiao Xu, Chao Liang, Changming Fang & Bo Li, *Comment on “Unexpected reversal of C4 versus C3 grass response to elevated CO2 during a 20-year field experiment”*. [science](#) **361** (2018), 858.

Reich et al. (Reports, 20 April 2018, p. 317) reported that elevated carbon dioxide (eCO₂) switched its effect from promoting C3 grasses to favoring C4 grasses in a long-term experiment. We argue that the authors did not appropriately elucidate the interannual climate variation as a potential mechanism for the reversal of C4-C3 biomass in response to eCO₂.

WATSON 2018

Traci Watson, *Prehistoric children toiled at tough tasks, Kids as young as eight worked as brickmakers and miners*. [nature](#) **561** (2018), 445–446.

Researchers paid little heed to children in the archaeological record until recently. But in the 1990s, more archaeologists began to examine the role of women in the past. That led some scientists to start studying other overlooked groups — including children.

Anthropologie

VOGEL 2018

Gretchen Vogel, *Ancient DNA reveals tryst between extinct human species, Woman had a Neanderthal mother and a Denisovan father.* *science* **361** (2018), 737.

A closer look at the genome suggests her father also had some Neanderthal ancestry, possibly several hundred generations back. And the woman's Neanderthal genes are closer to those of a Neanderthal found in Croatia than those from remains found in the Siberian cave.

Archäologie

WEMHOFF 2018

MATTHIAS WEMHOFF & MICHAEL M. RIND (Hrsg.), *Bewegte Zeiten – Archäologie in Deutschland, Begleitband zur Ausstellung, 21. September 2018 – 9. Januar 2019, Gropius Bau, Berlin.* (Petersberg 2018).

In Kooperation mit dem Verband der Landesarchäologen zeigt das Museum für Vor- und Frühgeschichte der Staatlichen Museen zu Berlin die große Sonderausstellung "Bewegte Zeiten. Archäologie in Deutschland". Alle 16 Bundesländer präsentieren hier ihre spektakulärsten Funde und aktuelle Forschungsergebnisse der letzten 20 Jahre. Gezeigt wird u.a. die früheste figürliche Kunst der Menschheit, die ca. 35000 Jahre alte Venus vom Hohle Fels (Baden-Württemberg) und die bronzezeitliche Himmelscheibe von Nebra (Sachsen-Anhalt) mit der weltweit ältesten bisher bekannten konkreten Darstellung des Kosmos. Ebenfalls präsentiert werden 3000 Jahre alte Goldhüte aus Deutschland und Frankreich, die nicht nur eine Meisterleistung der Goldschmiedetechnik darstellen, sondern auch mit kalendarischen Symbolen verziert sind.

In vier großen Themenfeldern – Mobilität, Austausch, Konflikt und Innovation – zeigen hochrangige Exponate aus der Steinzeit bis ins 20. Jahrhundert die Folgen überregionaler Interaktion. Die archäologischen Funde zeigen unmittelbar, dass die Menschen im heutigen Deutschland zu allen Zeiten in ein gesamteuropäisches Netzwerk eingebunden waren. Über dieses Netzwerk wurde der Transfer von Menschen, Materialien, Gesellschaftssystemen, Religionen und Wissen europaweit befördert. Der daraus resultierende Bezug zu aktuellen Themen macht die archäologischen Funde für den heutigen Betrachter greifbar.

Bibel

ATHAS 2008

George Athas, *The Creation of Israel, The Cosmic Proportions of the Exodus Event.* In: BRIAN S. ROSNER & PAUL R. WILLIAMSON (Hrsg.), *Exploring Exodus, Literary, Theological and Contemporary Approaches.* (Nottingham 2008), 30–59.

By holding Exodus up to its ancient Near Eastern context, we see that it is a story about God's determination to be in relationship with the descendants of Jacob, the Israelites. As such, the exodus is not just any old liberation story with a curious cast of characters. It is actually a revelation of who God is. It portrays him as a God of relationship, who desires to interact creatively and dynamically with the people he has chosen. Indeed, he desires to be the father of this people. Secondly, we have noted how the exodus event is an act of creation that brings Israel into being as a nation who can serve God as a son serving a father.

When we see this creative aspect of Exodus in the light of the revelation of God, and put it in perspective with the grander scheme of the biblical revelation, we see that Exodus represents a significant step in God's transformative or recreative work. That which was lost through sin at Eden is being partially recovered in Exodus. The relationship between God and humanity that was severed through sin is here being overcome, as Yahweh goes to tremendous lengths to regenerate a relationship with his creatures. Exodus is not simply about what God did for an oppressed people, but rather an account of God's efforts to rescue his creation from the chaos of non-being. In Exodus, we see this in miniature, as it were, in the lead up to a grander and more cosmic achievement through the Son of God, Jesus Christ. This is not a story we can simply adapt for our own entertainment or merely to make a political comment. It is, rather, the revelation of a God who desires to be known by his human creatures as Father.

