Liste erstellt am 2013-09-15

Literatur

Aktuell

Job 2013

Veronika Job, Gregory M. Walton, Katharina Bernecker & Carol S. Dweck, *Beliefs about willpower determine the impact of.* PNAS **110** (2013), 14837–14842.

Past research found that the ingestion of glucose can enhance self-control. It has been widely assumed that basic physiological processes underlie this effect. We hypothesized that the effect of glucose also depends on people's theories about willpower. Three experiments, both measuring (experiment 1) and manipulating (experiments 2 and 3) theories about willpower, showed that, following a demanding task, only people who view willpower as limited and easily depleted (a limited resource theory) exhibited improved self-control after sugar consumption. In contrast, people who view willpower as plentiful (a nonlimited resource theory) showed no benefits from glucose—they exhibited high levels of self-control performance with or without sugar boosts. Additionally, creating beliefs about glucose ingestion (experiment 3) did not have the same effect as ingesting glucose for those with a limited resource theory. We suggest that the belief that willpower is limited sensitizes people to cues about their available resources including physiological cues, making them dependent on glucose boosts for high self-control performance.
self theories | implicit theories | ego depletion | cognitive performance

Raio 2013

Candace M. Raio, Temidayo A. Orederu, Laura Palazzolo, Ashley A. Shurick & Elizabeth A. Phelps, *Cognitive emotion regulation fails the stress test.* PNAS **110** (2013), 15139–15144.

Cognitive emotion regulation has been widely shown in the laboratory to be an effective way to alter the nature of emotional responses. Despite its success in experimental contexts, however, we often fail to use these strategies in everyday life where stress is pervasive. The successful execution of cognitive regulation relies on intact executive functioning and engagement of the prefrontal cortex, both of which are rapidly impaired by the deleterious effects of stress. Because it is specifically under stressful conditions that we may benefit most from such deliberate forms of emotion regulation, we tested the efficacy of cognitive regulation after stress exposure. Participants first underwent fear-conditioning, where they learned that one stimulus (CS+) predicted an aversive outcome but another predicted a neutral outcome (CS-). Cognitive regulation training directly followed where participants were taught to regulate fear responses to the aversive stimulus. The next day, participants underwent an acute stress induction or a control task before repeating the fear-conditioning task using these newly acquired regulation skills. Skin conductance served as an index of fear arousal, and salivary a-amylase and cortisol concentrations were assayed as neuroendocrine markers of stress response. Although groups showed no differences in fear arousal during initial fear learning, nonstressed participants demonstrated robust fear reduction following regulation training, whereas stressed participants showed no such reduction. Our results suggest that stress markedly impairs the cognitive regulation of emotion

and highlights critical limitations of this technique to control affective responses under stress.

Anthropologie

Donald 2002

Merlin Donald, *A mind so rare, The evolution of human consciousness.* (New York 2002).

Drawing on his theory of the origins of the modern mind, Merlin Donald's thesis presents the forces, both cultural and neuronal, that power our distinctively human modes of awareness. Donald proposes that the human mind is a hybrid product of interweaving a supercomplex form of matter (the brain) with an invisible symbolic web (culture) to form a "distributed" cognitive network. This hybrid mind, Donald suggests, is our main evolutionary advantage, for it allowed humanity as a species to break free of the limitations of the mammalian brain.

Vaesen 2012

Krist Vaesen, *The cognitive bases of human tool use.* Behavioral and Brain Sciences **35** (2012), 203–218.

This article has two goals. The first is to assess, in the face of accruing reports on the ingenuity of great ape tool use, whether and in what sense human tool use still evidences unique, higher cognitive ability. To that effect, I offer a systematic comparison between humans and nonhuman primates with respect to nine cognitive capacities deemed crucial to tool use: enhanced hand-eye coordination, body schema plasticity, causal reasoning, function representation, executive control, social learning, teaching, social intelligence, and language. Since striking differences between humans and great apes stand firm in eight out of nine of these domains, I conclude that human tool use still marks a major cognitive discontinuity between us and our closest relatives. As a second goal of the paper, I address the evolution of human technologies. In particular, I show how the cognitive traits reviewed help to explain why technological accumulation evolved so markedly in humans, and so modestly in apes.