SCHMID 2018

Konrad Schmid, *Prognosis and Postgnosis in Biblical Prophecy*. [Scandinavian Journal of the Old Testament](#) **32** (2018), 106–120.

The Prophetic books of the Hebrew Bible are more than documents containing pronouncements from the prophets after whom the texts are named. They include not only prophecies, but also interpretations of these prophecies' historical consequences, a quality that makes the Bible's prophetic literature stand out from its ancient Near Eastern counterparts. This interpretive dynamic is indispensable for understanding the reception of these prophecies in the texts from Qumran and in the New Testament.

Keywords: prophecy | future | interpretation | reception history

Grabung

KRAUSS 2014

Raiko Krauß, Steve Zäuner & Ernst Pernicka, *Statistical and anthropological analysis of the Varna necropolis*. In: HARALD MELLER, ROBERTO RISCH & ERNST PERNICKA (Hrsg.), *Metalle der Macht – Frühes Gold und Silber, 6. Mitteldeutscher Archäologentag vom 17. bis 19. Oktober 2013 in Halle (Saale)*. Tagungen des Landesmuseums für Vorgeschichte Halle 11 ([Halle 2014](#)), 371–387.

A research project funded by the German Research Foundation (DFG) between 2011 and 2013, and carried out at the Eberhard Karls University of Tübingen and the Curt-EngelhornCentre Archaeometry gGmbH (CEZA), dealt with the metal finds and the human remains of the Copper Age necropolis at Varna I. The project manager for the archaeometallurgical part of the project was E. Pernicka; N. Conard was responsible for the anthropological part. Reports on the progress of the studies were regularly published at the University of Tübingen's website and in the "Bulgarien-Jahrbuch". As the project is now completed, we would like

to briefly present the most important results of the anthropological studies and statistical analysis.

Ein an der Eberhard Karls Universität Tübingen und der CurtEngelhorn-Zentrum Archäometrie gGmbH (CEZA) durchgeführtes Forschungsprojekt, das zwischen 2011 und 2013 durch die Deutsche Forschungsgemeinschaft (DFG) gefördert wurde, beschäftigte sich mit den Metallfunden und menschlichen Skelettresten aus dem kupferzeitlichen Gräberfeld von Varna I. Die Projektleitung für den archäometallurgischen Teil lag in den Händen von E. Pernicka; N. Conard leitete die anthropologischen Untersuchungen. Berichte über den Fortschritt der Forschungen wurden regelmäßig auf der Website der Universität Tübingen und im “Bulgarien-Jahrbuch” veröffentlicht. Zum Abschluss des Projektes sollen an dieser Stelle kurz die wichtigsten Ergebnisse der anthropologischen Auswertung und der statistischen Analysen vorgestellt werden.

Klima

VOOSEN 2018

Paul Voosen, *Sticky glaciers slowed tempo of ice ages.* [science 361 \(2018\), 739.](#)

Before Earth’s current ice age cycles began 3 million years ago, a long warm period had allowed a thick soil layer to build up on northern landmasses. At first, the soil acted as a grease that caused early ice sheets to collapse before they could thicken much. But repeated glaciations gradually scoured this grit away, and meltwater swept it into the ocean. As the glaciers dug deeper into older rock, the neodymium signal in ocean sediment became more negative. Eventually, the glaciers reached bedrock and began to stick to their base, allowing them to grow thicker—leading to a more profound and persistent cooling that somehow caused the AMOC to crash and the glacial cycle to lengthen.

Metallzeiten

MELLER 2004

HARALD MELLER (Hrsg.), *Der geschmiedete Himmel – Die weite Welt im Herzen Europas vor 3600 Jahren, Begleitband zur Sonderausstellung, Landesmuseum für Vorgeschichte, Halle (Saale) vom 15. Oktober 2004 bis 24. April 2005.* (Stuttgart 2004).

MELLER 2018

Harald Meller & Kai Michel, *Die Himmelsscheibe von Nebra, Der Schlüssel zu einer untergegangenen Kultur im Herzen Europas.* (Berlin 2018).

WALDBAUM 1980

Jane C. Waldbaum, *The First Archaeological Appearance of Iron and the Transition to the Iron Age.* In: THEODORE A. WERTIME & JAMES D. MUHLY (Hrsg.), *The Coming of the Age of Iron.* ([New Haven 1980](#)), 69–98.