Keywords: cognition; evolution; great apes; technology; tool use; cumulative culture

Bibel

Maier 1965

Johann Maier, *Das altisraelitische Ladeheiligtum.* Beihefte zur Zeitschrift für die alttestamentliche Wisenschaft 93 (Berlin 1965).

Die vorliegende Studie erwuchs aus einer Untersuchung der Gottesthronvorstellung in der israelitisch-jüdischen Religion, bei der sich ergab, daß die Lade entgegen einer geläufigen Annahme nicht als Thron zu deuten ist und daher eine andere Erklärung gesucht werden muß. Da es letztlich kein zutreffendes archäologisches oder religionsgeschichtliches Vergleichsmaterial für die Lade gibt, bleibt als einziger Weg die kritische Analyse der atl. Quellen. Nun sind auf diesem Gebiet im Einzelnen noch recht verschiedene Ansichten möglich, und es soll und kann hier nicht der Anspruch erhoben werden, auf alle Fragen eine letzte Antwort geboten zu haben. Die Arbeit will vielmehr eine Anregung zu weiterer Diskussion sein. Leidet die religionsgeschichtliche Erforschung Altisraels heute doch vielfach darunter, daß Sachverhalte behauptet werden, die mit dem literaturgeschichtlichen Befund nur

sehr schwer zu vereinbaren sind und den konkreten politisch-soziologischen Zeitverhältnissen zu wenig Rechnung tragen. Dies gilt insbesondere für die Annahme einer Zwölfstämmeamphiktyonie und die aus ihr erwachsenen kultgeschichtlichen Hypothesen, weil dabei der Richterzeit entschieden zu viel zugemutet, der frühen Königszeit mit ihren umstürzenden Ereignissen (wie der Einigung Israels und der »Reichsteilung«) hingegen eine viel zu geringe Bedeutung zugemessen wird. Für den eingeschlagenen Weg als Ganzes spricht auch das Ergebnis der Studie, eine kontinuierliche Bedeutungsgeschichte des Ladeheiligtums, die in Einklang steht mit der erhobenen chronologischen Folge der Ladebezeichnungen in den Quellen.

Biologie

Palkopoulou 2013

Eleftheria Palkopoulou et al., *Holarctic genetic structure and range dynamics in the woolly mammoth*. Proc. Royal Society B **280** (2013), 20131910.

ProcRSocB280-20131910-Supplement1.pdf

Eleftheria Palkopoulou, Love Dalén, Adrian M. Lister, Sergey Vartanyan, Mikhail Sablin, Andrei Sher, Veronica Nyström Edmark, Mikael D. Brandström, Mietje Germonpré, Ian Barnes & Jessica A. Thomas

Ancient DNA analyses have provided enhanced resolution of population histories in many Pleistocene taxa. However, most studies are spatially restricted, making inference of species-level biogeographic histories difficult. Here, we analyse mitochondrial DNA (mtDNA) variation in the woolly mammoth from across its Holarctic range to reconstruct its history over the last 200 thousand years (kyr).We identify a previously undocumented major mtDNA lineage in Europe, which was replaced by another major mtDNA lineage 32–34 kyr before present (BP). Coalescent simulations provide support for demographic expansions at approximately 121 kyr BP, suggesting that the previous interglacial was an important driver for demography and intraspecific genetic divergence. Furthermore, our results suggest an expansion into Eurasia fromAmerica around 66 kyr BP, coinciding with the first exposure of the Bering Land Bridge during the Late Pleistocene. Bayesian inference indicates Late Pleistocene demographic stability until 20–15 kyr BP, when a severe population size decline occurred.

Subject Areas: evolution, ecology, molecular biology

Keywords: ancient DNA, Mammuthus primigenius, extinction, refugia, climate

Datierung

Dee 2013

Michael Dee et al., *An absolute chronology for early Egypt using radiocarbon dating and Bayesian statistical modelling*. Proc. Royal Society A **469** (2013), 20130395.