The known finds of iron from prehistoric and Bronze Age contexts have often been listed or summarized. These published lists vary somewhat, depending on the

size of the area being covered and the time of the study. The exact number of such pieces changes constantly. Not only are new examples steadily being added with new excavation, but also frequently cited examples sometimes turn out on investigation to be spurious in date, context, or even attribution as iron. Nevertheless, it is possible to amass enough verifiably authentic examples to enable us, when we add the evidence in contemporary literary documents, to draw a picture of the earliest stages in the use and manufacture of iron.

An interesting question concerning the earliest stages of iron manufacture is the extent to which iron extracted from terrestrial ores by smelting was utilized in relation to iron obtained directly from metallic meteorites. Since meteoritic iron is rich in nickel and smelted iron usually is not, the two varieties are often distinguished by testing for nickel. Where such tests have been made they are noted in the text.

WALDBAUM 1999

Jane G. Waldbaum, *The Coming of Iron in the Eastern Mediterranean, Thirty Years of Archaeological and Technological Research*. In: VINCENT C. PIGOTT (Hrsg.), *The Archaeometallurgy of the Asian Old World*. University Museum Monograph 89 (Philadelphia 1999), 27–57.

Until the mid 1960s, theories on the advent of iron in the eastern Mediterranean were based on a number of largely unexamined assumptions, all predicated on the belief that iron was inherently superior to and more desirable than bronze as a utilitarian and military material. This article will review some of the major archaeological and technological research of the past three decades on the early production and use of iron and will show how this new research has affected our thinking on these previously held assumptions. It will examine some of the newer hypotheses currently being explored, and then point out some of the major unanswered questions that remain.

Mittelpaläolithikum

KARAKOSTIS 2018

Fotios Alexandros Karakostis, Gerhard Hotz, Vangelis Tourloukis & Katerina Harvati, *Evidence for precision grasping in Neandertal daily activities*. *Science Advances* 4 (2018), eaat2369. DOI:10.1126/sciadv.aat2369.

Neandertal manual activities, as previously reconstructed from their robust hand skeletons, are thought to involve systematic power grasping rather than precise hand movements. However, this interpretation is at odds with increasing archeological evidence for sophisticated cultural behavior. We reevaluate the manipulative behaviors of Neandertals and early modern humans using a historical reference sample with extensive genealogical and lifelong occupational documentation, in combination with a new and precise three-dimensional multivariate analysis of hand muscle attachments. Results show that Neandertal muscle marking patterns overlap exclusively with documented lifelong precision workers, reflecting systematic precision grasping consistent with the use of their associated cultural remains. Our findings challenge the established interpretation of Neandertal behavior and establish a solid link between biological and cultural remains in the fossil record.

Religion

ANDERSEN 2017

Marc Andersen, *Predictive coding in agency detection*. [Religion, Brain & Behavior \(2017\), preprint, 1–40](#). DOI:10.1080/2153599X.2017.1387170.

Agency detection is a central concept in the cognitive science of religion (CSR). Experimental studies, however, have so far failed to lend support to some of the most common predictions that follow from current theories on agency detection. In this article, I argue that predictive coding, a highly promising new framework for understanding perception and action, may solve pending theoretical inconsistencies in agency detection research, account for the puzzling experimental findings mentioned above, and provide hypotheses for future experimental testing. Predictive coding explains how the brain, unbeknownst to consciousness, engages in sophisticated Bayesian statistics in an effort to constantly predict the hidden causes of sensory input. My fundamental argument is that most false positives in agency detection can be seen as the result of top-down interference in a Bayesian system generating high prior probabilities in the face of unreliable stimuli, and that such a system can better account for the experimental evidence than previous accounts of a dedicated agency detection system. Finally, I argue that adopting predictive coding as a theoretical framework has radical implications for the effects of culture on the detection of supernatural agency and a range of other religious and spiritual perceptual phenomena.

Keywords: Agency detection | HADD | predictive coding | perception | supernatural agents | religion | epidemiology | cognitive science of religion

VAN EYGHEN 2018

Hans van Eyghen, *Predictive coding and religious belief*. [unknown \(2018\), preprint, 1–15](#). .

In this paper I investigate the epistemic implications of a recent theory of religious cognition that draws on predictive coding. The theory argues that certain experiences are heavily shaped by a subjects prior (religious) beliefs and thereby makes religious believers prone to detect invisible agents. The theory is an update of older theories of religious cognition but departs from them in crucial ways. I will assess the epistemic implications by reformulating existing arguments based on other (older) theories of religious cognition.