ProcRSocA469-20130395-Supplement1.pdf

Michael Dee, David Wengrow, Andrew Shortland, Alice Stevenson, Fiona Brock, Linus Girdland Flink & Christopher Bronk Ramsey

The Egyptian state was formed prior to the existence of verifiable historical records. Conventional dates for its formation are based on the relative ordering of artefacts. This approach is no longer considered sufficient for cogent historical analysis. Here, we produce an absolute chronology for Early Egypt by combining radiocarbon and archaeological evidence within a Bayesian paradigm. Our data

cover the full trajectory of Egyptian state formation and indicate that the process occurred more rapidly than previously thought.We provide a timeline for the First Dynasty of Egypt of generational-scale resolution that concurs with prevailing archaeological analysis and produce a chronometric date for the foundation of Egypt that distinguishes between historical estimates.
Subject Areas: mathematical modelling, analytical chemistry
Keywords: radiocarbon dating, Bayesian modelling, absolute chronology, ancient Egypt

Douka 2013

Katerina Douka, Christopher A. Bergman, Robert E. M. Hedges, Frank P. Wesselingh & Thomas F. G. Higham, *Chronology of Ksar Akil (Lebanon) and Implications for the Colonization of Europe by Anatomically Modern Humans*. PLoS ONE **8** (2013), e72931. DOI:10.1371/journal.pone.0072931.
pone08-e72931-Supplement.zip
The Out-of-Africa model holds that anatomically modern humans (AMH) evolved and dispersed from Africa into Asia, and later Europe. Palaeoanthropological evidence from the Near East assumes great importance, but AMH remains from the region are extremely scarce. 'Egbert', a now-lost AMH fossil from the key site of Ksar Akil (Lebanon) and 'Ethelruda', a recently re-discovered fragmentary maxilla from the same site, are two rare examples where human fossils are directly linked with early Upper Palaeolithic archaeological assemblages. Here we radiocarbon date the contexts from which Egbert and Ethelruda were recovered, as well as the levels above and below the findspots. In the absence of well-preserved organic materials, we primarily used marine shell beads, often regarded as indicative of behavioural modernity. Bayesian modelling allows for the construction of a chronostratigraphic framework for Ksar Akil, which supports several conclusions. The modelgenerated age estimates place Egbert between 40.8–39.2 ka cal BP (68.2 % prob.) and Ethelruda between 42.4–41.7 ka cal BP (68.2 % prob.). This indicates that Egbert is of an age comparable to that of the oldest directly-dated European AMH (PesÕtera cu Oase). Ethelruda is older, but on current estimates not older than the modern human teeth from Cavallo in Italy. The dating of the so-called "transitional" or Initial Upper Palaeolithic layers of the site may indicate that the passage from the Middle to Upper Palaeolithic at Ksar Akil, and possibly in the wider northern Levant, occurred later than previously estimated, casting some doubts on the assumed singular role of the region as a locus for human dispersals into Europe. Finally, tentative interpretations of the fossil's taxonomy, combined with the chronometric dating of Ethelruda's context, provides evidence that the transitional/IUP industries of Europe and the Levant, or at least some of them, may be the result of early modern human migration(s).

Grundlagen

Feynman 1974

Richard P. Feynman, *Cargo Cult Science*. Engineering and Science **37** (1974), vii, 10–13. http://resolver.caltech.edu/CaltechES:37.7.CargoCult.
Some remarks on science, pseudoscience, and learning how to not fool yourself. Caltech's 1974 commencement address.

But this long history of learning how to not fool ourselves—of having utter scientific integrity—is, I'm sorry to say, something that we haven't specifically included in any particular course that I know of. We just hope you've caught on by osmosis. The first principle is that you must not fool yourself—and you are the easiest person to fool. So you have to be very careful about that. After you've not fooled yourself, it's easy not to fool other scientists. You just have to be honest in a conventional way after that.

Judentum

Rosen 2010

Steven A. Rosen & Gunnar Lehmann, *Hat das biblische Israel einen nomadischen Ursprung?* Die Welt des Orients **40** (2010), 160–189.

Kritische Beobachtungen aus der Perspektive der Archäologie und Kulturanthropologie The paper reviews the concepts of nomadism in Near Eastern Archaeology and postulates that there is no archaeological evidence for Iron Age nomadism in Palestine and especially in the Negev. This gap of nomadic adaption stands in contrast to earlier forms of nomadism in Palestine especially during the 3rd millennium and again since the Persian Period.

Klima

Wang 2013

Kaicun Wang & Robert E. Dickinson, *Contribution of solar radiation to decadal temperature variability over land.* PNAS **110** (2013), 14877–14882.

Global air temperature has become the primary metric for judging global climate change. The variability of global temperature on a decadal timescale is still poorly understood. This paper examines further one suggested hypothesis, that variations in solar radiation reaching the surface (Rs) have caused much of the observed decadal temperature variability. Because Rs only heats air during the day, its variability is plausibly related to the variability of diurnal temperature range (daily maximum temperature minus its minimum). We show that the variability of diurnal temperature range is consistent with the variability of Rs at timescales from monthly to decadal. This paper uses long comprehensive datasets for diurnal temperature range to establish what has been the contribution of Rs to decadal temperature variability. It shows that Rs over land globally peaked in the 1930s, substantially decreased from the 1940s to the 1970s, and changed little after that. Reduction of Rs caused a reduction of more than 0.2 °C in mean temperature during May to October from the 1940s through the 1970s, and a reduction of nearly 0.2 °C in mean air temperature during November to April from the 1960s through the 1970s. This cooling accounts in part for the near-constant temperature from the 1930s into the 1970s. Since then, neither the rapid increase in temperature from the 1970s through the 1990s nor the slowdown of warming in the early twenty-first century appear to be significantly related to changes of Rs.
global dimming | global brightening | global warming | surface incident solar radiation | decadal variability

Mittelpaläolithikum

Rendu 2010

William Rendu, *Hunting behavior and Neanderthal adaptability in the Late Pleistocene site of Pech-de-l'Azé I.* Journal of Archaeological Science **37** (2010), 1798–1810.

The late Mousterian of Acheulian tradition (MTA) site of Pech-de-l'Azé 1 shows a very particular stratigraphic sequence characterized by numerous elements not usually found in Mousterian contexts such as avifauna exploitation and the use of hundreds of mineral pigments. Recent zooarchaeological and skeletochronological analyses provide new insights into the evolution of subsistence behaviors and settlement patterns of the Neanderthals that inhabited the shelter. Due to changes in hunting season, Neanderthals adapted their hunting strategies, exploiting various red deer populations which presented very different behavior. The evolution in the seasonal occupation of the shelter may have been the results of major modifications of its (series of roof collapsed) which induced a shrank in inhabitable space., which forced the Mousterians to adjust the way they used the cavity to its characteristics in order to optimize its exploitation. The conclusions underline the excellent adaptability of the Neanderthals to their physical environment.

Keywords: Zooarchaeology | Skeletochronology | Seasonality | Subsistence | Settlement pattern | Increment | Middle Paleolithic

Religion

Loichinger 2010

Alexander Loichinger & Armin Kreiner (Hrsg.), *Theodizee in den Weltreligionen, Ein Studienbuch.* (Paderborn 2010).

Die Frage nach dem Leid war und ist die große Frage an Gott. Wenn es ihn gibt, warum lässt er all das Leid zu? Warum hat er überhaupt eine Welt mit so viel Übel und Leid erschaffen? Warum lässt er Naturkatastrophen geschehen? Warum lässt er Gewaltverbrecher gewähren?

Das vorliegende Buch versteht sich als Lese-, Lehr- und Studienbuch. Inhaltlich besteht es aus zwei Teilen. Im ersten Teil werden Antworten und Lösungen aus der christlichen Tradition vorgestellt. Der zweite Teil wirft einen Blick in die nichtchristlichen Weltreligionen und zeigt dabei Gemeinsamkeiten und Unterschiede im Umgang mit der Leidfrage auf. Im abschließenden Arbeitsteil der einzelnen Kapitel finden sich vertiefende Fragen und weiterführende Literaturhinweise.

Schmitz 2010

Rolf Schmitz, *Das Leiden und das Böse, Antwortversuche im Judentum.* In: Alexander Loichinger & Armin Kreiner (Hrsg.), *Theodizee in den Weltreligionen, Ein Studienbuch.* (Paderborn 2010), 187–203.

Story or Book

Johnson 2013

J. R. Johnson, *The scent of things to come, Breathing is believing.* nature **501** (2013), 130.